

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
AIR QUALITY DIVISION**

May 6, 2010

PERMIT TO INSTALL
No. 79-10

ISSUED TO
Aleda E. Lutz VA Medical Center

LOCATED AT
1500 Weiss Street
Saginaw, Michigan 48602

IN THE COUNTY OF
Saginaw

STATE REGISTRATION NUMBER
K2899

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Natural Resources and Environment. 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 27, 2010

DATE PERMIT TO INSTALL APPROVED:

May 6, 2010

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
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 _x	Oxides of Nitrogen
MDNRE	Michigan Department of Natural Resources and Environment (Department)	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO ₂	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	yr	Year
VE	Visible Emissions		

* 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 Natural Resources and Environment, P.O. Box 30260, Lansing, Michigan 48909, 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 Natural Resources and Environment. **(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.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUBOIL1	A 10.4 MMBtu/hr natural gas and No. 2 fuel oil-fired steam boiler.	May 2010	FGBOILERS
EUBOIL2	A 10.4 MMBtu/hr natural gas and No. 2 fuel oil-fired steam boiler.	May 2010	FGBOILERS
EUBOIL3	A 10.4 MMBtu/hr natural gas and No. 2 fuel oil-fired steam boiler.	May 2010	FGBOILERS
EUGEN1	A 2.56 MMBtu/hr heat input (750 kW) diesel fuel/No. 2 fuel oil-fired generator.	May 2010	N/A

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.

The following conditions apply to: EUGEN1

DESCRIPTION: A 750 kW diesel fuel/No. 2 fuel oil fired generator used for emergency backup and peak shaving power production.

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. THC + NOx	9.8 g/kW-hr	Test protocol will specify averaging time	EUGEN1	SC VI.1, GC 13	40 CFR 60.4205(b)
2. CO	5.0 g/kW-hr	Test protocol will specify averaging time	EUGEN1	SC VI.1, GC 13	40 CFR 60.4205(b)
3. PM	0.50 g/kW-hr	Test protocol will specify averaging time	EUGEN1	SC VI.1, GC 13	40 CFR 60.4205(b)

*Emission limits based on Tier 2 Exhaust Emission Standards listed in 40 CFR 89.112 for new nonroad combustion ignition engines with a model year of 2011 or later.

II. MATERIAL LIMITS

1. The permittee shall only burn diesel fuel, in EUGEN1, with the following requirements:
 - a) Prior to October 1, 2010, the permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(a), as follows:
 - i. Maximum sulfur content of 500 ppm per gallon, and

- ii. A minimum centane index of 40; or a maximum aromatic content of 35 percent by volume. **(40 CFR 60.4207(a))**
 - b) On or after October 1, 2010, the permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b), as follows:
 - i. Maximum sulfur content of 15 ppm per gallon, and
 - ii. A minimum centane index of 40; or a maximum aromatic content of 35 percent by volume. **(40 CFR 60.4207(b))**
2. The permittee may petition the AQD District Supervisor for approval to use the remaining non-compliant fuel that does not meet the fuel requirements of paragraph b above, beyond the October 1, 2010 compliance date for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the permittee is required to submit a new petition to the AQD District Supervisor. **(40 CFR 60.4207(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall operate and maintain EUGEN1 according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the manufacturer to ensure compliance with the applicable emission standards in 40 CFR 60.4205(b). **(40 CFR 60.4205(b), 40 CFR 60.4206, 40 CFR 60.4211(c))**
2. The permittee shall not operate EUGEN1 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. The permittee may operate EUGEN1 for no more than 100 hours per 12-month rolling time period as determined at the end of each calendar month for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. 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 internal combustion engines beyond 100 hours per year. **(R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 60.4211(e))**
4. The permittee shall not operate EUGEN1 unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted to the AQD District Supervisor and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1911)**
5. The permittee shall not operate EUGEN1 unless an acceptable plan that describes how emissions will be minimized during all startups and shutdowns has been submitted to the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices and good combustion control. **(R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EUGEN1 with a non-resettable hour meter to track the number of hours the engine operates. **(R 336.1205(1)(a), 40 CFR 60.4209(a))**
2. EUGEN1 shall not exceed a nameplate capacity of 760 kW. **(R 336.1205(1)(a), 40 CFR Part 72.2)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record in a satisfactory manner, a log of the monthly hours of operation of EUGEN1. The log shall include the time of operation and the reason the engine was in operation. **(R 336.1205(1)(a), 40 CFR 60.4214(b))**
3. The permittee shall keep, in a satisfactory manner, fuel supplier certification records for each delivery of the diesel fuel oil. The certification shall include the name of the oil supplier, sulfur content, and a statement that the fuel complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. **(R 336.205(1)(a), R336.1402)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification of EUGEN1 authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUEMGGEN. **(R 336.1201(7)(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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVGEN1	8.0	60.0	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FGBOILERS

DESCRIPTION: Three (3) 10.4 MMBtu/hr natural gas fired steam boilers with capability to fire No. 2 fuel oil as a back up fuel.

POLLUTION CONTROL EQUIPMENT: N/A

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	0.10 lb/MMBtu (natural gas)	Test protocol will specify averaging time.	Each Boiler in FGBOILERS	GC 13	R 336.1205(1)(a)
2. NOx	1.04 pph (natural gas)	Test protocol will specify averaging time.	Each Boiler in FGBOILERS	GC 13	R 336.1205(1)(a)

II. MATERIAL LIMITS

1. The permittee shall only burn pipeline quality natural gas and No. 2 fuel oil with a maximum sulfur content of 0.50% by weight in FGBOILERS. **(R 336.1205(1)(a), R 336.1401, 40 CFR 60.42c(d))**
2. The No. 2 fuel oil usage for FGBOILERS shall not exceed 18,000 gallons per 12-month rolling time period. **(R 336.1205(1)(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

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 and Dc)**
2. The permittee shall operate FGBOILERS in a manner consistent with good air pollution control practices for minimizing emissions during periods of startup, shutdown, and malfunction. **(R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The heat input capacity of each boiler in FGBOILERS shall not exceed a maximum of 10.35 MMBtu per hour. **(R 336.1205(1)(a))**

V. TESTING/SAMPLING

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

NA

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)**
2. The permittee shall monitor emissions and operating information for FGBOILERS in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(40 CFR Part 60 Subparts A and Dc)**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage rate, in cubic feet per hour, on a daily basis. **(R 336.1205, 40 CFR 60.48c)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the No. 2 fuel oil usage rate, in gallons per hour, on a daily basis. **(R 336.1205, 40 CFR 60.48c)**
5. The permittee shall keep, in a satisfactory manner, fuel supplier certification records for each shipment of fuel oil. The certification shall include the name of the fuel oil supplier, sulfur content, and a statement from the fuel oil supplier that the fuel oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. **(R 336.1205(1)(a), R 336.1402, 40 CFR 60.48c(f))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGBOILERS. **(R 336.1201(7)(b))**
2. The permittee shall provide written notification of construction (or reconstruction as defined under 40 CFR 60.15) and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.48c(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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1.EUBOILER1	20	60.4	R 336.1225
2. EUBOILER2	20	60.4	R 336.1225
2.EUBOILER3	20	60.4	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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