

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
RENEWAL

PERMITTEE

Central DuPage Hospital
Attn: Robert Street
25 North Winfield Road
Winfield, IL 60190

Application No.: 85030050

I.D. No.: 043115AAA

Applicant's Designation: BLR/STLZRS

Date Received: January 13, 2000

Subject: 3 Boilers, & 2 Sterilizers

Date Issued:

Expiration Date: (Five Years from
date issued)

Location: 25 North Winfield Road, Winfield

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of two natural gas fired boilers with #2 fuel oil on emergency standby, one natural gas fired boiler, and three ethylene oxide gas sterilizers controlled by two abator units 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 nitrogen oxides (NO_x) and hazardous air pollutants (HAPs) from the source to less than major source thresholds, i.e., NO_x to less than 25 tons per year, and HAPs to less than 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes the current permit(s) issued for this location.
- 2a. Operation of the boilers shall not exceed the following limits:
 - i. Natural Gas Usage: 2,800,000 Therms/Year.
 - ii. No. 2 Fuel Oil Usage: 60,000 Gallons/Year.
 - iii. These limits define the potential emissions of nitrogen oxides from the boilers and are based on the actual emissions determined from the maximum capacity and standard emission factors.

b. At the above location, the Permittee shall not keep, store, or utilize distillate fuel oil (Grades No. 1 and No. 2) with a sulfur content greater than the larger of the following values:

- i. 0.28 weight percent, or
- ii. The wt. percent given by the formula:

$$\text{Maximum wt. percent sulfur} = (0.000015) \times (\text{Gross heating value of oil, Btu/lb}).$$

c. The emissions of 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 establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program permit from the Agency. 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 Clean Air Act Permit Program permit from the Agency.

d. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

3a. Within 90 days of a written request from the Agency, pursuant to 35 Ill Adm. Code Section 201.282, the emissions and opacity of the boilers from the plant shall be measured by an approved testing service, during conditions which are representative of the maximum performance. The Agency may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.

b. i. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Particulate Matter	USEPA Method 5
Nitrogen Oxides	USEPA Method 7
Opacity	USEPA Method 9
Carbon Monoxide	USEPA Method 10

ii. A test shall consist of three separate runs each at least 60 minutes in duration. Compliance shall be determined from the average of the runs provided that the Agency may accept the arithmetic mean of the two runs in circumstances described in 40 CFR 60.8(f).

- c. Testing shall be performed by a qualified independent testing service.
- d. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Agency for review and approval. A copy shall also be submitted to the USEPA. This plan shall describe the specific procedures for testing, including:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum operating rate, the levels of operating parameters at or within which compliance is intended to be shown, if applicable, and the means by which the operating parameters for the process and any control equipment will be determined.
- e. The Agency shall be notified prior to these tests to enable the Agency to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the tests. The Agency may, at its discretion, accept notification with shorter advance notice provided that the Agency will not accept such notifications if it interferes with the Agency's ability to observe the testing.
- 4a. The Permittee shall maintain records of the following items for the source:
 - i. The use of natural gas in the boilers, therms/month and therms/year (running total);
 - ii. The use of No. 2 fuel oil in the boilers, gallons/month and gallons/year (running total);
- b. The Permittee shall maintain records for any deviation or exceedance from the requirements of this permit, as determined by the above records or by other means, with date, time, duration, description, corrective action and measures to prevent future reoccurrences.
- 5. All records required by this permit shall be retained at a readily accessible location at the source for at least 3 years from the date of entry and shall be made available for inspection and copying by the Agency and USEPA upon request.
- 6. If there is an exceedance of the requirements of this permit as determined by the record required by this permit, the Permittee shall submit a report to the Agency'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. This report should be sent to:

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

7. For purposes of fees pursuant to Section 9.6 of the Illinois Environmental Protection Act, annual emissions of regulated air pollutants, i.e., particulate matter, nitrogen oxides, carbon monoxide, volatile organic material, and sulfur dioxide, shall not exceed 100 tons, which shall be the permitted emissions of this site.
8. Operation of the ethylene oxide sterilizers shall not exceed the following limits:
 - a. Sterilizer Gas Usage: 0.15 lbs/hour and 0.66 tons/year.
 - b. These limits define the potential emissions of the ethylene oxide sterilizers and are based on the actual emissions determined from the maximum gas usage and the gas containing a maximum of 12% ethylene oxide.
- 9a. The Permittee shall maintain records of the following items for the source:
 - i. The amount of ethylene oxide gas used in the sterilizers, lbs/day and tons/year (running total); and
 - b. The Permittee shall maintain records for any deviation or exceedance from the requirements of this permit, as determined by the above records or by other means, with date, time, duration, description, corrective action and measures to prevent future reoccurrences.
- 10a. The Final Report(s) for all tests shall be submitted within 180 days after the date of the test. The Final Report shall include as a minimum:
 - i. General information describing the test, including the name and identification of the emission source which was tested, date of test, names of personnel performing the tests, and Agency observers, if any;
 - ii. A summary of results;
 - iii. Description of test procedures, including description of sampling points, test equipment, and test schedule;
 - iv. Detailed description of test conditions, including:

- A. Process information, i.e., process rate, aggregate type, fuel type, and firing rate.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
- v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- b. Submittals of information shall be made as follows:
- i. Notices of Test - two copies to Compliance Section and one copy to the Regional Office.
 - ii. Final Report - two copies to Compliance Section and one copy to the Regional Office.

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

Illinois Environmental Protection Agency
Division of Air Pollution Control
The Eisenhower Tower
1701 First Avenue
Maywood, Illinois 60153

11. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year: natural gas and fuel oil usage for the boilers, the amount of waste incinerated, and ethylene oxide gas usage from the prior calendar year.
- 12a. Organic liquid by-products or waste materials shall not be used at this source without written approval from the Agency.
- b. The Permittee shall notify the Agency prior to any change in the type of fuel used at the source.

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

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

DES:JDC:drk

cc: IEPA, FOS, Region 1
Illinois EPA Compliance Section
Lotus Notes

Attachment A - Emissions Summary

- 1a. Natural gas combustion emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic material (VOM), sulfur dioxide (SO₂), and particulate matter (PM) from the boilers:

<u>Pollutant</u>	<u>Fuel Usage (Therms/Yr)</u>	<u>Emission Factor (Lb/Therm)</u>	<u>Emissions (Ton/Yr)</u>
NO _x	2,800,000	0.0140	19.60
CO		0.0035	4.90
VOM		0.0003	0.40
SO ₂		0.0001	0.10
PM		0.0014	<u>1.92</u>
		Total	26.92

- b. No. 2 fuel oil combustion emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic material (VOM), sulfur dioxide (SO₂) and particulate matter (PM) from the boilers:

<u>Pollutant</u>	<u>Fuel Usage (Gallons/Yr)</u>	<u>Emission Factor (Lb/Gallon)</u>	<u>Emissions (Ton/Yr)</u>
NO _x	60,000	0.0200	0.60
CO		0.0050	0.15
VOM		0.0020	0.01
SO ₂		0.0002	1.20
PM		0.0398	<u>0.06</u>
		Total	2.02

- c. These tables define the potential emissions of the boilers and are based on the fuel fired and standard emission factors at the maximum annual fuel usage.

2. Emissions and operation of three ethylene oxide sterilizers with abators:

<u>Item of Equipment</u>	<u>Operating Hours (Hours/Yr)</u>	<u>Ethylene Oxide Gas Usage (Lbs/Hr) (Tons/Yr)</u>		<u>Volatile Organic Material Emissions (Lbs/Hr) (Tons/Yr)</u>	
Three 3M Sterilizers	8,760	0.15	0.66	0.001	0.004

This table defines the potential emissions of volatile organic material and is based on a maximum of 12% ethylene oxide in the sterilizer gas the maximum gas usage, abator control and the maximum hours of operation.