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1.0 SOURCE IDENTIFICATION

1.1 Source

Reichhold, Inc.
6350 East Collins Road
Morris, Illinois 60450
815/942-4600

I.D. No.: 063806AAA
Standard Industrial Classification: SIC, 2821
SIC, 2891 (secondary)

1.2 Owner/Parent Company

Reichhold, Inc.
2400 Ellis Road
Durham, North Carolina 27703

1.3 Operator

Reichhold, Inc.
6350 East Collins Road
Morris, Illinois 60450

Ron Snook
815/942-4600 Ext. 215

1.4 General Source Description

The Reichhold Plant is located at 6350 East Collins Road in Morris, Grundy County. The source manufactures three classes of chemicals: latex emulsions, polyester resins and polyurethane adhesives. In addition, the plant operates boilers/heaters to supply heat for the processes.

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 Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Units
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emission Reduction Market System
F	degrees Fahrenheit
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
Kg	Kilogram
kW	kilowatts
lb	pound
mmBtu	Million British thermal units
mo	month
MW	Megawatt
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
ppmv	parts per million by volume
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
T1	Title I - Identifies Title I conditions that have been carried over from an existing construction permit.
SO ₂	Sulfur Dioxide
USEPA	United States Environmental Protection Agency
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
wt. %	weight percent
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:

The following storage tanks:

Polyester Plant: S-583, S-586

Emulsion Plant: S-550, S-551, S-552, SN-5214-01, SN-5214-05, S-503, S-515, S-516,

- 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:

Fumed Silica Dispersion Process

The following storage tanks:

Polyester Plant: S-581, S-582, S-588, S-590

Emulsion Plant: S-550, S-502, S-503, S-504, S-515, S-516, M-1, M-2, M-3, M-4, M-5, M-6, M-7, M-8

Polyurethane Plant: T-201, T-202, T-203, T-204

- 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)].

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)].

Equipment used for the mixing and blending of materials at ambient temperature to make water based adhesives, provided each material mixed or blended contains less than 5% organic solvent by weight [35 IAC 201.210(a)(9)].

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

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

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

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

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

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

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

3.2 Compliance with Applicable Requirements

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

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

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

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

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

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

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

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
See Attachment 1	Storage Tanks		See Attachment 1
M-501, M-502, M-503	Blend Tanks	1970/1976	None
R-101, R-102	Reactors	1970/1976	None
M-505, M-510	Cool Down Tanks	1972/1977	None
M-1, M-10	Half Ester Tanks	1986/1987	Thermal Oxidizer
R-1, R-2, R-3, R-4	Reactors	1987/1994	Thermal Oxidizer
M-101, M-102, M-104, M-107	Thin Tanks	1974	Thermal Oxidizer
M-103, 105, 108, 109, S-570 through S-572	Seven Blend Tanks	1974/1986	Thermal Oxidizer
T-204 through T-207	Blend Tanks	1995	Enclosed Flare
R-301 through R-305	Reactors	1995	Enclosed Flare
T-408, 409, 410	Shinto Process Tanks	1996	Enclosed Flare
T-407A	Dispersion Tank	1997	Rotoclone (WSC-510)
R-307, T-417	Two Reactors	1997	Rotoclone or Enclosed Flare
	Boiler No. 1	1970	None
	Boiler No. 2	1976	None
	Oil Heater	1990	None
	Wastewater Treatment System	1970	None

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of VOM and HAP emissions.

5.2 Applicable Regulations

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

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

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

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

- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.
- 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].

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

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

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

5.2.4 a. This stationary source, as defined in 40 CFR Section 68.3, is subject to 40 CFR Part 68, the Accidental Release Prevention regulations [40 CFR 68.215(a)(1)].

- b. The owner or operator of a stationary source shall revise and update the RMP submitted, as specified in 40 CFR 68.190.

5.3 Non-Applicability of Regulations of Concern

- a. 35 IAC 218.142 states that no person shall cause or allow the discharge of more than 2 cu in of VOL with vapor pressure of 17.24kPa (2.5 psia) or greater at 70°F into the atmosphere from any pump or compressor in any 15 minute period at standard conditions. This rule does not apply because the materials handled in pumps do not have a vapor pressure greater than 2.5 psia at 70°F.
- b. 35 IAC 218 Subpart Q, "Leaks from Synthetic Organic Chemical and Polymer Manufacturing Plants" does not apply because none of the synthetic organic chemicals listed in Appendix A of Part 218 are manufactured at this source.

5.4 Source-Wide Operational and Production Limits and Work Practices

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

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding

emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	183.1
Sulfur Dioxide (SO ₂)	86.2
Particulate Matter (PM)	8.8
Nitrogen Oxides (NO _x)	96.1
HAP, not included in VOM or PM	0
TOTAL	374.2

5.5.2 Emissions of Hazardous Air Pollutants

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

5.5.3 Other Source-Wide Emission Limitations

Source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

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

5.6.2 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., a computer program such as Plant Ware 7) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

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

5.7.2 Annual Emissions Report

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

5.7.3 Annual Reporting of HAP Emissions

The Permittee shall submit an annual report to the Illinois EPA, Compliance Section, on HAP emissions from the source.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating VOM and Combustion Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

- a. For the purpose of estimating NO_x and CO emissions from the boilers and heaters, the current version of AP-42 is acceptable.
- b. For the purpose of estimating fugitive VOM emissions from equipment leaks at the source, the emission factors found in A1995 Protocol for Equipment Leak Emission Estimates or an equivalent summary published by USEPA on the Technology Transfer Network bulletin board.
- c. For the purpose of estimating HAP emissions from equipment at the source, the vapor weight percent (based on a 1992 USEPA survey) of each HAP for each product times the VOM emissions contributed by that product is acceptable.
- d. Computer programs such as Plant Ware 7 may be used to calculate emissions, but the Illinois EPA may request the underlying methodology for the calculations.

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 should 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

Emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year shall not

exceed 15 tons, not including VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit. This limitation is established at the request of the source to exempt it from the requirements of 35 IAC Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 IAC 205.205.

6.3 Recordkeeping and Reporting

- a. The Permittee shall maintain the following records to determine compliance with the above limitation:
 - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 5 and 7 of this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
 - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 5 and 7 of this permit; and
 - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period.
- b. The Permittee shall submit the seasonal emissions component of the Annual Emissions Report by (October 31, November 30) of each year, reporting actual emissions of VOM during the seasonal allotment period, in accordance with 35 IAC 205.205(b) and 35 IAC 205.300.
- c. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period.

6.4 Federal Enforceability

Section 6.0 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit Storage Tanks (see Attachment 1)
Control (see Attachment 1 which lists control for individual tanks
in table format.)

7.1.1 Description

Fixed roof storage tanks for raw materials, products or
cleaning solvents.

7.1.2 List of Emission Units and Pollution Control Equipment

See Attachment 1 in Appendix.

7.1.3 Applicability Provisions and Applicable Regulations

- a. An "affected tank" for the purpose of these unit-specific conditions, is a storage tank that is only subject to 35 IAC 218.301, which limits organic material emissions from any unit to 8 lb/hr. If not odor nuisance exists, the limit only applies to photochemically reactive material. Emissions in excess of 8 lb/hr is allowed if the emissions are controlled by 85%.
- b. Each affected tank is subject to the emission limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected tanks not being subject to the New Source Performance Standards (NSPS) for storage tanks, 40 CFR 60, Subparts K, Ka or Kb, because the affected tanks were constructed prior to applicability dates, do not meet the volume requirement to be subject, or the material stored does not meet the vapor pressure requirement to be subject, or a combination of the above.
- b. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.119 because none of the tanks store materials for which the vapor pressure is greater than 0.5 psia and the tank capacity is greater than 40,000 gallons.
- c. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.121 because the materials stored are not volatile petroleum liquids and the vapor pressure/capacity requirements are not met.

d. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.122(b) because none of the tanks store materials with a vapor pressure greater than 2.5 psia. However, most of the storage tanks that are not vented to a control device have a submerged loading pipe.

7.1.5 Control Requirements

The tanks that are vented to an oxidizer or scrubber must continue to be vented to those control devices. The requirements for the oxidizer are described in Condition 7.3.5.

7.1.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.1.7 Operating Requirements

None

7.1.8 Inspection Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected tank to demonstrate compliance with Conditions 5.5.1 and Condition 7.1.5.a, pursuant to Section 39.5(7)(b) of the Act: Therefore recordkeeping to verify that operation is below that rate is not required.

Operation at the design capacity of the systems would not result in emission over 8 lb/hr due to the low vapor pressure of the materials involved.

7.1.10 Reporting Requirements

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

Storage of any material that would make the tank subject to a standard from which it is currently exempt (see Condition 7.1.4.a through d).

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the storage tanks 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 contents of the tanks may be changed provided that the vapor pressure of the material stored does not impose a new standard which the tank was not previously subject.

7.1.12 Compliance Procedures

Emissions may be calculated by a computer program such as Plantware⁷. For tanks the underlying program for Plantware⁷ shall be the USEPA tanks program or AP-42 emission factors for tanks.

7.2 Unit Emulsion Plant
Control None

7.2.1 Description

The process has several premix tanks where raw materials are mixed in the proper ratio. These materials are then sent to either of two reactors. After the reaction is complete the material is sent to cool down tanks. Blending and filtering may also occur. The product is stored as a water emulsion. The raw material and product storage tanks are listed in Section 7.1.

7.2.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
M-501, M-502 and M-503	Three Process Tanks	None
R-101 and R-102	Two Reactors	None
M-505 and M-510	Two Cool Down Tanks	None

7.2.3 Applicability Provisions and Applicable Regulations

- a. An "affected tank or reactor" for the purpose of these unit specific conditions, is a tank or reactor that is listed in Condition 7.2.2 and subject to 35 IAC 218 Subparts G and V. It is subject to Subpart V because it is in one of the specific SIC codes mentioned as applicable. Although subject to the rule, the emissions are low enough not to require implementation of the control requirements of either Subpart G or V. See Condition 7.2.6.
- b. Emissions of organic material from any emission unit shall not exceed 8 lb/hr. If no odor nuisance exists, the limitation shall apply only to photochemically reactive material. Emissions in excess of 8 lb/hr are allowable if emissions are controlled by 85%. (35 IAC 218.301 and 218.302)

7.2.4 Non-Applicability of Regulations of Concern

- a. 35 IAC 218 Subpart RR applies to organic chemical manufacturing processes. However, 35 IAC 218.960 states that a process is only subject to Subpart RR if not subject to Subpart V, and this process is subject to Subpart V.

- b. While as a process unit this equipment may be subject to 35 IAC 212.322, the materials involved are liquids and do not emit PM.
- c. While the product manufactured in this equipment is a polymer, the process is not subject to 40 CFR 60 Subpart DDD (Polymer Manufacturing) because it is not one of the specific polymers listed in the applicability section (40 CFR 60.560).

7.2.5 Control Requirements

None

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected tanks and reactors are subject to the following:

Uncontrolled total annual mass emissions of VOM from the batch process train, expressed as lb/yr, shall not exceed 30,000 lb/yr or the control requirements of 35 IAC 218.501 will apply. (35 IAC 218.500(c))

7.2.7 Operating Requirements

None

7.2.8 Inspection Requirements

None

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected tanks and reactors to demonstrate compliance with Conditions 5.5.1 and Condition 7.2.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Every owner or operator of a de minimis single unit operation or batch process train exempt under Section 218.500(c)(1) or (c)(2) of Subpart V shall keep records of the uncontrolled total annual mass emissions for any de minimis single unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations, any measurements made in accordance

with Section 218.503 of Subpart V, and the potential number of batch cycles per year. (35 IAC 218.505(a))

- b. Every owner or operator of a single unit operation exempt under Section 218.500(b)(3) or (d) of Subpart V shall keep the following records:
 - i. The uncontrolled total annual mass emissions and documentation verifying these values or measurements. The documentation shall include any engineering calculations, any measurements made in accordance with Section 218.503 of Subpart V, and the potential number of batch cycles per year.
 - ii. The average flow rate in SCFM and documentation verifying this value. (35 IAC 218.505(b))
- c. Every owner or operator of a single unit operation claiming a vent stream concentration exemption level, as set forth in Section 218.500(d)(1) of Subpart V, shall maintain records to indicate the vent stream concentration is less than or equal to 500 ppmv. (35 IAC 218.505(d))

7.2.10 Reporting Requirements

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

- a. The Permittee shall notify the Illinois EPA in writing if the vent stream concentration at any time equals or exceeds 500 ppmv, within 60 days after such event. Such notification shall include a copy of all records of such event. (35 IAC 218.505(d))
- b. The Permittee shall notify the Illinois EPA in writing if the uncontrolled total annual mass emissions from de minimis single unit operation or batch process train exceed the threshold in Section 218.500(c)(1) or (c)(2) of this Subpart, respectively, within 60 days after the event occurs. Such notification shall include a copy of all records of such event. (35 IAC 218.505(g))

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to reactor ingredients 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:

This process allows variations in the raw materials. However, all products must use some water in the reactor and the product must be a water emulsion.

7.2.12 Compliance Procedures

Estimates of uncontrolled emissions from tanks and reactors must be done using the procedures described in 35 IAC 218.502. A computer program such as Plantware⁷ may be used to make the calculations but the underlying basis for the program must be 35 IAC 218.502.

7.3 Unit Polyester Plant
Control Primary and Backup Afterburners (Thermal Oxidizers)

7.3.1 Description

The polyester resin manufacturing process is a condensation reaction occurring in four reactors. In the four thinning tanks a cross link-able monomer, usually styrene, is added to a polymer. All reactors and tanks (including the storage tanks for polyester products listed in Section 7.1) are vented to a primary thermal oxidizer or a backup Hirt unit in the event the primary oxidizer fails.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
M-1 and M-10	Two Half Ester Tanks	Thermal Oxidizer or HTO-Backup Thermal Oxidizer
R-1 through R-4	Four Reactors	Thermal Oxidizer or HTO-Backup Thermal Oxidizer
M-101, 102, 104, 107	Four Thin Tanks	Thermal Oxidizer or HTO-Backup Thermal Oxidizer
M-103, 105, 108, 109, S-570 through 572	Blend Tanks	Thermal Oxidizer or HTO-Backup Thermal Oxidizer

7.3.3 Applicability Provisions and Applicable Regulations

- a. An "affected tank or reactor" for the purpose of these unit specific conditions, is a tank or reactor that is listed in Condition 7.3.2 and subject to 35 IAC 218 Subparts G and V. The Permittee complies by use of the thermal oxidizer, which is required to reduce uncontrolled VOM emissions by 90% or to 20 ppmv, per batch cycle. (35 IAC 218.501(b)).
- b. Emissions of organic material from any emission unit shall not exceed 8 lb/hr. If no odor nuisance exists, the limitation shall apply only to photochemically reactive material. Emissions in excess of 8 lb/hr are allowable if emissions are controlled by 85%. The Permittee complies with the control equipment. (35 IAC 218.301 and 218.302)

7.3.4 Non-Applicability of Regulations of Concern

- a. 35 IAC 218 Subpart RR applies to organic chemical manufacturing processes. However, 35 IAC 218.960(a) states that a process is only subject to Subpart RR if not subject to Subpart V, and this process is subject to Subpart V.
- b. While as a process unit this equipment may be subject to 35 IAC 212.321, the materials involved are liquids and do not emit PM.
- c. While the product manufactured in this equipment is a polymer, the process is not subject to 40 CFR 60 Subpart DDD (Polymer Manufacturing) because it is not one of the specific polymers listed in the applicability section (40 CFR 60.560).

7.3.5 Control Requirements

- a. As stated in Condition 7.3.3, the applicable Part 218 rule requires 90% control or reduce emissions to 20 ppmv of VOM. When an additional reactor and thin tanks were added in construction permit 94070065, the Permittee voluntarily agreed to accept a condition requiring the thermal oxidizer to operate at 95% destruction efficiency.
- b. The primary thermal oxidizer combustion shall be preheated to the manufacturer's recommended temperature but not lower than 1400EF, before the resin process is begun; this temperature shall be maintained during the resin process. This latter requirement also applies to the secondary oxidizer when the primary oxidizer is out of service. The preheating requirement does not apply to the secondary oxidizer if the primary oxidizer malfunctions.
- c. Notwithstanding 35 IAC 218.107, seasonal shutdown of the thermal oxidizer from November 1 to April 1 of the following year is not allowed except for maintenance requirements.
- d. The batch polyester plants may continue to operate during malfunction or breakdown or maintenance requirements of the principal control device, the fume incinerator (H-102), provided that the Hirt thermal oxidizer (HTO) is used as the control device during the malfunction and breakdown. The following

requirements for use of the HTO are hereby established:

- i. The HTO shall be subjected to a detailed inspection prior to its initial use and verified to be ready for operation on a regular schedule, but not less than semi-annual inspections of the HTO shall be made.
- ii. When operated as the control device the minimum operating temperature of the HTO shall be 1400°F and be operated to achieve a 95% reduction in emissions.
- iii. All vents that are ducted to H-102 shall be ducted to the HTO.
- v. The HTO shall begin operating within 30 minutes of malfunction of H-102 if H-102 appears disabled. The time period may be extended to 60 minutes if H-102 appears likely to restart. During these time periods no new batches may begin and appropriate steps taken to reduce emissions for batches in process.

7.3.6 Emission and Operational Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected tanks and reactors are subject to the following:

Emissions of volatile organic material (VOM) to and from the thermal oxidizer attributable to reactor R-1 and thin tank M-104 and the four reactor systems (conversion plus three existing polyester resin systems) combined shall not exceed the following [T1]:

Reactor R-1 and thin tank M-104.

	VOM to Oxidizer ^a		VOM Emissions From Oxidizer ^b	
	(lb/mo)	(ton/yr)	(lb/mo)	(ton/yr)
R-1	40,000	108.0	2,000	5.4
M-104	400	2.0	20	0.1

Four reactors combined and associated thin tanks.

	200,000	840	10000	42
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- ^a Calculated using a material balance for representative batches. Batch size and process time vary but estimate for R-1 based on uncontrolled emissions from a representative batch of 320 to 360 lb/batch from reactor and 60 lb/batch from thin down tank and 45-50 batches per month. These batch values are typical and not limits.
- ^b Calculated using required control efficiency of 95% per Condition 7.3.5.

The above limitations were established in Construction Permit 94070065 pursuant to 35 IAC Part 203. These limits ensure that the construction/modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.3.7 Testing Requirements

Within 120 days of written notice from the Illinois EPA, the destruction efficiency of the afterburner shall be determined using appropriate test methodology.

7.3.8 Monitoring Requirements

The thermal oxidizers shall each be equipped with a continuous temperature indicator and strip chart recorder or disk storage for the thermal oxidizer combustion chamber temperature pursuant to 35 IAC 218.105(d)(2)(A).

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 each affected tank or reactor to demonstrate compliance with Conditions 5.5.1 and conditions 7.3.5 and 7.3.6, pursuant to Section 39.5(7)(b) of the Act:

- a. For each particular type of resin and batch size produced, the Permittee shall maintain records of the following:
 - i. Weight of raw materials and products per batch.
 - ii. Theoretical amounts of water of reaction and glycol reacted based on stoichiometry of the particular type of resin.

- iii. Estimated VOM vented to the thermal oxidizer, with supporting calculation (standardized calculations for fixed batch sizes may be used).
- b. The Permittee shall maintain daily records of the following items, and such other items as may be appropriate to allow the Illinois EPA to review compliance with the limits in Conditions 7.3.5 and 7.3.6.
 - i. Identification and size of each batch completed, with the amount of VOM vented to the thermal oxidizer as determined by previous batches per Condition 7.3.6.
 - ii. Thermal oxidizer combustion chamber temperature, per 35 IAC 218.505(c).
 - iii. Log of operating time (e.g. batch sheets) for capture system, thermal oxidizer, combustion chamber temperature monitor and associated reactors and thin tanks pursuant to 35 IAC 218.505.
 - iv. A maintenance log for the capture system, thermal oxidizer, and combustion chamber temperature monitor detailing all routine and non-routine maintenance performed including dates and duration of outages and when use of the backup thermal oxidizer is required pursuant to 35 IAC 218.505.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected tank or reactor 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. If the HTO is used as the control device in place of H-102 for over 8 hours, the Illinois EPA's Regional Office in Maywood shall be notified.
- b. The Annual Report submitted by the Permittee in fulfillment of 35 IAC Part 254 and ' 201.302 shall include a statement of total hours that the HTO was used and if over 100 hours for the year, the dates and hours it was used.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the tanks and reactors 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:

Different raw materials may be used as long as emissions to the control device do not exceed the limit in Condition 7.3.6.

7.3.12 Compliance Procedures

Operation with the thermal oxidizer as required by Condition 7.3.5 assures compliance. Annual VOM emissions are uncontrolled emissions times $(1-DE/100)$, where DE equals the destruction efficiency of the thermal oxidizer from the most recent emission test. As of the date of issuance of this permit, the destruction efficiency is 98.6%. A computer program such as Plantware⁷ may be used to calculate emissions.

The NO_x emissions from the thermal oxidizer shall be calculated using an emission factor of 0.1 lb per million Btu. Btus are determined from the heat value of the emissions being destructed as well as the supplemental natural gas.

7.4 Unit Polyurethane Adhesive Manufacturing Process
Control Scrubber and Enclosed Flare

7.4.1 Description

In the polyurethane process raw materials called polyols (single materials or mixtures) are weighed and mixed in a blend tank. The mixture is then fed into a reactor with isocyanates. Heat from the process is removed by a reflux condenser. When the reaction is complete a vacuum is then pulled on the reactor. The vacuum and reflux condensers are vented to an air pollution control device (currently an enclosed flare). Toluene is used to clean the blend tanks and reactors.

A wet scrubber (called a rotoclone 210) was formerly used as a control device but now is only a backup unit if the flare malfunctions. The rotoclone only removes isocyanate (a HAP) and not VOM.

The spensol process is a polymerization reaction. Subsequent thinning of the complete polymer is performed in a highly agitated dispersion vessel. All vessels are cleaned with N-methyl pyrrolidone (NMP) and water.

A wet scrubber (called a rotoclone WSC-510) is being used as the control device for the spensol process. The rotoclone removes isocyanates and NMP.

7.4.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
T-204 thru T-207	Four Blend Tanks with Reflux Condensers	Enclosed Flare or as backup Rotoclone (WSC-210)
R-301 thru R-305	Five Reactors with Reflux Condensers	Enclosed Flare or as backup Rotoclone (WSC-210)
T-408, T-409, T-410	Shinto Process Units: Two Dispersion Tanks and MIBK Recovery Tank	Enclosed Flare or as backup Rotoclone (WCS-510)
T-407A	Dispersion Tank and Reflux Condenser Part of Spensol Process	Rotoclone (WSC-510)

Emission Unit	Description	Emission Control Equipment
R-307, T-417	Two Reactors and Two Reflux Condensers Part of Spensol and Polyester Polyol Process	Rotoclone (WSC-510) or Enclosed Flare

7.4.3 Applicability Provisions and Applicable Regulations

- a. An "affected tank or reactor" for the purpose of these unit specific conditions in a tank or reactor that is listed in Condition 7.4.2 and subject to 35 IAC 218 Subpart G and RR. Although subject to Subpart RR, this process does not have to meet the control requirements because the potential to emit VOM is under 25 tons/yr. However, the Permittee does use a flare as a control device to minimize emissions of one HAP material.
- b. Emissions of organic material from any emissions unit shall not exceed 8 lb/hr. If no odor nuisance exists, the limitation shall apply only to photochemically reactive material. Emissions in excess of 8 lb/hr are allowable if emissions are controlled by 85%. (35 IAC 218.301 and 218.302)

7.4.4 Non-Applicability of Regulations of Concern

- a. 35 IAC 218 Subpart V applies to batch process with specific SIC codes. This process (SIC 2891) is not in one of those specific SIC codes.
- b. While as a process unit this equipment may be subject to 35 IAC 212.321, the materials involved are liquids and do not emit any PM.
- c. While the product manufactured in this equipment is a polymer, the process is not subject to 40 CFR 60 Subpart DDD (Polymer Manufacturing) because it is not one of the specific polymers listed in the applicability section (40 CFR 60.560).

7.4.5 Control Requirements

The enclosed flare shall be operated to capture and destruct VOM from the equipment listed in Condition 7.4.2. Minimum destruction efficiency shall be 90%.

7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected tanks and reactors are subject to the following:

- a. Emissions of VOM from the enclosed flare shall not exceed 0.4 ton/mo and 3.2 ton/yr. This limit is a combination of limits from the original reactors and from an additional reactor.
- b. Emissions of VOM from cleanup (excluding the spensol process) shall not exceed 0.1 ton/mo and 1.2 ton/yr. Emissions shall be determined by engineering calculations and/or a computer program such as Plantware®
- c. Emissions of VOM from the wet scrubber (WSC-510) which controls the spensol process shall not exceed 0.2 ton/mo and 2.0 ton/yr.

The above limitations were established in Construction Permits 94110091 and 96090041 pursuant to 35 IAC Part 203. These limits ensure that the construction/modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.4.7 Operating Requirements

None

7.4.8 Monitoring Requirements

The enclosed flare shall be equipped with a device for verification of a flame in the enclosed flare.

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 each affected tank and reactor to demonstrate compliance with Conditions 5.5.1 and 7.4.5 and 7.4.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Raw material throughputs (lb/mo).
- b. Proper operation of flare to meet destruction efficiency.

- c. Calculation of emissions to and from flare.
- d. Frequency of use of foam over tank.
- e. Material balance calculations for cleanup solvents, direct measurement, or other approved engineering calculations.
- f. VOM emissions.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected tank or reactor 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. Exceedance of annual emission limits.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the polyurethane process 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:

Different types of polyurethane adhesives from those described in the current application may be produced provided that emission limits in Condition 7.4.6 are met.

7.4.12 Compliance Procedures

Standard engineering calculation for uncontrolled emissions and 90% control by enclosed flare. A computer program such as Plantware⁷ may be used to perform the calculations.

7.5 Unit Boilers and Oil Heater
Control None

7.5.1 Description

List in Condition 7.5.2 is self-explanatory except oil heater means oil is the medium that is heated and not oil as a fuel.

7.5.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Maximum Firing Rate	Date Constructed	Emission Control Equipment
Boiler No. 1	53 mmBtu/hr, gas only	Pre-1972	None
Boiler No. 2	75 mmBtu/hr, gas with oil backup	1976	None
Oil Heater	28.7 mmBtu/hr, gas only	1990	None

7.5.3 Applicability Provisions and Applicable Regulations

- a. An affected boiler for the purpose of these unit specific condition is a steam generating unit (or other heat transfer medium) that is fired with natural gas with a heat input capacity less than 100 mmBtu/hr but greater than 10 mmBtu/hr and listed in Condition 7.5.2. Oil is used as a backup fuel in one of the affected units.
- b. The oil heater is subject to 40 CFR 60 Subpart Dc because it was constructed after June 9, 1989. However, it does not fire fuel oil and is only subject to recordkeeping requirements.
- c. Each affected boiler or heater is subject to the opacity limits identified in Condition 5.2.2.b.
- d. The emissions of particulate matter (PM) from affected boiler No. 2 only into the atmosphere in any one hour period shall not exceed 0.15 kg/MW-hr (0.10 lb/mmBtu) of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (35 IAC 212.206).
- e. The emission of carbon monoxide (CO) into the atmosphere from any affected boiler or heater with actual heat input greater than 2.9 MW (10 mmBtu/hr)

shall not exceed 200 ppm, corrected to 50 percent excess air. (35 IAC 216.121)

- f. The emission of sulfur dioxide (SO₂) into the atmosphere in any one hour period from affected boiler No. 2 burning liquid fuel exclusively shall not exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lb/mmBtu) (35 IAC 214.161(b)).

7.5.4 Non-Applicability of Regulations of Concern

- a. Boilers 1 and 2 are not subject to the NSPS, 40 CFR 60 Subpart Dc because they were constructed before the applicable dates.
- b. Each affected boiler or heater is not subject to 35 IAC 217.141, because the actual heat input of the affected boiler is less than 73.2 MW (250 mmBtu/hr).
- c. Pursuant to 35 IAC 218.303, each affected boiler or heater, i.e., fuel combustion emission unit, is not subject to 35 IAC 218.301, Use of Organic Material.
- d. There are no applicable requirements for particulate matter or sulfur dioxide for affected boilers or the heater when firing natural gas.

7.5.5 Operational and Production Limits and Work Practices

- a.
 - i. Boiler No. 1 and the oil heaters shall only be fired by natural gas.
 - ii. Boiler No. 2 shall only be fired by natural gas or #6 fuel oil as the fuels.
- b. The Permittee shall not use residual fuel oil (Grades No. 4, 5 and 6 fuels) in the affected boiler No. 2 with sulfur content greater than that given by the formula:

Maximum Wt percent sulfur = (0.00005) x (Gross heating value of oil, Btu/lb).
- c. Long-term firing rate of the boilers shall not exceed the values listed in Condition 7.5.2.

7.5.6 Emission Limitations

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

Emission of NO_x and CO from the oil heater shall not exceed the following [T1]:

NO _x		CO	
<u>(lb/hr)</u>	<u>(ton/yr)</u>	<u>(lb/hr)</u>	<u>(ton/yr)</u>
4.02	17.55	1.15	5.01

The above limitations were established in Construction Permit 90110005, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

There are no specific emission limitations for Boilers 1 and 2, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirement

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 each affected boiler or heater to demonstrate compliance with Conditions 5.5.1 and Condition 7.5.5, pursuant to Section 39.5(7)(b) of the Act:

- a. The maximum sulfur content (in Wt. %) for each shipment of residual fuel oil used in Boiler No. 2.
- b. Annual aggregate NO_x, PM, SO₂, and VOM emissions from each affected boiler, based on fuel consumption and the applicable emission factors, with supporting calculations.

- c. Records demonstrating that no fuel oil was burned in the oil heater.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected boiler or heater 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. Notification within 60 days of operation of an affected boiler that may not have been compliance with the opacity limitations in Condition 5.2.2(b), with a copy of such record for each incident.
- b. If there is an exceedance of sulfur content of distillate fuel oil in excess of the limit specified in condition 7.5.5, the Permittee shall submit a report within 30 days after receipt of a noncompliant shipment of distillate fuel oil.
- c. Emission of NO_x, PM, SO₂, or VOM from the affected boilers in excess of the limits specified in Condition 5.5.1 based on the current month's records plus the preceding 11 months within 30 days of such an occurrence.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance with Condition 7.5.3.e is demonstrated under inherent operating conditions of an affected boiler or heater, so that no compliance procedures are set in this permit addressing this requirement.
- b. Compliance with Condition 7.5.3.f is demonstrated under inherent operating conditions of affected boiler fired by distillate oil with a sulfur content meeting the specification of Condition 7.5.5.b, so that no compliance procedures are set in this permit addressing this regulation.
- c. Compliance with the emission limits in Conditions 5.5.1 and 5.5.3 shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

- ii. Emission from the boilers burning natural gas shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factor (lb/10⁶ ft³)</u>
PM	7.5
SO ₂	0.6
VOM	2.8
NO _x	140.0

These are the emission factors for uncontrolled natural gas combustion in small industrial boilers (10 - <100 mmBtu/hr), Tables 1.4-1, 1.4-2, and 1.4-3, AP-42, Volume I, Supplement F, October 1996. VOM emission factor based on Total Organic Carbon (TOC) factor corrected for 52% methane.

Boiler Emission (lb) = natural gas consumed multiplied by the appropriate emission factor.

- ii. Emissions from the affected boilers burning residual fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	12.4
NO _x	55.0
SO ₂	1575
VOM	1.1

These are the emission factors for uncontrolled residual fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1 and 1.3-2, AP-42, Volume I, Supplement F, October, 1996. AS@ indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Boiler Emissions (lb) = residual fuel oil consumed (gallons) multiplied by the appropriate emission factor.

- iii. Total emissions for each pollutant are to be determined by combining the results of

Conditions 7.2.12(i) and (ii) for all affected boilers.

- iv. A computer program such as Plantware⁷ may be used to perform the calculations, but must be based on the above emission factors.

7.6 Unit Wastewater Treatment System

7.6.1 Description

The wastewater treatment operations perform secondary treatment on process water that is generated by the reactor trains, boiler blow-down, production floor drains, and outside sewer drainage lines. Approximately 110,000 gallons per day of wastewater is treated and discharged by this operations system.

7.6.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
WTS	Wastewater Treatment System	None

7.6.3 Applicability Provisions and Applicable Regulations

- a. The Wastewater Treatment System, is an "affected wastewater treatment system" for the purpose of these unit-specific conditions.
- b. 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 wastewater treatment operations are not subject to the NESHAP for Organic Hazardous Air Pollutants from Synthetic Organic Chemical Manufacturing Industry Process Vents, Storage Vessels, Transfer Operations, and Wastewater, 40 CFR 63, Subpart G, because the source does not manufacture as a primary product one or more of the chemicals listed in table 1 of 40 CFR 63 Subpart F.
- b. The affected wastewater treatment operations are not subject to the NSPS for Sewage Treatment Plants, 40 CFR 60 Subpart O, because there is no incinerator that combusts wastes containing more than 10 percent sewage sludge (dry basis) produced by municipal sewage treatment plants, or an incinerator that charges more than 1000 kg (2205 lb) per day municipal sewage sludge (dry basis) associated with these affected wastewater treatment operations.

- c. The affected wastewater treatment operations are not subject to the NSPS for VOC Emissions From Petroleum Refinery Wastewater Systems, 40 CFR 60 Subpart QQQ, because the affected wastewater treatment operations are not located at a petroleum refinery.
- d. The affected wastewater treatment operations are not subject to 35 IAC 218.443, Wastewater (Oil/Water) Separator, because the affected wastewater treatment operations are not located at a petroleum refinery.
- e. This permit is issued based on the affected wastewater treatment operations not being subject to 35 IAC 218 Subpart TT, Other Emission Units, because the affected wastewater treatment operations do not meet the applicability of 35 IAC 218.980(a). In particular, the affected wastewater treatment operations have maximum theoretical emissions of VOM that are less than 90.7 Mg (100 tons) per year.
- f. No person shall use any single or multiple compartment effluent water separator which receives effluent water containing 757 l/day (200 gal/day) or more of organic material from any equipment processing, refining, treating, storing or handling organic material unless such effluent water separator is equipped with air pollution control equipment capable of reducing by 85 percent or more the uncontrolled organic material emitted to the atmosphere. Exception: If no odor nuisance exists the limitations of this subsection shall not apply if the vapor pressure of the organic material is below 17.24 kPa (2.5 psia) at 294.3EK (70EF) [35 IAC 218.141(a)]. This rule does not apply because the wastewater treatment system does not have separators to remove organic material and the vapor pressure of organic material that could be in the system are less than 2.5 psia.

7.6.5 Operational and Production Limits and Work Practices

None

7.6.6 Emission Limitations

None

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 5.6, the Permittee shall maintain records of the following items for each affected wastewater treatment operations to demonstrate compliance with Conditions 5.5.1 and 7.2.3, pursuant to Section 39.5(7)(b) of the Act:

- a. The amount of wastewater treated, gal/day and gal/yr; and
- b. Monthly and annual aggregate VOM emissions from the affected wastewater treatment operations shall be maintained, based on the applicable emission factors and formulas, with supporting calculations.

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected wastewater treatment operations 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:

Upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 IAC 218 Subpart TT shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements [35 IAC 218.990].

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 7.2.9 and the emission factors and formulas listed below:

To determine compliance with Conditions 5.5.1 and estimating VOM emissions from the affected wastewater treatment unit the emission factors and formulas in Table 4.3-1 of the AP-42, Volume I, Supplement F, January, 1995 are acceptable.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

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

This permit shield does not extend to applicable requirements which are promulgated after August 27, 1999 (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 without applying for or obtaining an

amendment to this permit, provided that the changes do not constitute a modification under Title I of the CAA, emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change and 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 [Section 39.5(12)(a) of the Act]. This notice shall:

- a. Describe the physical or operational change;
- b. Identify the schedule for implementing the physical or operational change;
- c. 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;
- d. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
- e. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

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

8.6 Reporting Requirements

8.6.1 Monitoring Reports

A report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

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

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

8.6.2 Test Notifications

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

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

8.6.3 Test Reports

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

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

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
 - i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
Eisenhower Tower
1701 South First Avenue
Maywood, Illinois 60153

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

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

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

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

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

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

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

9.2.2 Duty to Maintain Equipment

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

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

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

9.2.5 Duty to Pay Fees

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

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(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
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source.

9.4 Obligation to Comply With Other Requirements

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

9.5 Liability

9.5.1 Title

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

9.5.2 Liability of Permittee

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

9.5.3 Structural Stability

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

9.5.4 Illinois EPA Liability

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

9.5.5 Property Rights

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

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

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

9.6.2 Records of Changes in Operation

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

9.6.3 Retention of Records

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

9.7 Annual Emissions Report

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

9.8 Requirements for Compliance Certification

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

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

9.9 Certification

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

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

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

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

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

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

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

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

9.12.3 Inaccurate Application

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

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee

shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(l), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 List of Tanks

Tank No.	Process	Type of Material	HAP	Year Built	Volume (Gal)	Vapor Pressure (psia)	Submerged Loading Pipe
S-501	Emulsion	Raw Material	Yes	Pre-1972	32,000	1.8	Yes
S-514	Emulsion	Raw Material	Yes	1975	32,000	1.8	Yes
S-517	Emulsion	Raw Material	Yes	1975	20,000	0.7	Yes
S-506	Emulsion	Product	No	Pre-1972	20,000	0.4	Yes
S-507	Emulsion	Product	No	Pre-1972	20,000	0.4	Yes
S-508	Emulsion	Product	No	Pre-1972	20,000	0.4	Yes
S-509	Emulsion	Product	No	Pre-1972	20,000	0.4	Yes
S-510	Emulsion	Product	No	April, 1973	20,000	0.4	Yes
S-511	Emulsion	Product	No	April, 1973	20,000	0.4	Yes
S-512	Emulsion	Product	No	April, 1973	20,000	0.4	Yes
S-513	Emulsion	Product	No	April, 1973	20,000	0.4	Yes
S-520	Emulsion	Product	No	Nov., 1977	20,000	0.4	Yes
S-521	Emulsion	Product	No	Nov., 1977	20,000	0.4	Yes
S-522	Emulsion	Product	No	Nov., 1977	20,000	0.4	Yes
S-523	Emulsion	Product	No	Nov., 1977	20,000	0.4	Yes
S-524	Emulsion	Product	No	March, 1982	20,000	0.4	Yes
S-525	Emulsion	Product	No	March, 1982	20,000	0.4	Yes
S-526	Emulsion	Product	No	March, 1982	20,000	0.4	Yes
S-527	Emulsion	Product	No	March, 1982	20,000	0.4	Yes
S-580	Polyester	Raw Material	Yes	Feb., 1975	40,000	0.6 ^a	Yes
S-584	Polyester	Raw Material	Yes	Dec., 1974	20,000	0.2	Yes
S-585	Polyester	Raw Material	Yes	Dec., 1974	40,000	0.2	Yes
S-587	Polyester	Raw Material	Yes	Jan., 1975	40,000	0.2	Yes
S-589	Polyester	Raw Material	Yes	Pre-1972	46,500	0.2 ^a	Yes
M-4	Polyester	Product	No	Oct., 1974	50,000	0.2	No ^b

Tank No.	Process	Type of Material	HAP	Year Built	Volume (Gal)	Vapor Pressure (psia)	Submerged Loading Pipe
M-5	Polyester	Product	No	Oct., 1974	50,000	0.2	No ^b
M-6	Polyester	Product	No	Oct., 1974	50,000	0.2	No ^b
M-7	Polyester	Product	No	Oct., 1974	50,000	0.2	No ^b
M-11	Polyester	Product	No	Nov., 1986	23,000	0.2	No ^b
M-12	Polyester	Product	No	Nov., 1986	23,000	0.2	No ^b
M-13	Polyester	Product	No	Sept., 1986	27,000	0.2	No ^b
M-14	Polyester	Product	No	Sept., 1986	27,000	0.2	No ^b
T-201	Polyurethane	Raw Material	Yes	April, 1995	8,000	0.5	Yes
T-217	Polyurethane	Weigh Tank	No	1997	600	0.2	No ^c
T-171	Polyurethane	Raw Material	Yes	1997	8,000	0.01	No ^c
T-172	Polyurethane	Raw Material	Yes	1997	8,000	0.01	No ^c
T-173	Polyurethane	Raw Material	No	1997	7,000	0.01	No
T-174	Polyurethane	Raw Material	Yes	1997	8,000	0.01	No ^c
T-152	Polyurethane	Cleaning Solvent	No	1997	6,000	0.02	No
T-153	Polyurethane	Cleaning Solvent	No	1997	8,000	0.02	No
T-501	Polyurethane	Product	No	1997	7,000	0.2	No ^c
T-502	Polyurethane	Product	No	1997	7,000	0.2	No ^c
T-503	Polyurethane	Product	No	1997	7,000	0.2	No ^c
T-504	Polyurethane	Product	No	1997	7,000	0.2	No ^c

^a Vapor pressure at elevated temperature. Others are vapor pressure at 70EF although ambient may be above 70EF.

^b Vented to oxidizer

^c Vented to scrubber

10.2 Attachment 2 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: _____

DGP:psj

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
1021 NORTH GRAND AVENUE EAST
P.O BOX 19506
SPRINGFIELD, ILLINOIS
AUGUST, 1999

PROJECT SUMMARY
FOR PROPOSED ISSUANCE OF A
CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
FOR REICHHOLD, INC.

Applicant:

Name: Reichhold, Inc.
Address: 6350 East Collins Road
Morris, Illinois 60450
Contact Person: Ron Snook

Source:

Source: Chemical Manufacturing
Source Location: 6350 East Collins Road
Morris, Illinois 60450
Plant Name: Reichhold, Inc.
Identification Number: 063806AAA
Application Number: 96030183

Significant Dates:

Application Received: April 5, 1996
Comment Period Begins: August 27, 1999
Comment Period Ends: September 26, 1999

Illinois EPA Contacts:

Permit Section: Dan Punzak
1021 North Grand Avenue East
P.O. Box 19506
Springfield, Illinois 62794-9206
Telephone: 217/782-2113
TDD: 217/782-9143

Field Operations Section: Emilio Salis
1701 First Avenue
Maywood, Illinois 60153
Telephone: 708/338-7900

DGP:jar\8

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. Unlike this source's current state operating permit(s), the conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

The Reichhold Chemicals Plant is located at 6350 East Collins Road in Morris. The source manufactures three classes of chemicals: latex emulsions, polyester resins and polyurethane adhesives. In addition, the plant operates boilers/heaters to supply heat for the processes.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
See Attachment 1	Storage Tanks		See Attachment 1
M-501, M-502, M-503	Blend Tanks	1970/1976	None
R-101, R-102	Reactors	1970/1976	None
M-505, M-510	Cool Down Tanks	1972/1977	None
M-1, M-10	Half Ester Tanks	1986/1987	Thermal Oxidizer
R-1, R-2, R-3, R-4	Reactors	1987/1994	Thermal Oxidizer
M-101, M-102, M-104, M-107	Thin Tanks	1974	Thermal Oxidizer
M-103, 105, 108, 109, S-570 through S-572	Seven Blend Tanks	1974/1986	Thermal Oxidizer
T-204 through T-207	Blend Tanks	1995	Enclosed Flare
R-301 through R-305	Reactors	1995	Enclosed Flare
T-408, 409, 410	Shinto Process Tanks		Rotoclone
R-307, T-407A	Reactor and Dispersion Tank	1997	Rotoclone
	Boiler No. 1	1970	None
	Boiler No. 2	1976	None
	Oil Heater	1990	None
	Wastewater Treatment System	1970	None

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions. The proposed permit limits the maximum annual emissions from significant emission units at the source. Insignificant activities at this source are not accounted for in the source limit.

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

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	183.1
Sulfur Dioxide (SO ₂)	86.2
Particulate Matter (PM)	8.8
Nitrogen Oxides (NO _x)	103.5
HAP, not included in VOM or PM	0
TOTAL	381.6

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

A CAAPP permit contains conditions listing the applicable state and federal air pollution control regulations that apply to a source. The permit conditions also establish emission limits 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 to demonstrate that the source is operating in accordance with the requirements of the permit.

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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