

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 ACTIVITY REPORT: Scheduled Inspection

FY 2015 IUSP

K272928830		SRN / ID: K2729
FACILITY: BOTSFORD HOSPITAL		DISTRICT: Southeast Michigan
LOCATION: 28050 GRAND RIVER AVENUE, FARMINGTN HLS		COUNTY: OAKLAND
CITY: FARMINGTN HLS		ACTIVITY DATE: 03/11/2015
CONTACT:		SOURCE CLASS: SM OPT OUT
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	
SUBJECT: FY 2015 level 2 scheduled compliance inspection of Botsford General Hospital, an osteopathic hospital		
RESOLVED COMPLAINTS:		

K2729 - SAR - 2015 03 11

Botsford General Hospital (K2729)
 28050 Grand River Avenue
 Farmington Hills, Michigan 48336-5933
 Phone: (248) 471-8201
 Fax: (248) 471-8961

Permit-to-Install Nos.:

1. 168-02 (Boiler No. 4 installed in 1987; Boiler No. 4 incorrectly identified as EU-BOILER1 in the permit; PTI obtained after May 4, 2001, VN) dated September 18, 2002;
2. 77-04 (NSPS Dc Boiler Nos. 7 & 8; Supplemental revision on 8/30/2004) dated August 30 2004; and
3. 50-12 (2012 NSPS 4I Emergency Generator using 15 ppm S ULSD).

Denied PTI No.: 328-01 (5/14/2002) for Boiler No. 4 for lack of info.

Void PTI Nos.: 353-01 (12/12/2001) for Boiler No. 3 (never approved) and PTI No. 93-711 (01/22/2003) for two Incinerators (one medical waste and one pathogenic waste). The two incinerators are welded shut and made inoperable. Utilities disconnected.

Two of three boilers (Nos. 7 & 8 and not No. 4) are subject to: federal New Source Performance Standards (NSPS Dc) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR, Part 60, Subpart Dc). Natural gas fired boilers with fuel oil back-up and hence fee-subject facility.

Fee: Category II Air Quality Fee due to fuel oil back up NSPS Dc Boilers

Three (3) steam boilers may be subject to: NESHAP / Boiler MACT / MACT 6J, 40 CFR Part 63, Subpart JJJJJJ / 6J National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, Page 15554, Federal Register / Vol. 76, No. 54 / Monday, March 21, 2011 / Rules and Regulations / Final rule. This rule does NOT apply to boilers that burn only gaseous fuels or any solid waste. AQD has decided not to take delegation of these standards and therefore no attempt has been made to evaluate the Botsfords's compliance with NESHAP / MACT 6J.

Four (4) emergency generators may be subject to: RICE MACT 4Z, Area Source NESHAP / MACT ZZZZ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants for

Reciprocating Internal Combustion Engines / Final rule (Page 3568, Federal Register / Vol. 73, No. 13 / Friday, January 18, 2008 / Rules and Regulations / Final rule). AQD has decided not to take delegation of these standards and therefore no attempt has been made to evaluate the Botsfords's compliance with NESHAP / MACT 4Z. According to PTI No. 50-12, SC IX.2, newest generator (1 MW Caterpillar Engine Model C32 2012) is subject to RICE MACT 4Z.

One (manufactured in April 2012) of four (4) emergency generators is subject to: NSPS III or 4I, New Source Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion (IC) Engines, 39154 Federal Register / Vol. 71, No. 132 / Tuesday, July 11, 2006 / Rules and Regulations /Final Rule. Three of four generators are not subject to NSPS 4I based upon manufacture date (before April 1, 2006).

On February 10 and March 11, 2015, I conducted a level 2 scheduled compliance inspection of Botsford General Hospital, an osteopathic hospital, located at 28050 Grand River Avenue, Farmington Hills, Michigan 480336-5933. The inspection was conducted to determine compliance with federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules; and Permit-to-Install Nos. 168-02, 77-04 & 52-12.

Mr. Donald Ditri (Phone: 248-471-8714 / 8201; E-mail: dditri@botsford.org), Plant Technology and Management Supervisor, Mr. Steve Henning (Phone: 248-471-8201; E-mail: SHenning@botsford.org), Director, and Ms. Mary Jo McKenzie (248-471-8202, fka Kuhns), Office Coordinator, and Hank Macinkowdcz (248-471-8201), Electrician, assisted me during my inspection

Mr. Michael Budnick (248-471-8201), Physical Plant Supervisor, retired about March 2013.

Charles E. Wirth (810-220-2313; fax: 810-220-2313; Cell: 810-656-4466) of Monarch Environmental, Inc., 12625 Grand River Avenue, Brighton, Michigan 48116, an environmental consultant to Botsford Hospital, was not present.

PTI No. 93-71I Two Incinerators (one Pathological and one Medical – voided on 01/22/2003 based upon FY 2001 inspection.

The hospital has two incinerators, which are now inoperable: one burns medical waste and the other burns pathogenic waste. These incinerators were installed in 1964. The modifications were permitted by PTI #93-71I. They are equipped with common secondary combustion chamber. In pathogenic incinerator human body parts such as gal bladder, limbs, legs, arms, kidneys were burned. Air Quality Division has not received any complaint for several years indicating that the incinerator was not operated. Mr. Richard Rutherford, Director, Physical Plant Maintenance, wrote a letter dated December 11, 1998 to AQD that the hospital was permanently shutting down the two incinerators with a common afterburner. Per my instructions of May 1, 2001, when I performed my previous inspection, incinerators are sealed, gas supply is disconnected, electrical supply is terminated and the notice has been posted that incinerators were shutdown. My observations indicated that the incinerators could not be restarted without substantial reconstruction. On March 08, 2005, Mr. Michael Budnick stated that the incinerators were welded shut. On June 4, 2008, I confirmed that steel plates (6 inches * 6 inches) were installed and welded so that the doors for the two incinerators could not be opened. In addition, I verified that all utilities such as natural gas and

electricity were disconnected.

The hospital is not subject to 40 CFR, Part 60, Subpart Ce, Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste because the two incinerators now are shut down permanently.

PTI Nos. 168-02 for Boiler No. 4 and 77-04 for Boiler Nos. 7/1A & 8/2A

Of the original four natural gas fired boilers, Botsford has removed three boilers (Nos. 1, 2 & 3) in May 2004 (per Mach 17, 2004, letter and March 8, 2005, inspection) and installed two new boilers (known as Nos. 7/1A & 8/2A) as follows:

1. Boiler #1: 12.5 million BTU per hour installed in 1964 (removed in May 2004; Boiler Nos. 7 & 8 replaced Boiler Nos. 1, 2, & 3).
2. Boiler #2: 12.5 million BTU per hour installed in 1964 (removed in May 2004; Boiler Nos. 7 & 8 replaced Boiler Nos. 1, 2, & 3).
3. Boiler #3: 12.5 million BTU per hour installed in 1972 (removed in May 2004; Boiler Nos. 7 & 8 replaced Boiler Nos. 1, 2, & 3).
4. Boiler #4: Cleaver Brooks CB Package Boiler CB-200-600-150, 25 million BTU per hour, 179.5 gallons of No. 2 fuel oil per hour, 600 hp, 150 psi steam (installed in 1987 & operating). Serial No. L80233. PTI No. 168-02, which was obtained after May 4, 2001, VN, covers this boiler; incorrectly identified as EU-BOILER1. Boiler No. 4 is not subject to NSPS Dc (installed in 1987, before June 9, 1989)
5. Boiler #7/1A: Cleaver Brooks CB Package Boiler CB-200-600-150, 25 million BTU per hour, 179.5 gallons of No. 2 fuel oil per hour, 600 hp, 150 psi steam (installed July 2004 & operating). Serial No. OL103403. PTI No. 77-04 covers this boiler. Boiler Nos. 7 & 8 are subject to NSPS Dc (installed in 2004, after June 9, 1989).
6. Boiler #8/2A: Cleaver Brooks CB Package Boiler CB-200-600-150, 25 million BTU per hour, 179.5 gallons of No. 2 fuel oil per hour, 600 hp, 150 psi steam (installed October 2004 & operating). Serial No. OL103404. PTI No. 77-04 covers this boiler. Boiler Nos. 7 & 8 are subject to NSPS Dc (installed in 2004, after June 9, 1989).

About 2004, two new boilers (known as Nos. 7/1A & 8/2A) replaced Boiler Nos. 1 through 3. As a matter of fact, new boilers (Nos. 7 & 8) are installed in the space made available by dismantling old (Nos. 1 thru 3 and not No. 4) boilers. All boilers using predominantly natural gas produce steam for space heating. While natural gas is a principal fuel, ultra-low sulfur diesel (15 ppm S ULSD) is used as a back-up fuel (PTI No. 77-04, FG-BOILER7&8, SC 1.2). Twice a year, 24-hour test with fuel oil combustion in all boilers is conducted to ensure reliability (PTI No. 77-04, FG-BOILER7&8, SC 1.3 limit: 175,000 gallons per year; PTI No. 168-02, EU-BOILER1, SC 1.2 limit: 208,154 gallons per year). Boiler Nos. 7 & 8 (not No. 4) are subject to federal New Source Performance Standards (NSPS Dc) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR, Part 60, Subpart Dc) as the boilers are installed in CY 2004 (after June 9, 1989); Boiler No. 4 was installed in 1987. All boilers are fire tube boilers (hot gases pass through tubes). All boilers burn 15 ppm sulfur ultra-low sulfur diesel (15 ppm S ULSD) as a back-up fuel. All boilers burn predominantly pipeline quality natural gas (PTI No. 77-04, FG-BOILER7&8, SC 1.2: explicitly only NG and diesel and PTI No. 168-02, EU-BOILER1, SC 1.3: implicitly only NG and diesel). Once a year,

all boilers are test fired using ULSD diesel fuel (15 ppm S) to ensure reliability; propane is used to start fire. In-patient (greater than 24 hours, not out-patient) hospitals are required to equip boilers used for space heating with back-up fuel capability with a high degree of reliability. AQD received the letter dated March 17, 2004, from Mr. Henning regarding decommissioning of the Boiler Nos. 1, 2, & 3 (each 12.5 MM BTU per hour. Cleaver Brooks CB Package Boiler).

The May 4, 2001, letter of violation (LOV) of Rule 336.1201

Pursuant to Rule 336.1282(b), the boilers burning sweet natural gas (up to 50 million BTU per hour) are exempt from Rule 336.1201 (Permit-to-Install). In addition, Pursuant to Rule 336.1282(b), the fuel oil fired boilers (up to 20 million BTU per hour) are exempt from Rule 336.1201 (Permit-to-Install) subject to the condition that fuel oil (limited to No.1 and No.2) burnt has sulfur content no greater than 0.40 percent by mass. It may be noted that NSPS Dc allows sulfur content up to 0.50 percent sulfur by mass (0.5 pounds of sulfur dioxide per million BTU heat input). Boiler No. 4 has a design capacity of 25 (>20) million BTU heat input per hour. Therefore, Boiler No. 4 was installed in violation of Rule 201.

The letter of violation (LOV) of Rule 336.1201 dated May 4, 2001 was issued for installing Boiler No. 4 without obtaining a permit. In response to the LOV, the hospital, on November 5, 2001, submitted an application for Permit-to-Install for Boiler No. 4. The application was referred to as 328-01. On May 14, 2002 MDEQ-AQD denied 328-01 for failure to submit the information requested on April 8, 2002. Again, on July 8, 2002 MDEQ-AQD received an application for Boiler No. 4. The application was referred to as 168-02. On September 18, 2002 MDEQ-AQD approved PTI No. 168-02 for Boiler No. 4.

Mr. Steve Henning requested modification of special condition No. 1.3 of EU-BOILER1, PTI No. 168-02 via his letter dated February 17, 2003 to Ms. Mary Ann Dolehanty. However, Ms. Dolehanty asked Mr. Henning for a Permit-to-Install application to revise PTI No. 168-02. Mr. Henning again responded with another letter dated March 14, 2003, requesting modification of PTI No. 168-02 (EU-BOILER1, SC 1.3: daily usage records; NSPS Dc revisions simplified this monitoring). Botsford requested the revision because it was not able to keep daily records for fuel usage (before installation of meters). The daily fuel usage records were required by NSPS Dc, 40 CFR, Part 60, 60.48c(g) until US EPA revised the recordkeeping requirements; see below.

However, upon completion of installation of Boiler Nos. 7/1A & 8/2A, each boiler, including Boiler No. 4, is equipped with meters for natural gas and fuel oil. Natural gas meter reading is in one thousand standard cubic feet (MSCF, PTI #77-04, FG-BOILER7&8, SC 1.6; PTI No. 168-02, EU-BOILER1 SC 1.3).

Fuel oil is not used at the hospital except when fuel is fired to test boilers for fuel oil capability. The fuel oil test is performed once a year, one day per year. Daily natural gas meter readings for each boiler are taken. The readings for each boiler are tabulated using a spreadsheet and monthly usage calculations are done (PTI No. 77-04, FG-BOILER7&8, SC 1.6; PTI No. 168-02, EU-BOILER1, SC 1.3). The main natural gas meter reading is also taken; this gives natural gas usage for the entire hospital facility including kitchen.

Pursuant PTI No. 77-04 (PTI No. 77-04, FG-BOILER7&8, SC 1.7), AQD received NSPS Dc notification dated March 22, 2005, for Boiler Nos. 7/1A and 8/2A. March 17, 2005 letter from Mr. Mike Budnick stated that daily natural gas usage would be kept for each boiler using dedicated meter of each boiler. Per FY 2015 inspection, the natural gas usage (daily and

monthly) records are kept using a spreadsheet. I obtained copies of CY2013 and CY2014 records.

On February 21, 2007 Atlas Oil Company (800-878-2000) of Taylor, Michigan, supplied 5,000 gallons of fuel oil for \$10,419.50. On February 16, 2011 (most recent) Atlas Oil Company (800-878-2000) of Taylor, Michigan, supplied 1500 gallons of fuel oil for \$5,019.23. The fuel oil is dyed ultra-low sulfur motor diesel containing 15 ppm sulfur (PTI No. 168-02, EU-BOILER1, SC 1.1a limit: 0.5%S and 41 lbs. / day; PTI No. 77-04, FG-BOILER7&8, SC 1.5 limit: 0.05%, which is equivalent to 500 ppm). Complying with sulfur-in-diesel limit via 15 ppm S ULSD is equivalent to complying with PTI No. 168-02, EU-BOILER1, SC 1.1a limit: 0.5%S and 41 lbs. of sulfur dioxide / day and PTI No. 77-04 , FG-BOILER7&8, SC 1.1a limit: 0.50 pounds of sulfur dioxide per MM BTU heat input.

As required by PTI No. 77-04, , FG-BOILER7&8, SC 1.6 [monthly fuel usage records] and PTI No. 168-02, EU-BOILER1 SC 1.3 [daily usage], using MS Excel spreadsheets, Botsford keeps records of natural gas usage for each boiler and entire hospital. Botsford used 190 MM SCF in CY 2013 and 221 MM SCF in CY 2014, (PTI No. 77-04, FG-BOILER7&8, SC 1.4 limit: 430 MM SCF for Boiler Nos. 7 & 8; PTI No. 77-04, FG-BOILER7&8, SC 1.3 limit: 175,000 gallons per year Diesel for Boiler Nos. 7 & 8; PTI No. 168-02, EU-BOILER1, SC 1.2: no limit for NG, 208,154 gallons per year limit for diesel / fuel oil). Separately, meter reading are done for Intern / Resident Apartments, POB South, Day Care Center and Botsford Hospital, etc.

Daily meter reading calculations and entire hospital readings do not match. I asked the hospital to check meters for Lake Shore Energy. Botsford may be overpaying (possibly underpaying) depending upon the meter errors.

NSPS Dc

The boilers (FG-BOILER7&8: Nos. 7 & 8 and not 4) are subject to federal New Source Performance Standards (NSPS Dc) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR, Part 60, Subpart Dc). Hence, pursuant to Act 451 of 1994, as amended, § 324.5522 (2)(b), Botsford is subject to Category II air quality fees. In addition, pursuant to Rule 336.1282(b), the boilers burning sweet natural gas (up to 50 million BTU per hour) are exempt from Rule 336.1201 (Permit-to-Install). Furthermore, pursuant to Rule 336.1282(b), the fuel oil fired boilers (up to 20 million BTU per hour) are exempt from Rule 336.1201 (Permit-to-Install) subject to the condition that fuel oil (limited to No.1 and No.2) burnt has sulfur content no greater than 0.40 percent by mass. It may be noted that NSPS Dc allows sulfur content up to 0.50 percent sulfur by mass (0.5 pounds of sulfur dioxide per million BTU heat input).

Because each boiler (Nos. 7 & 8: 25 MM BTU / hour, each boiler; fuel oil backup) has design capacity over 20 million BTU per hour, two identical boilers are NOT exempt, pursuant to Rule 336.282(b)(ii), from Rule 336.1201 (Permit-to-Install).

NSPS Dc Revisions:

1. 72 FR 32759 = Page 32759 Federal Register / Vol. 72, No. 113 / Wednesday, June 13, 2007 / Rules and Regulations / Final Rule – to add compliance alternatives and to revise certain recordkeeping and reporting requirements.
2. 74 FR 5091 = Page 5091 Federal Register / Vol. 74, No. 17 / Wednesday, January 28, 2009 / Rules and Regulations / Final Rule - to correct technical and editorial errors.

The NSPS revisions simplified the natural gas usage recordkeeping.

Area Boiler MACT 6J

The hospital was subject to Boiler MACT, 40 CFR, Part 63, Subpart DDDDD--National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters because the boilers are not located in major NESHAP source. . At any rate, on June 8, 2007, US Court of Appeals has mandated that EPA vacate the Boiler MACT Rule in its entirety. For existing (< January 13, 2003) large (> 10 MM BTU / hour) boilers (gas and fuel oil), only **Initial Notification** was applicable.

As the boilers are designed to be capable of burning liquid fuels such as fuel oil, Botsford's boilers are subject to: NESHAP / MACT 6J, 40 CFR Part 63, Subpart JJJJJJ / 6J National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, Page 15554, Federal Register / Vol. 76, No. 54 / Monday, March 21, 2011 / Rules and Regulations / Final rule. This NESHAP / MACT 6J rule does NOT apply to boilers that burn only gaseous fuels or any solid waste; the Botsford's boilers are designed for liquid fuels, such as fuel oil, as well.

AQD has decided not to take delegation of these standards and therefore no attempt has been made to evaluate Botsford's compliance with NESHAP / MACT 6J.

The final rule sets different requirements for boilers based on their size, which is defined as follows:

- ✓ Large area source boilers have a heat input capacity equal to or greater than 10 million British thermal units (Btu) per hour (MMBtu/hr).
- ✓ Small area source boilers have a heat input capacity less than 10 MMBtu/hr.

Botsford has three large area source MACT 6J natural gas fired boilers (with fuel oil back-up) based upon design capacity (three 25 MM BTU / hour, each boiler). An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before June 4, 2010. Hence, Botsford's boilers are existing boilers concerning the NESHAP / MACT 6J (installed in 1987 & 2004). Existing area source boilers (biomass and oil) are required comply with the following:

1. Tune-up every other year (biennial)
2. No numeric emission limits

A gas-fired boiler that periodically fires liquid fuels during gas curtailment and supply emergencies or for periodic (not to exceed a total of 48 hours during any calendar year) testing is still considered a gas-fired boiler. Botsford's boilers may be considered gas fired if records that prove 48-hour-limit are kept. In that case (< 48 hours), the NESHAP / MACT 6J rule does NOT apply to boilers that burn only gaseous fuels or any solid waste (solid waste rules apply).

The following notification requirements may apply:

1. Initial Notification: no later than September 17, 2011
2. Notification of Compliance Status subject to tune-ups: No later than July 19, 2012

AQD has decided not to take delegation of these standards and therefore no attempt has been made to evaluate Botsford's compliance with NESHAP / MACT 6J.

Botsford was subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Federal Register / Vol. 69, No. 176 / Monday, September 13, 2004 / Page 55218 / Rules and Regulations). However, on June 8, 2007, US Court of Appeals had mandated that EPA vacate the Boiler MACT Rule in its entirety; in the interim period, 112(j) MACT permit was required. US EPA re-promulgated the Area Source Boiler MACT as NESHAP / MACT 6J

01/09/12 - The U.S. District Court for the DC Circuit vacated the EPA's May 18, 2011, notice that delayed the effective dates of the Major Source Boiler MACT rule. The effective dates of the final rules published in the Federal Register on March 21, 2011 (76 FR 15608 and 76 FR 15704), are delayed until such time as judicial review is no longer pending or until the EPA completes its reconsideration of the rules, whichever is earlier.

12/23/11 - The EPA published the Major Source Boiler MACT reconsideration proposal (40 CFR 63, subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Page 80598 Federal Register / Vol. 76, No. 247 / Friday, December 23, 2011 / Proposed Rules). The EPA will accept comment on the reconsideration proposal until February 21, 2012.

PTI No. 77-04 supplemental revision

AQD performed supplemental revision of PTI No. 77-04, FG-BOILER7&8, SC1.4 to mean 430 million standard cubic feet per year; typographical error correction by adding "per year".

Safety-Kleen Cold-cleaner

One Safety-Kleen (1-800-669-5746; www.safety-kleen.com) Cold-cleaner is present. It is equipped with mechanically assisted lid. The cold-cleaner is subject rule 336.611 or 336.1707 depending on if it is new or existing. A cold-cleaner is exempt from Rule 336.1201 pursuant to Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979. I gave to Mr. Budnick a copy of DEQ's decal for "cold-cleaner operating procedures". I asked Mr. Budnick to keep cold-cleaner's lid closed at all times.

Cold-Cleaner solvent used is Naphtha, Stoddard Solvent, Mineral Spirits with flash point (FP) of 148 degrees Fahrenheit (Tag Closed Cup), density (ρ) of 6.4-6.7 lbs./ gal ($\rho = 770-800$ g/L or 0.77-0.8 kg/L), specific gravity (SG water =1.0) of 0.77-0.80, vapor pressure (VP) of 0.2 mm Hg at 68 degrees Fahrenheit (0.6 mm Hg at 100 degrees Fahrenheit), boiling point (BP) of 350 degrees Fahrenheit, flammability range of 0.7%v (LEL) to 5%v (UEL), auto-ignition temperature of 410 degrees Fahrenheit, VOC content of 100%.

Emergency Generators(3)

Four emergency diesel generators are present as follows:

1. CumminsGenSet: One Cummins Standard Power AC Generator (500 kilowatt [kW] or 0.5 megawatt [MW]). Model No. VTA28GS1. Engine No. 37110077. Installed in 2/27/1987. Not covered by any PTI. Hours meter reading = 1,195 hrs. (Feb 10, 2015).
2. EastGenSet: East Caterpillar Diesel Generator (1250 kVA; 1,000 kilowatt [kW] or 1 megawatt [MW]). Model No. 3512DITA. Serial No. 24Z04731. Installed in 1993. Not covered by any PTI. Hours meter reading = 1,033 hrs. (Feb 10, 2015).
3. WestGenSet: West Caterpillar Diesel Generator (1250 kVA; 1,000 kilowatt [kW] or 1 megawatt [MW]). Model No. 3512DITA. Serial No. 24Z04488. Installed in 1991. Not covered by any PTI. Hours meter reading = 1,129 hrs. (Feb 10, 2015).
4. EG4: Caterpillar Diesel Generator (1250 kVA; 1,000 kilowatt [kW] or 1 megawatt [MW]). Caterpillar Model C32 Engine (2012) with SR5 Generator. Serial No. PRH02481. Generator Model: SR3, Serial # G2H00064. The generator is covered by PTI No. 50-12 and is subject to NSPS 4I and NESHAP / RICE MACT 4Z. Rain protection sleeve with vertical discharge of 7705 cfm at 890 °F. The generator is expected to operate less than 500 hours per year, including 100 hours for maintenance and testing. The unit has EPA emissions certification. Installed in 2012. Hours meter reading = 102 hrs. (Feb 10, 2015).

PTI No. 50-12 for 1 MW Caterpillar Diesel Generator (EG4)

Only 15 ppm sulfur ultra-low sulfur diesel (15 ppm S ULSD) is fired Caterpillar Model C32 Engine of the generator (PTI No. 50-12, EG4, SC II.1 limit: 15 ppm S).

The Caterpillar engine operated < 100 hrs (102 hours meter reading in Feb 2015) (PTI No. 50-12, EG4, SC III.1 limit: 500 hrs. / yr.). The Caterpillar engine operated <100 hours per year in CY 2014 (PTI No. 50-12, EG4, SC III.2 limit: 100 hrs. / yr. for maintenance and testing). The Caterpillar engine operated in accordance with manufacturer recommendations (PTI No. 50-12, EG4, SC III.3).

The Caterpillar engine is equipped with non-resettable hours-meter (PTI No. 50-12, EG4, SC IV.1: non-resettable hours-meter). The Caterpillar engine is has name plate for 1 MW (PTI No. 50-12, EG4, SC IV.2: max 1 MW).

The Caterpillar engine is certified by US EPA for Engine Family CCPXL32.0NZS and Model Year 2012. Hence, no testing is necessary (PTI No. 50-12, EG4, SC V.1: testing and sampling; testing and sampling is not required if US EPA certificate is kept conspicuously on file and it is acceptable to AQD).

At this time calculations are not necessary because the engine if fired only for testing (PTI No. 50-12, EG4, SC VI.1: calculations by 15th). A copy of US EPA emission certificate for Engine Family CCPXL32.0NZS and Model Year 2012 is kept on file (PTI No. 50-12, EG4, SC VI.2: manufacturer certificate). According to non-resettable hours-meter, the engine operated < 100

hours in CY 2014 (PTI No. 50-12, EG4, SC VI.3: hours of operation). Only 15 ppm sulfur ULSD is used (PTI No. 50-12, EG4, SC VI.4: fuel sample analysis – not required if only 15 ppm ULSD is purchased).

Botsford has not notified AQD regarding the engines installation and nor has it submitted NSPS 4I and NESHAP / RICE MAC 4Z notifications (PTI No. 50-12, EG4, SC VII.1 and IX.1 & IX.2). I advised the hospital send these documents. AQD will follow up on these issues.

1,000 kW (1 MW) generator is equivalent to 8.2 million BTU per hour heat input based upon 60 gallons per hour fuel (diesel) consumption at peak load and 137,000 BTU per gallon of diesel. Therefore, the generators (<10 million BTU per hour heat input internal combustion engines) are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 285(g).

ROP synthetic minor permits

Permit-to-Install Nos. 168-02 (Boiler No. 4 installed in 1987) dated September 18, 2002, 77-04 (NSPS Dc Boiler Nos. 7 & 8) dated August 2004 and 50-12 (2012 NSPS 4I Emergency Generator) may be collectively known as synthetic minor permits due to fuel usage or hours limits.

Conclusion:

This is a NSPS Dc fee subject source. Natural gas usage records are kept upon installation of meters, instrumentation and controls (Siemens). The hospital has no source of odor because it has now shut down the two incinerators: one burned medical waste and the other burned pathogenic waste. One NSPS 4I (installed 2012) generator is present.

NAME *D. Kenanahall* DATE *03/17/2015* SUPERVISOR *CJE*