

FINAL DRAFT/PROPOSED CAAPP PERMIT  
Equistar Chemicals, LP  
I.D. No.: 041804AAB  
Application No.: 96020121  
June 5, 2001

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT  
and  
TITLE I PERMIT<sup>1</sup>

PERMITTEE

Equistar Chemicals, LP  
Attn: Chris Bland  
624 East U.S. Highway 36  
Tuscola, Illinois 61953

Application No.: 96020121                      I.D. No.: 041804AAB  
Applicant's Designation:                      Date Received: February 28, 1996  
Operation of: Chemical Manufacturing Plant  
Date Issued: !TO BE DETERMINED!                      Expiration Date<sup>2</sup>: !DATE!  
Source Location: 625 East U.S. Highway 36, Tuscola, Douglas County  
Responsible Official: Richard Purgason, Site Manager

This permit is hereby granted to the above-designated Permittee to OPERATE a chemical manufacturing plant, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

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

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

DES:DGP:psj

cc: Illinois EPA, FOS, Region 3

<sup>1</sup> This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

<sup>2</sup> Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Equistar Chemicals, LP  
625 East U.S. Highway 36  
Tuscola, Illinois 61953  
217/253-3311

I.D. No.: 041804AAB  
Standard Industrial Classification: 2869, Organic Chemical  
Manufacturing  
3087, Custom Compounding of  
Purchased Plastics  
Resins

1.2 Owner/Parent Company

Equistar Chemicals, LP  
1221 McKinney  
Houston, Texas 77252

1.3 Operator

Equistar Chemicals, LP  
625 East U.S. Highway 36  
Tuscola, Illinois 61953

Chris Bland  
217/253-1575

1.4 General Source Description

The Equistar Chemicals, LP site is located at 625 East U.S. Highway 36 in Tuscola. The source manufactures ethanol, diethyl ether and powdered polymer from polyethylene pellets. In addition, the source compounds two types of polyethylene through an extruder, and operates a wastewater treatment plant.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
cu in	Cubic inch
°F	degrees Fahrenheit
gal	Gallon
HAP	Hazardous Air Pollutant
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
Kg	Kilogram
kW	kilowatts
lb	pound
LDAR	Leak Detection and Repair
min	Minute
Mg	Megagram
mmgal	Million gallons
mmBtu	Million British thermal units
MSDU	Molecular Sieve Dehydration Unit
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM <sub>10</sub>	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
PWR	Process weight rate

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RMP	Risk Management Plan
scm	Standard cubic meters
SO <sub>2</sub>	Sulfur Dioxide
T	Ton
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material
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:

Gasoline Tank<sup>a</sup> DR-801 (250 gallons)  
Fire Training Gasoline Tank<sup>a</sup> (750 gallons)  
Fire Water Pump Gasoline Tank<sup>a</sup> (350 gallons)  
Bulk Gasoline Storage Tank<sup>a</sup> (2,500 gallons)

<sup>a</sup> Each tank is filled using a vapor balance line and each tank has a submerged loading pipe

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

None

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

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

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

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

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)].

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

Description	Date Constructed	Emission Control Equipment
Alcohol Plant <sup>a</sup> (All Vents to Flares)	Pre-1972	Flares (2, East and West)
Storage Tanks	<sup>b</sup>	Submerged Loading Pipe
Denaturing Plant Mix and Storage Tanks	<sup>b</sup>	Submerged Loading Pipe
Alcohol Process Emissions	<sup>b</sup>	Submerged Loading Pipe
Fugitive Leaks	--	LDAR Program
Cooling Tower (Fugitive PM and VOM)	Pre-1972	None
Two Process Heaters (FR-1101 and 1102) (60.0 mmBtu/hr, Each)	Pre-1972	None
Pellet Storage Silos	Pre-1971	None
Closed Vent Microthene ® Process Equipment	Pre-1971	None
Product Drying	Pre-1971	Baghouse, Fi-1863
Product Storage and Packaging	Pre-1971	Baghouse, Fi-1869
Black Compounding Unit which Includes Raw Material and Product Storage, Extruder Drier and Pelletizer	Pre-1971	None
Wastewater Treatment Plant	Pre-1971	None

<sup>a</sup> The MSDU within the alcohol plant was constructed in 1998

<sup>b</sup> Construction dates are listed in Table in Attachment 1

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 emissions.
- 5.1.2 This permit is issued based on the source not being a major source of HAPs.
- 5.1.3 For purposes of the CAAPP and Title I of the Clean Air Act, Equistar Chemicals is considered a single source with Trigen Cinergy, I.D. No. 041030ABG, located at 625 U.S. Highway 36. The source has elected to obtain separate CAAPP permits for these locations.

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.

5.2.3 Ozone Depleting Substances

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

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

5.2.4 Risk Management Plan

- 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.

5.2.5 Future Regulations

- a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to

address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

#### 5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
  - i. Illinois EPA, Compliance Section; and
  - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
  - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

#### 5.2.7 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected

pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

5.3 Non-Applicability of Regulations of Concern

5.3.1 This permit is issued based on the source not being subject to any subpart of 40 CFR Part 63, because the source is not a major source of HAPs. (See also Condition 5.5.2)

5.3.2 This permit is issued based on the source not being subject to 35 IAC Parts 218 or 219, because the source is not located in the Chicago or Metro East Metropolitan areas.

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)	596.8
Sulfur Dioxide (SO <sub>2</sub> )	0.32
Particulate Matter (PM)	13.46
Nitrogen Oxides (NO <sub>x</sub> )	53.35
HAP, not included in VOM or PM	0.01
TOTAL	663.94

5.5.2 Emissions of Hazardous Air Pollutants

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

The emissions of HAPs from the source shall be less than 10 tons/year for each individual HAP and 25 tons/year for all HAPs combined. Compliance with these limits shall be based on a running total of 12 months of data, with emissions calculated using standard USEPA methodology, e.g., by appropriately summing the product of the vapor weight percent of each HAP in the VOM emissions for each organic liquid and the VOM emissions attributable to the storage and handling of that liquid, as determined by the current version of the TANKS program.

5.5.3 Other Source-Wide Emission Limitations

Other 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 Records for VOM and HAP Emissions

The Permittee shall maintain records of the following items for the denaturing plant to verify that the source is not a major source of HAP emissions.

- a. HAP emissions from denaturing plant mixing tanks;
- b. HAP emissions from denaturing plant storage tanks;  
and
- c. HAP emissions from denaturing loading operations.

5.6.3 Records for Operating Scenarios

N/A

5.6.4 Retention and Availability of Records

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

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

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

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.

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 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 VOM emissions from the storage tanks, the current version of the USEPA TANKS program (4.08) shall be used for the life of the permit.
- b. For the purpose of estimating fugitive VOM emissions from equipment leaks at the source, the emission factors found in TNRCC 28MID program are acceptable.
- 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 organic liquid times the VOM emissions contributed by that organic liquid is acceptable.

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6.0 EMISSION REDUCTION MARKET SYSTEM - NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit: Ethyl Alcohol Production, Denaturing, Storage and Shipping  
 Control: Flare

7.1.1 Description

Ethyl alcohol at this site is produced by a chemical synthesis with ethylene as the raw material. This is in contrast to alcohol being made by fermentation of grains using yeast. A co-product of the chemical synthesis method is diethyl ether. Water is one of the reactants and thus is in the product. Distillation can achieve at best 95% ethanol due to formation of an azeotrope. To produce 100% ethanol, the Permittee uses a Molecular Sieve Dehydration Unit.

Denaturing is a process of adding small amounts of a chemical that makes the alcohol unfit for human consumption. Examples of typical denaturing materials are methanol, toluene and isopropyl alcohol. In some cases the denaturant is added to a tank of alcohol and mixed. In most cases the denaturant is pumped into a shipping container (e.g. rail car, tank car or 55 gallon drums) at the same time that the alcohol is being pumped and the mixing occurs in the pipe and/or the shipping container. Acetic acid and vinyl acetate are also transloaded from rail car to tank truck at this source.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment
Alcohol Plant (All Vents to Flares)	Flares (2, East and West)
Storage Tanks <sup>a</sup>	Submerged Loading Pipe
Denaturing Plant Mix and Storage Tanks <sup>a</sup> and Loading Racks	Submerged Loading Pipe
Alcohol Process Emissions <sup>b</sup>	Submerged Loading Pipe
Fugitive Leaks	LDAR Program
Cooling Tower (Fugitive PM and VOM)	None
Two Process Heaters (FR-1101 and 1102) (60.0 mmBtu/Hr, Each)	None

<sup>a</sup> List of storage tanks is presented in three tables in Attachment 1.

- b Includes diethyl ether and hazardous waste loading and atmosphere process units.

#### 7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected alcohol plant" for the purpose of these unit-specific conditions, is a chemical process for synthesizing ethanol with diethyl ether as a co-product. This process is identified in Condition 7.1.2.
- b. Other affected operations associated with the actual synthesis process including process heaters, mixing and storage tanks for ethanol and denatured ethanol are also identified in Condition 7.1.2.
- c. Each affected process is subject to the emission limits identified in Condition 5.2.2.
- d. The molecular sieve dehydration unit (MSDU) within the alcohol plant is subject to NSPS, 40 CFR 60 Subpart VV. This requires that SOCOMI operations perform a leak detection and repair program for equipment components such as valves, pumps, and compressor.
- e. The alcohol plant is subject to 35 IAC 215.301. Under normal circumstances only alcohol and ether are vented to the flare and neither of these is photochemically reactive pursuant to the definition in 35 IAC 211.4690. In addition, there is no odor nuisance. However, during a shutdown some reacted and unreacted materials are vented. This includes ethylene, which is photochemically reactive, but will also include small amounts of ethanol and diethyl ether. Therefore, a condition to allow emissions in excess of the allowable pursuant to 35 IAC 215.301 during startup/shutdown is included.
- f. The alcohol plant and associated loading operations are subject to 35 IAC 215 Subpart Q (§ 215.430 to 214.438).
- g. All emission units listed in Condition 7.1.2 except the cooling tower and process heaters are subject to 35 IAC 215.142. This rule states that no person shall cause or allow the discharge of more than 2 cu in of volatile organic liquid with vapor pressure of 2.5 psia or greater at 70°F into the atmosphere from

any pump or compressor in any 15 minute period at standard conditions. Because the specified vapor pressure, diethyl ether is the only material affected and the LDAR program specified above minimizes the probability of a leak occurring.

- h. The alcohol plant is subject to 35 IAC 215.143 which states that no person shall cause or allow the emission of organic material into the atmosphere from any vapor blowdown system or any safety relief valve, except such safety relief valves not capable of causing an excessive release, unless such emission is controlled by combustion in a smokeless flare. (There are other options but the Permittee operates a flare). The safety relief valves in the alcohol plant that are capable of causing excessive release, as explained in 35 IAC 215.144 are vented to a header which vents to the flare.
- i. All loading operations are subject to 35 IAC 215.122. This rule states that no person shall cause or allow the discharge of more than 8 lbs/hr of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading facility having throughput of greater than 40,000 gal/day into any railroad tank car, tank truck, or trailer unless such loading facility is equipped with submerged loading pipes, submerged fill or a device that is equally effective in controlling emissions and is approved by the Illinois EPA. No alternate has been approved. As of the date issued of this permit there is no odor nuisance and therefore this requirement only applies to volatile organic liquids with a vapor pressure greater than 2.5 psia at 70°F. Diethyl ether has a vapor pressure greater than 2.5 psia but the vapor pressure of ethyl alcohol is less than 2.5 psia. Typically all tanks have submerged loading pipes.
- j. The two process heaters are subject to 35 IAC 216.121. This rule requires that emissions of CO not exceed 200 ppm.
- k. The ether surge drum, Dr-1277, a storage tank, within the alcohol plant, is subject to 40 CFR 60 Subpart Kb. The specific standard the Permittee complies with is 40 CFR 60.112b(a)(3) with the flare as the control device. The tank is a pressure tank but the design pressure is not sufficient to meet requirement

for the NSPS not to be applicable as specified in 40 CFR 60.110b(c)(2).

l. Malfunction and Breakdown Provisions

During a compressor outage emissions increase because more uncontrolled emissions are vented to the flare. However, no rule is violated and therefore special permission to operate during a compressor outage does not need to meet the requirements of 35 IAC 201.262. Operation at this abnormal condition is recognized.

- i. The Permittee shall repair the damaged feature(s) of the compressor as soon as practicable.
- ii. The Permittee shall fulfill the applicable recordkeeping and reporting requirements of Condition 7.1.9(k).

m. Shutdown Provisions

The Permittee is authorized to operate an affected alcohol plant in violation of the applicable limit of 35 IAC 215.301 during startup/shutdown pursuant to 35 IAC 201.262, as the Permittee has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual starts, and frequency of startups. This authorization is subject to the following:

- i. This authorization only extends for a period of emptying of a reactor below 50 psig. Above 50 psig the emissions are vented to the flare but below 50 a separate vent must be used.
- ii. The Permittee shall take the following measures to minimize startup emissions, the duration of startups, and minimize the frequency of startups:
  - A. Implementation of established startup procedures; and
  - B. Venting to the flare down to as low a pressure as possible.

- iii. The Permittee shall fulfill the applicable recordkeeping requirements of Condition 7.1.9(j).

#### 7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected alcohol plant excluding the MSDU not being subject to the New Source Performance Standards (NSPS) for equipment leaks for SOCOMI processes, 40 CFR Part 60, Subpart VV, because the affected processes excluding the MSDU were constructed prior to the applicability date of January 5, 1981.
- b. This permit is issued based on the affected MSDU not being subject to the New Source Performance Standards (NSPS) for SOCOMI distillation, 40 CFR Part 60, Subpart NNN, because the affected unit meets one of the exemptions specified in 40 CFR 60.660(c)(6), namely a vent stream flow rate of less than 0.008 scm/min. However, recordkeeping is required. See Condition 7.1.8.
- c. The cooling tower is not subject to 35 IAC 212 because the process weight rate (PWR) cannot be determined in a meaningful manner. If the weight of water is the PWR, the unit is always in compliance using a standard emission factor. If the weight of water is excluded from the PWR, the unit would always be out of compliance. In addition, the unit cannot be reasonably tested with standard USEPA test methodology.

#### 7.1.5 Control Requirements

The flare shall be operated to reduce VOM emissions vented to it by 98%. Operation in compliance with the requirements of 40 CFR 60.18 shall be deemed as meeting this requirement. Operation in this manner will also be sufficient for the flare to be considered a smokeless flare as required in Condition 7.1.3(h).

#### 7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected molecular sieve dehydration unit is subject to the following:

- a. Emissions from the affected molecular sieve dehydration unit shall not exceed the following limits:

VOM Emissions	
<u>(lb/hr)</u>	<u>(ton/year)</u>
2.9	12.7

These limits are based on an ethanol production limit of 33.2 mmgal/yr [T1]. However, this limit is only for 200 proof alcohol, the product of the dehydration unit, and not total alcohol that includes 190 proof alcohol.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 97090003, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

- b. Emissions of VOM from Tank Dr-68 shall not exceed 3.3 tons/yr. This limit is based on an ethanol throughput of 12.75 mmgal/yr.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 88120080, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.1.7 Testing Requirements

Upon request the flare shall be tested to demonstrate that it is operated within the parameters specified in 40 CFR 60.18.

7.1.8 Monitoring Requirements

- a. The MSDU unit shall be monitored for leaks in accordance with the requirements of 40 CFR 60.482.
- b. The alcohol plant and associated loading operations shall be monitored for leaks in accordance with 35 IAC 215.432. This monitoring program shall also meet the requirement of the TNRCC-28MID leak detection and repair program in order to qualify for the reduced emission factors specified in Condition 7.1.12(c).
- c. Each flare shall be operated with a device for detection of a flame. This may be either a thermocouple or a camera with an infrared or UV heat detector.

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 the affected unit to demonstrate compliance with Conditions 5.5.1 and 7.1.3, pursuant to Section 39.5(7)(b) of the Act:

- a. Flare flame monitor;
- b. Ethylene feed (lb/mo);
- c. Product manufactured (190 proof and 200 proof alcohol, diethyl ether, lb/mo);
- d. Denatured alcohol production (lb/mo);
- e. Volume of each general product shipped (lb/mo);
- f. Cooling tower recirculation rate (gal/hr);
- g. Natural gas used in process heaters (may be combined, scf or therms/mo);
- h. Leak detection program results including number of leaks and dates of leak repairs;

- i. VOM, PM, NO<sub>x</sub>, and HAP emissions (lb/yr);
- j. Records for Shutdown

The Permittee shall maintain the following records, pursuant to Section 39.5(7)(b) of the Act, for each affected alcohol plant subject to Condition 7.1.3(m), which at a minimum shall include:

The following information for each shutdown of alcohol plant:

- i. Date and duration of the shutdown, i.e., start time and time completed;
  - ii. A detailed description of the shutdown, including reason for operation and whether the vent was vented to the flare down to recommend pressure was performed;
  - iii. An explanation why the unit had to be shutdown.
- k. Records for Malfunctions and Breakdowns of Compressor
    - i. The measures used to reduce the quantity of emissions and the duration of the event;
    - ii. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity; and
    - iii. The amount of release above typical emissions during malfunction/breakdown.
  - l. Records that show the MSDU vent flow rate is below the 0.008 scm/min exemption level specified in 40 CFR 60.660(c)(6) so that the MSDU is not subject to 40 CFR Subpart NNN [See Condition 7.1.4(b)].

#### 7.1.10 Reporting Requirements

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

Operation when not vented to a properly functioning flare.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.12 Compliance Procedures

- a. i. Storage tank losses shall be calculated using the method in AP-42 or the USEPA TANKS (4.08) program for the life of the permit.
  - ii. HAP emissions shall be based on the percent HAPs divided by 100 in the denatured product times VOM emissions using the formula in (a)(i).
  - iii. Mix tank emissions shall be calculated using AP-42 or the USEPA TANKS (4.08) program for breathing and working losses but with an additional factor for mixing losses as presented in a May 2001 supplement to the CAAPP application.
- b. Loading losses shall be calculated using AP-42 equation 4.4-5, as follows:

$$\text{VOM Emissions (lb / mo)} = \frac{12.46 \times \text{MW} \times \text{VP}}{\text{T} + 460} \times \frac{\text{Q}}{1000}$$

where:

Loading Loss = lb/mo of VOM lost during product loading

S = Saturation factor

MW = Molecular weight

VP = Vapor pressure (psia)

T = Temperature (°F)

Q = Gallons of material loaded during month

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- c. Fugitive emissions from equipment leaks shall be calculated using the following reference:

Component	Service	AP-42 Factor Lbs/Hr/ Component	Leak Threshold	Monitoring Frequency	TNRCC 28MID <sup>a</sup> Reduction Credit, %
Valves	Light Liquid	0.0035	10,000	Annually	50
Valves	Vapor	0.0089	10,000	Annually	50
Pumps	Light Liquid	0.0386	10,000	Annually	50
Pressure Relief Valves	Vapor	0.2293	10,000	Annually	50
Compressors	Vapor	0.5027	10,000	Annually	50
Valves	Light Liquid	0.0035	10,000	Quarterly	75
Valves	Vapor	0.0089	10,000	Quarterly	75
Pumps	Light Liquid	0.0386	10,000	Quarterly	75
Pressure Relief Valves	Vapor	0.2293	10,000	Quarterly	75
Compressors	Vapor	0.5027	10,000	Quarterly	75
Valves	Light Liquid	0.0035	500	Quarterly	97
Valves	Vapor	0.0089	500	Quarterly	97
Pumps	Light Liquid	0.0386	500	Quarterly	93
Pressure Relief Valves	Vapor	0.2293	500	Quarterly	97
Compressors	Vapor	0.5027	500	Quarterly	93

<sup>a</sup> Texas Natural Resources Conservation  
 Commission Maintenance Incentive Directed  
 Program

- d. Cooling tower VOM and PM emissions shall be calculated based on AP-42 Table 5.1-2 and actual recirculation flow rate of water.
- e. i. Compliance provisions addressing Condition 7.1.3(j) are not set by this permit as compliance is assumed to be achieved by the normal work practices and maintenance

activities inherent in operation of natural gas fired boilers.

- ii. Compliance with the emission limits in Condition 5.5 shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

<u>Pollutant</u>	<u>Emission Factor</u> <u>(lb/10<sup>6</sup> ft<sup>3</sup>)</u>
NO <sub>x</sub>	100.0
PM	7.6
SO <sub>2</sub>	0.6
VOM	5.5

These are the emission factors for uncontrolled natural gas combustion in small industrial boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, 5th Edition, March 1998 Revision.

Process heater emissions (lb) = natural gas consumed multiplied by the appropriate emission factor.

7.2 Unit Microthene® Unit  
 Control Bag Filter

7.2.1 Description

The Microthene® unit produces a fine powder form of polyethylene, beginning with polyethylene in pellet form. The only emissions are PM during drying and bagging.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment
Pellet Storage Silos	None
Closed Vent Process Equipment	None
Product Drying	Baghouse, Fi-1863
Product Storage and Packaging	Baghouse, Fi-1869

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected Microthene® unit" for the purpose of these unit-specific conditions, is a process for converting polyethylene pellets into a fine powder. The equipment for this process is listed in Condition 7.2.2.
- b. The affected Microthene® unit is subject to the emission limits identified in Condition 5.2.2.
- c. The pellet silo (emissions only occur when being filled), product drying, product storage silo and product packaging process are subject to 35 IAC 212.322. This rule is written out in Attachment 2.

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected Microthene® unit not being subject to the New Source Performance Standards (NSPS) for Polymers, 40 CFR Part 60, Subpart DDD, because the affected unit was constructed prior to the applicability date of January 10, 1989 and this unit does not manufacture polyethylene from ethylene but reprocesses previously made polyethylene. In addition, Subpart DDD addresses VOM emissions and this unit emits only PM, not VOM.
- b. This permit is issued based on the affected Microthene® unit not being subject to 40 CFR Part 64,

Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected Microthene® unit does not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

7.2.5 Control Requirements

The baghouses shall be operated in accordance with manufacturers instructions so that PM emissions comply with Condition 7.2.3(c).

7.2.6 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.

7.2.7 Testing Requirements

Upon request by the Illinois EPA, the discharge from either of the baghouses shall be tested to verify compliance with Condition 7.2.3(c). The tests shall be done using standard USEPA methodology.

7.2.8 Monitoring Requirements

Each baghouse shall be equipped with a device for measuring pressure drop across the bags.

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 the affected Microthene® unit to demonstrate compliance with Conditions 5.5.1 and 7.2.3(c), pursuant to Section 39.5(7)(b) of the Act:

- a. Pressure drop across each baghouse (once/week);
- b. Production rate so that allowable for Condition 7.2.3(c) may be calculated;
- c. Production (lb/yr); and
- d. PM emissions (lb/yr).

7.2.10 Reporting Requirements

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

PM emissions exceeding the allowable of Condition 7.2.3(c).

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

- a. The pellet storage silos are assumed to be in compliance without control equipment because of the large size of the pellets although transferred by an air conveyor.
- b. Emissions from each of the baghouses are assumed to be in compliance if the pressure drop across each baghouse is within its normal operating range.
- c. Emissions from each baghouse shall be calculated using a value determined by testing of 1.9 lb/hr.

$$\text{PM Emissions (lb / mo)} = \frac{1.9 \text{ lb}}{\text{hr}} \times \text{Hours of Operation for Month}$$

7.3 Unit: Other Emission Units  
 Control: None

7.3.1 Description

Two independent units are discussed in this section. In the black polyethylene compounding unit clear (or white) polyethylene pellets are blended into an extruder with black pellets that contain a high concentration of carbon black to make a black pellet with an intermediate concentration of carbon black. The material is repelletized in an underwater pelletizer, dried and stored in silos for shipping.

The wastewater treatment plant treats all plant process wastewater.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Description	Emission Control Equipment
Black compounding unit which includes raw material and product storage, extruder, drier and pelletizer	None
Wastewater Treatment Plant performs primary and secondary treatment and includes but is not limited to a neutralization chamber, a primary clarifier, and aerated ditch and oxidation ponds	None

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected black compounding unit" for the purpose of these unit-specific conditions, is a process for blending a light and dark form of polyethylene to make all of it dark. The equipment for this process is listed in Condition 7.3.2.
- b. An "affected wastewater treatment plant" for the purpose of these unit-specific conditions is a unit used to treat process wastewater at the source and identified in Condition 7.3.2.
- c. Each affected black compounding process or wastewater treatment plant is subject to the emission limits identified in Condition 5.2.2.

- d. The silos (emissions only occur when being filled) are subject to 35 IAC 212.322. This rule is written out in Attachment 2.
- e. The affected black compounding unit and wastewater treatment plant are both subject to 35 IAC 215.301. This rule limits VOM emissions of photochemically reactive material, as defined as 35 IAC 211.4690 from any emission unit to 8 lb/hr unless vented to control equipment. Neither process has control equipment.

The black compounding unit emits only trace amounts of VOM that is dissolved in the incoming pellets and emissions are significantly below 8 lb/hr.

Although the wastewater treatment plant has total VOM of approximately 8 lb/hr, the plant is made up of distinct units and thus emissions from each unit are well below 8 lb/hr. Also the primary components of the VOM in the water are likely to be ethanol and diethyl ether and neither of these materials is photochemically reactive.

#### 7.3.4 Non-Applicability of Regulations of Concern

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

#### 7.3.5 Control Requirements

None

#### 7.3.6 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.

#### 7.3.7 Operating Requirements

None

#### 7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

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

- a. Black compounding unit throughput (tons/mo);
- b. Wastewater treatment throughput (gal/mo);
- c. VOM emissions (lb/yr); and
- d. HAP emissions (lb/yr).

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected units 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:

PM emissions exceeding the allowable of Condition 7.3.3(d).

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Since neither unit uses control equipment, the units are assumed to be in compliance at all times.
- b. Black Compounding Unit
  - i. PM emissions shall be calculated using an emission factor of 0.036 lb per 1000 pounds of product.

$$\text{PM Emissions (lb / mo)} = \frac{0.036 \text{ lb}}{1000} \times \text{Throughput in lb / mo}$$

- ii. VOM Emissions = 0.1 lb/hr

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c. Wastewater Treatment Plant

VOM emissions shall be calculated using the USEPA  
WATER 8 computer program.

## 8.0 GENERAL PERMIT CONDITIONS

### 8.1 Permit Shield

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

This permit shield does not extend to applicable requirements which are promulgated after \_\_\_\_\_ **{insert public notice start date}** (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].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

### 8.4 Operational Flexibility/Anticipated Operating Scenarios

#### 8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
  - i. Describe the physical or operational change;
  - ii. Identify the schedule for implementing the physical or operational change;
  - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
  - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
  - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. 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

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, 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

However, currently submitted semi-annual reporting of leak programs under 40 CFR 60, Subpart VV, may continue to be submitted within 60 days of the October - March and April - September time periods.

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  
2009 Mall Street  
Collinsville, Illinois 62234
  - iii. Illinois EPA - Air Permit Section  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)  
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.

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8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

## 9.0 STANDARD PERMIT CONDITIONS

### 9.1 Effect of Permit

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

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

### 9.2 General Obligations of Permittee

#### 9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, 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)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

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

#### 9.4 Obligation to Comply with Other Requirements

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

#### 9.5 Liability

##### 9.5.1 Title

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

##### 9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or

resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

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

9.5.4 Illinois EPA Liability

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

9.5.5 Property Rights

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

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. 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)(1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1A - List of Storage Tanks (Alcohol Plant)

Tank Designation	Material Stored	Tank Capacity (gal)	Vapor Pressure (psia)	Tank Shape	Other Features <sup>a</sup>	Vented to Flare	Year Built
Dr-501	Diethyl Ether	215,000	8.55	Spherical	Pressure	Yes	Pre-1972
Dr-502	Diethyl Ether	215,000	8.55	Spherical	Pressure	Yes	Pre-1972
Dr-507	Alcohol Waste	22,500	Range	Horizontal	Pressure	Yes	Pre-1972
Dr-508	Alcohol By-Product	24,200	Range	Horizontal	Pressure	Yes	Pre-1972
D-1210	Alcohol Waste	10,250	?	Cylindrical	Fixed Roof	Yes	Pre-1972
D-1211	Recovered Alcohol	10,250	0.9	Cylindrical	Fixed Roof	No	Pre-1972
D-1212	Recovered Alcohol	10,250	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1252A	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1252B	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1253A	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1253B	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1257A	Ethanol	1,750,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1257B	Ethanol	1,750,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1258	Diethyl Ether	260,400	8.55	Spherical	Pressure	No	Pre-1972
Dr-1259A	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1259B	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1260A	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1260B	Diethyl Ether	12,900	8.55	Cylindrical	Pressure	No	Pre-1972
Dr-1961A	Crude Alcohol Ether	25,500	0.9	Horizontal	Pressure	Yes	Pre-1972
Dr-1277	Diethyl Ether	55,000	8.55	Horizontal	Pressure	Yes	2000
Dr-1278A	Ethanol	200,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1278B	Ethanol	200,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1279A	Ethanol	175,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972

Tank Designation	Material Stored	Tank Capacity (gal)	Vapor Pressure (psia)	Tank Shape	Other Features <sup>a</sup>	Vented to Flare	Year Built
Dr-1279B	Ethanol	175,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1280A	Crude Alcohol	150,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-1280B	Crude Alcohol	150,000	0.9	Cylindrical	Fixed Roof	No	Pre-1972
Dr-466	Crude Alcohol	665,000	0.9	Spherical	Fixed Roof	No	Pre-1972
Dr-469	Crude Alcohol	665,000	0.9	Spherical	Fixed Roof	No	Pre-1972
Dr-470	Crude Alcohol	665,000	0.9	Spherical	Fixed Roof	No	Pre-1972
D-1288A	Ethanol	76,100	0.9	Horizontal	Pressure	Yes	1976
D-1288B	Ethanol	76,100	0.9	Horizontal	Pressure	Yes	1982
D-1288C	Ethanol	76,100	0.9	Horizontal	Pressure	Yes	1982
Dr-541	Ethanol	14,100	0.9	Horizontal	Pressure	Yes	Pre-1972
Dr-542	Ethanol	14,100	0.9	Horizontal	Pressure	Yes	Pre-1972
Dr-543	Ethanol	14,100	0.9	Horizontal	Pressure	Yes	Pre-1972

<sup>a</sup> All tanks have submerged loading pipes.

Attachment 1B - List of Denatured Alcohol Mix Tanks<sup>a</sup>

Tank Designation	Tank Capacity (Gal)
T-206	10,350
T-207	10,350
T-208	10,350
T-209	10,350
T-210	10,350
T-211	10,350
T-212	10,350
T-213	10,350
T-214	2,060
T-215	2,220
T-226	7,850
T-302	10,350
T-303	10,300
T-305	10,350
T-507	23,030
T-510	1,530

<sup>a</sup> All tanks are cylindrical, fixed roof tanks with submerged loading pipes and constructed prior to 1972.

Attachment 1C - List of Denatured Alcohol Storage Tanks<sup>a</sup>

Tank Designation	Tank Capacity (gal)	Contents
T-23	14,200	Acetic Acid
T-27	14,200	Acetic Acid
T-101	157,800	Ethanol (190 Proof)
T-102	157,800	Ethanol (200 Proof)
T-103	157,800	Ethanol (190 Proof)
T-201	10,400	Rubber Hydrocarbon Solvent
T-202	10,400	Methyl Isobutylketone
T-203	10,400	Isopropanol
T-204	5,500	Toluene
T-205	5,500	Ethanol
T-301	10,400	Ethylacetate
T-304	10,400	Acetone
T-403	10,400	Ethoxyethanol
T-501	31,700	Vinyl Acetate
T-502	31,700	Vinyl Acetate
T-503	31,700	Ethanol (Denatured)
T-504	31,700	Ethanol (200 Proof)
T-505	31,700	Ethanol (Denatured)
T-506	10,400	Ethanol (Denatured)
T-508	40,500	Ethanol (Denatured)
T-509	40,500	Methanol
T-511	1,028,100	Ethanol (200 Proof)
Dr-68	3,537,300	Ethanol
Dr-57	2,520,000	Ethanol

<sup>a</sup> This list includes tanks containing the materials that will be used to denature the alcohol as well as the alcohol after it has been denatured. All tanks are equipped with a submerged loading pipe.

10.2 Attachment 2 - Allowable Emissions of Particulate Matter

Process Emission Units Which Were Existing Prior to April 14, 1972 [35 IAC 212.322(b)].

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in the following equation:

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

Where:

P = Process weight rate;

E = Allowable emission rate; and,

a. For process weight rate up to 30 ton/hour:

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

b. For process weight rate in excess of 30 ton/hour:

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

c. For a process weight rate under 100 lb/hr (0.05 tons), the allowable is 0.55 lb/hr.

10.3 Attachment 3 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: \_\_\_\_\_

10.4 Attachment 4 Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
  - Corrects typographical errors;
  - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - Requires more frequent monitoring or reporting by the Permittee;
  - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
  - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
  - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule, marketable permits rule, or generic emissions trading rule.

2. Minor Permit Modification

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
  - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

FINAL DRAFT/PROPOSED CAAPP PERMIT  
Equistar Chemicals, LP  
I.D. No.: 041804AAB  
Application No.: 96020121  
June 5, 2001

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



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

<b>Application For Construction Permit (For CAAPP Sources Only)</b>	For Illinois EPA use only
	ID number:
	Permit number:
	Date received:

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

Source Information		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. ID number:

Owner Information		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

Operator Information (if different from owner)		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

Applicant Information	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

<b>Summary Of Application Contents</b>	
24. Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25. Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26. Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28. Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29. If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

<b>Signature Block</b>	
This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.	
30. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature:	
BY:	_____
_____	_____
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY
_____	_____/_____/_____
TYPED OR PRINTED NAME OF SIGNATORY	DATE

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

I. INTRODUCTION

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

The Equistar Chemicals, LP site is located at 625 East U.S. Highway 36 in Tuscola. The source manufactures ethanol, diethyl ether and powdered polymer from polyethylene pellets. In addition, the source compounds two types of polyethylene through an extruder, and operates a wastewater treatment plant.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Description	Emission Control Equipment
Alcohol Plant (All Vents to Flares)	Flares (2, East and West)
Storage Tanks	Submerged Loading Pipe
Denaturing Plant Mix and Storage Tanks	Submerged Loading Pipe
Alcohol Process Emissions	Submerged Loading Pipe
Fugitive Leaks	LDAR Program
Cooling Tower (Fugitive PM and VOM)	None
Two Process Heaters (FR-1101 and 1102) (60.0 mmBtu/hr, Each)	None
Pellet Storage Silos	None
Closed Vent Microthene @ Process Equipment	None
Product Drying	Baghouse, Fi-1863
Product Storage and Packaging	Baghouse, Fi-1869
Black Compounding Unit which Includes Raw Material and Product Storage, Extruder Drier and Pelletizer	None
Wastewater Treatment Plant	None

III. EMISSIONS

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

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

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	596.8
Sulfur Dioxide (SO <sub>2</sub> )	0.32
Particulate Matter (PM)	13.46
Nitrogen Oxides (NO <sub>x</sub> )	53.35
HAP, not included in VOM or PM	0.01
TOTAL	663.94

IV. APPLICABLE EMISSION STANDARDS

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

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

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

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

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

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.