

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

April 22, 2014  
REVISED July 22, 2015

**PERMIT TO INSTALL**  
216-07A

**ISSUED TO**  
St. Joseph Mercy Hospital - Oakwood

**LOCATED AT**  
44405 Woodward  
Pontiac, Michigan

**IN THE COUNTY OF**  
Oakland

**STATE REGISTRATION NUMBER**  
G5066

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

**April 22, 2014**

DATE PERMIT TO INSTALL APPROVED:

**April 22, 2014**

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

## PERMIT TO INSTALL

### Table of Contents

<b>Section</b>	<b>Page</b>
Alphabetical Listing of Common Abbreviations / Acronyms .....	2
General Conditions .....	3
Special Conditions .....	5
Emission Unit Summary Table.....	5
Flexible Group Summary Table .....	5
Special Conditions for FGBOILERS .....	6
Special Conditions for FGFACILITY .....	9

**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
AQD	Air Quality Division	Btu	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO <sub>2</sub> e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO <sub>2</sub>	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
  
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
  
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EUBOILER1	A natural gas/distillate oil fired Cleaver Brooks package boiler with a maximum rated heat input capacity of 25 million Btu per hour. Exhausts to the communal stack, SVBOILERS.	11-29-2007	FGBOILERS
EUBOILER2	A natural gas/distillate oil fired Cleaver Brooks package boiler with a maximum rated heat input capacity of 25 million Btu per hour. Exhausts to the communal stack, SVBOILERS.	11-29-2007	FGBOILERS
EUBOILER3	A natural gas/distillate oil fired Cleaver Brooks package boiler with a maximum rated heat input capacity of 25 million Btu per hour. Exhausts to the communal stack, SVBOILERS.	11-29-2007	FGBOILERS

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

**FLEXIBLE GROUP SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGBOILERS	Three Cleaver Brooks boilers each with a maximum rated heat input capacity of 25 MMBtu per hour. They are natural gas-fired boilers with distillate oil-firing backup capabilities. They all exhaust to the communal stack, SVBOILERS.	EUBOILER1, EUBOILER2, EUBOILER3
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	N/A

**The following conditions apply to:**  
**FGBOILERS**

**DESCRIPTION:** Three Cleaver Brooks boilers each with a maximum rated heat input capacity of 25 MMBtu per hour. They are natural gas-fired boilers with distillate oil-firing backup capabilities.

**Emission Units:** EUBOILER1, EUBOILER2, EUBOILER3

**POLLUTION CONTROL EQUIPMENT:** N/A

**I. EMISSION LIMITS**

N/A

**II. MATERIAL LIMITS**

1. The permittee shall burn only natural gas or No. 2 fuel oil in FGBOILERS. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**
2. As allowed by the definition of gas-fired boiler in 40 CFR 63.11237, the permittee shall only burn No. 2 fuel oil during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. The periodic testing on liquid fuel shall not exceed a combined total of 48 hours, for each boiler, during any calendar year. **(40 CFR Part 63 Subpart JJJJJ)**
3. The sulfur content of the fuel oil used in FGBOILERS shall not exceed 0.5 percent by weight. **(R 336.1205(3), 40 CFR 60.42c(d))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

N/A

**IV. DESIGN/EQUIPMENT PARAMETERS**

N/A

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

N/A

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall submit notification of the date of construction, anticipated startup, and actual startup of FGBOILERS. This notification shall include:
  - a. The design heat input capacity of the boilers and identification of fuels to be combusted in the boilers.
  - b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR Part 60 Subpart Dc, either 60.42c or 60.43c.
  - c. The annual capacity factor at which the owner or operator anticipates operating the boilers based on all fuels fired and based on each individual fuel fired.
  - d. Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions.

**(40 CFR 60.48c)**

2. The permittee shall record and maintain the following records:
  - a. The amount of each fuel combusted during each calendar month. Natural gas usage shall be recorded in million cubic feet per month. No. 2 fuel oil usage shall be recorded in thousands of gallons per month.
  - b. The heat content of each fuel combusted. The heat content of natural gas shall be recorded in Btu's per cubic foot of gas. The heat content of the No. 2 fuel oil shall be recorded in Btu's per gallon.
  - c. The sulfur content of the No. 2 fuel oil used.

All recordkeeping shall be done in a manner acceptable to the District Supervisor, and shall be maintained for a period of at least five years. **(R 336.1205(3))**

3. The permittee shall maintain, for each boiler separately, fuel certification records from the No. 2 fuel oil supplier which verify that the sulfur content of the fuel is in compliance with the sulfur content restriction specified in SC II.3. These records shall include the name of the oil supplier, and a statement from the oil supplier that the oil complies with the specifications under definition of No. 2 (distillate) fuel oil in 40 CFR 60.41c. If the supplier cannot provide fuel certification, then the permittee shall conduct its own sampling and analysis for the sulfur content. These records shall be maintained for a period of five years.

**(40 CFR 60.48c(f)(1))**

4. The permittee shall keep, in a satisfactory manner, records of why each boiler in FGBOILERS was burning No. 2 Fuel Oil on a calendar year basis, along with the hours of operation each boiler in FGBOILERS operates for periodic testing while burning No. 2 Fuel Oil. **(40 CFR Part 63 Subpart JJJJJ)**

**VII. REPORTING**

N/A

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVBOILERS	26	104	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to FGBOILERS.  
**(40 CFR Part 60 Subparts A & Dc)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply Source-Wide to:  
FGFACILITY**

**DESCRIPTION:** All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

**Emission Units:** N/A

**POLLUTION CONTROL EQUIPMENT:** N/A

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. NOx	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	VI.4	R 336.1205(1)(a) & (3)

**II. MATERIAL LIMITS**

1. The natural gas usage for FGFACILITY shall not exceed 933.6 million cubic feet per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not burn No. 2 fuel oil in any piece of equipment in FGFACILITY for more than 500 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

**IV. DESIGN/EQUIPMENT PARAMETERS**

N/A

**V. TESTING/SAMPLING**

N/A

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3))**
2. The permittee shall monitor, record, and keep, in a satisfactory manner, the monthly natural gas usage in million cubic feet for FGFACILITY on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**

3. The permittee shall monitor, record, and keep, in a satisfactory manner, the hours each piece of equipment burns No. 2 fuel oil on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling time period total NOx mass emissions for FGFACILITY, as required by SC I.1. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
5. The permittee shall keep, in a satisfactory manner, documentation of the emission factors used for the calculation of mass emissions from each piece of equipment in FGFACILITY. **(R 336.1205(1)(a) & (3))**

**VII. REPORTING**

N/A

**VIII. STACK/VENT RESTRICTIONS**

N/A

**IX. OTHER REQUIREMENTS**

N/A