

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NESHAP SOURCE -- RENEWAL

PERMITTEE

Lake Forest Hospital
Attn: Donald Colbert
660 North Westmoreland Road
Lake Forest, Illinois 60045-1659

Application No.: 99110100

I.D. No.: 097080AAC

Applicant's Designation:

Date Received: September 9, 2009

Subject: Hospital

Date Issued: July 18, 2013

Expiration Date: July 18, 2023

Location: 660 North Westmoreland Road, Lake Forest, Lake 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) 14.7 mmBtu/hour natural gas-fired boilers (Gas Boilers #1 and #2), one (1) 14.7 mmBtu/hour natural gas/distillate fuel oil-fired boiler (Gas/Oil Boiler #3), four (4) 820 kW natural gas-fired cogeneration engine/generators (Cogeneration Engines #1PFD, #2PFD, #3PFD, and #4PFD), two (2) 2,000 kW diesel-powered emergency generators and six (6) small boilers (22.1 mmBtu/hour, total) 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) and Nitrogen Oxides (NO_x)). As a result, the source is excluded from 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_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. Cogeneration Engines #1PFD, #2PFD, #3PFD, and #4PFD are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63 Subparts A and ZZZZ. The Illinois EPA is administering the NESHAP in

Illinois on behalf of the USEPA under a delegation agreement. Pursuant to 40 CFR 63.6590(a), an affected source is any existing, new or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

- b. Pursuant to 40 CFR 63.6595(a)(1), if you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.
 - c. Pursuant to 40 CFR 63.6603(a), if you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d (see Attachment B) to 40 CFR 63 Subpart ZZZZ and the operating limitations in Table 2b to 40 CFR 63 Subpart ZZZZ that apply to you.
- 3a. 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).

- 4a. 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)).
5. 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.
- 6a. This permit is issued based on the two 2,000 kW diesel-powered emergency generators not being subject to the requirements of 40 CFR 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6585(f)(3), 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) are not subject to 40 CFR 63 Subpart ZZZZ. 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).
 - b. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD because this source is not or is part of, a major source of HAP as defined in 40 CFR 63.2.
 - c. This permit is issued based on the boilers at this source 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.

7. 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.
- 8a. Pursuant to 40 CFR 63.6605(a), you must be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63 Subpart ZZZZ that apply to you at all times.
- b. Pursuant to 40 CFR 63.6605(b), at all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by 40 CFR 63 Subpart ZZZZ have been achieved. Determination of whether such operation 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, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
- c. Pursuant to 40 CFR 63.6625(h), if you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to 40 CFR 63 Subpart ZZZZ apply.
- d. Pursuant to 40 CFR 63.6625(j), if you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to 40 CFR 63 Subpart ZZZZ or in items 5, 6, 7, 9, or 11 of Table 2d to 40 CFR 63 Subpart ZZZZ, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to 40 CFR 63 Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change

the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

- e. Pursuant to 40 CFR 63.6630(a), you must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 (see Attachment D) of 40 CFR 63 Subpart ZZZZ.
- f. Pursuant to 40 CFR 63.6630(b), during the initial performance test, you must establish each operating limitation in Tables 1b and 2b of 40 CFR 63 Subpart ZZZZ that applies to you.
- g. Pursuant to 40 CFR 63.6630(c), you must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645.
- h. Pursuant to 40 CFR 63.6640(a), you must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40 CFR 63 Subpart ZZZZ that apply to you according to methods specified in Table 6 (see Attachment E) to 40 CFR 63 Subpart ZZZZ.
- i. Pursuant to 40 CFR 63.6640(f), if you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63 Subpart ZZZZ, 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 63.6640(f)(1) through (4), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under 40 CFR 63 Subpart ZZZZ and must 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 any combination of the purposes specified in 40 CFR 63.6640(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 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this 40 CFR 63.6640(f)(2).

- A. Emergency stationary RICE 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 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 calendar year.
 - B. Emergency stationary RICE 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 63.14), 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 RICE 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 RICE located at area sources of HAP 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 63.6640(f)(2). Except as provided in 40 CFR 63.6640(f)(4)(i) and (ii), the 50 hours per 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. Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.
 - B. 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:

- I. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
 - II. 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.
 - III. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - IV. The power is provided only to the facility itself or to support the local transmission and distribution system.
 - V. 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.
- j. Pursuant to 40 CFR 63.6665, Table 8 (see Attachment G) to 40 CFR 63 Subpart ZZZZ shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the

gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

- 9a. 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 and #2 and Cogeneration Engines #1PFD, #2PFD, #3PFD, and #4PFD shall only be operated with natural gas as the fuel. The use of any other fuel in Boilers #1 or #2 or Cogeneration Engines #1PFD, #2PFD, #3PFD, or #4PFD 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. Boiler #3 shall only be operated with natural gas or distillate fuel oil as the fuel. The use of any other fuel in Boiler #3 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 two 2,000 kW emergency generators shall only be operated with distillate fuel oil as the fuel. The use of any other fuel in the emergency 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.
- e. 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 wt. percent given by the formula: Maximum Wt percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.
- f. 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.
- g. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 10a. Operation of and emissions from the boilers shall not exceed the following limits:
 - i. Natural gas usage: 40 mmscf/month, 320 mmscf/year
 - ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	Emission Factor (lbs/mmscf)	Emissions	
		(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	84.0	1.68	13.44
Nitrogen Oxides (NO _x)	100.0	2.00	16.00
Particulate Matter (PM)	7.6	0.15	1.22
Sulfur Dioxide (SO ₂)	0.6	0.01	0.10
Volatile Organic Material (VOM)	5.5	0.11	0.88

These limits are based on the 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).

- iii. Distillate fuel oil usage: 100,000 gallons/month, 100,000 gallons/year
- iv. Emissions from the combustion of fuel oil:

<u>Pollutant</u>	Emission Factor (lbs/10 ³ Gal)	Emissions	
		(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	5.00	0.25	0.25
Nitrogen Oxides (NO _x)	20.00	1.00	1.00
Particulate Matter (PM)	2.00	0.10	0.10
Sulfur Dioxide (SO ₂)	39.76	1.99	1.99
Volatile Organic Material (VOM)	0.20	0.01	0.01

These limits are based on the maximum boilers operations and standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E, September 1999, corrected May 2010).

- b. Emissions from and operation of Cogeneration Engines #1PFD, #2PFD, #3PFD, and #4PFD shall not exceed the following limits:
 - i. Operating engine-hours (total): 12,000 hours/year
 - ii. Emissions from Cogeneration Engines #1PFD, #2PFD, #3PFD, and #4PFD:

<u>Pollutant</u>	Emission Factor (Lbs/Hp-Hr)	Emissions	
		(Lb/Hr)	(Tons/Yr)
Carbon Monoxide (CO)	0.003512	16.00	24.00
Nitrogen Oxides (NO _x)	0.007638	34.80	52.20
Particulate Matter (PM)	0.00007380	0.34	0.50
Sulfur Dioxide (SO ₂)	0.000004344	0.02	0.03
Volatile Organic Material (VOM)	0.001756	8.00	12.00

These limits are based on the maximum rated power of the engines (1,139 hp), the maximum operating hours for the engine, the engine manufacturer's emission factors for CO, NO_x, and VOM, and standard emission factors for PM and SO₂ (Table 3.2.-2, AP-42, Fifth Edition, Volume I, Supplement F, August 2000).

- c. Emissions from and operation of the two 2,000 kW diesel-powered emergency generators shall not exceed the following limits:
 - i. Operating engine-hours (each): 500 hours/year
 - ii. Emissions from the two 2,000 kW diesel-powered emergency generators:

<u>Pollutant</u>	<u>Emission Factor (Lbs/Hp-Hr)</u>	<u>Emissions (Lbs/Hr)</u>	<u>(Tons/Yr)</u>
Carbon Monoxide (CO)	0.0009520	5.40	1.35
Nitrogen Oxides (NO _x)	0.01969	111.70	27.93
Particulate Matter (PM)	0.0001587	0.90	0.23
Sulfur Dioxide (SO ₂)	0.002265	12.85	3.21
Volatile Organic Material (VOM)	0.0002433	1.38	0.35

These limits are based on the maximum rated power of the engines (2,836 hp), the maximum operating hours for the engine, the engine manufacturer's emission factors for CO, NO_x, PM, and VOM, and standard emission factor for SO₂ (Table 3.4.-1, AP-42, Fifth Edition, Volume I, Supplement B, October 1996).

- d. 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).
11. 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 from this source being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a CAAPP Permit from the Illinois EPA.
- 12a. Pursuant to 40 CFR 63.6620(a), you must conduct each performance test in Tables 3 and 4 of 40 CFR 63 Subpart ZZZZ that applies to you.
- b. Pursuant to 40 CFR 63.6620(b), each performance test must be conducted according to the requirements that 40 CFR 63 Subpart ZZZZ specifies in Table 4 (see Attachment C) to 40 CFR 63 Subpart ZZZZ. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is

started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in 40 CFR 63.6620(b)(1) through (4).

- c. Pursuant to 40 CFR 63.6620(d), you must conduct three separate test runs for each performance test required in this section, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in 40 CFR 63 Subpart ZZZZ.
- d. i. Pursuant to 40 CFR 63.6620(e)(1), you must use Equation 1 of 40 CFR 63.6620 to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

- ii. Pursuant to 40 CFR 63.6620(e)(2), you must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in 40 CFR 63.6620(e)(2)(i) through (iii).

- A. Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{ Btu}$).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($\text{dscf}/10^6 \text{ Btu}$).

- B. Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{\text{CO}_2} = \frac{5.9}{F_c} \quad (\text{Eq. 3})$$

Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.

- C. Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{\text{adj}} = C_d \frac{X_{\text{CO}_2}}{\% \text{CO}_2} \quad (\text{Eq. 4})$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2 .

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO_2 correction factor, percent.

$\% \text{CO}_2$ = Measured CO_2 concentration measured, dry basis, percent.

- e. Pursuant to 40 CFR 63.6620(f), if you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Illinois EPA or USEPA for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not

conduct the initial performance test until after the petition has been approved by the Illinois EPA or USEPA.

- g. Pursuant to 40 CFR 63.6620(i), the engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.
- h. Pursuant to 40 CFR 63.6640(c), the annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
 - i. The compliance demonstration must consist of at least one test run.
 - ii. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - iii. If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ.
 - iv. If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR Part 60, appendix A.
 - v. You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
 - vi. If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and

O2 emissions simultaneously at the inlet and outlet of the control device.

- vii. If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of 40 CFR 63 Subpart ZZZZ, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of 40 CFR 63 Subpart ZZZZ. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of 40 CFR 63 Subpart ZZZZ.
- 13a. 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.
- b. Testing required by Condition 14 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.

14. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 15a. Pursuant to 40 CFR 63.6625(a), if you elect to install a CEMS as specified in Table 5 of 40 CFR 63 Subpart ZZZZ, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in 40 CFR 63.6625(a)(1) through (4). If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.
 - i. Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR Part 60, Appendix B.
 - ii. You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable performance specifications of 40 CFR Part 60, Appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
 - iii. As specified in 40 CFR 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.
 - iv. The CEMS data must be reduced as specified in 40 CFR 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.
- b. Pursuant to 40 CFR 63.6625(b), if you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 CFR 63 Subpart ZZZZ, you must install, operate, and maintain each CPMS according to the requirements in 40 CFR 63.6625(b)(1) through (6). For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in 40 CFR 63.6625(b) are applicable September 6, 2011
 - i. You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in 40 CFR

63.6625(b) (1) (i) through (v) and in 40 CFR 63.8(d). As specified in 40 CFR 63.8(f) (4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in 40 CFR 63.6625(b) (1) through (5) in your site-specific monitoring plan.

- A. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
 - B. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
 - C. Equipment performance evaluations, system accuracy audits, or other audit procedures;
 - D. Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c) (1) (ii) and (c) (3); and
 - E. Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e) (1), and (e) (2) (i).
- ii. You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
 - iii. The CPMS must collect data at least once every 15 minutes (see also 40 CFR 63.6635).
 - iv. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
 - v. You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
 - vi. You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
- c. Pursuant to 40 CFR 63.6625(f), 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 or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

- d. Pursuant to 40 CFR 63.6635(a), if you must comply with emission and operating limitations, you must monitor and collect data according to 40 CFR 63.6635.
 - e. Pursuant to 40 CFR 63.6635(b), except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
 - f. Pursuant to 40 CFR 63.6635(c), you may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.
16. 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.
- 17a. Pursuant to 40 CFR 63.6655(a), if you must comply with the emission and operating limitations, you must keep the records described in 40 CFR 63.6655(a)(1) through (a)(5), (b)(1) through (b)(3) and (c).

- i. A copy of each notification and report that you submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b) (2) (xiv).
 - ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - iii. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b) (2) (viii).
 - iv. Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- b. Pursuant to 40 CFR 63.6655(b), for each CEMS or CPMS, you must keep the records listed in 40 CFR 63.6655(b) (1) through (3).
- i. Records described in 40 CFR 63.10(b) (2) (vi) through (xi).
 - ii. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d) (3).
 - iii. Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40 CFR 63.8(f) (6) (i), if applicable.
- c. Pursuant to 40 CFR 63.6655(d), you must keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies to you.
- d. Pursuant to 40 CFR 63.6655(e) (3), you must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate an existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to 40 CFR 63 Subpart ZZZZ.
- e. Pursuant to 40 CFR 63.6660(a), your records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b) (1).
- f. Pursuant to 40 CFR 63.6660(b), as specified in 40 CFR 63.10(b) (1), you must keep each record for 5 years following the date of each

occurrence, measurement, maintenance, corrective action, report, or record.

- g. Pursuant to 40 CFR 63.6660(c), you must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).
- 18. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 19a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Natural gas usage (mmscf/month and mmscf/year) separately for boilers and engines;
 - ii. Fuel oil usage (gallons/month and gallons/year) separately for boilers and engines;
 - iii. Hours of operation for each engine (hours/month and hours/year);
 - iv. Sulfur content of diesel fuel used (% by weight), this shall be recorded for each shipment of oil delivered to the source; and
 - iv. Monthly and annual emissions of CO, NO_x, PM, SO₂, 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.
- 20a Pursuant to 40 CFR 63.6640(e), you must also report each instance in which you did not meet the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ: An existing 2SLB

stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

- b. Pursuant to 40 CFR 63.6645(a), you must submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f) (4) and (f) (6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following:
 - i. An existing stationary RICE located at an area source of HAP emissions.
 - ii. This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.
- c. Pursuant to 40 CFR 63.6645(g), if you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b) (1).
- d. Pursuant to 40 CFR 63.6645(h), if you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to 40 CFR 63 Subpart ZZZZ, you must submit a Notification of Compliance Status according to 40 CFR 63.9(h) (2) (ii).
 - i. For each initial compliance demonstration required in Table 5 to 40 CFR 63 Subpart ZZZZ that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
 - ii. For each initial compliance demonstration required in Table 5 to 40 CFR 63 Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 to 40 CFR 63 Subpart ZZZZ, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.10(d) (2).
- e. Pursuant to 40 CFR 63.6650(a), you must submit each report in Table 7 (see Attachment F) of 40 CFR 63 Subpart ZZZZ that applies to you.

- f. Pursuant to 40 CFR 63.6650(b), unless the Illinois EPA or USEPA has approved a different schedule for submission of reports under 40 CFR 63.10(a), you must submit each report by the date in Table 7 of 40 CFR 63 Subpart ZZZZ and according to the requirements in 40 CFR 63.6650(b) (1) through (b) (9).
 - i. For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in 40 CFR 63.6595.
 - ii. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR 63.6595.
 - iii. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - iv. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - v. For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.6595 and ending on December 31.
 - vi. For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in 40 CFR 63.6595.
 - vii. For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
 - viii. For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.
- g. Pursuant to 40 CFR 63.6650(c), the Compliance report must contain the information in 40 CFR 63.6650(c) (1) through (6).
 - i. Company name and address.

- ii. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - iii. Date of report and beginning and ending dates of the reporting period.
 - iv. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.6605(b), including actions taken to correct a malfunction.
 - v. If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.
 - vi. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
- h. Pursuant to 40 CFR 63.6650(d), for each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in 40 CFR 63 Subpart ZZZZ, the Compliance report must contain the information in 40 CFR 63.6650(c)(1) through (4) and the information in 40 CFR 63.6650(d)(1) and (2).
- i. The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
 - ii. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- i. Pursuant to 40 CFR 63.6650(e), for each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in 40 CFR 63.6650(c)(1) through (4) and (e)(1) through (12).
- i. The date and time that each malfunction started and stopped.
 - ii. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

- iii. The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8).
 - iv. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - v. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
 - vi. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - vii. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
 - viii. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
 - ix. A brief description of the stationary RICE.
 - x. A brief description of the CMS.
 - xi. The date of the latest CMS certification or audit.
 - xii. A description of any changes in CMS, processes, or controls since the last reporting period.
- j. Pursuant to 40 CFR 63.6650(h), if you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is 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) or that operates for the purpose specified in 40 CFR 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in 40 CFR 63.6650(h)(1) through (3).
- i. The report must contain the following information:
 - A. Company name and address where the engine is located.
 - B. Date of the report and beginning and ending dates of the reporting period.
 - C. Engine site rating and model year.

- D. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - E. Hours operated for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii).
 - F. Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii).
 - G. Hours spent for operation for the purpose specified in 40 CFR 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
 - H. If there were no deviations from the fuel requirements in 40 CFR 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
 - I. If there were deviations from the fuel requirements in 40 CFR 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.
- ii. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
 - iii. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Illinois EPA or USEPA at the appropriate address listed in 40 CFR 63.13.
20. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.

21a. 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 Valeriy Brodsky at 217/785-1705.

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

Date Signed: _____

RWB:VJB: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.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)				
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>
Boilers #1 - #3 and 6 Small					
Boilers (Natural Gas)	13.44	16.00	1.22	0.10	0.88
Boiler #3 (Fuel Oil)	0.25	1.00	0.10	1.99	0.01
Cogeneration Engines #1PFD - #4PFD	24.00	52.20	0.50	0.03	12.00
2 - 2,000 kW Diesel-Powered Emergency Generators	<u>1.35</u>	<u>27.93</u>	<u>0.23</u>	<u>3.21</u>	<u>0.35</u>
Totals	39.04	97.13	2.05	5.33	13.24

RWB:VJB:psj

Attachment B - Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in 40 CFR 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and.	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	

¹ Sources have the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63 Subpart ZZZZ.

Attachment C - Table 4 to Subpart ZZZZ of Part 63—Requirements for
Performance Tests

As stated in 40 CFR 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR Part 60, Appendix A, or ASTM Method D6522- 00 (Reapproved 2005). ^{a c}	(a) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) ^{a b c} or Method 10 of 40 CFR Part 60, Appendix A	(a) The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR Part 60, Appendix A 40 CFR 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR Part 60, Appendix A, or ASTM Method D6522- 00 (Reapproved 2005). ^a	(a) measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03. ^a	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.

- ^a Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.
- ^b You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.
- ^c ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

Attachment D - Table 5 to Subpart ZZZZ of Part 63 - Initial Compliance With Emission Limitations and Operating Limitations

As stated in 40 CFR 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
<p>13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install an oxidation catalyst</p>	<p>i. You have conducted an initial compliance demonstration as specified in 40 CFR 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂;</p>
		<p>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in 40 CFR 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350°F.</p>
<p>14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install NSCR</p>	<p>i. You have conducted an initial compliance demonstration as specified in 40 CFR 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more;</p>

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in 40 CFR 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250°F.

Attachment E - Table 6 to Subpart ZZZZ of Part 63 - Continuous Compliance
With Emission Limitations, Operating Limitations, Work Practices, and
Management Practices

As stated in 40 CFR 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in 40 CFR 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ; and either ii. Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450°F and less than or equal to 1350°F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350°F.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
<p>15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install NSCR</p>	<p>i. Conducting annual compliance demonstrations as specified in 40 CFR 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750°F and less than or equal to 1250°F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250°F.</p>

Attachment F - Table 7 to Subpart ZZZZ of Part 63 - Requirements for Reports

As stated in 40 CFR 63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in 40 CFR 63.6650 (b) (1) - (5).

Attachment G - Table 8 to Subpart ZZZZ of Part 63 - Applicability of General Provisions to Subpart ZZZZ.

As stated in 40 CFR 63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in 40 CFR 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b) (1) - (4)	Compliance dates for new and reconstructed sources	Yes.	
§ 63.6(b) (5)	Notification	Yes.	
§ 63.6(b) (6)	[Reserved]		
§ 63.6(b) (7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§ 63.6(c) (1) - (2)	Compliance dates for existing sources	Yes.	
§ 63.6(c) (3) - (4)	[Reserved]		
§ 63.6(c) (5)	Compliance dates for existing area sources that become major sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f) (1)	Applicability of standards	No.	
§ 63.6(f) (2)	Methods for determining compliance	Yes.	
§ 63.6(f) (3)	Finding of compliance	Yes.	
§ 63.6(g) (1) - (3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at 40 CFR 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that 40 CFR 63.7(b)(1) only applies as specified in 40 CFR 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that 40 CFR 63.7(b)(2) only applies as specified in 40 CFR 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that 40 CFR 63.7(c) only applies as specified in 40 CFR 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at 40 CFR 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at 40 CFR 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at 40 CFR 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(c)(1)(i)	Routine and predictable SSM	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for 40 CFR 63.8(e)(5)(ii), which applies to COMS.
		Except that 40 CFR 63.8(e) only applies as specified in 40 CFR 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that 40 CFR 63.8(f)(4) only applies as specified in 40 CFR 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that 40 CFR 63.8(f)(6) only applies as specified in 40 CFR 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at 40 CFR 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that 40 CFR 63.9(b)(3) is reserved.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		Except that 40 CFR 63.9(b) only applies as specified in 40 CFR 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that 40 CFR 63.9(c) only applies as specified in 40 CFR 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that 40 CFR 63.9(d) only applies as specified in 40 CFR 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that 40 CFR 63.9(e) only applies as specified in 40 CFR 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g) (1)	Notification of performance evaluation	Yes	Except that 40 CFR 63.9(g) only applies as specified in 40 CFR 63.6645.
§ 63.9(g) (2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g) (3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that 40 CFR 63.9(g) only applies as specified in 40 CFR 63.6645.	
§ 63.9(h) (1) - (6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. 40 CFR 63.9(h) (4) is reserved.
			Except that 40 CFR 63.9(h) only applies as specified in 40 CFR 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that 40 CFR 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(i)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that 40 CFR 63.10(e)(3)(i)(C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.15	Availability of information	Yes.	