

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

City of Fairfield  
Attn: Jim Griffith  
109 Northeast Second Street  
Fairfield, Illinois 62837

Application No.: 77080053  
Applicant's Designation: POWER PLNT  
Subject: Power Generating Plant  
Date Issued:  
Location: Northwest 6th Street, Fairfield

I.D. No.: 191010AAI  
Date Received: November 9, 2004  
Expiration Date:

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of an electric power plant with three diesel engines as described in the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This Federally Enforceable State Operating Permit (FESOP) is issued to limit the emissions of nitrogen oxide, carbon monoxide, sulfur dioxide, particulate matter, and volatile organic material from all internal combustion engines combined to less than 100 tons per year, as further described in Attachment A. As a result, this facility is excluded from the requirements to obtain a Clean Air Act Permit.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- 2a. The only fuel fired in the diesel engines shall be diesel fuel (distillate oil).
- b. Total emissions and operation for all three diesel engines shall not exceed the following limits:

<u>Pollutant (Total all 3 Units)</u>	<u>Diesel Fuel Usage</u>		<u>Emissions</u>	
	<u>(Gallons/Day)</u>	<u>(Gallons/Year)</u>	<u>(Lbs/Day)</u>	<u>(Tons/Yr)</u>
	13,920	456,000		
			<u>Emission Factors</u>	
			<u>(Lbs/1,000 Gal)</u>	
Nitrogen Oxides (NO <sub>x</sub> )			438.5	99.98
Carbon Monoxide (CO)			116.5	26.56
Sulfur Dioxide (SO <sub>2</sub> )			6.9	1.58
Particulate Matter (PM)			13.7	3.12
Volatile Organic Material (VOM)			12.3	2.81

These limits are based on maximum fuel usage a heat content of 137,030 mmBtu/gallon and standard emission factors (AP-42). Compliance with annual limits shall be determined from a running total of 365 days of data.

- 3a. i. The Permittee shall not allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any of these three diesel engine units, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and during startup, malfunction and breakdown as addressed below.
  - ii. The Permittee is authorized to operate each of these three engine units in excess of 30 percent opacity, during startup as the applicant has affirmatively demonstrated that all reasonable efforts will be made to minimize excess emissions during startup, and during malfunction or breakdown, as necessary to prevent injury to persons or severe damage to equipment; or provide essential services, provided, however, that continued operation solely for the economic benefit of the Permittee is not authorized. This authorization is subject to the following requirements:
    - A. This authorization for excess opacity during startup only extends for a period of up to two hours for a unit, following initial firing of fuel in the engine during each startup event.
    - B. This authorization for excess opacity during malfunction or breakdown only extends for the period of time until the engine may be safely removed from service.
    - C. The Permittee shall fulfill the applicable recordkeeping requirements of Condition 5(b), (c), (d) and (e).
  - b. At all times, the Permittee shall to the extent practicable, maintain and operate the above referenced emission sources, in a manner consistent with good air pollution control practice for minimizing emissions.
- 4a. The sulfur content of the diesel fuel shall not exceed 0.05 weight percent.
- b. Organic liquid by-products or waste materials shall not be used in any diesel engine without written approval from the Illinois EPA.
  - c. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 5a. The Permittee shall maintain records of the following items:
- i. Hours of operation for each unit including startup and shutdown when fuel is being fired in the unit (hours/day and hours/year);

- ii. Fuel usage for all engines combined (gallons per day and gallons/year);
  - iii. Heat content of the fuel oil burned (mmBtu/gallon);
  - iv. Fuel analysis sheets indicating sulfur content for each shipment or purchase of fuel; and
  - v. Daily and aggregate annual emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOM from the source with supporting calculations (lb/day and tons/year).
- b. The Permittee shall keep a maintenance and repair log for each engine, listing significant activities performed with date.
- c. The Permittee shall maintain records for each startup of an affected engine, which at minimum shall include the following information:
- i. Date and time of startup;
  - ii. Whether startup is "remote", i.e., initiated by off-site personnel or automated procedures;
  - iii. Whether operating personnel for the engines or air environmental staff are on site during startup, even if startup is remote; and
  - iv. A description of startup, if operating problems are identified during the startup.
- d. The Permittee shall maintain records that include as a minimum for each malfunction or breakdown of an engine during which operation continued and opacity may have exceeded 30 percent as allowed by 35 IAC 212.123.
- i. Date, time and duration of malfunction or breakdown;
  - ii. Description of malfunction or breakdown; and
  - iii. Whether operating personnel for the engines or air environmental staff are on site during malfunction or breakdown.
- e. Records for each occurrence when excess opacity was observed during startup or malfunction or breakdown of a unit, including:
- i. Date and duration of excess opacity, including start time and end time excess opacity occurred during startup;
  - ii. If normal operation was not achieved within one hour of initiating startup, an explanation why normal operation could not be achieved in one hour;
  - iii. If excess opacity occurred during malfunction or breakdown, an explanation why the unit could not be immediately shutdown; and

- iv. An explanation of the cause of the excess opacity and documentation that established procedures for minimizing emissions were followed.
  
- f. These records shall be retained on site at a readily accessible location for a period of at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and the USEPA upon request.

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

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

DES:GMK:psj

cc: Region 3  
Illinois EPA, FOS - CMU  
USEPA

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions of the generators operating in compliance with the requirements of this construction permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from the source. These maximum emissions from the generators utilize annual fuel usage of 456,000 gallons. The resulting maximum emissions are below the threshold levels (e.g., 100 tons/year for NO<sub>x</sub>, 100 tons/year for SO<sub>2</sub>, 100 tons/year for CO, and 100 tons/year for PM) at which this project would be considered a new major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that the fuel usage is less than allowed in this permit.

E M I S S I O N S						
(Tons/Year)						
<u>Emission Unit</u>	<u>Fuel</u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>SO<sub>2</sub></u>	<u>PM</u>	<u>VOM</u>
3 Diesel Engines	Diesel	99.98	26.56	1.58	3.12	2.81

GMK:psj