

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Shapiro Developmental Center  
Attn: Ira Collins  
100 East Jeffery Street  
Kankakee, Illinois 60901

Application No.: 74060029

I.D. No.: 091055AAP

Applicant's Designation: POWERHOUSE

Date Received: May 13, 2005

Subject: Natural Gas-Fired Boilers

Date Issued: November 3, 2005

Expiration Date: November 3, 2010

Location: 100 East Jeffery Street, Kankakee

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of two 52 mmBtu/hr and one 112 mmBtu/hr natural gas-fired boilers and two 575 kW diesel emergency generators, 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 is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for nitrogen oxide (NO<sub>x</sub>)). As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions from the source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes the current permit issued for this location.
- 2a. Total emissions and operation of the two 52 mmBtu/hour and one 112 mmBtu/hour natural gas boilers combined shall not exceed the following limits:

Natural Gas Usage: 500,000 therms/month, 5,000,000 therms/year.

<u>Pollutant</u>	<u>Emission Factor</u> ( <u>Lb/mmscf</u> )	<u>Emissions</u>	
		( <u>Tons/Mo</u> )	( <u>Tons/Yr</u> )
Nitrogen Oxide (NO <sub>x</sub> )	100.0	2.451	24.51
Carbon Monoxide (CO)	84.0	2.059	20.59
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.015	0.15
Particulate Matter (PM)	7.6	0.186	1.86
Volatile Organic Material (VOM)	5.5	0.135	1.35

These limits are based on the maximum boilers operations, standard emission factors AP-42, and maximum hours of operation. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.

3. Total emissions and operation of the two 575 kW emergency generators shall not exceed the following limits:

<u>Pollutant (Total All Units)</u>	<u>(Lbs/kW-Hr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxide (NO <sub>x</sub> )	0.03218	0.925	9.25
Carbon Monoxide (CO)	0.00738	0.212	2.12
Sulfur Dioxide (SO <sub>2</sub> )	0.00304	0.087	0.87
Particulate Matter (PM)	0.00094	0.027	0.27
Volatile Organic Material	0.00095	0.027	0.27

These emissions are based on 500 hours of operation of each of the generators and standard emission factors of AP-42. Compliance with annual limits shall be determined from a running total of 12 months of data.

- 4a. Natural gas shall be the only fuel for the boilers.
  - b. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.
- 5a. The Permittee shall maintain an operating log for the boilers control system, including dates and times of usage, malfunctions (type, date, and measures taken to correct).
  - b. The Permittee shall maintain records of the following items:
    - i. Fuel type and consumption (therms/month and therms/year or mmscf/month and mmscf/year).
    - ii. Operating hours of each generator (hours/month and hours/year).
    - iii. Firing rate of each boiler and generator (mmBtu/hour).
  - c. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.
  - d. These records shall be retained at a readily accessible location at the plant for 3 years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and the USEPA upon request.
6. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would

require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

7. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA 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 or USEPA request for records during the course of a source inspection.
8. If there is an exceedance of 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. 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 violation and efforts to reduce emissions and future occurrences.
9. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system 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  
9511 West Harrison  
Des Plaines, Illinois 60016

10. The Permittee shall submit the following additional information from the prior calendar year along with the Annual Emissions Report, due May 1st of each year. This report shall include as a minimum: fuel type and annual fuel consumption, total hours of operation, and total nitrogen oxide (NO<sub>x</sub>) emissions from the prior calendar year. If there have been no exceedances during the prior calendar year, the Annual Emissions Report shall include a statement to that effect.

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

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

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cc: IEPA, FOS Region 1  
IEPA, FOS - CMU  
USEPA

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from this facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, e.g., 100 tons/year NO<sub>x</sub>, CO, SO<sub>2</sub> and volatile organic material at which this source would be considered a 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 less material is handled and control measures are more effective than required in this permit.

		E M I S S I O N S						
		(Tons/Year)						
<u>Emissions 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>	<u>Single</u>	<u>Combined</u>
						<u>HAP</u>		<u>HAP</u>
3 Boilers	Natural Gas	24.51	20.59	0.15	1.86	1.35		
2 Generators	#2 Oil	<u>9.25</u>	<u>2.12</u>	<u>0.87</u>	<u>0.27</u>	<u>0.27</u>		
	Total	<u>33.76</u>	<u>22.71</u>	<u>1.02</u>	<u>2.13</u>	<u>1.62</u>	< 0.44	< 0.44

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