217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -– NSPS/NESHAP SOURCE -- RENEWAL

PERMITTEE

Advocate Good Samaritan Hospital
Attn: Chief Engineer, c/o Joe Kybartas
3815 Highland Avenue
Downers Grove, Illinois 60515

Application No.: 05090010 I.D. No.: 043030ADQ
Applicant's Designation: Date Received: January 30, 2012
Subject: Boilers, Generators, and Sterilizers
Date Issued: November 7, 2013 Expiration Date: November 7, 2023
Location: 3815 Highland Ave., Downers Grove, Du Page County

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of two (2) 51.2 mmBtu/hour natural gas/distillate fuel oil-fired boiler (Boilers #1 and #2), one (1) 12.5 mmBtu/hour natural gas/distillate fuel oil-fired boiler (Boiler #3), one (1) 8.6 mmBtu/hour natural gas/distillate fuel oil-fired boiler (Boiler #4), one (1) 1,000 kW (1,360 HP) diesel-powered emergency generator, one (1) 1,250 kW (1,675 HP) diesel-powered emergency generator, one (1) 1,500 kW (2,206 HP) diesel-powered emergency generator, and three (3) Ethylene Oxide Sterilizers 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 Carbon Monoxide (CO), 100 tons/year for Nitrogen Oxides (NO_x), 100 tons/year for sulfur dioxide (SO_2), and 10 tons/year for any single Hazardous Air Pollutant (HAP) and 25 tons/year for any combination of such HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program 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_x 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. Boilers #1, #2, and #3 (two-51.2 mmBtu/hour and one-12.5 mmBtu/hour) are 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.

b. Pursuant to 40 CFR 60.42c(d), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/mmBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that combusts greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

c. Pursuant to 40 CFR 60.42c(h)(1), for distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 mmBtu/hour), compliance with the emission limits or fuel oil sulfur limits under 40 CFR 60.42c may be determined based on a certification from the fuel supplier, as described under 40 CFR 60.48c(f), as applicable.

d. Pursuant to 40 CFR 60.43c(c), on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 mmBtu/hour) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

3a. Emergency Diesel Generator Gen-3 (1,500 kW) is 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.

4a. 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[1]	NO_x	HC	NMHC + NO_x	CO	PM
kW>560	Tier 1	2000	9.2	1.3	---	11.4	0.54
	Tier 2	2006	---	---	6.4	3.5	0.20

[1] The model years listed indicates the model years for which the specified tier of standards take effect.

b. Pursuant to 40 CFR 89.112(d), in lieu of the NO_x standards, NMHC + NO_x 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[1]	NO_x FEL	NMHC + NO_x FEL	PM FEL
kW>560	Tier 1	2000	14.6	---	---
	Tier 2	2006	---	10.5	0.54

[1] The model years listed indicates the model years for which the specified tier of standards take effect.

c. 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.

d. 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.

e. Pursuant to 40 CFR 89.113(c)(3), constant-speed engines are exempt from the requirements of 40 CFR 89.113.

5. Emergency diesel generator Gen-3 (1,500 kW) is 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.

6a. The Ethylene Oxide Sterilizers are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hospital Ethylene Oxide Sterilizers, 40 CFR Part 63 Subpart WWWWW. Pursuant to 40 CFR 63.10382(a), you are subject to 40 CFR Part 63 Subpart WWWWW, 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 63.10382(b), the affected source subject to 40 CFR Part 63 Subpart WWWWW is each new or existing sterilization facility. An affected source is existing if you commenced construction or reconstruction of the affected source before November 6, 2006. An affected source is new if you commenced construction or reconstruction of the affected source on or after November 6, 2006.

c. Pursuant to 40 CFR 63.10384(a), the existing source must comply with applicable requirements in 40 CFR Part 63 Subpart WWWWW no later than December 29, 2008.

d. Pursuant to 40 CFR 63.10390, the source 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.

7a. 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 any 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).

8a. 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 excess 2000 ppm.

c. Pursuant to 35 Ill. Adm. Code 214.304, the emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan area shall comply with the applicable Subparts B through F (i.e., 35 Ill. Adm. Code 214.122(b)(2)).

9. Pursuant to 35 Ill. Adm. Code 218.301, 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 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G (Use of Organic Material) shall only apply to photochemically reactive material.

10. Pursuant to 35 Ill. Adm. Code 218.303, the provisions of 35 Ill. Adm. Code 218.301 and 218.302 (Use of Organic Material) shall not apply to fuel combustion emission units.

11a. This permit is issued based on the emergency diesel generators (Gen-1 at 1,000 kW & Gen-2 at 1,250 kW) 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 and 63 Subpart A. Pursuant to 63.6585(f), the emergency stationary RICE listed in paragraphs 63.6585(f)(1) through (3) are not subject to 40 CFR Part 63 Subpart ZZZZ and 63 Subpart A. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).

i. 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 the 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. This permit is issued based on the Boilers at this source not being subject to the requirements of the National Emission Standard 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), gas-fired boilers are not subject to 40 CFT 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.

c. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Ethylene Oxide Emissions Standards for Sterilization Facilities, 40 CFR 63 Subpart O. Pursuant to 40 CFR 63.360(e), 40 CFR Part 63 Subpart O 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.

12a. Pursuant to 40 CFR 60.11(c), the opacity standards set forth in 40 CFR Part 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

b. 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.

13a. 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.

14a. 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.

b. 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 do all of the following, except as permitted under 40 CFR 60.4211(g):

i. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

ii. Change only those emission-related settings that are permitted by the manufacturer; and

iii. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

c. 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 60.4205(b), you must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g).

d. Pursuant to 40 CFR 60.4211(f), if you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart IIII and must meet all requirements for non-emergency engines.

i. There is no time limit on the use of emergency stationary ICE in emergency situations.

ii. You may operate your emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2).

A. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator 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 calendar year.

B. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see 40 CFR 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

C. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

A. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

2. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

3. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

4. The power is provided only to the facility itself or to support the local transmission and distribution system.

5. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

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. The Boilers shall only be operated with natural gas or distillate fuel oil as the fuel. The use of any other fuel in the boilers 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 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 operation of the four boilers (#1, #2, #3 and #4) combined shall not exceed the following limits:

i. Natural Gas Usage: 108.19 mmscf/month, 1081.86 mmscf/year

ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor (lbs/mmscf)	Emissions (Tons/Mo)	Emissions (Tons/Yr)
Carbon Monoxide (CO)	84.0	4.54	45.44
Nitrogen Oxide (NO_x)	100.0	5.41	54.09
Particulate Matter (PM)	7.6	0.41	4.11
Sulfur Dioxide (SO_2)	0.6	0.03	0.32
Volatile Organic Material (VOM)	5.5	0.30	2.98

These limits are based on the maximum firing rate of the boilers (123.50 mmBtu/hour), the maximum operating hours (8,760 hours/year), and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

iii. Distillate fuel oil usage: 44,107 gallons/month, 441,071 gallons/year.

iv. Emissions from the combustion of distillate fuel oil:

Pollutant	Emission Factor (lb /1,000 Gal)	Emissions (Tons/Mo)	Emissions (Tons/Yr)
Carbon Monoxide (CO)	5.0	0.11	1.10
Nitrogen Oxide (NO_x)	20.0	0.44	4.41
Particulate Matter (PM)	2.0	0.05	0.44
Sulfur Dioxide (SO_2)	39.76	0.88	8.77
Volatile Organic Material (VOM)	0.34	0.01	0.07

These limits are based on fuel usage, 500 hours/year of operation, a heat content of 140,000 Btu/gallon for No. 2 fuel oil, 0.0015% sulfur content in the fuel, and standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E, September 1998).

b. Emissions and operation of the emergency diesel generators Gen-1 and Gen-2 (1,339 HP/1,000 kW, and 1,674 HP/1,250kW) combined shall not exceed the following:

i. Operating hours of each generator: 500 hours/year.

ii. Emissions from the diesel generators Gen-1 and Gen-2 shall not exceed:

Pollutant	Emission Factor (lbs/HP-Hr)	Total Emissions (lbs/Hr)	(Tons/Yr)
Carbon Monoxide (CO)	0.01874	56.48	14.12
Nitrogen Oxides (NO_x)	0.01512	45.56	11.39
Particulate Matter(PM)	0.00089	2.68	0.67
Volatile Organic Material (VOM)	0.00214	2.40	1.61
Sulfur Dioxide (SO_2)	0.00001	0.04	0.01

The above limits are based on the maximum fuel usage, and emission factors from 40 CFR Part 60 Subpart IIII Table 1 and SO_2 emission factor from AP42 Table 3.4-1 & 0.0015% maximum sulfur content of diesel fuel. Emission totals shall be calculated by multiplying the rated output power of the diesel generators, the diesel generators set runtime and the emission factors for each pollutant.

c. Emissions and operation of Emergency Diesel Generator Gen-3 (2,206 HP/1,500kW) shall not exceed the following:

i. The Diesel Generator Gen-3 operating hours: 500 hours/year.

ii. Emissions from the Diesel Generator Gen-3 shall not exceed:

Pollutant	Emission Factor (lbs/HP-Hr)	Total Emissions (lbs/Hr)	(Tons/Yr)
Carbon Monoxide (CO)	0.00097	1.20	0.53
Nitrogen Oxides (NO_x)	0.01119	13.76	6.17
Particulate Matter(PM)	0.00007	0.08	0.04
Volatile Organic Material (VOM)	0.00059	0.72	0.32
Sulfur Dioxide (SO_2)	0.00001	0.04	0.01

The above limits are based on the maximum fuel usage, and emission factors from the manufacturer’s specification and technical data, SO_2 emission factor from AP42 Table 3.4-1 and 0.0015% maximum sulfur content of diesel fuel per 40 CFR 60.4207(a). Emission totals shall be calculated by multiplying the rated output power of the diesel generators, the diesel generators set runtime and the emission factors for each pollutant.

d. Emissions and operation of the three (3) ethylene oxide sterilizers combined shall not exceed the following limits:

VOM/ETO Usage		VOM/ETO Emission	
(lbs/hour)	(Tons/Year)	(Tons/Month)	(Tons/Year)
1.14	5.00	0.50	5.00

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.

e. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.79 tons/month and 7.9 tons/year of any single HAP and 1.99 tons/month and 19.9 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a CAAPP Permit from the Illinois EPA.

f. 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 emergency Diesel Generator Gen-3 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 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.

18. 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.

19a. 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.

20a. Pursuant to 40 CFR 60.48c(e)(11), the owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall keep records including the following information, as applicable. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under 40 CFR 60.48c(f)(1), (2), (3), or (4), as applicable.

b. Pursuant to 40 CFR 60.48c(f)(1), fuel supplier certification shall include the following information for distillate oil:

i. The name of the oil supplier;

ii. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and

iii. The sulfur content of the oil.

c. i. Pursuant to 40 CFR 60.48c(g)(1), except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

ii. Pursuant to 40 CFR 60.48c(g)(2), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

iii. Pursuant to 40 CFR 60.48c(g)(3), as an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to 40 CFR 60 Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

d. Pursuant to 40 CFR 60.48c(i), all records required under 40 CFR 60.48 shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

21. 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.

22a. 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.

b. Pursuant to 40 CFR 63.10432, you must keep the records specified in 40 CFR 63.10432(a) and (b) of this section.

i. A copy of the Initial Notification of Compliance Status that you submitted to comply with 40 CFR Part 63 Subpart WWWWW.

ii. Records required by 40 CFR 63.10420 for each sterilization unit not equipped with an air pollution control device.

c. Pursuant to 40 CFR 63.10434(a), your records must be in a form suitable and readily available for expeditious review.

d. Pursuant to 40 CFR 63.10434(b), you must keep each record for 5 years following the date of each record.

e. 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.

23a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

i. Natural gas usage for boilers (mmscf/month and mmscf/year);

ii. Fuel oil usage for boilers and engines separately (gallons/month and gallons/year);

iii. Hours of operation for each engine (hours/month and hours/year;

iv. Certification from the fuel oil supplier of the weight percent sulfur content of the distillate fuel oil used in the diesel-powered generator with each fuel oil shipment received (weight %);

v. Amount of Ethylene Oxide usage (lbs/hours and tons/year); and

vi. Monthly and annual emissions of CO, NO_x, PM, SO_2, 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.

24a. Pursuant to 40 CFR 60.48c(b), the owner or operator of each affected facility subject to the SO_2 emission limits of 40 CFR 60.42c, or the PM or opacity limits of 40 CFR 60.43c, shall submit to the Illinois EPA or USEPA the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of 40 CFR Part 60.

b. Pursuant to 40 CFR 60.48c(d), the owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall submit reports to the Illinois EPA or USEPA.

c. Pursuant to 40 CFR 60.48c(j), the reporting period for the reports required under 40 CFR 60 Subpart Dc is each six-month period. All reports shall be submitted to the Illinois EPA or USEPA and shall be postmarked by the 30th day following the end of the reporting period.

25. 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.

26a. 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, copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

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, IL 62794-9276

and one (1) copy shall be sent to the Illinois EPA regional office at the following address unless otherwise indicated:

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

If you have any questions on this, please call German Barria at 217/785-1705.

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

Date Signed:_____

RWB:GB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emission 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 source. The resulting maximum emissions are below the level (e.g., 100 tons/year for CO and NO_x) 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 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)						
Emission Units	CO	NO_x	PM	SO_2	VOM	HAP	Total HAPs
Boilers #1,2,3 and 4 (Nat. Gas)	45.44	54.09	4.11	0.32	2.98	----	----
Boilers #1,2,3, and 4 (Fuel Oil)	1.10	4.41	0.44	8.77	0.07	----	----
Emergency Generators Gen-1 & Gen-2	14.12	11.39	0.67	0.01	1.61	----	----
1 – 1,500 kW Emergency Generator	0.53	6.17	0.04	0.01	0.32	----	----
3 – Ethylene Oxide Sterilizers	0.00	0.00	0.00	0.00	5.00	----	----
Totals	61.19	76.06	5.26	9.11	9.98	7.90	19.90

RWB:GB:psj