

217/782-2113

CONSTRUCTION PERMIT - NSPS SOURCE

PERMITTEE

Blackhawk Biodiesel  
Attn: Tom Mowrer  
406 First Street  
Post Office Box 68  
Ralston, Iowa 51459

Application No.: 06090035

I.D. No.: 177020ADH

Applicant's Designation: BIODIESELPRODFAC

Date Received: November 8, 2006

Subject: Biodiesel Plant

Date Issued: January 11, 2007

Location: 3692 Colby Road, Freeport, Stephenson County, 61032

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of:

- (1) 4 mmBtu/hour Flare
- (1) 30 mmBtu/hour Boiler Fired by Natural Gas, #2 oil, or Biodiesel
- (1) 10 mmBtu/hour Boiler fired Natural Gas, #2 oil, or Biodiesel
- (1) 11,700 Gallon #2 Oil Storage Tank
- (3) 500,000 Gallon Feedstock Oil Storage Tanks
- (1) 110,000 Gallon Refined Crude Fat Tank
- (2) 38,000 Gallon Fresh Methanol Storage Tanks
- (1) 38,000 Gallon Process Methanol Tank
- (1) 38,000 Gallon Sodium Methylate Tank
- (1) 20,000 Gallon Biodiesel Rework Tank
- (1) 45,000 Gallon Fatty Acid Tank
- (3) 500,000 Gallon Biodiesel Storage Tanks
- (3) 11,700 Gallon HCl Storage Tanks
- (2) 110,000 Gallon Glycerine Storage Tanks
- (2) 14,000 Gallon Soapstock Storage Tanks
- (1) 6,000 gpm Cooling Tower
- (1) Fatty Acid Stripping Column
- (1) Degumming Centrifuge
- (1) Feedstock Filter System
- (1) Vacuum Oil Dryer
- (2) Biodiesel Reactors (1st & 2nd Stage)
- (3) Biodiesel Decanters
- (1) Biodiesel Wash Tank (Ester Wash)
- (1) Acidulation Reactor
- (1) Biodiesel Stripping Column (Ester Drying)
- (1) Glycerin Stripping Column
- (1) Methanol Rectification Column
- (1) Biodiesel Filter System
- (1) Process Vent Condenser System
- (1) Water Absorber
- (1) Oil Absorber

Rail, and Truck and Unload/Load Facilities

pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit is issued based on the Potential to Emit (PTE) for Hazardous Air Pollutants (HAP) for Hazardous Air Pollutants (HAP) as listed in Section 112(g) of the Clean Air Act being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP).
- 2a. The 30 mmBtu/hr boiler is subject to a New Source Performance Standard (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. (Note: Pursuant to 40 CFR 60.41c, oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.)
  - b. Standard for sulfur dioxide:
    - i. Pursuant to 40 CFR 60.42c(d), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.
    - ii. Pursuant to 40 CFR 60.42c(g), except as provided in 40 CFR 60.42c(h), compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.
    - iii. Pursuant to 40 CFR 60.42c(i), the SO<sub>2</sub> emission limits, fuel oil sulfur limits, and percent reduction requirements under 40 CFR 60.42c apply at all times, including periods of startup, shutdown, and malfunction.
    - iv. Pursuant to 40 CFR 60.42c(j), only the heat input supplied to the affected facility from the combustion of coal and oil is counted under 40 CFR 60.42c. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

- c. Standard for particulate matter:
  - i. Pursuant to 40 CFR 60.43c(c), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.
  - ii. Pursuant to 40 CFR 60.43c(d), the PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.
  - iii. Pursuant to 40 CFR 60.43c(e) (1), on or after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, gas, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 mmBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter emissions in excess of 13 ng/J (0.030 lb/mmBtu) heat input, except as provided in 40 CFR 60.43c(e) (2) and (e) (3). Affected facilities subject to this paragraph, are also subject to the requirements of 40 CFR 60.43c(c) and (d).
- 3a. The 10 mmBtu/hr natural gas-fired cogeneration boiler is subject to a New Source Performance Standard (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Sulfur dioxide emissions from the boiler shall not exceed the applicable limit, pursuant to the NSPS, 40 CFR 60.42(c).
- c. At all times, the Permittee shall maintain and operate the boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, as required by the NSPS, 40 CFR 60.11(d).
- d. The Permittee shall fulfill applicable notification and recordkeeping requirements of the NSPS, 40 CFR 60.7 and 60.48c.
- 4a. Methanol storage tanks (38,000 gallons, each) are subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after

July 23, 1984, 40 CFR 60 Subparts A and Kb. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 60.110b(b), 40 CFR 60 Subpart Kb does not apply to storage vessels with a capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa.
- 5a. The transesterification, separation/washing, product drying, glycerine treatment/drying, and methanol recovery processes at this source are subject to the New Source Performance Standards (NSPS) Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts A and VV. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 60.482-1(a), each owner or operator subject to the provisions of 40 CFR 60 Subpart VV shall demonstrate compliance with the requirements of 40 CFR 60.482-1 through 60.482-10 or 40 CFR 60.480(e) for all equipment within 180 days of initial startup.
- c. Pursuant to 40 CFR 60.482-1(b), compliance with 40 CFR 60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485.
- 6a. The methanol recovery process is subject to the New Source Performance Standards (NSPS) for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR 60 Subparts A and NNN. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 60.662, each owner or operator of any affected facility shall comply with paragraph 40 CFR 702(a), (b), or (c) for each vent stream on and after the date on which the initial performance test required by 40 CFR 60.8 and 40 CFR 60.664 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. For each facility using a flare for compliance the owner or operator shall combust the emissions in a flare that meets the requirements of 40 CFR 60.18.
- 7a. The transesterification, separation/washing, product drying, and glycerine treatment/drying processes are subject to the New Source Performance Standards (NSPS) for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, 40 CFR 60, Subparts A and RRR. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 60.702, each owner or operator of any affected facility shall comply with paragraph 40 CFR 702(a), (b), or (c) for each vent stream on and after the date on which the initial performance test required by 40 CFR 60.8 and 40 CFR 60.704 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. For each facility using a flare for compliance the owner or operator shall combust the emissions in a flare that meets the requirements of 40 CFR 60.18.
  
- 8. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
  
- 9a. Flare used as control device shall have the following requirements:
  - i. Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph 9(c), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
  - ii. Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph 9(c).
  - iii. An owner/operator has the choice of adhering to either the heat content specifications in paragraph 9(a)(iii)(B) of this section and the maximum tip velocity specifications in paragraph 9(a)(iv) of this section, or adhering to the requirements in paragraph 9(a)(iii)(A) of this section.
    - A. 1. Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity,  $V_{max}$ , as determined by the following equation:

$$V_{max} = (XH_2 - K_1) * K_2$$

Where:

$V_{max}$  = Maximum permitted velocity, m/sec.

$K_1$  = Constant, 6.0 volume-percent hydrogen.

$K_2$  = Constant, 3.9(m/sec)/volume-percent hydrogen.

$X_{H_2}$  = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in 40 CFR 60.17).

2. The actual exit velocity of a flare shall be determined by the method specified in paragraph 9(c)(iv) of this section.
  - B. Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph 9(c)(iii) of this section.
- iv.
  - A. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph 9(c)(iv) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs 9(a)(iv)(B) and (C) of this section.
  - B. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph 9(c)(iv), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
  - C. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph 9(c)(iv), less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph 9(c)(v), and less than 122 m/sec (400 ft/sec) are allowed.
- v. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph 9(c)(vi).
- vi. Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

- b. Flares used to comply with provisions of this permit shall be operated at all times when emissions may be vented to them.
- c.
  - i. Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
  - ii. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
  - iii. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

$$K = \text{Constant}, 1.740 \times 10^{-7} \left( \frac{1}{\text{ppm}} \right) \left( \frac{\text{g mole}}{\text{scm}} \right) \left( \frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for  $\left( \frac{\text{g mole}}{\text{scm}} \right)$  is 20°C;

$C_i$  = Concentration of sample component  $i$  in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 60.17); and

$H_i$  = Net heat of combustion of sample component  $i$ , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

- iv. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

- v. The maximum permitted velocity,  $V_{max}$ , for flares complying with paragraph 9(a)(iv)(C) shall be determined by the following equation.

$$\text{Log}_{10} (V_{max}) = (HT + 28.8)/31.7$$

$V_{max}$  = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

$H_T$  = The net heating value as determined in paragraph 9(c)(iii).

- vi. The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084 (HT)$$

$V_{max}$  = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

$H_T$  = The net heating value as determined in paragraph 9(c)(iii).

- 10a. 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 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. Pursuant to 35 Ill. Adm. Code 212.321(a), 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 Ill. Adm. Code 212.321.
- 11. The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) in the boilers with a sulfur content greater than the larger of the following two values pursuant to 35 Ill. Adm. Code 214.122:
  - a. 0.28 weight percent, or
  - b. the wt. percent given by the formula: Maximum wt. percent sulfur =  $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$ .

12. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air, pursuant to 35 Ill. Adm. Code 216.121.
- 13a. Pursuant to 35 Ill. Adm. Code 215.122 loading operations shall:
  - i. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gallons), unless such tank is equipped with a permanent submerged loading pipe, submerged fill, or an equivalent device approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code 201 or unless such tank is a pressure tank as described in 35 Ill. Adm. Code 215.121(a) or is fitted with a recovery system as described in 35 Ill. Adm. Code 215.121(b) (2).
  - ii. Exception: If no odor nuisance exists the limitations of this Section shall only apply to the loading of volatile organic liquid with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).
- b. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart K shall apply only to photochemically reactive material.
- c. Pursuant to 35 Ill. Adm. Code 215.302(b), Emissions of organic material in excess of those permitted by 35 Ill. Adm. Code 215.301 are allowable if such emissions are controlled by a vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere.
- d. Pursuant to 35 Ill. Adm. Code 215.421(a), the owner or operator of a plant which has more than 1,500 components in gas or light liquid service, which components are used to manufacture the synthetic organic chemicals or polymers listed in 35 Ill. Adm. Code Part 215 Appendix D, shall conduct leak inspection and repair programs in accordance with 35 Ill. Adm. Code 215 Subpart Q for that component containing more than 10 percent volatile organic material as determined by ASTM method E-260, E-168, and E-169, incorporated by reference in Section 215.105. The provisions of 35 Ill. Adm. Code 215 Subpart Q are not applicable if the products listed in Appendix D are made from natural fatty acids for the production of hexadecyl alcohol.
- e. Pursuant to 35 Ill. Adm. Code 215.421(b), a component shall be considered to be leaking if the volatile organic material concentration exceeds 10,000 parts per million ppm when measured at a distance of 0

centimeters cm from the component as determined by Method 21, 40 CFR Part 60, Appendix A.

- f. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

14a. Emissions and operation of the source shall not exceed the following limits:

- i. Production of biodiesel shall not exceed 3,600,000 gallons/month and 36,000,000 gallons/year.
- ii. Emissions of VOM and HAPs from the source shall not exceed the following limits:

<u>Equipment</u>	<u>VOM Emissions</u>		<u>HAP (methanol) Emissions</u>		<u>HAP (hexanes) Emissions</u>		<u>HAP (hydrochloric acid) Emissions</u>	
	<u>(T/Mo)</u>	<u>(T/Yr)</u>	<u>(T/Mo)</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>	<u>(T/Yr)</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
Header vent (included in flare emissions)								
Feedstock Tanks	0.02	0.19			0.01	0.05		
Biodiesel Tanks	0.01	0.03						
Hydrochloric Acid Tanks							0.01	0.05
Glycerine Tanks	---	---						
Blending and #2 Oil Tanks	0.01	0.01						
Rail, Truck & Barge Unload/load (included in flare emissions)								
Total	0.03	0.23	--		0.01	0.05	0.01	0.05

These limits are based on maximum production rates, maximum plant operation of 8760 hours per year, and information provided with application.

- b. Fugitive emissions of methanol from leaking components (i.e., valves, flanges, pumps, compressor, etc.) shall not exceed 0.47 tons/month and 4.7 tons/year.
15. Combustion emissions from the 4 mmbtu/hr flare shall not exceed the following limits:

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
	<u>(Lb/mmBtu)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
NO <sub>x</sub>	0.068	0.12	1.19
CO	0.37	0.65	6.48
VOM	0.14 @ 45%	0.11	1.10
HAP (methanol)	0.062	0.11	1.09

These limits define the potential emissions of VOM, PM, NO<sub>x</sub>, and CO and are based on maximum usage, 8,760 hours of operation, AP-42, Table 13.5 emission factors, and information provided in application.

16a. Emissions and operation of the boilers shall not exceed the following limits:

- i. The boilers shall only be operated with natural gas and Biodiesel B100 as the fuels. The use of any other fuel in the boiler or process heaters requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements; and
- ii. Emissions from the two 30 mmbtu/hr Boiler:

<u>Pollutant</u>	<u>E M I S S I O N S</u>			
	<u>Natural Gas</u> <u>(lb/mmscf)</u>	<u>Biodiesel/#2 oil</u> <u>(lb/1,000 Gal)</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
Nitrogen Oxides (NO <sub>x</sub> )	100	20.0	1.88	18.77
Carbon Monoxide (CO)	84	5.0	1.06	10.51
Particulate Matter (PM)	7.6	3.3	0.19	1.88
Volatile Organic Material (VOM)	5.5	0.252	0.07	0.69
Sulfur Dioxide (SO <sub>2</sub> )	0.6	---/42.6	4.00	40.00

These limits are based on the maximum operation (8760 hours per year) for natural gas, #2 oil, or biodiesel, AP-42, Tables 1.4-1, 1.4-2, and 1.5-1 (1.5-1 representing Biodiesel except got SO<sub>2</sub>) emission factors, and the maximum emissions no matter which fuel (natural gas, #2 oil, or Biodiesel) is used.

iii. Emissions from the one 10 mmbtu/hr Boiler:

<u>Pollutant</u>	<u>E M I S S I O N S</u>			
	<u>Natural Gas</u> <u>(lb/mmscf)</u>	<u>Biodiesel/#2 oil</u> <u>(lb/1,000 Gal)</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
Nitrogen Oxides (NO <sub>x</sub> )	100	20.0	0.63	6.26
Carbon Monoxide (CO)	84	5.0	0.37	3.61
Particulate Matter (PM)	7.6	3.3	0.07	0.63
Volatile Organic Material (VOM)	5.5	0.252	0.03	0.24
Sulfur Dioxide (SO <sub>2</sub> )	0.6	---/42.6	1.34	13.33

These limits are based on the maximum operation (8760 hours per year) for natural gas, #2 oil, or biodiesel, AP-42, Tables 1.4-1,

1.4-2, and 1.5-1 (1.5-1 representing Biodiesel except got SO<sub>2</sub>) emission factors, and the maximum emissions no mater which fuel (natural gas, #2 oil, or Biodiesel) is used.

17. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements of Section 112(g) of the Clean Air Act.
18. Compliance with the annual limits of this permit 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).
- 19a. Pursuant to 40 CFR 60.46c(d), as an alternative to operating a CEMS at the inlet to the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under 40 CFR 60.46c(a), an owner or operator may elect to determine the average SO<sub>2</sub> emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under 40 CFR 60.46c(a), an owner or operator may elect to determine the average SO<sub>2</sub> emission rate by using Method 6B. Fuel sampling shall be conducted pursuant to either 40 CFR 60.46c(d) (1) or (d) (2). Method 6B shall be conducted pursuant to 40 CFR 60.46c(d) (3).
  - i. For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average SO<sub>2</sub> input rate.
  - ii. As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

- iii. Method 6B may be used in lieu of CEMS to measure SO<sub>2</sub> at the inlet or outlet of the SO<sub>2</sub> control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable SO<sub>2</sub> and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in 40 CFR 3.2 and the applicable procedures in section 7 of Performance Specification 2 (Appendix b). Method 6b, Method 6A, or a combination of Methods 6 and 3 or Methods 6C and 3a are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6b 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).
- b. Pursuant to 40 CFR 60.46c(f), the owner or operator of an affected facility operating a CEMS pursuant to 40 CFR 60.46c(a), or conducting as-fired fuel sampling pursuant to 40 CFR 60.46c(d)(1), shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the USEPA or Illinois EPA.
- 20a. Pursuant to 40 CFR 60.47c(a), the owner or operator of an affected facility combusting coal, oil, gas, or wood that is subject to the opacity standards under 40 CFR 60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system, except as specified in 40 CFR 60.47c(c) and (d).
- b. Pursuant to 40 CFR 60.47c(b), all COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 (appendix b). The span value of the opacity COMS shall be between 60 and 80 percent.
- c. Pursuant to 40 CFR 60.47c(c), units that burn only oil that contains no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/mmBtu) heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.
- d. Pursuant to 40 CFR 60.47c(d), owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for PM emissions discharged to the atmosphere as specified in 40 CFR 60.45c(d). The continuous monitoring

systems specified in paragraph 40 CFR 60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

- 21a. The source may be operated for a period of 12 months under this construction permit.
- b. Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the owner or operator of such facility shall conduct performance test(s) and furnish the Illinois EPA or USEPA a written report of the results of such performance test(s).
- 22a. Pursuant to 40 CFR 60.44c(a), except as provided in 40 CFR 60.44c(g) and (h) and in 40 CFR 60.8(b), performance tests required under 40 CFR 60.8 shall be conducted following the procedures specified in 40 CFR 60.44c(b), (c), (d), (e), and (f), as applicable. 40 CFR 60.8(f) does not apply to this section. The 30-day notice required in 40 CFR 60.8(d) applies only to the initial performance test unless otherwise specified by the Illinois EPA or USEPA.
- b. Pursuant to 40 CFR 60.44c(b), the initial performance test required under 40 CFR 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under 40 CFR 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.
- c. Pursuant to 40 CFR 60.44c(c), after the initial performance test required under 40 CFR 60.44c(b) and 40 CFR 60.8, compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under 40 CFR 60.42c is based on the average percent reduction and the average SO<sub>2</sub> emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO<sub>2</sub> emission rate are calculated to show compliance with the standard.
- d. Pursuant to 40 CFR 60.44c(d), if only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 are used to determine the hourly SO<sub>2</sub> emission rate ( $E_{no}$ ) and the 30-day average SO<sub>2</sub> emission rate ( $E_{ao}$ ). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system (CEMS). Method 19 shall be used to calculate  $E_{ao}$  when using daily fuel sampling or Method 6b.

- e. Pursuant to 40 CFR 60.44c(e), if coal, oil, or coal and oil are combusted with other fuels:
  - i. An adjusted  $E_{ho}$  ( $E_{ho}$ ) is used in Equation 19-19 of Method 19 to compute the adjusted  $E_{ao}$  ( $E_{ao}$ ). The  $E_{ho}$  is computed using the following formula:

$$E_{hoO} = [E_{ho} - E_w(1 - X_k)]/X_k$$

where:

$E_{hoO}$  is the adjusted  $E_{ho}$ , ng/J (lb/million Btu)

$E_{ho}$  is the hourly  $SO_2$  emission rate, ng/J (lb/million Btu)

$E_w$  is the  $SO_2$  concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9, ng/J (lb/million Btu). The value  $E_w$  for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure  $E_w$  if the owner or operator elects to assume  $E_w = 0$ .

$X_k$  is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

- ii. The owner or operator of an affected facility that qualifies under the provisions of 40 CFR 60.42c(c) or (d) [where percent reduction is not required] does not have to measure the parameters  $E_w$  or  $X_k$  if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19.
- f. Pursuant to 40 CFR 60.44c(g), for oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under 40 CFR 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under 40 CFR 60.46c(d) (2).
- g. Pursuant to 40 CFR 60.44c(j), the owner or operator of an affected facility shall use all valid  $SO_2$  emissions data in calculating  $\%P_s$  and  $E_{ho}$  under 40 CFR 60.44c(d), (e), or (f), as applicable, whether or not the minimum emissions data requirements under 40 CFR 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating  $\%P_s$  or  $E_{ho}$  pursuant to 40 CFR 60.44c(d), (e), or (f), as applicable.

- 23a. Pursuant to 40 CFR 60.45c(a), the owner or operator of an affected facility subject to the PM and/or opacity standards under 40 CFR 60.43c shall conduct an initial performance test as required under 40 CFR 60.8, and shall conduct subsequent performance tests as requested by the Illinois EPA or USEPA, to determine compliance with the standards using the following procedures and reference methods, except as specified in 40 CFR 60.45c(c) and (d).
- i. Method 1 shall be used to select the sampling site and the number of traverse sampling points.
  - ii. Method 3 shall be used for gas analysis when applying Method 5, Method 5B, or Method 17.
  - iii. Method 5, Method 5B, or Method 17 shall be used to measure the concentration of PM as follows:
    - A. Method 5 may be used only at affected facilities without wet scrubber systems.
    - B. Method 17 may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160°C (320°F). The procedures of Sections 8.1 and 11.1 of Method 5B may be used in Method 17 only if Method 17 is used in conjunction with a wet scrubber system. Method 17 shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.
    - C. Method 5B may be used in conjunction with a wet scrubber system.
  - iv. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Illinois EPA or USEPA when necessitated by process variables or other factors.
  - v. For Method 5 or Method 5B, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160±14°C (320±25°F).
  - vi. For determination of PM emissions, an oxygen or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5, Method 5B, or Method 17 by traversing the duct at the same sampling location.
  - vii. For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

- A. The oxygen or carbon dioxide measurements and PM measurements obtained under 40 CFR 60.45c,
- B. The dry basis F-factor, and
- C. The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

viii. Method 9 (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

- b. Pursuant to 40 CFR 60.45c(c), units that burn only oil containing no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/mmBtu) heat input or less are not required to conduct emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.
- c. Pursuant to 40 CFR 60.45c(d), in place of particulate matter testing with EPA Reference Method 5, 5B, or 17, an owner or operator may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor particulate matter emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 shall install, calibrate, maintain, and operate a continuous emission monitoring system and shall comply with the requirements specified in 40 CFR 60.45c(d) (1) through (d) (13).
  - i. Notify the Illinois EPA or USEPA 1 month before starting use of the system.
  - ii. Notify the Illinois EPA or USEPA 1 month before stopping use of the system.
  - iii. The monitor shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.
  - iv. The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under 40 CFR 60.8 or within 180 days of notification to the Illinois EPA or USEPA of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5, 5B, or 17 performance tests, whichever is later.
  - v. The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions as required under 40 CFR 60.8. Compliance with the particulate matter emission limit shall be determined by using the continuous emission monitoring system specified in 40 CFR 60.45c(d) to measure particulate matter and calculating a 24-hour block arithmetic

average emission concentration using EPA Reference Method 19, section 4.1.

- vi. Compliance with the particulate matter emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data.
- vii. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in 40 CFR 60.45c(d)(7)(i) for 75 percent of the total operating hours per 30-day rolling average.
  - A. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
- viii. The 1-hour arithmetic averages required under 40 CFR 60.45c(d)(7) shall be expressed in ng/J or lb/mmBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under 40 CFR 60.13(e)(2).
- ix. All valid continuous emission monitoring system data shall be used in calculating average emission concentrations even if the minimum continuous emission monitoring system data requirements of 40 CFR 60.45c(d)(7) are not met.
- x. The continuous emission monitoring system shall be operated according to Performance Specification 11 in appendix B of 40 CFR part 60.
- xi. During the correlation testing runs of the continuous emission monitoring system required by Performance Specification 11 in appendix B of 40 CFR part 60, particulate matter and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in 40 CFR 60.45c(d)(7)(i).
  - A. For particulate matter, EPA Reference Method 5, 5B, or 17 shall be used.
  - B. For oxygen (or carbon dioxide), EPA reference Method 3, 3A, or 3B, as applicable shall be used.
- xii. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of 40 CFR part 60. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.
- xiii. When particulate matter emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs,

calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Illinois EPA or USEPA or EPA Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

- 24a. Pursuant to 40 CFR 60.485(a), in conducting the performance test required in 40 CFR 60.8 the owner or operator shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A or other methods and procedures as specified in 40 CFR 60.485, except as provided in 40 CFR 60.8(b).
- b. Pursuant to 40 CFR 60.485(b), the owner or operator shall determine compliance with the standards in 40 CFR 60.482 as follows:
  - i. Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use in the procedures specified in Method 21. The following calibration gas shall be used:
    - A. Zero air (less than 10 ppm of hydrocarbon in air); and
    - B. Mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.
- c. Pursuant to 40 CFR 60.485(c), the owner or operator shall determine compliance with the no detectable emission standards in 40 CFR 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:
  - i. The requirement of 40 CFR 60.485(b) shall apply.
  - ii. Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
- d. Pursuant to 40 CFR 60.485(d), the owner or operator shall test each piece of equipment unless it is demonstrated that a process unit is not in VOC service i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the methods and procedures specified in 40 CFR 60.485(d) (1) through (d) (3) shall be used.
- e. Pursuant to 40 CFR 60.485(e), the owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:
  - i. The vapor pressure of one or more of the components is greater than 0.3 kPa at 20°C (1.2 in H<sub>2</sub>O at 68°F). Standard reference

tests or ASTM D2879-83, 96, or 97 (incorporated by reference) shall be used to determine the vapor pressures.

- ii. The total concentration of the pure components having vapor pressure greater than 0.3 kPa at 20°C (1.2 in H<sub>2</sub>O at 68°F) is greater than 20 percent by weight.
- iii. The fluid is a liquid at operating conditions.
- f. Pursuant to 40 CFR 60.485(f), samples used in conjunction with 40 CFR 60.485(d) and (e) shall be representative of the process fluid that is contained in or contacts the equipment.
- 25a. Pursuant to 40 CFR 60.664(a) and 60.704(a), for the purpose of demonstrating compliance with 40 CFR 60.662 or 60.702, all affected facilities shall be run at full operating conditions and flow rates during any performance test.
- b. Pursuant to 40 CFR 60.664(d) and 60.704(d), the following methods in appendix A to 40 CFR part 60, except as provided under 40 CFR 60.8(b), shall be used for determining the process vent stream TRE index value to determine compliance under 40 CFR 60.662(c) or 40 CFR 60.702(c).
  - i. A. Method 1 or 1A, as appropriate, for selection of the sampling site. The sampling site for the vent stream flow rate and molar composition determination prescribed in 40 CFR 60.664(d) (2) and (3) or 40 CFR 60.704(d) (2) and (d) (3) shall be, except for the situations outlined in 40 CFR 60.664(d) (1) (ii) or 60.704(d) (1) (ii), prior to the inlet of any control device, prior to any post-distillation dilution of the stream with air, and prior to any post-distillation introduction of halogenated compounds into the process vent stream. No transverse site selection method is needed for vents smaller than 4 inches in diameter.
  - B. If any gas stream other than the distillation vent stream from the affected facility is normally conducted through the final recovery device.
    - I. The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which the nondistillation stream is introduced.
    - II. The efficiency of the final recovery device is determined by measuring the TOC concentration using Method 18 at the inlet to the final recovery device after the introduction of any nondistillation vent stream and at the outlet of the final recovery device.

- III. This efficiency is applied to the TOC concentration measured prior to the final recovery device and prior to the introduction of the nondistillation stream to determine the concentration of TOC in the distillation vent stream from the final recovery device. This concentration of TOC is then used to perform the calculations outlined in 40 CFR 60.664(d) (4) and (5) or 40 CFR 60.704(d) (4) and (5).
- ii. The molar composition of the process vent stream shall be determined as follows:
  - A. Method 18 to measure the concentration of TOC including those containing halogens.
  - B. ASTM D1946-77 (incorporation by reference as specified in 40 CFR 60.17) to measure the concentration of carbon monoxide and hydrogen.
  - C. Method 4 to measure the content of water vapor.
- iii. The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, as appropriate.
- iv. The net heating value of the vent stream shall be calculated using the equation in 40 CFR 60.664(d) (4) or 60.704(d) (4).
- v. The emission rate of TOC in the vent stream shall be calculated using the equation in 40 CFR 60.664(d) (5) or 60.704(d) (5).
- c. Pursuant to 40 CFR 60.664(e) and 60.704(e), for purposes of complying with 40 CFR 60.662(c) or 60.702(c) the owner or operator of a facility affected by 40 CFR 60 Subpart NNN or RRR shall calculate the TRE index value of the vent stream using the equation for incineration in 40 CFR 60.664(e) (1) or 60.704(e) (1) for halogenated vent streams. The owner or operator of an affected facility with a nonhalogenated vent stream shall determine the TRE index value by calculating values using both the incinerator equation in 40 CFR 60.664(e) (1) or 60.704(e) (1) and the flare equation in 40 CFR 60.664(e) (2) or 60.704(e) (2) and selecting the lower of the two values.
- 26a. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:
  - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
  - ii. 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 emission unit and any control equipment will be determined.

- iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.
  - iv. The test method(s), which will be used, with the specific analysis method, if the method can be used with different analysis methods.
  - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
  - vi. Any proposed use of an alternative test method, with detailed justification.
  - vii. The format and content of the Source Test Report.
- b. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.
- c. Fourteen days after completion of sampling, the Final Report shall include as a minimum:
- i. A summary of results
  - ii. General information
  - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule
  - iv. Detailed description of test conditions, including
    - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption
    - B. Control equipment information, i.e., equipment condition and operating parameters during testing, and
    - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair
  - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
  - vi. An explanation of any discrepancies among individual tests or anomalous data.
  - vii. The results of all quality control evaluation, including a copy of all quality control data.

- d. Satisfactory completion of these tests so as to demonstrate compliance with applicable emission limits is a prerequisite to issuance of an operating permit, pursuant to 35 Ill. Adm. Code 201.160(a), (b) and (c).
- 27a. Pursuant to 40 CFR 60.482-10(f), except as provided in 40 CFR 60.482-10(i) through (k), each closed vent system shall be inspected according to the procedures and schedule specified in 40 CFR 60.482-10(f)(1) and (f)(2).
- i. If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in 40 CFR 60.482-10(f)(1)(i) and (f)(1)(ii):
    - A. Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and
    - B. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
  - ii. If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:
    - A. Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and
    - B. Conduct annual inspections according to the procedures in 40 CFR 60.485(b).
- b. Pursuant to 40 CFR 60.482-10(g), leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in 40 CFR 60.482-10(h).
- i. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
  - ii. Repair shall be completed no later than 15 calendar days after the leak is detected.
- c. Pursuant to 60.486(b), when each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:
- i. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
  - ii. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.

- iii. The identification on equipment except on a valve, may be removed after it has been repaired.
- d. Pursuant to 40 CFR 60.663(d) and 60.703(d), the owner or operator of an affected facility that seeks to comply with the TRE index value limit specified under 40 CFR 60.662(c) or 60.702(c) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
  - i. Where an absorber is the final recovery device in the recovery system:
    - A. A scrubbing liquid temperature monitoring device having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5^{\circ}\text{C}$ , whichever is greater, and a specific gravity monitoring device having an accuracy of  $\pm 0.02$  specific gravity units, each equipped with a continuous recorder, or
    - B. An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity, each equipped with a continuous recorder.
  - ii. Where a condenser is the final recovery device in the recovery system:
    - A. A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5^{\circ}\text{C}$ , whichever is greater, or
    - B. An organic monitoring device used to monitor organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.
- 28. This permit is issued based on the source not being subject to 35 Ill. Adm. Code Subpart Q "Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment" because plant has less than 1,500 components in gas of light liquid service pursuant to 35 Ill. Adm. Code 215.421(a).
- 29a. Pursuant to 40 CFR 60.48c(e), the owner or operator of each affected facility subject to the  $\text{SO}_2$  emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.43c shall keep records, including the following information, as applicable.
  - i. Calendar dates covered in the reporting period.

- ii. Each 30-day average SO<sub>2</sub> emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.
- iii. Each 30-day average percent of potential SO<sub>2</sub> emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.
- iv. Identification of any steam generating unit operating days for which SO<sub>2</sub> or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.
- v. Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.
- vi. Identification of the F factor used in calculations, method of determination, and type of fuel combusted.
- vii. Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.
- viii. If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.
- ix. If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 (40 CFR 60 appendix B).
- x. If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR 60 appendix f, Procedure 1.
- xi. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under 40 CFR 60.48c(f) (1), (2), or (3), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

- b. Pursuant to 40 CFR 60.48c(g), the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/mmBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.
  - c. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48c shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
30. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 31a. Pursuant to 40 CFR 60.115b(c), the owner or operator of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records and furnish reports as required by 40 CFR 60.115b(a), (b), or (c) depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. The owner or operator shall keep copies of all reports and records required by 40 CFR 60.115b, except for the record required by 40 CFR 60.115b(c)(1), for at least 2 years. The record required by 40 CFR 60.115b(c)(1) will be kept for the life of the control equipment. After installing control equipment in accordance with 40 CFR 60.112b(a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.
- i. A copy of the operating plan.
  - ii. A record of the measured values of the parameters monitored in accordance with 40 CFR 60.113b(c)(2).
- b. Pursuant to 40 CFR 60.486(c), when each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
- i. The instrument and operator identification numbers and the equipment identification number.
  - ii. The date the leak was detected and the dates of each attempt to repair the leak.
  - iii. Repair methods applied in each attempt to repair the leak.
  - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.
  - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

- vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired.
  - ix. The date of successful repair of the leak.
- c. Pursuant to 40 CFR 60.486(d), the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10 shall be recorded and kept in a readily accessible location:
- i. Detailed schematics, design specifications, and piping and instrumentation diagrams.
  - ii. The dates and descriptions of any changes in the design specifications.
  - iii. A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
  - iv. Periods when the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.
  - v. Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482-2, 60.482-3, 60.482-4, and 60.482-5.
- d. Pursuant to 40 CFR 60.486(e), the following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for equipment subject to the requirements of 40 CFR 60 Subpart VV.
  - ii. A. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e), 60.482-3(i) and 60.482-7(f).

- B. The designation of equipment as subject to the requirements of 40 CFR 60.482-2(e), 40 CFR 60.482-3(i), or 40 CFR 60.482-7(f) shall be signed by the owner or operator.
  - iii. A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4.
  - iv.
    - A. The dates of each compliance test as required in 40 CFR 60.482-2(e), 60.482-3(i), 60.482-4, and 60.482-7(f).
    - B. The background level measured during each compliance test.
    - C. The maximum instrument reading measured at the equipment during each compliance test.
  - v. A list of identification numbers for equipment in vacuum service.
- e. Pursuant to 40 CFR 60.486(f), the following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all pumps subject to the requirements of 40 CFR 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
  - ii. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
- 32a. Pursuant to 40 CFR 60.665(b)(4) and 60.705(b)(4), each owner or operator subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR 60.8. Where a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to comply with 40 CFR 60.662(a) or 60.702(a), a report containing performance test data need not be submitted, but a report containing the information in 40 CFR 60.665(b)(2)(i) or 60.705(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined. Where an owner or operator subject to the provisions of 40 CFR 60 Subpart NNN or RRR seeks to demonstrate compliance with 40 CFR 60.662(c) or 60.702(c):
- i. Where an absorber is the final recovery device in the recovery system, the exit specific gravity (or alternative parameter which

is a measure of the degree of absorbing liquid saturation, if approved by the Administrator), and average exit temperature, of the adsorbing liquid measured at least every 15 minutes and averaged over the same time period of the performance testing (both measured while the vent stream is normally routed and constituted), or

- ii. Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature measured at least every 15 minutes and averaged over the same time period of the performance testing while the vent stream is routed and constituted normally, or
  - iii. All measurements and calculations performed to determine the TRE index value of the vent stream.
- b. i. Pursuant to 40 CFR 60.665(d) and 40 CFR 60.705(d)(1), each owner or operator subject to the provisions of 40 CFR 60 Subpart NNN or RRR shall keep up to date, readily accessible continuous records of the flow indication specified under 40 CFR 60.663(a)(2), 40 CFR 60.663(b)(2) and 40 CFR 60.663(c)(1) or 40 CFR 60.703(a)(2)(i), 40 CFR 60.703(b)(2)(i) and 40 CFR 60.703(c)(1)(i), as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or has no flow rate.
- ii. Pursuant to 40 CFR 60.705(d)(2), where a seal mechanism is used to comply with 40 CFR 60.703(a)(2)(ii), 40 CFR 60.703(b)(2)(ii), and 40 CFR 60.703(c)(1)(ii), a record of continuous flow is not required. In such cases, the owner or operator shall keep up-to-date, readily accessible records of all monthly visual inspections of the seals as well as readily accessible records of all periods and the duration when the seal mechanism is broken, the bypass line valve position has changed, the serial number of the broken car-seal has changed, or when the key for a lock-and-key type configuration has been checked out.
- c. Pursuant to 40 CFR 60.665(g) and , Each owner or operator subject to the provisions of 40 CFR 60 Subpart NNN or RRR shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under 40 CFR 60.663(d) or 60.703(d), as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Illinois EPA or USEPA may at any time require a report of these data. Where an owner or operator seeks to comply with 40 CFR 60.662(c) or 60.702(c), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:
- i. Where an absorber is the final recovery device in a recovery system, and where an organic compound monitoring device is not used:

- A. All 3-hour periods of operation during which the average absorbing liquid temperature was more than 11°C (20°F) above the average absorbing liquid temperature during the most recent performance test, or
  - B. All 3-hour periods of operation during which the average absorbing liquid specific gravity was more than 0.1 unit above, or more than 0.1 unit below, the average absorbing liquid specific gravity during the most recent performance test (unless monitoring of an alternative parameter, which is a measure of the degree of absorbing liquid saturation, is approved by the Administrator, in which case he will define appropriate parameter boundaries and periods of operation during which they are exceeded).
- ii. Where a condenser is the final recovery device in a system, and where an organic compound monitoring device is not used, all 3-hour periods of operation during which the average exit (product side) condenser operating temperature was more than 6°C (11°F) above the average exit (product side) operating temperature during the most recent performance test.
  - iii. Where an absorber, condenser, or carbon adsorber is the final recovery device in the recovery system and where an organic compound monitoring device is used, all 3-hour periods of operation during which the average organic compound concentration level or reading of organic compounds in the exhaust gases is more than 20 percent greater than the exhaust gas organic compound concentration level or reading measured by the monitoring device during the most recent performance test.
33. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA

guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b) (3) and to record the results of that determination under 40 CFR 63.10(b) (3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

34. Pursuant to 40 CFR 60.663(b) and 40 CFR 60.703(b) each owner of operator of a affected facility that uses a flare to seek compliance with 40 CFR 60.662(b) and 40 CFR 60.702(b) shall install, calibrate, maintain and operate according to manufacturer's specification the following equipment:
  - a. A heat sensing device, such as a ultra-violet beam sensor or thermocouple, at the pilot light to indicate the continuous presence of a flame.
  - b. A flow indicator that provides a record of vent stream flow to the flare at least once every hour for each affected facility. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the flame and before being joined with any other vent stream.
35. Pursuant to 40 CFR 60.665(b) (3) and 40 CFR 60.705(b) (3) each owner of operator of a affected facility that seeks to demonstrate compliance with 40 CFR 60.662(b) and 40 CFR 60.702(b) through use of a smokeless flare, flare design(i.e., steam-assisted, air-assisted or nonassisted), shall keep data and records of all visible emission reading, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring, and records of all periods of operations during which the pilot flame is absent.
- 36a. Pursuant to 35 Ill. Adm. Code 215.425(a), the owner or operator of a synthetic organic chemical or polymer manufacturing plant shall maintain a leaking components monitoring log which shall contain, at a minimum, the following information:
  - i. The name of the process unit where the component is located;
  - ii. The type of component (e.g., valve, seal);
  - iii. The identification number of the component;
  - iv. The date on which a leaking component is discovered;
  - v. The date on which a leaking component is repaired;
  - vi. The date and instrument reading of the recheck procedure after a leaking component is repaired;
  - vii. A record of the calibration of the monitoring instrument;

- viii. The identification number of leaking components which cannot be repaired until process unit shutdown; and
  - ix. The total number of components inspected and the total number of components found leaking during that monitoring period.
- b. Pursuant to 35 Ill. Adm. Code 215.425(b), copies of the monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report prepared.
- c. Pursuant to 35 Ill. Adm. Code 215.425(c), copies of the monitoring log shall be made available to the Illinois EPA, upon verbal or written request, at any reasonable time.
- 37a. The Permittee shall maintain monthly records of the following items so as to demonstrate compliance with the conditions of this permit:
- iv. Biodiesel production (gallons/month and gallons/year);
  - v. Amount of raw material used in process (ton/month and tons/year);
  - iii. VOM and HAP content in all feed stock (% by weight)
  - iv. Fuel usage for the boiler (therms/month and therms/year); and
  - vi. Monthly and aggregate emissions of NO<sub>x</sub>, CO, VOM, PM and HAP with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 38a. Pursuant to 40 CFR 60.48c(b), the owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits of 40 CFR 60.42c, or the PM or opacity limits of 40 CFR 60.43c, shall submit to the Illinois EPA or USEPA the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in 40 CFR 60 appendix b.
- b. Pursuant to 40 CFR 60.48c(c), the owner or operator of each coal-fired, residual oil-fired, or wood-fired affected facility subject to the opacity limits under 40 CFR 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility which occur during the reporting period.

- c. Pursuant to 40 CFR 60.48c(d), the owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall submit reports to the Illinois EPA or USEPA.
- d. Pursuant to 40 CFR 60.48c(e), the owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.43c shall submit reports as required under paragraph (d) of this section, including the following information, as applicable.
  - i. Calendar dates covered in the reporting period.
  - ii. Each 30-day average SO<sub>2</sub> emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.
  - iii. Each 30-day average percent of potential SO<sub>2</sub> emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.
  - iv. Identification of any steam generating unit operating days for which SO<sub>2</sub> or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.
  - v. Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.
  - vi. Identification of the F factor used in calculations, method of determination, and type of fuel combusted.
  - vii. Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.
  - viii. If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.
  - ix. If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 (40 CFR 60 appendix B).
  - x. If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR 60 appendix f, Procedure 1.

- xi. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under 40 CFR 60.48c(f) (1), (2), or (3), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.
- e. Pursuant to 40 CFR 60.48c(j), the reporting period for the reports required under 40 CFR 60 Subpart Dc is each six-month period. All reports shall be submitted to the Illinois EPA or USEPA and shall be postmarked by the 30th day following the end of the reporting period.
- 39a. Pursuant to 40 CFR 60.487(a), each owner or operator subject to the provisions of 40 CFR 60 Subpart VV shall submit semiannual reports to the Illinois EPA or USEPA beginning six months after the initial start up date.
- b. Pursuant to 40 CFR 60.487(b), the initial semiannual report to the Illinois EPA or USEPA shall include the following information:
  - i. Process unit identification.
  - ii. Number of valves subject to the requirements of 40 CFR 60.482-7, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f).
  - iii. Number of pumps subject to the requirements of 40 CFR 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e) and those pumps complying with 40 CFR 60.482-2(f).
  - iv. Number of compressors subject to the requirements of 40 CFR 60.482-3, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR 60.482-3(i) and those compressors complying with 40 CFR 60.482-3(h).
- c. Pursuant to 40 CFR 60.487(c), all semiannual reports to the Illinois EPA or USEPA shall include the following information, summarized from the information in 40 CFR 60.486:
  - i. Process unit identification.
  - ii. For each month during the semiannual reporting period,
    - A. Number of valves for which leaks were detected as described in 40 CFR 60.482(7) (b) or 40 CFR 60.483-2,
    - B. Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d) (1),

- C. Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i),
  - D. Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2(c)(1) and (d)(6)(ii),
  - E. Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f),
  - F. Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1), and
  - G. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- iii. Dates of process unit shutdowns which occurred within the semiannual reporting period.
  - iv. Revisions to items reported according to 40 CFR 60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report.
- d. Pursuant to 40 CFR 60.665(1) and 60.705(1), each owner or operator that seeks to comply with the requirements of 40 CFR 60 Subpart NNN or RRR by complying with the requirements of 40 CFR 60.662 or 40 CFR 60.702 shall submit to the Illinois EPA or USEPA semiannual reports of the following recorded information. The initial report shall be submitted within 6 months after the initial start-up date.
    - i. Exceedances of monitored parameters recorded under 40 CFR 60.665(c) and (g) or 40 CFR 60.705(c), (f), and (g).
    - ii. All periods recorded under 40 CFR 60.665(d) or 60.705(d) when the vent stream is diverted from the control device or has no flow rate.
- e. Pursuant to 35 Ill. Adm. Code 215.426, the owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to 35 Ill. Adm. Code 215.420 shall:
    - i. Submit a report to the Illinois EPA prior to the 1st day of July and October listing all leaking components identified pursuant to 35 Ill. Adm. Code 215.423 but not repaired within 21 days, all leaking components awaiting process unit shutdown, the total number of components inspected and the total number of components found leaking;
    - ii. Submit a signed statement with the report attesting that all monitoring and repairs were performed as required under 35 Ill. Adm. Code 215.421 through 215.427.

40. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
41. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
5415 North University  
Peoria, Illinois 61614

It should be noted that the Illinois EPA's Division of Water Pollution Control has determined that the waste water stream for your facility requires a construction Permit in accordance with 35 Ill. Adm. Code 309.202(a). If you have any questions regarding this requirement, contact the Division of Water Pollution Control at 217/782-0610.

It should be also noted that during the analysis of this permit application, it was determined that your facility has the potential to emit more than 10 type of HAP and will be classified as a major source under the Clean Air Act Permit Program (CAAPP). To avoid the CAAPP permitting requirements, you may want to consider immediately applying for a Federally Enforceable State Operating Permit (FESOP). A FESOP is an operating permit which contains Federally enforceable limits in the form of permit conditions which effectively restrict the potential emissions of a source to below major source thresholds, thereby excluding the source from a CAAPP. Please Contact the Permit Section at 217/782-2113 to request the necessary application forms. Please note that this permit will expire one year from the initial date of issuance.

If you have any questions on this permit, please contact George Kennedy at 217/782-2113.

Edwin C. Bakowski, P.E.  
Acting Manager, Permit Section

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Division of Air Pollution Control

DES:GMK:cjc

cc: Region 2