DRAFT CAAPP PERMIT
January 8, 2008

217/782-2113

Renewal
CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

PERMITTEE:

Equistar Chemicals, LP
Attn: Mike Stoneberger
625 East U.S. Highway 36
Tuscola, Illinois 61953

I.D. No.: 041804AAB
Application No.: 96020121

Date Received: October 21, 2005
Date Issued: To Be Determined
Expiration Date[1]: To Be Determined

Operation of: Chemical Manufacturing Plant
Source Location: 625 East U.S. Highway 36, Tuscola, Douglas County, 61953
Responsible Official: Daniel J. Podgurski, 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.

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

ECB:DGP:psj

cc: Illinois EPA, FOS, Region 3
CES
Lotus Notes

1 Except as provided in Conditions 1.5 and 8.7 of this permit.

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1.0 INTRODUCTION

1.1 Source Identification

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

I.D. No.: 041804AAB
County: Douglas
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

Mike Stoneberger
217/253-1291

1.4 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 operates gas-fired process heaters, a wastewater treatment plant and numerous storage tanks.

Note: This narrative description is for informational purposes only and is not enforceable.

1.5 Title I Conditions

As generally identified below, this CAAPP permit contains certain conditions for emission units at this source that address the applicability of permitting programs for the construction and modification of sources, which programs were established pursuant to Title I of the Clean Air Act (CAA) and regulations thereunder. These programs include PSD and MSSCAM, and are implemented by the Illinois EPA pursuant to Sections 9, 9.1, 39(a) and 39.5(7)(a) of the Illinois Environmental Protection Act (Act). These conditions continue in effect, notwithstanding the expiration date specified on the first page

of this permit, as their authority derives from Titles I and V of the CAA, as well as Titles II and X of the Act. (See also Condition 8.7.)

a. This permit contains Title I conditions that reflect Title I requirements established in permits previously issued for this source, which conditions are specifically designated as “T1.”

2.0 LIST OF ABBREVIATIONS AND ACRONYMS COMMONLY USED

ACMA	Alternative Compliance Market Account
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
ATU	Allotment Trading Unit
BACT	Best Available Control Technology
BAT	Best Available Technology
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emissions Reduction Market System
HAP	Hazardous Air Pollutant
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
LDAR	Leak Detection and Repair
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MSSCAM	Major Stationary Sources Construction and Modification (35 IAC 203, New Source Review for non-attainment areas)
MSDU	Molecular Sieve Dehydration Unit
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 microns as measured by applicable test or monitoring methods
PSD	Prevention of Significant Deterioration (40 CFR 52.21, New Source Review for attainment areas)
RMP	Risk Management Plan
SO_2	Sulfur Dioxide
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

3.0 CONDITIONS FOR 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:

None

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)].

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). Note: These activities are not required to be individually listed.

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 5.3.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 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 (see Attachment 2) and 35 IAC Part 266. 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.

3.2.2 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, which requires that organic material emissions not exceed 8.0 pounds per hour or, if no odor nuisance exists, do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.2.3 For each open burning activity, the Permittee shall comply with 35 IAC Part 237, including the requirement to obtain a permit for open burning in accordance with 35 IAC 237.201, if necessary.

3.2.4 For each storage tank that has a storage capacity greater than 946 liters (250 gallons) and, if no odor nuisance exists, that stores an organic material with a vapor pressure exceeding 2.5 psia at 70°F, the Permittee shall comply with the applicable requirements of 35 IAC 215.122, which requires use of a permanent submerged loading pipe, submerged fill, or a vapor recovery system.

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
Section 7.1		
Alcohol Plant (All Vents to Flares)	Pre-1972[a]	Flares (2, East and West)
Storage Tanks	[b]	Submerged Loading Pipe
Denaturing Plant Mix and Storage Tanks and Loading Racks	[b]	Submerged Loading Pipe
Alcohol Process Emissions	[b]	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
Section 7.2		
Closed Vent Microthene® F Process Equipment	Pre-1971	None
Product Drying w/Process Baghouse Fi-1863	Pre-1971	None
Product Storage and Packaging w/Process Baghouse Fi-1869	Pre-1971	None
Section 7.3		
Wastewater Treatment Plant	Pre-1971	None
Gasoline Storage Tanks Bulk Gasoline Tank, 2500 gal North Lake Fire Water Pump Gasoline Tank, 325 gal		Submerged Loading Pipe

[a] The MSDU within the alcohol plant was constructed in 1998

[b] Construction dates are listed in Table in Attachment 5

5.0 OVERALL SOURCE CONDITIONS

5.1 Applicability of Clean Air Act Permit Program (CAAPP)

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 For purposes of the CAAPP, Equistar Chemicals is considered a single source with Trigen Cinergy, I.D. No. 041030ABG, located at 625 U.S. Highway 36. The Permittees have elected to obtain separate CAAPP permits for their operations.

5.2 Area Designation

This permit is issued based on the source being located in an area that, as of the date of permit issuance, is designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (CO, lead, NO_2, ozone, $PM_{2.5}$, PM_{10}, SO_2).

5.3 Source-Wide Applicable Provisions and Regulations

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

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

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

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

5.3.3 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.

5.3.4 Risk Management Plan (RMP)

a. This stationary source, as defined in 40 CFR 68.3, is subject to 40 CFR Part 68, the federal regulations for Chemical Accident Prevention. This condition is imposed in this permit pursuant to 40 CFR 68.215(a)(1).

b. The owner or operator of a stationary source shall revise and update the RMP submitted pursuant to 40 CFR 68.150, as specified in 40 CFR 68.190.

5.3.5 Future Emission Standards

a. Should this stationary source become subject to a new or revised regulation under 40 CFR Parts 60, 61, 62, or 63, or 35 IAC Subtitle B after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by Condition 9.8. This permit may also have to be revised or reopened to address such new or revised regulations (see Condition 9.12.2).

b. This permit and the terms and conditions herein do not affect the Permittee’s past and/or continuing obligation with respect to statutory or regulatory requirements governing major source construction or modification under Title I of the CAA. Further, neither the issuance of this permit nor any of the terms or conditions of the permit shall alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.

5.3.6 Episode Action Plan

a. Pursuant to 35 IAC 244.141, 244.142, and 244.143, 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 and is incorporated by reference into this permit.

b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared by the Director of the Illinois EPA or his or her designated representative.

c. If an operational change occurs at the source which invalidates the plan, a revised plan shall be submitted to the Illinois EPA for review within 30 days of the change, pursuant to 35 IAC 244.143(d). Such plans shall be further revised if disapproved by the Illinois EPA.

5.4 Source-Wide Non-Applicability of Regulations of Concern

5.4.1 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 5.6.2)

5.4.2 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.

5.5 Source-Wide Control Requirements and Work Practices

Source-wide control requirements and work practices are not set for this source. However, there are requirements for unit specific control requirements and work practices set forth in Section 7 of this permit.

5.6 Source-Wide Production and Emission Limitations

5.6.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.6.1) are set for the purpose of establishing fees and are not federally enforceable (see Section 39.5(18) of the Act).

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	686.95
Sulfur Dioxide (SO_2)	0.06
Particulate Matter (PM)	60.05
Nitrogen Oxides (NO_x)	12.83
HAP, not included in VOM or PM	0.01
Total	759.91

5.6.2 Emissions of Hazardous Air Pollutants

Pursuant to Section 39.5(7)(a) of the Act, 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 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). This condition is being imposed so that the source is not a major source of HAP emissions. The Permittee shall fulfill the applicable testing, recordkeeping, and reporting requirements of Conditions 5.7.2, 5.9.2, and 5.10.2.

5.6.3 Other Source-Wide Production and Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to the federal rules for PSD, state rules for MSSCAM, or Section 502(b)(10) of the CAA. However, there are unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.7 Source-Wide Testing Requirements

5.7.1 Pursuant to 35 IAC 201.282 and Section 4(b) of the Act, every emission unit or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

a. Testing by Owner or Operator: The Illinois EPA may require the owner or operator of the emission unit or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests [35 IAC 201.282(a)].

b. Testing by the Illinois EPA: The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary [35 IAC 201.282(b)].

c. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.7.2 HAP Testing to Verify Minor Source Status

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

a. If in the previous calendar year, emissions of HAPs exceeded 80% of major source threshold for individual or total HAPs (greater than 8 tons of a single HAP or greater than 20 tons of total HAPs), then a reevaluation of the calculations for HAPs shall be conducted including testing for HAPs if any single emission unit (as defined in Section 4.0) emits over 50% of major source levels (i.e. over 5 tons of a single HAP or 12.5 tons of total HAPs). The term "reevaluation" shall include reviewing calculations and AP-42 factors for accuracy and including fugitive leak emissions of HAPs in the calculations.

b. The calculation as to whether the 80% of major source threshold was exceeded shall be based on records and procedures in Condition 5.9.2 and shall be completed by February 15 for the previous calendar year. If a reevaluation is required it shall be completed by March 31 beginning the year after this permit is issued. If testing is required the Permittee shall proceed with the testing provisions given in Section 8 of this permit. Any emission testing may take up to 90 days past the March 31 date specified above.

c. Any such tests are also subject to the Testing Procedures of Condition 8.5 set forth in the General Permit Conditions of Section 8.

5.8 Source-Wide Monitoring Requirements

Source-wide monitoring requirements are not set for this source. However, there are provisions for unit specific monitoring set forth in Section 7 of this permit.

5.9 Source-Wide Recordkeeping Requirements

5.9.1 Annual Emission Records

The Permittee shall maintain records of total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act.

5.9.2 Records for HAP Emissions

a. The Permittee shall maintain records of individual and combined HAP emissions on a monthly and annual basis for the emission units covered by Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit to demonstrate compliance with Condition 5.6.2, pursuant to Section 39.5(7)(b) of the Act. Note that emissions of HAPs from insignificant emission units must be included in the calculation of HAPs.

b. If testing is required by Condition 5.7.2, the Permittee shall keep records of the testing, including the test date, conditions, methodologies, calculations, test results, and any discrepancies between the test results and calculations.

5.9.3 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

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

5.10 <u>Source-Wide Reporting Requirements</u>

5.10.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the source with the permit requirements within 30 days, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken. There are also reporting requirements for unit specific emission units set forth in Section 7 of this permit.

5.10.2 Annual Emissions Report

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

5.11 Source-Wide Operational Flexibility/Anticipated Operating Scenarios

Source-wide operational flexibility is not set for this source.

5.12 Source-Wide Compliance Procedures

5.12.1 Procedures for Calculating Emissions

Except as provided in Condition 9.1.3, compliance with the source-wide emission limits specified in Condition 5.6 shall be addressed by the recordkeeping and reporting requirements of Conditions 5.9 and 5.10, and compliance procedures in Section 7 (Unit Specific Conditions for Specific Emission Units) of this permit.

a. For the purpose of estimating VOM emissions from the storage tanks, the current version of the USEPA TANKS program (currently 4.08) or equivalent shall be used for the life of the permit. If a newer version of the TANKS program is approved and made available by USEPA, the Permittee may use the updated version to calculate emissions.

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.

6.0 CONDITIONS FOR EMISSIONS CONTROL PROGRAMS

This section is reserved for emissions control programs. As of the date of issuance of this permit, there are no such programs applicable to this source.

7.0 UNIT SPECIFIC CONDITIONS FOR SPECIFIC EMISSION UNITS

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

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.

Note: This narrative description is for informational purposes only and is not enforceable.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Description	Date Constructed	Emission Control Equipment
Alcohol Plant (All Vents to Flares)	Pre-1972[a]	Flares (2, East and West)
Storage Tanks[c]	[b]	Submerged Loading Pipe
Denaturing Plant Mix and Storage Tanks and Loading Racks	[b]	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

[a] The MSDU within the alcohol plant was constructed in 1998

[b] Construction dates are listed in Table in Attachment 5

[c] List of storage tanks is presented in three tables in Attachment 5

7.1.3 Applicable Provisions and 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 and described in Conditions 7.1.1 and 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. The molecular sieve dehydration unit (MSDU) within the alcohol plant is subject to NSPS, 40 CFR 60 Subpart VV. This requires that SOCMI operations perform a leak detection and repair program for equipment components such as valves, pumps, and compressor.

d. The alcohol plant is subject to 35 IAC 215 Subpart K. This rule lists two methods to comply. The first is that the Permittee shall not allow the discharge of more than 8 lb/hr of organic material except as provided for in §215.302 but that the 8 lb/hr limit only applies if the organic material is photochemically reactive pursuant to §211.4690 and there is no odor nuisance. The alternative standard of §215.302(c) states that emissions may exceed 8 lb/hr if any other air pollution control equipment approved by the Illinois EPA is capable of reducing by 85% the uncontrolled organic material. The flares have been approved by the Illinois EPA.

   There are other types of control equipment listed under the alternative standards in §215.302(a) and (b) but the Permittee does not have those types of control equipment and therefore those alternates are not listed here.

e. The alcohol plant and associated loading operations are subject to 35 IAC 215 Subpart Q (§ 215.430 to 214.438). This is a leak detection and repair program for pumps, valves and other components.

f. 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.

g. 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.

h. 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 alternative to a submerged loading pipe has been approved.

i. The two process heaters are subject to 35 IAC 216.121. This rule requires that emissions of CO not exceed 200 ppm.

j. The ether surge drum, Dr-1277, a storage tank, within the alcohol plant, is subject to 40 CFR 60 Subpart Kb.

k. The storage tanks, which are listed in Attachment 5, are subject to 35 IAC 215.121. This rules states that no person shall cause or allow the storage of any volatile organic liquid with a vapor pressure of 2.5 psia or greater or any gaseous organic material in any stationary tank, reservoir or other container of more than 40,000 gallon capacity unless such tank, reservoir or other container:

   i. Is a pressure tank capable of withstanding the vapor pressure of such liquid or the pressure of the gas, so as to prevent vapor or gas loss to the atmosphere at all times; or

   ii. Is designed and equipped with one of the following vapor loss control devices:

      A. A floating roof with rests on the surface of the volatile organic liquid and is equipped with a closure seal or seals between the roof edge and the tank wall. Such floating roof shall not be permitted if the volatile organic liquid has a vapor pressure of 12.5 psia or greater at 70°F. No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tanks, except during sampling or maintenance operations.

      B. A vapor recovery system consisting of:

         1. A vapor gather system capable of collecting 85% or more of the

uncontrolled volatile organic material that would be otherwise emitted to the atmosphere; and

2. A vapor disposal system capable of processing such volatile organic material so as to prevent its emission to the atmosphere. No person shall cause or allow the emission of air contaminants into the atmosphere from any gauging or sampling devices attached to such tank, reservoir or other container except during sampling.

iii. Other equipment or means of equal efficiency approved by the Illinois EPA according to the provisions of 35 IAC 201.

l. The Molecular Sieve Dehydration Unit (MSDU) is subject to the New Source Performance Standards (NSPS) for SOCMI distillation, 40 CFR Part 60, Subpart NNN. However, see Condition 7.1.4(a) for the explanation of an exemption and thus why the standards in Subpart NNN do not apply.

m. The flares are subject to 40 CFR 64, Compliance Assurance Monitoring (CAM). See Condition 7.1.8(a).

7.1.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected Molecular Sieve Dehydration Unit (MSDU) not being subject to the emission standard (§60.662) within New Source Performance Standards (NSPS) for SOCMI 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 7.1.9(j).

b. 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.

c. The two affected process heaters are not subject to 35 IAC 217.121 or 217.141 because the firing rates of the heaters are less than 250 mmBtu/hr. In addition, §217.141 only applies to units in a major metropolitan area and Douglas County is not in a major metropolitan area.

d. The affected storage tanks, denaturing plant mix and storage tanks and the alcohol process emissions are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected

units either do not use an add-on control device to achieve compliance with an emission limitation or standard or use a passive control measure, such as a submerged loading pipe, that is not considered a control device because it acts to prevent the release of pollutants.

e. The affected cooling towers and process heaters are not 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.

7.1.5 Control Requirements and Work Practices

a. The east and west flares 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 except that the west flare is not subject to the monitoring requirement. Only the east flare is actually subject to the NSPS. Operation in this manner will also be sufficient for the flare to be considered a smokeless flare as required in Condition 7.1.3(g).

b. The ether surge drum storage tank (Dr-1277) shall be vented to the east flare. This will bring the tank into compliance with the requirements of 40 CFR 60.112b(a)(3), one of the methods within §60 Subpart Kb that the Permittee has chosen in order to comply.

7.1.6 Production and Emission Limitations

In addition to Condition 5.3.2 and the source-wide emission limitations in Condition 5.6, the affected molecular sieve dehydration unit (MSDU) and storage tank Dr-68 are subject to the following:

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

VOM Emissions	
(lb/hr)	(ton/year)
2.9	12.7

These limits are based on an ethanol production limit of 33.2 mmgal/yr, which shall no be exceeded [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 is a natural minor emission unit and 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 is a natural minor emission unit and 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

a. Within 180 days of issuance of this permit renewal, both flares shall be tested to demonstrate that it is operated within the parameters specified in 40 CFR 60.18. When performing the testing the Permittee may request that alternate methods of measuring the Btu content of the gas be used.

7.1.8 Monitoring Requirements

a. Compliance Assurance Monitoring (CAM) Requirements

The affected alcohol plant subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The Permittee shall comply with the monitoring requirements of the Compliance Assurance Monitoring (CAM) Plan described in Attachment 3, Table 3.1 pursuant to 40 CFR Part 64 as submitted in the Permittee’s CAM plan application. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment [40 CFR 64.7(a) and (b)].

b. The east and west flares 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. Note that the NSPS only required it for the east flare but CAM now requires it for both flares.

c. The MSDU unit shall be monitored for leaks in accordance with the requirements of 40 CFR 60.482.

d. 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(i).

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for each affected alcohol plant and other associated emission units to demonstrate compliance with Conditions 5.6.1 and 7.1.3 through 7.1.8, pursuant to Section 39.5(7)(b) of the Act:

a. Records for Compliance Assurance Monitoring (CAM) Requirements

The Permittee shall maintain records of the monitoring data, monitor performance data, corrective actions taken, monitoring equipment maintenance, and other supporting information related to the monitoring requirements in Condition 7.1.8(a), as required by 40 CFR 64.9(b)(1).

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_x, and HAP emissions (lb/yr);

j. 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(a)];

k. Contents and vapor pressure of material stored in any storage tank over 40,000 gallons in volume that is not a pressure tank or vented to a control device;

l. Records for Compressor Outages

The Permittee shall maintain records of continued operation of an affected alcohol plant subject to Condition 7.1.11(b) during a compressor outage, which as a minimum, shall include:

i. Date and duration of the compressor outage.

ii. A detailed explanation of the the compressor outage.

iii. An explanation why the affected alcohol plant continued to operate in accordance with Condition 7.1.11(b).

iv. The measures used to reduce the quantity of emissions and the duration of the event.

v. The steps taken to prevent similar compressor outages or reduce their frequency and severity.

vi. The amount of release above typical emissions during the compressor outages. If the exceedance during the compressor outage is for opacity only then the emissions do not need to be quantified.

n. A record of the test conducted on the flare to verify compliance with 40 CFR 60.18 as required by Condition 7.1.7.

7.1.10 <u>Reporting Requirements</u>

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of an affected alcohol plant or associated emission 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:

i. Emissions of VOM from the affected alcohol plant or tank in excess of the limits specified in Condition 7.1.6 within 30 days of such occurrence.

ii. Operation of the affected alcohol plant or storage tanks in excess of the limits or not meeting the requirements (e.g. submerged loading pipe) specified in Conditions 7.1.3 or 7.1.5 within 30 days of such occurrence.

iii. Failure to perform leak testing as required by Condition 7.1.3(c) and (e).

iv. Failure to perform the flare test required by Condition 7.1.7 within the specified timeframe.

b. Reporting of Compliance Assurance Monitoring (CAM)

The Permittee shall submit monitoring reports to the Illinois EPA in accordance with Condition 8.6.1 and shall include, at a minimum, the information required under Condition 8.6.1 and the following information:

i. Summary information on the number, duration, and cause of excursions or exceedances, and the corrective actions taken [40 CFR 64.6(c)(3) and 64.9(a)(2)(i)]; and

ii. Summary information on the number, duration, and cause for monitoring equipment downtime incidents, other than downtime associated with calibration checks [40 CFR 64.6(c)(3) and 64.9(a)(2)(ii)].

c. Reporting of Compressor Outages

The Permittee shall provide the following notification and reports to the Illinois EPA, Air Compliance Unit and Regional Field Office concerning continued operation of an affected alcohol plant subject to Condition 7.1.11(b) during a compressor outage:

In accordance with the due dates in Condition 8.6.1, the Permittee shall submit semi-annual compressor outage reports to the Illinois EPA pursuant to Sections 39.5(7)(a) and (f) of the Act. These reports may be submitted along with other semi-annual reports and shall include the following information for compressor outages of the affected alcohol plant during the reporting period:

i. A listing of compressor outages, in chronological order, that includes:

A. The date, time, and duration of each incident.

B. The identity of the affected operation(s) involved in the incident.

ii. The aggregate duration of all incidents during the 6-month reporting period.

iii. If there have been no such incidents during the 6-month reporting period this shall be stated in the report.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to an affected storage tank 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:

a. For denatured alcohol or denaturant storage tanks listed in Attachment 5c, the Permittee may change the materials stored in the tanks to other materials listed in that same attachment provided that no material with a vapor pressure over 2.5 psia may be stored in a tank over 40,000 gallons in volume, that is the tank must continue to comply with 35 IAC 215.121 [Condition 7.1.3(k)].

b. Compressor Outages

During a compressor outage emissions increase because more uncontrolled emissions are vewnted to the flare. However, no rule is violated and therefore special permission to operated during a compressor outage does not need to meet the requirements of 35 IAC 201.262 (Malfuntion and Breakdown). 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 shlal fulfill the applicable recordkeeping and reporting requirements of Condition 7.1.9(l).

7.1.12 Compliance Procedures

a. Compliance with Conditions 7.1.3(c), (e) and (f) are addressed by the leak monitoring requirements in Condition 7.1.8(c), the records required in Condition 7.1.9(h), and the reports required in Condition 7.1.10(a)(iii).

b. Compliance with Condition 7.1.3(d) is addressed by the requirements of Condition 7.1.5, the testing requirements of Condition 7.1.7, the CAM monitoring requirements of Condition 7.1.8(a) and the records and reports required by Conditions 7.1.9 and 7.1.10.

c. Compliance with Condition 7.1.3(e) is addressed by the leak monitoring requirements of Condition 7.1.8(b) and the records and reports required by Conditions 7.1.9(h) and 7.1.10(a)(iii).

d. Compliance with Condition 7.1.3(g) is addressed by the requirements of Condition 7.1.5, the testing requirements of Condition 7.1.7 and the records and reports required in Conditions 7.1.9(n) and 7.1.10.

e. Compliance with Condition 7.1.3(h) is addressed by having all tank trucks and tank cars equipped with a submerged loading pipe.

f. Compliance with Condition 7.1.3(i) is addressed by the emission factors for CO as listed below and the records required by Condition 7.1.9(g).

i. A. Emission factors for the affected process heaters when fired by natural gas:

Pollutant	Emission Factors (lb/mmscf)
VOM	5.5
PM	7.6
SO_2	0.6
NO_x	100
CO	84

The emission factors (lb/mmscf) are for Natural Gas-Fired Small Boilers (<100 mmBtu/hr Heat Input) from AP-42 Section 1.4 (dated 3/98).

B. Emission formula for the affected process heater when fired by natural gas:

(Process Heater Emissions, lb) = (The Appropriate Emission Factor, lb/mmscf) x (Natural Gas Usage, mmscf)

g. Compliance with Condition 7.1.3(j) is addressed by the requirements of Condition 7.1.5(b) and the records and reports for flare operation required by Conditions 7.1.9 and 7.1.10. Note that the tank is a pressure tank but the design pressure is not sufficient to meet the exemption from NSPS requirements specified in 40 CFR 60.110b(c)(2).

h. Compliance with Condition 7.1.3(k) is addressed by having diethyl ether, the only material with a vapor pressure over 2.5 psia, stored in pressure tanks (see Attachment 5).

i. i. Storage tank losses shall be calculated using the method in AP-42 or the USEPA TANKS 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 Condition 7.1.12(g)(i).

iii. Mix tank emissions shall be calculated using AP-42 or the USEPA TANKS 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.

j. Loading losses when loading tank cars and tank trucks shall be calculated using AP-42 equation 4.4-5, as follows:

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

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

i. 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[a] 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

Component	Service	AP-42 Factor Lbs/Hr/ Component	Leak Threshold	Monitoring Frequency	TNRCC 28MID[a] Reduction Credit, %
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

[a] Texas Natural Resources Conservation Commission Maintenance Incentive Directed Program

k. Cooling tower VOM and PM emissions shall be calculated based on AP-42 Table 5.1-2 and actual recirculation flow rate of water.

l. Emissions from the flare shall be calculated using the AP-42 emission factor for industrial flares, Table 13.5-1. These factors in lb/mmBtu are as follows (the mmBtu rate is based on the fuel gas only):

Total hydrocarbons: 0.14
Carbon monoxide: 0.37
Nitrogen oxides: 0.068

Emission formula for the affected flare when fired by natural gas and process waste gas:

(Flare Emissions, lb) = (The Appropriate Emission Factor, lb/mmBtu) x (Btu [in millions] value of fuel gas)

7.2 Microthene® F Unit

7.2.1 Description

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

Note: This narrative description is for informational purposes only and is not enforceable.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Description	Date Constructed	Emission Control Equipment
Pellet Storage Silos	Pre-1971	None
Closed Vent Microthene® F Process Equipment	Modified in 2006	None
Product Drying w/Process Baghouse Fi-1863	Modified in 2006	None
Product Storage and Packaging w/Process Baghouse, Fi-1869	Modified in 2006	None

7.2.3 Applicable Provisions and Regulations

a. The “affected Microthene® F unit” for the purpose of these unit-specific conditions, is a group of processes for converting polyethylene pellets into a fine powder and described in Conditions 7.2.1 and 7.2.2.

b. All of the processes in the Microthene® F unit are subject to the opacity limits in condition 5.3.2.

c. All of the processes in the Microthene® F unit are subject to 35 IAC 212.321. The method to calculate allowable for this rule is described in Attachment 2.

7.2.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected Microthene® F unit not being subject to the New Source Performance Standards (NSPS) for Polymers, 40 CFR Part 60, Subpart DDD, because the affected 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. The affected closed vent process equipment, product drying operation and product storage and packaging operation are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected closed vent process equipment, product drying operation and product storage and packaging operation do

not use an add-on control device to achieve compliance with an emission limitation or standard. The process baghouses are for product recovery and not for emission control.

c. This permit is issued based on the affected Microthene® F unit not being subject to 35 IAC 215 Subpart K (§215.301 et. seq.), Use of Organic Material, because the affected Microthene® F unit does not use or emit an organic material but only PM.

7.2.5 Control Requirements and Work Practices

a. The Permittee shall operate the Microthene® F unit and associated product recapture systems (including process baghouses that are not defined as control devices) in accordance with good air pollution control practice to minimize emissions of all air pollutants.

b. The design exhaust flow rate of the dryer system (Process Baghouse Fi-1863) shall not exceed 6,800 scfm [T1].

c. The design exhaust flow rate of the storage and packaging system (Baghouse Fi-1869) shall not exceed 550 scfm [T1].

The above limitations (b and c) were established in Permit 05090028 [revision issued October 17, 2007], pursuant to PSD. These limits document that the construction and/or modification addressed in the aforementioned permit was a natural minor increase does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1].

7.2.6 Production and Emission Limitations

a. Emissions of PM from the Microthene® F unit shall not exceed the following limits [T1]:

Unit	(Lbs/Hour)	(Tons/Year)
Drying (Fi-1863)	1.75	7.66
Storage and Packaging (Fi-1869)	0.17	0.77

b. This permit is issued based on negligible emissions of PM from vents in the Microthene® unit not addressed above. For this purpose, PM emissions shall not exceed 0.1 lb/hour and 0.44 tons/year [T1].

c. This permit is issued based on minimal emissions of pollutants other than PM from the Microthene® F unit. For this purpose, emissions of other pollutants shall not exceed 0.5 lb/hour and 2.2 tons/year [T1].

d. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current

month plus the preceding 11 months (running 12 month total) [T1].

e. The above limitations were established in Permit 05090028 [revision issued October 17, 2007], pursuant to PSD. These limits document that the construction and/or modification addressed in the aforementioned permit is a natural minor source does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for PSD [T1]. Note that this construction permit only increased the production rate of Microthene® F unit and did not create a totally new emission unit.

7.2.7 Testing Requirements

Testing requirements are not set for the affected Microthene® F unit. However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.2.8 Monitoring Requirements

a. The Permittee shall monitor the Fi-1863 and Fi-1869 process baghouses by equipping each of them with continuous dust gauges. The dust gauges shall have the capability to notify plant personnel if a leak detection signal is outside the established normal value, i.e., above 100 picoamps.

b. The plant operator shall perform a Method 22 observation of the Fi-1863 and Fi-1869 baghouse daily when the dust gauges are not operating and the system is in operation.

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected Microthene® unit to demonstrate compliance with Conditions 5.6.1, 7.2.3, 7.2.5, 7.2.6 and 7.2.8, pursuant to Section 39.5(7)(b) of the Act:

a. Production rate so that allowable for Condition 7.2.3(c) may be calculated;

b. Production (lb/yr);

c. PM emissions (lb/yr);

d. Baghouse information (including process baghouses that are not control equipment):

i. The engineering or manufacturer’s specifications for each baghouse, including design air flow rate.

ii. The engineering or manufacturer's specifications for the filter bags, including exhaust grain loading (gr/dscf).

iii. The maximum PM emission rate (lbs/hour), based on engineering calculations, with supporting documentation.

iv. An operating log for the Microthene® F unit, including the baghouses.

e. Daily visible emission observations of the Fi-1863 dryer baghouse and Fi-1869 storage and packaging baghouse whenever a dust gauge is not operating but the system is in operation.

f. A log of actions taken when the dust gauges indicate to plant personnel that a leak detector signal is outside the normal range.

7.2.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of an affected Microthene® F 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:

i. Emissions of PM from the affected product drying and product storage and packaging in excess of the limits specified in Condition 7.2.6 within 30 days of such occurrence.

ii. Operation of the affected Microthene® F unit in excess of the limits specified in Conditions 7.2.3(b) or (c) within 30 days of such occurrence.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to affected Microthene® F unit 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:

a. Construction Permit No. 05090028 as revised on October 17, 2007 authorizes installation of a new extruder screw and changes to the filter equipment to increase in production of the Microthene® F Unit by either changing to

a parallel configuration or installing a more effective filtration system).

7.2.12 Compliance Procedures

a. Compliance with Conditions 7.2.3(b) and (c) are addressed by the requirements of Condition 7.2.5, the monitoring requirements in Condition 7.2.8 and the records and reports required in Conditions 7.2.9 and 7.2.10.

b. Compliance with Condition 7.2.6 is addressed by the records and reports required in Conditions 7.2.9 and 7.2.10.

c. To determine compliance with Condition 5.6.1 and 7.2.6, emissions of PM from the affected material transfer units shall be calculated based on the following:

PM Emissions = (Air flow, cfm) x (Estimated Dust Collector Outlet Dust Loading*, gr/scf) x (1 lb/7,000 gr) x (60 minutes/hr).

* As specified by manufacturer or vendor of the filter, or air testing of the actual equipment, or air testing of similar equipment at this or other similar operations, or engineering calculations.

7.3 Wastewater Treatment Plant and Gasoline Storage Tanks

7.3.1 Description

The wastewater treatment plant treats all plant process wastewater.

There are two gasoline storage tanks on site.

Note: This narrative description is for informational purposes only and is not enforceable.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Description	Date Constructed	Emission Control Equipment
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	Pre-1971	None
Gasoline Storage Tanks Bulk Gasoline Tank, 2500 gal North Lake Fire Water Pump Gasoline Tank, 325 gal		Submerged Loading Pipe

7.3.3 Applicable Provisions and Regulations

a. The “affected wastewater treatment plant” for the purpose of these unit-specific conditions, is a multi-unit operation used to treat process wastewater generated at the source and described in Conditions 7.3.1 and 7.3.2.

b. The affected wastewater treatment plant is 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. The process does not have any control equipment.

c. The affected gasoline storage tanks are subject to 35 IAC 215.122(b) which requires the use of a submerged loading pipe because the vapor pressure of the material stored is over 2.5 psia.

7.3.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected 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.

b. This permit is issued based on the affected gasoline storage tanks not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected units use a passive control measure, such as a seal, lid, pipe or roof, that is not considered a control device because it acts to prevent the release of pollutants.

7.3.5 Control Requirements and Work Practices

a. Control requirements and work practices are not set for the affected wastewater treatment plant.

7.3.6 Production and Emission Limitations

a. Production and emission limitations are not set for the affected wastewater treatment plant. However, there are source-wide production and emission limitations set forth in Condition 5.6.

7.3.7 Testing Requirements

a. Testing requirements are not set for the affected wastewater treatment plant. However, there are source-wide testing requirements in Condition 5.7 and general testing requirements in Condition 8.5.

7.3.8 Inspection and Monitoring Requirements

a. On a yearly basis the gasoline storage tanks shall be inspected to verify that the submerged loading pipe is in good condition and functioning properly.

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.9, the Permittee shall maintain records of the following items for the affected wastewater treatment plant to demonstrate compliance with Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act:

a. Wastewater treatment throughput (gal/mo).

b. VOM and HAP emissions (lb/yr).

c. Results of yearly inspections of submerged loading pipes.

7.3.10 Reporting Requirements

a. Reporting of Deviations

The Permittee shall promptly notify the Illinois EPA, Air Compliance Unit, of deviations of the affected wastewater treatment plant 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:

Any of the submerged loading pipes was not in good working order or not functioning properly.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

a. Operational flexibility is not set for the affected wastewater treatment plant.

7.3.12 Compliance Procedures

a. Compliance with Condition 7.3.3(b) is addressed by the non photochemical nature of the chemicals used in the process and the records and reports required in Conditions 7.3.9 and 7.3.10.

b. Compliance with Condition 7.3.3(c) is addressed by the inspection requirements of Condition 7.3.8 and the records and reports required in Conditions 7.3.9 and 7.3.10.

c. VOM emissions from the wastewater system shall be calculated using the USEPA WATER 8 computer program, a more recent version of such program or an equivalent calculation. VOM emissions from the gasoline storage tanks shall be calculated using the USEPA TANKS program or AP-42 emission factors.

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 _____Error! Bookmark not defined. (the date of issuance of the proposed permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

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

8.4.2 Changes Requiring Prior Notification

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

a. The changes do not violate applicable requirements;

b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test

methods), recordkeeping, reporting, or compliance certification requirements;

c. The changes do not constitute a modification under Title I of the CAA;

d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and

e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:

i. Describe the physical or operational change;

ii. Identify the schedule for implementing the physical or operational change;

iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;

iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and

v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods if applicable test methods are not specified by the applicable regulations or otherwise identified in the conditions of this permit. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Conditions 8.6.3 and 8.6.4.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

Reports summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Illinois EPA

every six months as follows, unless more frequent submittal of such reports is required in Sections 5 or 7 of this permit [Section 39.5(7)(f) of the Act]:

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

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

8.6.2 Test Notifications

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

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

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

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

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

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

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

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

8.6.3 Test Reports

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

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

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

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

c. The date any analyses were performed;

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

e. The test and analytical methodologies used;

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

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

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

8.6.4 Reporting Addresses

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

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

i. Illinois EPA - Air Compliance Unit

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

ii. Illinois EPA - Air Quality Planning Section

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

iii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

iv. USEPA Region 5 - Air Branch

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

c. Permit applications should be addressed to the Air Permit Section. As of the date of issuance of this permit, the address of the Air Permit Section is as follows:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

8.7 Title I Conditions

Notwithstanding the expiration date on the first page of this CAAPP permit, Title I conditions in this permit, which are identified by a T1, T1N, or T1R designation, remain in effect until such time as the Illinois EPA takes action to revise or terminate them in accordance with applicable procedures for action on Title I conditions. This is because these conditions either: (a) incorporate conditions of earlier permits that were issued by the Illinois EPA pursuant to authority that includes authority found in Title I of the CAA (T1 conditions), (b) were newly established in this CAAPP permit pursuant to authority that includes such Title I authority (T1N conditions), or (c) reflect a revision or combination of conditions established in this CAAPP permit (T1R conditions). (See also Condition 1.5.)

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

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

9.1.2 In particular, this permit does not alter or affect the following [Section 39.5(7)(j)(iv) of the Act]:

a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and

d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, pursuant to Section 39.5(7)(j) and (p) of the Act, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

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

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

9.2.2 Duty to Maintain Equipment

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

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless this permit provides for such continued operation consistent with the Act and applicable Illinois Pollution Control Board regulations [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

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

9.2.5 Duty to Pay Fees

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

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents as may be required by law and in accordance with constitutional limitations, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Sections 4 and 39.5(7)(a) and (p)(ii) of the Act]:

a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment),

practices, or operations regulated or required under this permit;

d. Sample or monitor any substances or parameters at any location:

i. At reasonable times, for the purposes of assuring permit compliance or applicable requirements; or

ii. As otherwise authorized by the CAA, or the Act.

e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and

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

9.4 Obligation to Comply with Other Requirements

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

9.5 Liability

9.5.1 Title

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

9.5.2 Liability of Permittee

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

9.5.3 Structural Stability

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

9.5.4 Illinois EPA Liability

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

9.5.5 Property Rights

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

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

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

9.6.2 Records of Changes in Operation

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

9.6.3 Retention of Records

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

b. Other records required by this permit including any logs, plans, procedures, or instructions required to be kept by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

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

9.8 Requirements for Compliance Certification

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

a. The certification shall include the identification of each term or condition of this permit that is the basis of the

certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.

b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.

c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act and applicable regulations [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as Attachment 1 to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

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

9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence [Section 39.5(7)(k) of the Act]:

i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency.

Note: For this purpose, emergency means a situation arising from sudden and reasonably unforeseeable events beyond the control of the source, as further defined by Section 39.5(7)(k)(iv) of the Act.

ii. The permitted source was at the time being properly operated;

iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed

description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.

b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations [Section 39.5(7)(k)(iv) of the Act].

9.11 Permanent Shutdown

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

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

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

9.12.2 Reopening and Revision

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

a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit.

b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program.

c. The Illinois EPA or USEPA determines that this permit contains a material mistake or that inaccurate statement were made in establishing the emission standards or limitations, or other terms or conditions of this permit.

d. The Illinois EPA or USEPA determines that this permit must be revised or revoked to ensure compliance with the applicable requirements.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation and reissuance under Section 39.5(15) of the Act, pursuant to Sections 39.5(5)(e) and (i) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable. In the event of a challenge to any portion of the permit, other portions of the permit may continue to be in effect. Should any portion of this permit be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected and the rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

Upon the expiration of this permit, if the source is operated, it shall be deemed to be operating without a permit unless a timely and complete CAAPP application has been submitted for renewal of this permit. However, if a timely and complete application to renew this CAAPP permit has been submitted, the terms and all conditions of this CAAPP permit will remain in effect until the issuance of a renewal permit [Section 39.5(5)(l) and (o) of the Act].

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

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

9.15 General Authority for the Terms and Conditions of this Permit

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

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

10.0 ATTACHMENTS

Attachment 1 Example Certification by a Responsible Official

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

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

Attachment 2 Emissions of Particulate Matter from Process Emission Units

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

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

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

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

where:

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

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

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

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

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

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

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

iv. For process weight rates of less than 100 pounds per hour, the allowable rate is 0.5 pounds per hour [35 IAC 266.110].

b. Existing Process Emission Units for Which Construction or Modification Prior to April 14, 1972 [35 IAC 212.322].

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

ii. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.322(b)]:

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

where:

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

A. Up to process weight rates up to 27.2 Mg/hr (30 T/hr):

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

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

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

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

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

iv. For process weight rates of less than 100 pounds per hour, the allowable rate is 0.5 pounds per hour [35 IAC 266.110].

Attachment 3 Compliance Assurance Monitoring (CAM) Plan

Table 3.1 PSEU Designation:	Alcohol Plant
Significant Emission Unit Section:	7.1
Pollutant:	VOM

Indicators:	#1: Primary, Presence of Pilot Flame	#2: Secondary, Verification of Flare Flame
GENERAL CRITERIA		
THE MONITORING APPROACH USED TO MEASURE THE INDICATORS:	Thermocouples, infrared monitoring signal or equivalent method	TV screen aimed at flare and outdoor visual checks
THE INDICATOR RANGE WHICH PROVIDES A REASONABLE ASSURANCE OF COMPLIANCE:	No range, immediate action taken if no flame indicated by primary or secondary indicator	No range, immediate action taken if no flame indicated by primary or secondary indicator
QUALITY IMPROVEMENT PLAN (QIP) THRESHOLD LEVELS:	Not applicable	Not applicable
PERFORMANCE CRITERIA		
THE SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA:	For the IR camera, output signal sent to chart recorder and action taken if no signal; for the thermocouple, output signal sent to local light panel and action taken if a red light is realized.	Additional verification
VERIFICATION PROCEDURES TO CONFIRM THE OPERATIONAL STATUS OF THE MONITORING:	Alarm or visual indication if no signal	None, manual monitoring
QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES THAT ENSURE THE VALIDITY OF THE DATA:	Vendors recommendations on preventative maintenance	Camera shield from weather
THE MONITORING FREQUENCY:	Continuous	Continuous, visual check if no flame is seen on camera
THE DATA COLLECTION PROCEDURES THAT WILL BE USED:	Recorded on paper printouts for IR Camera; Visual inspection of thermocouple light panel logged in operator log sheets	Camera image and operator observations entered on logsheets
THE DATA AVERAGING PERIOD FOR DETERMINING WHETHER AN EXCURSION OR EXCEEDANCE HAS OCCURRED:	For IR Camera: continuous, no averaging period; for thermocouple: visual observations recorded every 4-6 hours	Camera image or operator observation

Attachment 4 Guidance

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

Guidance On Revising A CAAPP Permit:

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

Guidance On Renewing A CAAPP Permit:

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

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

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

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

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

Attachment 5 - List of Storage Tanks

5A – Alcohol Plant Storage Tanks

Tank Designation	Material Stored	Tank Capacity (gal)	Vapor Pressure (psia)	Tank Shape	Other Features[a]	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	0.9	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
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

Tank Designation	Material Stored	Tank Capacity (gal)	Vapor Pressure (psia)	Tank Shape	Other Features[a]	Vented to Flare	Year Built
Dr-470	Crude Alcohol	665,000	0.9	Spherical	Pressure	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

[a] All tanks have submerged loading pipes.

5B - Denatured Alcohol Mix Tanks[a]

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

[a] All tanks are cylindrical, fixed roof tanks with submerged loading pipes and constructed prior to 1972.

5C - Denatured Alcohol Storage Tanks[a]

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

[a] 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.