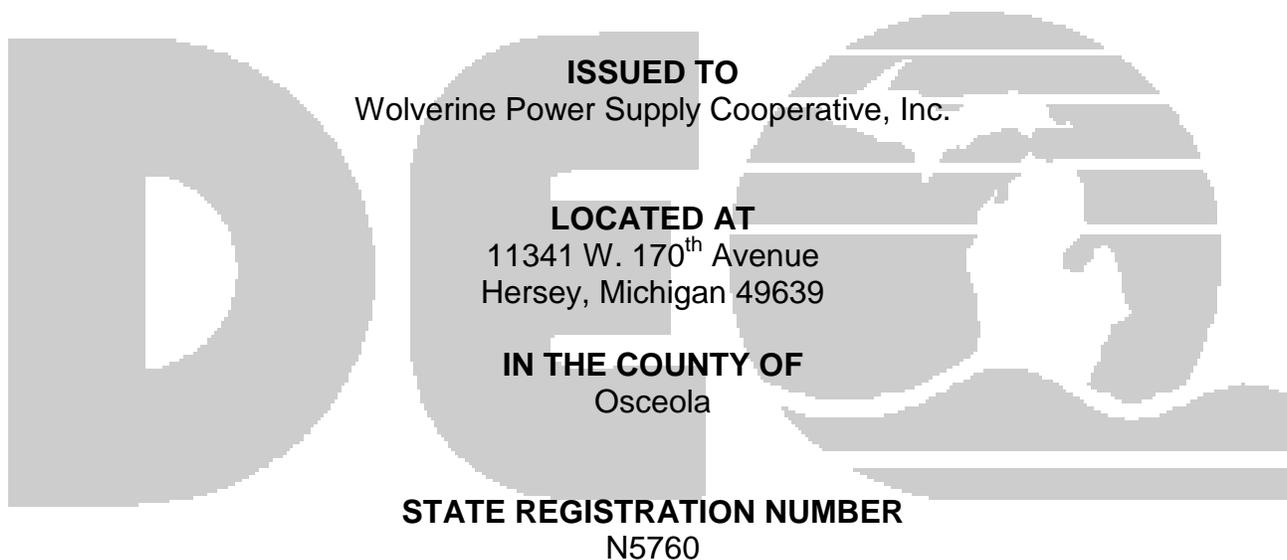


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

August 6, 2009

PERMIT TO INSTALL

No. 133-09



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: 6/19/2009	
DATE PERMIT TO INSTALL APPROVED: 8/6/2009	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
MDEQ	Michigan Department of Environmental Quality	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 Environmental Quality, 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(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
EUTURBINE09	Natural Gas Fired Turbine 25,000kW	2000	FGTURBINES02
EUTURBINE10	Natural Gas Fired Turbine 25,000kW	2000	FGTURBINES02
EUCAT	Diesel fired electrical generator.	2003	NA
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: EUCAT

DESCRIPTION: EUCAT - CAT Mod. 3512, Diesel-fired, 1030 KW, 9.1 MM BTU/HR Diesel fired electrical generator. This unit will be used in the event of extended power outages or interruptions in electrical service to supply power to the facility primarily. Therefore this engine will not operate very frequently.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	10.0 tons**	12-Month rolling time period as determined at the end of each calendar month	EUCAT	SC VI.2	R 336.1205 (1)(a) and (3)

**The NOx limit is based on an emission factor of 4.39 pounds NOx per MM BTU. (See Appendix A)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fuel oil	The sulfur content of the fuel oil shall not exceed 0.05 percent, by weight	annual average	EUCAT	SC VI.3.	R 336.1401, 40 CFR 72.7(d)(3)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUCAT 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) and (3), R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 the hours of operation for EUCAT on a monthly basis. (R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))
2. The permittee shall keep, in a satisfactory manner, monthly and previous 12-month NOx emission calculation records for EUCAT. All records shall be made available to the AQD upon request. (R 336.1205(1)(a) and (3))
3. The permittee shall keep records of the sulfur content, in percent by weight, for each fuel oil shipment. The annual average shall be calculated as specified in 40 CFR 72.7(d)(3). All records shall be made available to the Department upon request. (R 336.1401, 40 CFR 72.7)
4. The permittee shall keep, in a satisfactory manner, a written log of the monthly hours of operation of EUCAT. All records shall be made available to the AQD upon request. (R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
SVCAT	12	22	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTURBINES	Two natural gas fired 25,000 kW turbines.	EUTURBINE09, EUTURBINE10
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

The following conditions apply to: FGTURBINES

DESCRIPTION: FGTURBINES – Two natural gas fired 25,000 kW turbines.

Emission Units: EUTURBINE09, EUTURBINE10

POLLUTION CONTROL EQUIPMENT: Dry low NO_x combustor

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Nitrogen Oxides (NO _x)	0.12 pound per million BTU heat input	Test Method	EUTURBINE09, EUTURBINE10	SC V.1	R 336.1201(3), R 336.1205(1)(a)
2. NO _x	35.3 pph	Test Method	EUTURBINE09, EUTURBINE10	SC V.1	R 336.1201(3), R 336.1205(1)(a)
3. NO _x	33 parts per million by volume at 15 percent oxygen and on a dry basis	Test Method	EUTURBINE09, EUTURBINE10	SC V.1	40 CFR 60.332(a)
4. CO	0.12 pound per million BTU heat input	Test Method	EUTURBINE09, EUTURBINE10	SC V.1	R 336.1201(3), R 336.1205(1)(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall burn only pipeline quality natural gas as defined in 40 CFR 60.331(u) (See Appendix B).
(R 336.1201(3), 40 CFR 72.7(d)(1), 40 CFR 60.333(b))

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. Upon request by the AQD District Supervisor, the permittee shall verify NO_x and CO emission factors used to calculate emissions from one or more turbine(s) in FGTURBINES, by testing at owner's expense, in accordance with Department requirements. If a test has been conducted, any resulting increase in an emission factor shall be implemented to calculate NO_x and CO. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.1205, R 336.2001, R 336.2003, R 336.2004)

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 the monthly natural gas usage rate for each turbine at the end of each calendar month. (R 336.1201(3))

VII. REPORTING

NA

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.SVTURBINE09	142	45	40 CFR 52.21
2.SVTURBINE10	142	45	40 CFR 52.21

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply Source-Wide to: FGFACILITY

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO _x	89.9 TPY	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. CO	89.9 TPY	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

II. MATERIAL LIMITS

1. The natural gas usage for FGFACILITY shall not exceed 1, 463,000,000 (1,463 MM) cubic feet per year, based on a heat content of 1024 BTU per cubic foot of natural gas burned. The natural gas usage rate shall be based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3))**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. Verification of H₂S and/or sulfur content of the natural gas burned in FGFACILITY may be required upon request by the AQD District Supervisor (See Appendix B). **(R 336.1205(3))**

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 and make them available 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(3))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period NO_x and CO emission calculation records for FGFACILITY, as required by SC I.1, SC I.2 and Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period fuel use records for FGFACILITY. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

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
NA			

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

APPENDIX A Procedures for Calculating NO_x and CO Emissions

The permittee shall demonstrate compliance with the NO_x and CO emission limits by keeping track of all fuel usage for all equipment using such fuel at this facility and multiplying that fuel usage by an equipment-specific emission factor. The emission factors are typically expressed as the mass of pollutant per unit of fuel.

Each turbine included in FGTURBINES:

The permittee shall use emission factors from vendor data or from source specific testing (stack testing), as available for each turbine included in FGTURBINES. If emission factors from other sources are used, the permittee shall obtain the approval of the AQD District Supervisor before using the emission factors to calculate emissions.

Fuel burning equipment at the facility:

The permittee shall use emission factors contained in the most recent AP-42 (Compilation of Air Pollutant Emission Factors) or the most recent FIRE (Factor Information Retrieval) database if vendor or stack testing data is not available. If emission factors from other sources are used, the permittee shall obtain the approval of the AQD District Supervisor before using the emission factors to calculate emissions.

The permittee shall document the source of each emission factor used in the calculations.

Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGFACILITY.

The facility shall calculate the NO_x emission rate by multiplying the actual heat input to each emission unit (EUTURBINE09, EUTURBINE10, and EUCAT) per calendar month with the appropriate emission factor in pound(s) per MMBTU as listed below, or the NO_x emission rate derived (in terms of pounds per MMBTU) from the latest compliance stack test which is not more than 5 years old, and dividing by 2,000 pounds per ton to obtain NO_x emission in tons per month per unit. The heat input rate shall be calculated by monitoring the fuel usage rate for (EUTURBINE09, EUTURBINE10 and EUCAT) and multiplying the fuel usage by the heating value for each fuel.

The monthly NO_x emissions as determined above shall be summed to obtain a plant-wide total monthly NO_x emission rate, which shall then be added to the total plant-wide NO_x emissions from the previous 11 months to determine the 12-month rolling time period emission rate of NO_x in tons per year.

Emission Unit ID	NO_x Emission Rates (pounds/MMBTU)
EUTURBINE09	0.12
EUTURBINE10	0.12
EUCAT	4.39

APPENDIX B

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTURBINES.

Fuel Monitoring Program For Sources Subject to 40 CFR Part 60 Subpart GG

1. Nitrogen
 - a) Monitoring of fuel nitrogen content shall not be required while pipeline quality natural gas, as defined in 40 CFR 60.331(u), is the only fuel fired in the gas turbine.
2. Sulfur
 - a) Monitoring of fuel sulfur content shall not be required while pipeline quality natural gas, as defined in 40 CFR 60.331(u), is the only fuel fired in the gas turbine.
 - b) If there is a change in the fuel supply, the owner/operator must notify the Administrator of such changes for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom monitoring schedule is being re-examined.
3. Fuel analysis can be conducted at a single separate site for multiple plants (engines) provided there are no additional entry points for natural gas or other sulfur containing streams between the proposed sampling site and the plants (engines) in question.
4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of five years and be available for inspection.