

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS and NESHAP SOURCE

PERMITTEE

St. John's Hospital  
Attn: Dennis Jarman, Supervisor, Engineering & Construction  
800 East Carpenter Street  
Springfield, Illinois 62769

Application No.: 99110044

I.D. No.: 167120ACK

Applicant's Designation:

Date Received: December 11, 2009

Subject: Hospital

Date Issued: November 13, 2013

Expiration Date: November 13, 2023

Location: 800 East Carpenter Street, Springfield, Sangamon County

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of:

Natural-Gas-Fired Boiler #1 33.0 mmBtu/hour with Fuel Oil #2 as Backup;  
Natural-Gas-Fired Boiler #2 51.5 mmBtu/hour with Fuel Oil #2 as Backup;  
Natural-GAS-Fired Boiler #3 51.5 mmBtu/hour with Fuel Oil #2 as Backup;  
Natural-Gas-Fired Boiler #4 10.25 mmBtu/hour with Fuel Oil #2 as Backup;  
Two (2) Emergency Diesel Generators 2000 kW each #EG1 and #EG2;  
Two (2) Emergency Natural-Gas-Fired Internal Combustion Engines/Chillers Each  
11.2 mmBtu/hour; and  
Ethylene Oxide Sterilization Process (2 ETO Sterilizers, 4 ETO Aerators and 2  
catalytic oxidizers)

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:
  - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Nitrogen Oxides (NO<sub>x</sub>), Sulfur Dioxide (SO<sub>2</sub>) and Carbon Monoxide (CO)). 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.
  - ii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for NO<sub>x</sub> to less than 100 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 217 Subpart Q (Stationary Reciprocating Internal Combustion Engines And Turbines).
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.

- 2a. The 33 mmBtu/hour boiler #1 is subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subparts A and Dc. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.40c(a), Except as provided in 40 CFR 60.40c(d), (e), (f), and (g), the affected facility to which 40 CFR 60 Subpart Dc applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (mmBtu/hour)) or less, but greater than or equal to 2.9 MW (10 mmBtu/hour).
- b. Sulfur Dioxide emission from the boiler #1 shall not exceed the applicable limit pursuant to 40 CFR 60.42c(d), 0.50 lb sulfur dioxide/mmBtu for boilers that combust oil.
- 3a. Diesel Generators #EG1 and EG2 are subject to the New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subparts A and IIII. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.
- c. Pursuant to 40 CFR 60.4202(a)(2), stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines, to the emission standards specified in 40 CFR 60.4202(a)(1) through (2). For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.
- d. Pursuant to 40 CFR 89.112(a), exhaust emission from nonroad engines to which 40 CFR 89 Subpart B is applicable shall not exceed the applicable exhaust emission standards contained in Table 1, as follows:

Table 1 – Emission Standards (g/kW-hour)

Rated Power (kW)	Tier	Model Year <sup>1</sup>	NO <sub>x</sub>	HC	NMHC + NO <sub>x</sub>	CO	PM
kW>560	Tier 1	2000	9.2	1.3	---	11.4	0.54
	Tier 2	2006	---	---	6.4	3.5	0.20

<sup>1</sup> The model years listed indicates the model years for which the specified tier of standards take effect.

- e. Pursuant to 40 CFR 89.112(d), in lieu of the NO<sub>x</sub> standards, NMHC + NO<sub>x</sub> standards, and PM standards specified in 40 CFR 89.112(a), manufacturers may elect to include engine families in the averaging, banking, and trading program, the provisions of which are specified in 40 CFR 89 Subpart C. The manufacturer must set a family emission limit (FEL) not to exceed the levels contained in Table 2. The FEL established by the manufacturer serves as the standard for that engine family. Table 2 follows:

Table 2 – Upper Limit for Family Emission Limits (g/kW-hour)

Rated Power (kW)	Tier	Model Year <sup>1</sup>	NO <sub>x</sub> FEL	NMHC + NO <sub>x</sub> FEL	PM FEL
kW>560	Tier 1	2000	14.6	---	---
	Tier 2	2006	---	10.5	0.54

<sup>1</sup> The model years listed indicates the model years for which the specified tier of standards take effect.

- f. Pursuant to 40 CFR 89.112(e), naturally aspirated nonroad engines to which 40 CFR 89 Subpart B is applicable shall not discharge crankcase emissions into the ambient atmosphere, unless such crankcase emissions are permanently routed into the exhaust and included in all exhaust emission measurements. This provision applies to all Tier 2 engines and later models. This provision does not apply to engines using turbochargers, pumps, blowers, or superchargers for air induction.
  - g. Pursuant to 40 CFR 89.113(a), exhaust opacity from compression-ignition nonroad engines for which 40 CFR 89 Subpart B is applicable must not exceed:
    - i. 20 percent during the acceleration mode;
    - ii. 15 percent during the lugging mode; and
    - iii. 50 percent during the peaks in either the acceleration or lugging modes.
  - h. Pursuant to 40 CFR 89.113(c)(3), constant-speed engines are exempt from the requirements of 40 CFR 89.113.
4. Diesel Generators #EG1 and EG2 are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c)(1), a new or reconstructed stationary residential, commercial, or institutional emergency stationary RICE located at an area source must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for compression

ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR Part 63.

- 5a. The ethylene oxide sterilizers are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hospital Ethylene Oxide Sterilizers, 40 CFR 63, Subparts A and WWWW. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 63.10382(a), you are subject to 40 CFR 63 Subpart WWWW if you own or operate an ethylene oxide sterilization facility at a hospital that is an area source of hazardous air pollutant (HAP) emissions.
- b. Pursuant to 40 CFR 63.10384(a), if you have an existing affected source, you must comply with applicable requirements in 40 CFR 63 Subpart WWWW no later than December 29, 2008.
- c. Pursuant to 40 CFR 63.10390, you must sterilize full loads of items having a common aeration time, except under medically necessary circumstances, as that term is defined in 40 CFR 63.10448.
- d. Pursuant to 40 CFR 63.10420, for each sterilization unit not equipped with an air pollution control device, you must demonstrate continuous compliance with the management practice standard in 40 CFR 63.10390 by recording the date and time of each sterilization cycle, whether each sterilization cycle contains a full load of items, and if not, a statement from a hospital central services staff, a hospital administrator, or a physician that it was medically necessary.
- e. Pursuant to 40 CFR 63.10440, Table 1 to 40 CFR 63 Subpart WWWW (see also Attachment B) shows which parts of the General Provisions in 40 CFR 63.1 through 63.16 apply to you.
- 6a. Pursuant to 35 Ill. Adm. Code 212.123(a), 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 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent, but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 meter (1000 foot) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.206, 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-hour of actual

heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).

- 7a. 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/hour), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hour of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).
- b. Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm.
- c. Pursuant to 35 Ill. Adm. Code 216.121, 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.
8. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 215.302, 215.303, or 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall only apply to photochemically reactive material.
- 9a. This permit is issued based on the two internal combustion engines/chillers (11.2 mmBtu/hr) not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6585(f)(3), the following stationary RICE do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of 40 CFR 63 Subpart A, including initial notification requirements: Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii).
- b. Pursuant to 40 CFR 63.6590(a)(iii), for stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.
- c. This permit is issued based on Boilers 1, 2, 3, and 4 not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11195(e), a gas-fired boiler as defined in 40 CFR 63 Subpart JJJJJJ are not subject to 40 CFR 63 Subpart JJJJJJ and to any requirements in 40 CFR 63 Subpart JJJJJJ. Pursuant to 40 CFR 63.11237, gas-fired boiler includes

any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

- d. Pursuant to 40 CFR 63.360(e), Subpart O Ethylene Oxide Emission Standards for sterilization facilities does not apply to ethylene oxide sterilization operations at stationary sources such as hospitals, doctors offices, clinics, or other facilities whose primary purpose is to provide medical services to humans or animals.
- 10. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 11a. Pursuant to 40 CFR 60.4206, owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.
- b. Pursuant to 40 CFR 60.4207(b), beginning October 1, 2010, owners and operators of stationary CI ICE subject to 40 CFR 60 Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.
- 12. Pursuant to 40 CFR 80.510(b), beginning June 1, 2010, except as otherwise specifically provided in 40 CFR 80 Subpart I, all NR and LM diesel fuel is subject to the following per-gallon standards:
  - i. Sulfur content 15 ppm maximum for NR diesel fuel.
  - ii. Cetane index or aromatic content, as follows:
    - A. A minimum cetane index of 40; or
    - B. A maximum aromatic content of 35 volume percent.
- 13a. Pursuant to 40 CFR 60.4211(a), if you are an owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written

instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as they apply to you.

- b. Pursuant to 40 CFR 60.4211(c), if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4204(b) or 40 CFR 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to 40 CFR 60 Subpart IIII and must comply with the emission standards specified in 40 CFR 60.4205(c), you must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.
- c. Pursuant to 40 CFR 60.4211(e), emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Illinois EPA or USEPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under 40 CFR 60.4205 but not 40 CFR 60.4204, any operation other than emergency operation, and maintenance and testing as permitted in 40 CFR 60.4011, is prohibited.
- 14a. Pursuant to 40 CFR 63.6640(f)(1), if you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640 (f)(1)(i) through (iii). Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1)(i) through (iii), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 63.6640(f)(1)(i) through (iii), the engine will not be considered an emergency engine under 40 CFR 63 Subpart ZZZZ and will need to meet all requirements for non-emergency engines.

- i. There is no time limit on the use of emergency stationary RICE in emergency situations.
  - ii. You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Illinois EPA or USEPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
  - iii. You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by 40 CFR 63.6640(f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.
- 15a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. Boilers 1, 2, 3, and 4 shall only be operated with natural gas or distillate fuel oil as the fuel. The use of any other fuel in Boilers 1, 2, 3, or 4 requires that the Permittee first obtain a construction

permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.

- c. The 4 Diesel Generators shall only be operated with distillate/diesel fuel oil as the fuel. The use of any other fuel in Diesel Generators requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
  - d. The Permittee shall not keep, store or use distillate fuel oil (Grades No. 1 and 2) at this source with a sulfur content greater than the larger of the following two values:
    - i. 0.28 weight percent, or
    - ii. The weight percent given by the formula: Maximum weight percent sulfur = (0.000015) x (Gross heating value of oil, Btu/lb).
  - e. Organic liquid by-products or waste materials shall not be used in any emission unit at this source without written approval from the Illinois EPA.
  - f. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 16a. Emissions and operations of the four boilers shall not exceed the following limits:

- i. Natural Gas Consumption Emissions:

<u>Fuel Type</u>	<u>Usage</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(mmscf/Mo)</u>	<u>(mmscf/Yr)</u>		<u>Factor</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Natural Gas	100	610	NO <sub>x</sub>	100	5.0	30.5
			CO	84	4.2	25.62
			PM	7.6	0.38	2.32
			SO <sub>2</sub>	0.6	0.03	0.18
			VOM	5.5	0.28	1.68

- ii. #2 Fuel Oil Consumption and Emissions:

<u>Fuel Type</u>	<u>Usage</u>		<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>(10<sup>3</sup> Gal/Mo)</u>	<u>(10<sup>3</sup> Gal/Yr)</u>		<u>Factor</u>	<u>(T/Mo)</u>	<u>(T/Yr)</u>
#2 Fuel Oil	85	150	NO <sub>x</sub>	20	0.85	1.50
			CO	5	0.21	0.38
			PM	2	0.09	0.15
			SO <sub>2</sub>	42	1.79	3.15
			VOM	0.252	0.01	0.02

iii. These limits define the potential emissions for NO<sub>x</sub>, CO, PM, SO<sub>2</sub>, and VOM and are based on maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998 for Natural Gas Combustion and Tables 1.3-1 and 1.3-3, AP-4, Fifth Edition, Volume I, Supplement E, September 1998 for Fuel Oil Combustion).

b. Emissions and operation of Emergency Diesel Generators EG1 and EG2 (each 2937 HP or 2000kW) shall not exceed the following:

i. Diesel Generators shall not operate more than 500 hours/year.

ii. Emissions from the Diesel Generators shall not exceed:

<u>Pollutant</u>	<u>Emission Factor</u> (Gram/HP-Hr)	<u>Total Emissions</u>	
		(Lbs/Hr)	(Tons/Yr)
Carbon Monoxide (CO)	0.30	3.88	0.97
Nitrogen Oxides (NO <sub>x</sub> )	5.45	70.52	17.63
Particulate Matter (PM)	0.03	0.39	0.10
Volatile Organic Material (VOM)	0.11	1.44	0.36
Sulfur Dioxide (SO <sub>2</sub> )	0.46	5.92	1.48

The above limits are based on the maximum fuel usage, total emissions for two generators and emission factors derived from the manufacturer's certification data.

c. Total Emissions and operation of two internal combustion engines/chillers (11.2 mmBtu/hour each) shall not exceed the following limits:

i. Engines shall not operate more than 500 hours/year.

ii. Natural Gas Usage:

<u>(mmscf/Month)</u>	<u>(mmscf/Year)</u>
45	45

iii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor</u> (Lbs/mmscf)	<u>Emissions</u>	
		(Tons/Month)	(Tons/Year)
CO	399	2.00	8.98
NO <sub>x</sub>	895	3.58	20.14
PM	10	0.04	0.23
SO <sub>2</sub>	0.6	0.01	0.02
VOM	116	0.47	2.61

These limits are based on maximum fuel usage and standard emissions factors (FIRE emission factors).

- d. Emissions and operation of the ethylene oxide sterilization process shall not exceed the following limits:

ETO Usage		VOM/ETO Emissions	
<u>(Cylinders/Month)</u>	<u>(Cylinders/Year)</u>	<u>(lb/Month)</u>	<u>(Tons/Year)</u>
200	1600	45	0.2

These limits are based on emission factor of 3.54 oz ETO/cylinder.

- 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).
17. This permit is issued based on the potential to emit (PTE) for hazardous air pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs, or such less quantity as USEPA may establish by rule which would trigger applicability of the requirements of Section 112(g) of the Clean Air Act.
  18. This permit is issued based on emergency Diesel Generators EG1 and EG2 each having a displacement of less than 30 liters per cylinder and has been certified by the manufacturer to meet the standards of 40 CFR 60.4202(a) through (d). As a result this permit is issued based on the emergency diesel generators not being subject to the testing requirements of 40 CFR 60.8.
  - 19a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
    - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
20. Pursuant to 40 CFR 60.4209(a), if you are an owner or operator, you must meet the monitoring requirements of 40 CFR 60.4209. In addition, you must also meet the monitoring requirements specified in 40 CFR 60.4211. If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.
- 21a. Pursuant to 40 CFR 63.10432, you must keep the records specified in 40 CFR 63.10432(a) and (b).
- i. A copy of the Initial Notification of Compliance Status that you submitted to comply with 40 CFR 63 Subpart WWWW.
  - ii. Records required by 40 CFR 63.10420 for each sterilization unit not equipped with an air pollution control device.
- b. Pursuant to 40 CFR 63.10434(a), your records must be in a form suitable and readily available for expeditious review.
- c. Pursuant to 40 CFR 63.10434(b), you must keep each record for 5 years following the date of each record.
- d. Pursuant to 40 CFR 63.10434(c), you must keep each record onsite for at least 2 years after the date of each record. You may keep the records offsite for the remaining 3 years.
- 22a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file

shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

23. Pursuant to 40 CFR 60.4214(b), if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to 40 CFR 60 Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.
24. 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.
- 25a. The Permittee shall maintain records of the following items to demonstrate compliance with the Conditions of this permit:
  - i. Natural gas usage for the boilers (mmscf/month and mmscf/year);
  - ii. Fuel oil usage for the boilers (gallons/month and gallons/year);

- iii. Fuel oil usage for the diesel-powered emergency generator sets (gallons/month and gallons/year);
  - iv. Certification from the fuel oil supplier of the weight percent sulfur content of the distillate fuel oil used in the boilers and the diesel-powered generator sets with each fuel oil shipment received (weight %);
  - v. Each diesel generator operating hours (hours/month and hours/year);
  - vi. An inspection, maintenance and repair log of the diesel-powered generators listing each activity performed with date;
  - vii. Ethylene Oxide usage for the ethylene oxide sterilizers; and
  - viii. Monthly and annual emissions of CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOM and HAPs from the source with supporting calculations (tons/month and tons/year).
- b. 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 storage device) 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.
26. Pursuant to 40 CFR 60.7(a), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows:
- i. A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
  - ii. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
  - iii. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the

facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.

27a. If there is an exceedance of or a 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 or 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.

b. Two (2) copies of required reports and notifications 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

It should be noted that fuel oil storage tanks are exempt from permitting, pursuant to 35 Ill. Adm. Code 201.146(n).

If you have any questions concerning this permit, please call David Hulskotter at 217/785-1705.

Robert W. Bernoteit  
Acting Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

RWB:DWH:psj

cc: Illinois EPA, FOS Region 2

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the hospital 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 per year of VOM, 10 tons per year for a single HAP, and 25 tons per year for any combination of such HAPs) 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.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					Single	Total
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>	<u>HAP</u>	<u>HAPs</u>
Generators EG1 & EG2	0.97	17.63	0.10	1.48	0.36		
Boilers Natural Gas Fired	25.62	30.50	2.32	0.18	1.68		
Boilers #2 Oil Fired	0.38	1.50	0.15	3.15	0.02		
Internal Combustion Engines	8.98	20.14	0.23	0.02	2.61		
Ethylene Oxide Sterilization Process						<u>0.2</u>	
Totals	<u>35.95</u>	<u>69.77</u>	<u>2.80</u>	<u>4.83</u>	<u>4.87</u>	<u>&lt;10</u>	<u>&lt;25</u>

Attachment B - Table 1 to 40 CFR Subpart WWWW - Applicability of General Provisions to Subpart WWWW

Citation	Subject	Applies to subpart WWWW	Explanation
§63.1(a)(1)-(4), (6), (10)-(12), (b)(1), (3)	Applicability	Yes	
§63.1(a)(5), (7)-(9)	[Reserved]		
§63.1(b)(2)	[Reserved]		
§63.1(c)(1)-(2)	Applicability of 40 CFR Part 63 after a relevant standard has been set	Yes	40 CCFR 63.10446 exempts affected sources from the obligation to obtain title V operating permits for purposes of being subject to 40 CFR 63 Subpart WWWW.
§63.1(c)(3)-(4)	[Reserved]		
§63.1(c)(5)	Subject to notification requirements	No	
§63.1(d)	[Reserved]		
§63.1(e)	Emission limitation by permit	Yes	
§63.2	Definitions	Yes	
§63.3	Units and abbreviations	Yes	
§63.4	Prohibited activities	Yes	
§63.5	Construction/reconstruction	No	
§63.6(a), (b)(1)-(5), (7)	Compliance with standards and maintenance requirements	Yes	
§63.6(b)(6)	[Reserved]		
§63.6(c)(1)	Compliance dates for existing sources	Yes	Subpart WWWW requires compliance 1 year after the effective date.
§63.6(c)(2), (5)	Compliance dates for CAA section 112(f) standards and for area sources that become major	No	
§63.6(c)(3)-(4)	[Reserved]		

Citation	Subject	Applies to subpart WWWW	Explanation
§63.6(d)	[Reserved]		
§63.6(e)-(h)	Alternative nonopacity emission standard	No	
§63.6(i)-(j)	Compliance extension	Yes	
§63.7	Performance testing requirements	No	
§63.8	Monitoring requirements	No	
§63.9(a)	Applicability and initial notifications addressees	Yes	
§63.9(b)	Initial notifications	No	
§63.9(c)	Request for extension of compliance	Yes	
§63.9(d)-(j)	Other notifications	No	
§63.10(a)(1)-(2)	Recordkeeping and reporting requirements, applicability	Yes	
§63.10(a)(3)-(4)	General information	Yes	
§63.10(a)(5)-(7)	Recordkeeping and reporting requirements, reporting schedules	No	
§63.10(b)(1)	Retention time	Yes	
§63.10(b)(2)-(f)	Recordkeeping and reporting requirements	No	
§63.11	Control device requirements	No	
§63.12	State authority and delegations	Yes	
§§63.13-63.16	Addresses, Incorporations by Reference, availability of information, performance track provisions	Yes	