

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Vista Health-Victory Memorial Hospital
Attn: Robert Henne
1324 North Sheridan Road
Waukegan, Illinois 60085

Application No.: 91020067

I.D. No.: 097190ADC

Applicant's Designation:

Date Received: August 19, 2005

Subject: Hospital

Date Issued:

Expiration Date:

Location: 1324 North Sheridan Road, Waukegan

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of three boilers, three ethylene oxide sterilizers, and emergency engine generator 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 potential emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for nitrogen oxides (NO_x), 10 tons/year for a single hazardous air pollutant (HAP) and 25 tons/year for total HAPs). As a result, the source is excluded from the requirements 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.
- 2a. 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. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).
- 3a. Pursuant to 35 Ill. Adm. Code 214,122(b)(2), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel

exclusively to exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).

- b. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm, pursuant to 35 Ill. Adm. Code 214.301.
- c. Pursuant to 35 Ill. Adm. Code 214.304 the emissions from the burning of fuel at process emission units located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with Condition 4(b) (see also 35 Ill. Adm. Code Part 214 Subparts B through F).
- 4. 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/hour) to exceed 200 ppm, corrected to 50 percent excess air, pursuant to 35 Ill. Adm. Code 216.121.
- 6a. This permit is issued based on the use of natural gas and #2 fuel oil for the three boilers. Use of any other fuel will require a revised permit.
- b. Distillate fuel oil shall be the only fuel used in the generators at this source.
- c. At the above location, the Permittee shall not keep, store, or utilize in the boilers and generators at this source:
 - i. Distillate fuel oil (Grade No. 1 and 2) with a sulfur content greater than the larger of the following two values:
 - A. 0.28 weight percent, or
 - B. The Wt percent given by the formula: Maximum Wt percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.
 - ii. Organic liquid by-products or waste materials shall not be used in the boilers and generators without written approval from the Illinois EPA.
- d. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 7. The design capacity of the three boilers shall be 38.8 million Btu/hr, 38.8 million Btu/hr and 16.8 million Btu/hr.
- 8a. Emissions and operation of the three boilers shall not exceed the following limits:

i. Natural Gas Consumption and emissions:

Fuel Type	Usage		Pollutant	Emission Factor (lb/mmscf)	Emissions	
	(mmscf/Mo)	(mmscf/Yr)			(T/Mo)	(T/Yr)
Natural Gas	50	150	NO _x	100	2.5	7.5
			CO	84	2.1	6.3
			PM	7.6	0.19	0.57
			SO ₂	0.6	0.02	0.05
			VOM	5.5	0.14	0.41

ii. #2 Fuel Oil Consumption and emissions:

Fuel Type	Usage		Pollutant	Emission Factor (lb/10 ³ Gal)	Emissions	
	(10 ³ Gal/Mo)	(10 ³ Gal/Yr)			(T/Mo)	(T/Yr)
#2 Fuel Oil	85	150	NO _x	20	0.85	1.5
			CO	5	0.21	0.38
			PM	2	0.09	0.15
			SO ₂	42	1.79	3.15
			VOM	0.252	0.01	0.02

iii. These limits define the potential emissions of NO_x, CO, PM, SO₂, and VOM and are based on maximum fuel usage and standard emission factors.

b. Operation of the three ethylene oxide sterilizers shall not exceed the following limits:

Ethylene Oxide Usage		CFC-12 Usage		VOM Emissions		Non-VOM Emissions	
(Lb/Mo)	(Lb/Yr)	(Lb/Mo)	(Lb/Yr)	(Ton/Mo)	(Ton/Yr)	(Ton/Mo)	(Ton/Yr)
129	1,546	945	11,331	0.064	0.77	0.47	5.67

These limits define the potential emissions of the ethylene oxide sterilizers operation and are based on the actual emissions determined from maximum production capacity and material balance.

c. Emissions and operation of the standby engine generator shall not exceed the following limits:

Fuel Type	Usage		Pollutant	Emission Factor (lb/10 ³ Gal)	Emissions	
	(10 ³ Gal/Mo)	(10 ³ Gal/Yr)			(T/Mo)	(T/Yr)
#2 Fuel Oil	8,760	8,760	NO _x	3.2	1.94	1.94
			CO	0.85	0.52	0.52
			PM	0.1	0.06	0.06
			SO ₂	0.505	0.31	0.31
			VOM	0.09	0.05	0.05

These limits define the potential emissions of potential emissions of NO_x, CO, PM, SO₂, and VOM from the standby engine generator operation and are based on the actual emissions determined from maximum fuel usage, conversion factor of 0.14 mmBtu/gallon, and standard emission factors.

- d. The emissions of Hazardous Air Pollutants (HAP) 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 a 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 CAAPP from the Illinois EPA.
- e. 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).
- 9a. 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.
- b. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

- i. Natural gas consumption for the boilers (mmscf/month and mmscf/year);
 - ii. #2 fuel oil consumption for the boilers (gallons/month and gallons/year);
 - iii. Ethylene oxide and CFC-12 usage for the ethylene oxide sterilizer (lbs/month and lbs/year);
 - iv. #2 fuel oil consumption for the standby engine generators (gallons/month and gallons/year);
 - v. Operating and maintenance logs for the boilers including maintenance activities, with date and description of inspections, repair actions, and replacements, etc.; and
 - vi. Monthly and annual emissions of CO, NO_x, PM, SO₂, VOM and HAPs with supporting calculations (tons/month and tons/year).
10. 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 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.
 11. 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.
 10. Two (2) copies of required reports and notifications 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:

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Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

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

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

DES:DWH:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the hospital equipment 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 for nitrogen oxides (NO_x), 10 tons per year for a single HAP, and 25 tons/year for total HAP) 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 used, and control measures are more effective than required in this permit.

<u>Emission Units</u>	E M I S S I O N S (Tons/Year)						
	<u>VOM</u>	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>HAPs</u> <u>Single Total</u>	
3 Boilers	0.43	6.68	9.00	0.72	3.20		
Emergency Generator	0.05	0.52	1.94	0.06	0.31		
3 Ethylene Oxide Sterilizers	<u>0.77</u>	<u>----</u>	<u>----</u>	<u>----</u>	<u>----</u>		
Plant-Wide Total	1.25	7.20	10.94	0.78	3.51	< 10	< 25

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