

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Methodist Medical Center of Illinois  
Attn: Terry Cochran  
221 Northeast Glen Oak Avenue  
Peoria, Illinois 61636

Application No.: 98110039

I.D. No.: 143065AEL

Applicant's Designation:

Date Received: November 16, 1998

Subject: Medical Center

Date Issued: June 12, 2000

Expiration Date: June 12, 2005

Location: 221 Northeast Glen Oak Avenue, Peoria

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of ten (10) natural gas fired boilers with four (4) having fuel oil backup; two (2) emergency generators; one (1) sterilizer; two (2) fuel oil tanks; medical waste incinerator; and one (1) fume hood, pursuant to 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 nitrogen oxides). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this 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 all operating permits issued for this location.
2. Emissions and operation shall not exceed the following limits:
- a. Boilers

Boiler Fuel Usage		Boilers Emissions (Tons/Year)				
Natural Gas (mmcf/Year)	Fuel Oil (kqal/Year)	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	(VOM)
444.776	400	1.74	8.65	34.14	8.44	0.69

b. Emergency Generators

<u>Engine</u>	<u>Fuel Oil (kqal/Year)</u>	<u>Emissions (Tons/Year)</u>				
		<u>PM</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>(VOM)</u>
G-1	47.760	1.04	0.97	14.82	3.19	1.21
G-2	<u>47.760</u>	<u>1.04</u>	<u>0.97</u>	<u>14.82</u>	<u>3.19</u>	<u>1.21</u>
Total	95.520	2.08	1.94	29.64	6.38	2.42

c. Ethylene Oxide Sterilizers

<u>Sterilant Gas (Lbs/Cycle)</u>	<u>Ethylene Oxide (%)</u>	<u>Usage (Cycles/Year)</u>	<u>Emissions Ethylene Oxide (Tons/Year)</u>
4.0	10	500	0.10

d. Fuel Oil Storage Tanks

<u>Fuel Oils Storage</u>	<u>VOM Emissions (Tons/Year)</u>
Two 20,000 Gallon Tanks	0.00216

e. Fume Hood

<u>Material</u>	<u>Amount Evaporated (Tons/Year)</u>	<u>VOM Emissions (Tons/Year)</u>
Solvents	0.367	0.367

Compliance with the above limits shall be determined from required records and applicable emission factors. Compliance with the annual limits shall be determined monthly using the last 12 months of data.

f. Incinerator (I-1)

<u>Incineration Rate</u>		<u>E M I S S I O N S</u>			
<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>Particulate Matter</u>		<u>Carbon Monoxide</u>	
		<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
415	4,150	1.01	10.13	1.01	10.13

Compliance with annual limits shall be determined monthly based upon the standard emission factors and the last 12 months of data.

i. Only general hospital waste generated on site shall be incinerated.

- ii. The incinerator's secondary combustion chamber shall be preheated to the manufacturer's recommended temperature, but not less than 1,400°F before incineration begins and maintained during operation.
  - iii. This incinerator has been scheduled to cease operation by or before September 15, 2000 in accordance with 35 Ill. Adm. Code 229.116(a). The Permittee shall give written notice to the Compliance Section within 30 days of rendering the incinerator permanently inoperable in accordance with 35 Ill. Adm. Code 229.116(b).
  - iv. After the incinerator has been rendered permanently inoperable a permit application should be submitted to delete the incinerator from this permit.
3. The Permittee shall maintain monthly records of the following items, and such other items as may be appropriate to allow the Illinois EPA to review compliance with the limits of this permit.
- a. Natural gas usage (mmcf).
  - b. Boiler fuel oil usage (kgal).
  - c. Emergency generator fuel oil usage (kgal).
  - d. Sterilant gas usage and ethylene oxide content (lbs and %).
  - e. Fume hood solvent usage and hazardous air pollutant content (lbs).
  - f. Amount of waste incinerated (tons/month).
  - g. Calculated monthly pollutant emissions (tons).
4. 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.
5. 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.

6. 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.
7. 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  
5415 North University  
Peoria, Illinois 61614

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:psj

cc: Illinois EPA, FOS Region 2  
Illinois EPA, Compliance Section  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the medical center physical plant which supplies heating and emergency electrical energy and an ethylene oxide sterilization unit 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. By limiting natural gas and fuel oil usage the resulting air emissions are reduced. The resulting maximum emissions are well below the levels, e.g., 100 tons per year of nitrogen oxides 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.

1. Emissions and operation shall not exceed the following limits:

a. Boilers

Boilers 1, 2, 3, and 4							
Natural Gas		(Units)	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOM
(mmcf/Yr)	Factors*	(lb/mmcf)					
444.776	Emissions	(ton/yr)	1.22	0.12	27.66	6.91	0.55
Oil		(lb/kgal)					
(kgal/Yr)	Factors*	(lb/kgal)					
400.000	Emissions	(ton/yr)	0.40	8.52	4.00	1.00	0.07

Boilers 6, 7, 8, 9 and 10							
Total Boiler	Fuel Usage	Total Boilers Emissions (Tons/Year)					
Natural Gas	Fuel Oil	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	(VOM)	
(mmcf/Year)	(kgal/Year)						
49.664	0.000	0.11	0.01	2.48	0.32	0.07	

\* AP-42 Tables 1.3-1 and 1.4-1 and 2

b. Emergency Generators

Engine	Fuel Oil (kgal/Year)	Emissions (Tons/Year)				
		PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOM
G-1	47.760	1.04	0.97	14.82	3.19	1.21
G-2	<u>47.760</u>	<u>1.04</u>	<u>0.97</u>	<u>14.82</u>	<u>3.19</u>	<u>1.21</u>
Total	95.520	2.08	1.94	29.64	6.38	2.42

c. Ethylene Oxide Sterilizers

Sterilant Gas (Lbs/Cycle)	Ethylene Oxide (%)	Usage (Cycles/Year)	Emissions
			Ethylene Oxide (Tons/Year)
4.0	10	500	0.10

d. Fuel Oil Storage Tanks

<u>Fuel Oils Storage</u>	<u>VOM Emissions (Tons/Year)</u>
Two 20,000 Gallon Tanks	0.00216

e. Fume Hood

<u>Material</u>	<u>Amount (Gal/Year)</u>	<u>Density (Lb/Gal)</u>	<u>VOM Emissions (Tons/Year)</u>
Xylene	100	7.35	0.367

Compliance with the above limits shall be determined from required records and applicable emission factors.

f. Incinerator (I-1)

<u>Incineration Rate</u>		<u>Particulate Matter</u>		<u>Carbon Monoxide</u>	
<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
415	4,150	1.01	10.13	1.01	10.13

g. Total Source Emissions

<u>Equipment</u>	<u>EMISSIONS (Tons/Year)</u>				
	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOM</u>
Boilers	1.74	8.65	34.14	8.44	0.690
Generators	2.08	1.94	29.64	6.38	2.420
Sterilizer					0.100
Fuel Tanks					0.002
Fume Hood					0.367
Incinerator	10.13			10.13	
Total	13.95	10.59	63.78	24.95	3.575

2. As a consequence of the requirements of this permit, the emissions of hazardous air pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source will be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs so that HAP emissions do not trigger the requirements to obtain a Clean Air Act Permit Program permit from the Illinois EPA.

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