

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.

Koppers Industries, Inc. is located at 3900 South Laramie Avenue in Stickney, Illinois. The source includes a tar plant, phthalic anhydride plant, wastewater treatment plant, and the Stickney Oil Terminals. The source manufactures chemical oil products, creosotes, coal tar pitches, and phthalic anhydride from coal tar. Raw materials or products may be stored at the Stickney Oil Terminals.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
1	522,000 Gallon Raw Material/Distillate Oil/Carbon Black Storage Tank (Tank 1)	1922	Fume System #2
2	522,000 Gallon Raw Material/Distillate Oil/Carbon Black/Refined Chemical Oil Storage Tank (Tank 2)	1922	Fume System #2
4	522,000 Gallon Raw Material Storage Tank (Tank 4)	1922	None
5	522,000 Gallon Raw Material Storage Tank (Tank 5)	1922	None
6	522,000 Gallon Raw Material Storage Tank (Tank 6)	1922	None
7	522,000 Gallon Naphthalene Storage Tank (Tank 7)	December, 1978	Sublimation Box No. 3
12	316,000 Gallon Refined Chemical Oil Storage Tank (Tank 12)	1922	Fume System #2
13	316,000 Gallon Tar/Water Storage Tank (Tank 13)	1922	Fume System #2
21	158,000 Gallon Distillate Oil Storage Tank (Tank 21)	1922	Fume System #2
22	158,000 Gallon Distillate Oil Storage Tank (Tank 22)	1922	Fume System #2

Emission Unit	Description	Date Constructed	Emission Control Equipment
23	158,000 Gallon Distillate Oil Storage Tank (Tank 23)	1970	Fume System #2
24	158,000 Gallon Distillate Oil Storage Tank (Tank 24)	1922	Fume System #2
25	158,000 Gallon Distillate Oil/Refined Chemical Oil Storage Tank (Tank 25)	1988	Fume System #2
26	155,000 Gallon Light/Light Blend/Heavy Distillate Oil Storage Tank (Tank 26)	1957	Fume System #2
27	155,000 Gallon Light/Light Blend/Heavy Distillate Oil Storage Tank (Tank 27)	1957	Fume System #2
31	109,000 Gallon Heavy Distillate Oil Storage Tank (Tank 31)	1955	Fume System #1
32	109,000 Gallon Heavy Distillate Oil Storage Tank (Tank 32)	1955	Fume System #1
33	106,000 Gallon Pitch/Old Style Pitch/Bitumen Storage Tank (Tank 33)	1957	Fume System #4
40	44,000 Gallon Distillate Oil Storage Tank (Tank 40)	1960	Fume System #1
41	55,000 Gallon Carbon Pitch Storage Tank (Tank 41)	1980	Fume System #5
42	58,000 Gallon Raw Material/Crude Tar/Pitch Storage Tank (Tank 42)	1980	Fume System #2
43	37,000 Gallon Raw Material/Pitch/Crude Tar Storage Tank (Tank 43)	1980	Fume System #2
44	63,000 Gallon Carbon Pitch Storage Tank (Tank 44)	1960	Fume System #5
45	56,000 Gallon Pitch/Bitumen/PSB Storage Tank (Tank 45)	1960	Fume System #1
46	52,000 Gallon Carbon Pitch Storage Tank (Tank 46)	1965	Fume System #5
47	55,000 Gallon Carbon Pitch Storage Tank (Tank 47)	1970	Fume System #5
48	56,000 Gallon Carbon Pitch Storage Tank (Tank 48)	1970	Fume System #5

Emission Unit	Description	Date Constructed	Emission Control Equipment
49	50,000 Gallon Carbon Pitch/Petroleum Pitch Storage Tank (Tank 49)	1980	Fume System #5
62	25,000 Gallon Pitch Storage Tank (Tank 62)	1960	Fume System #1
63	25,000 Gallon Pitch Storage Tank (Tank 63)	1960	Fume System #1
64	25,000 Gallon Pitch Storage Tank (Tank 64)	1960	Fume System #1
77	Wastewater Storage Tank (Tank 77)	Unknown	None
78	Wastewater Storage Tank (Tank 78)	Unknown	None
100	1,040,000 Gallon Raw Material Storage Tank (Tank 100)	1957	None
101	1,040,000 Gallon Raw Material Storage Tank (Tank 101)	1957	None
102	1,000,000 Gallon Raw Material/Crude Tar Storage Tank (Tank 102)	1999	None
300	827,000 Gallon O-Xylene Storage Tank (Tank 300)	October, 1973	None
301	376,000 Gallon Distillate Oil/P1/P13/P2-88 Storage Tank (Tank 301)	1979	None
302	376,000 Gallon Distillate Oil/P1/P13/P2-88 Storage Tank (Tank 301)	1979	None
303-PAA	826,000 Gallon O-Xylene Storage Tank (PAA Plant Tank 303)	December, 1970	None
303-TP	350,000 Gallon Distillate Oil/P2/P88 Storage Tank (Tar Plant Tank 303)	1979	None
304A	84,000 Gallon O-Xylene Storage Tank (Tank 304A)	June, 1970	None
304B	84,000 Gallon O-Xylene Storage Tank (Tank 304B)	June, 1970	None
305	822,000 Gallon Naphthalene Storage Tank (Tank 305)	June, 1970	Sublimation Box No. 2
API	Five API Wastewater Separators	Unknown	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
A-Train	Phthalic Anhydride Reactor Train (A-Train)	December, 1972	Regenerative Thermal Oxidizer No. 1
B1	Cleaver Brooks Model DL-76 Natural Gas-Fired Boiler (Boiler #1, 85.0 mmBtu/hr)	Prior to February, 1973	None
B2	Cleaver Brooks Model D-42 Natural Gas-Fired Boiler (Boiler #2, 32.850 mmBtu/hr)	Prior to February, 1973	None
B3	Cleaver Brooks Model D-42 Natural Gas-Fired Boiler (Boiler #3, 32.850 mmBtu/hr)	Prior to February, 1973	None
B4	Natural Gas-Fired Boiler (Boiler #4, 99.0 mmBtu/hr)	1979	None
Bertram	Marlotherm Heat Transfer System Natural Gas-Fired Heater (Bertram Heater, 19 mmBtu/hr)	October, 1976	None
Born	Marlotherm Heat Transfer System Natural Gas-Fired Heater (Born Heater, 14.5 mmBtu/hr)	October, 1970	None
B-Train	Phthalic Anhydride Reactor Train (B-Train)	December, 1972	Regenerative Thermal Oxidizer No. 2
C-Train	Phthalic Anhydride Reactor Train (C-Train)	December, 1972	Regenerative Thermal Oxidizer No. 3 and Entrainment System No. 2
D-5	36,000 Gallon Pitch/Old Style Pitch/Bitumen Storage Tank (Tank D-5)	1966	Fume System #4
DAF	2 Dissolved Air Flotation (DAF) Wastewater Tanks	Unknown	None
D-Train	Phthalic Anhydride Reactor Train (D-Train)	December, 1972	Regenerative Thermal Oxidizer No. 4 and Entrainment System No. 2
MF-106	5,100 Gallon Napthalene Vaporizer Oil Tank (Tank MF-106)	Prior to April, 1978	Sublimation Box No. 4
MF301A	202,000 Gallon Refined Phthalic Anhydride Storage Tank (Tank 301A)	June, 1970	PAA Tank Farm Switch Condensers

Emission Unit	Description	Date Constructed	Emission Control Equipment
MF301B	202,000 Gallon Intermediate Crude Phthalic Anhydride Storage Tank (Tank 301B)	June, 1970	PAA Tank Farm Switch Condensers
MF302A	54,000 Gallon Refined Phthalic Anhydride Storage Tank (Tank 302A)	June, 1970	PAA Tank Farm Switch Condensers
MF302B	54,000 Gallon Refined Phthalic Anhydride Storage Tank (Tank 302B)	June, 1970	PAA Tank Farm Switch Condensers
MF-311	10,000 Gallon Refined Phthalic Anhydride Storage Tank (Tank MF-311)	Prior to April, 1978	Mini-Switch Condenser System
MF-4150	240,000 Gallon Intermediate Crude Phthalic Anhydride Storage Tank (Tank MF-4150)	November, 1975	PAA Tank Farm Switch Condensers
MS-308	10,000 Gallon Refined Phthalic Anhydride Flaker Feed Storage Tank (Tank MS-308)	Prior to April, 1978	Sublimation Box No. 14
MS-414	10,000 Gallon Flaked Phthalic Anhydride Storage Remelt Tank (Tank MS-414)	Unknown	Flaker Dust Collector
OL12	2,284,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL12)	1956	None
OL13	424,000 Gallon Raw Material/Carbon Black/Crude Tar Storage Tank (Tank OL13)	1956	None
OL14	424,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL14)	1956	None
OL15	2,286,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL15)	1956	None
OL19	418,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL19)	1949	None
OL20	969,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL20)	1949	None
OL21	969,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL21)	1949	None

Emission Unit	Description	Date Constructed	Emission Control Equipment
OL22	2,284,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL22)	1949	None
OL-23	2,280,000 Gallon O-Xylene Storage Tank (Tank OL-23)	1949	None
OL24	2,283,000 Gallon Carbon Black Storage Tank (Tank OL24)	1950	None
OL25	2,284,000 Gallon Raw Material/Crude Tar Storage Tank (Tank OL25)	1950	None
OL27	2,351,000 Gallon Refined Chemical Oil Storage Tank (Tank OL27)	1952	None
P8	55,000 Gallon Pitch Storage Tank (Tank P8)	1953	Fume System #1
P9	55,000 Gallon Pitch Storage Tank (Tank P9)	1953	Fume System #1
PAA-BU	Barge Unloading of Naphthalene to Tanks	April, 1978	None
PAA-F	Phthalic Anhydride Flaker	Prior to April 14, 1972	Dust Collector
PAA-R	Phthalic Anhydride Refining (Heat Treaters, Preflash, Strippers, and Residue Still)	October, 1970	Fume Scrubber
PAA-RE	Phthalic Anhydride Recovery Exhausters	November, 1999	Regenerative Thermal Oxidizers No. 1 and 2
PAA-RRTCU	Railroad Tank Car Unloading of Naphthalene to Tanks	April, 1978	Sublimation Box No. 1
PAA-TTU	Tank Truck Unloading of Naphthalene to Tanks	April, 1978	None
RCL-1	Rail Car Loading Station No.1	Prior to April, 1978	Mini-Switch Condenser System
RCL-2	Rail Car Loading Station No.2	Prior to April, 1978	Mini-Switch Condenser System
RCL-3	Rail Car Loading Station No.3	Prior to April, 1978	Mini-Switch Condenser System
RCL-4	Rail Car Loading Station No.4	Prior to April, 1978	Mini-Switch Condenser System
RCL-5	Rail Car Loading Station No.5	Prior to April, 1978	Mini-Switch Condenser System

Emission Unit	Description	Date Constructed	Emission Control Equipment
SF	Natural Gas-Fired Startup Furnace (Startup Furnace, 20 mmBtu/hr)	Unknown	None
SH	RADCO Natural Gas-Fired Super Heater (Super Heater, 25.4 mmBtu/hr)	1988	None
T-305	158,000 Gallon Raw Material Storage Tank (Tank T-305)	1977	None
T-306	200,000 Gallon Raw Material Storage Tank (Tank T-306)	1977	None
T-8102	Wastewater Equalization Tank (Tank T-8102)	Unknown	None
T-8200	Stormwater Surge Tank (Tank T-8200)	Unknown	None
T-8400	Wastewater Biological/Aeration Tank (Tank T-8400)	1990	None
T-8450	Wastewater Clarifier Tank (Tank T-8450)	Unknown	None
TP-701	526,000 Gallon Raw Material Storage Tank (Tank TP-701)	1977	None
TPDS1	Tar Plant Distillation Still #1 (Dehydrator, Fractionators, Flash, and Decanter)	December, 1972	Tube Heaters F101 and F201, Flare, and Fume System #2
TPDS2	Tar Plant Distillation Still #2 (Dehydrator, Fractionators, Flash, and Decanter)	December, 1972	Tube Heaters F101 and F201, Flare, and Fume System #2
TWL	Tank Wagon Loading	Prior to April, 1978	Mini-Switch Condenser System
Fugitive PM Emissions	Paved/Unpaved Traffic Areas, Parking Lots, and Roadways	--	None
Fugitive VOM/HAP Emissions	Equipment Leaks, Loading/Unloading Operations, and Cleanup Operations	--	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)	650.31
Particulate Matter (PM)	146.55
Sulfur Dioxide (SO ₂)	1,471.43
Volatile Organic Material (VOM)	629.06
HAP, not included in VOM or PM	--
TOTAL	2,897.35

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 164.

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