

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

May 21, 2018

**PERMIT TO INSTALL  
3-18**

**ISSUED TO**  
Northern Natural Gas Company

**LOCATED AT**  
M-28 East, 3.7 miles North of Harrison Street  
Wakefield, Michigan

**IN THE COUNTY OF**  
Gogebic

**STATE REGISTRATION NUMBER**  
P0890

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 20, 2018**

DATE PERMIT TO INSTALL APPROVED:

**May 21, 2018**

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
Special Conditions for EUEMERGENGINE .....	6
Special Conditions for EUPROCESSHEATER.....	10
Flexible Group Summary Table .....	11
Special Conditions for FGTURBINES.....	12

**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2e</sub>	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 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>Flexible Group ID</b>
EUTURBINE1	A 1,679 HP simple-cycle natural gas-fired combustion turbine (CT) for compressing natural gas	FGTURBINES
EUTURBINE2	A 1,679 HP simple-cycle natural gas-fired combustion turbine (CT) for compressing natural gas	FGTURBINES
EUEMERGENGINE	A nominally rated 530 HP natural gas-fired emergency engine driving a generator for emergency electrical power	NA
EUPROCESSHEATER	One 0.09 MMBTU/Hr natural gas fired heater (with two stacks)	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:**  
**EUEMERGENGINE**

**DESCRIPTION:** A nominally rated 530 HP natural gas-fired emergency engine driving a generator for emergency electrical power.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	2.0 g/HP-hr OR 160 ppmvd	Hourly	EUEMERGENGINE	SC V.1, VI.1, VI.2	40 CFR 60.4233(e)
2. NO <sub>x</sub>	2.34 lb/hr	Hourly	EUEMERGENGINE	SC V.1, VI.1, VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
3. CO	4.0 g/HP-hr OR 540 ppmvd	Hourly	EUEMERGENGINE	SC V.1, VI.1, VI.2	40 CFR 60.4233(e)
4. VOC	1.0 g/HP-hr <sup>A</sup> OR 86 ppmvd <sup>A</sup>	Hourly	EUEMERGENGINE	SC V.1, VI.1, VI.2	R 336.1205(1)(a), R 336.1702(a), 40 CFR 60.4233(e)

ppmvd = parts per million by volume at 15 percent oxygen and on a dry gas basis  
A When calculating VOC emissions for this emission limit, emissions of formaldehyde should not be included.

**II. MATERIAL LIMITS**

1. The permittee shall burn only pipeline quality natural gas in EUEMERGENGINE. **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233)**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EUEMERGENGINE for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 500 hours includes the 100 hours as described in SC III.2. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee may operate EUEMERGENGINE for no more than 100 hours per calendar year 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, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The 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 calendar year. **(40 CFR 60.4243(d)(2))**
3. The permittee may operate EUEMERGENGINE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing as described in SC III.2. Except as provided in 40 CFR 60.4243(d)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3))**

4. The permittee shall operate and maintain EUEMERGENGINE such that it meets the emission limits in SC I.1, I.2, and I.3 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
5. If EUEMERGENGINE is operated as a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EUEMERGENGINE:
  - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
  - b) Meet the requirements as specified in 40 CFR 1068 Subparts A through D, as applicable, including labeling and maintaining certified engines according to the manufacturer's recommendations,
  - c) Only change those engine settings that are permitted by the manufacturer.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and be subject to SC III.6. **(40 CFR 60.4243(b)(1))**

6. If EUEMERGENGINE is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee shall keep a maintenance plan for EUEMERGENGINE and shall, to the extent practicable, maintain and operate EUEMERGENGINE in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall equip and maintain EUEMERGENGINE with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4237(a))**
2. The nameplate capacity of EUEMERGENGINE shall not exceed 530 HP, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), 40 CFR 60.4230)**

#### **V. TESTING/SAMPLING**

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

1. If EUEMERGENGINE is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee must demonstrate compliance as follows:
  - a) Conduct an initial performance test to demonstrate compliance with the applicable emission limits in SC I.2 – I.3 within 60 days after achieving the maximum production rate at which EUEMERGENGINE will be operated, but not later than 180 days after initial startup of EUEMERGENGINE, or within 1 year after EUEMERGENGINE is no longer operated as a certified engine.
  - b) The performance tests shall consist of three separate test runs of at least 1 hour, for each performance test required in 40 CFR 60.4244 and Table 2 to Subpart JJJJ of Part 60.
  - c) Subsequent performance testing shall be completed every 8,760 hours of engine operation or every 3 years, whichever comes first, to demonstrate compliance with the applicable emission limits.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c) & (d), 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

## **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall keep, in a satisfactory manner, the following records for EUEMERGENINE:
  - a) If certified: The permittee shall keep records of the documentation from the manufacturer that the EUEMERGENINE is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.
  - b) If non-certified: The permittee shall keep records of testing required in SC V.1.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243, 40 CFR 60.4245(a))**

2. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUEMERGENINE:
  - a) If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EUEMERGENINE has been maintained according to them, as specified in SC III.5.
  - b) If non-certified: The permittee shall keep records of a maintenance plan, as required by SC III.6 and records of conducted maintenance.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4243, 40 CFR 60.4245(a), 40 CFR Part 60 Subpart JJJJ)**

3. The permittee shall monitor and record the total hours of operation for EUEMERGENINE. The permittee shall document how many hours are spent for emergency operation of EUEMERGENINE including what classified the operation as emergency. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4243, 40 CFR 60.4245(b))**
4. The permittee shall keep records of notifications submitted for the completion of construction and start-up of EUEMERGENINE. **(40 CFR 60.4245(a))**

## **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 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 EUEMERGENINE. **(R 336.1216(1)(a)(v), R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUEMERGENINE will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of EUEMERGENINE and within 30 days of switching the manner of operation. **(40 CFR Part 60 Subpart JJJJ)**
3. If EUEMERGENINE has not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231, the permittee shall submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
  - a) The date construction of EUEMERGENINE commenced;
  - b) Name and address of the owner or operator;
  - c) The address of the affected source;
  - d) EUEMERGENINE information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
  - e) EUEMERGENINE emission control equipment; and
  - f) Fuel used in EUEMERGENINE.

The notification must be postmarked no later than 30 days after construction commenced for EUEMERGENINE. **(40 CFR 60.7(a)(1), 40 CFR 60.4245(c))**

4. The permittee shall submit an initial notification as required in 40 CFR 63.6645(f) for EUEMERGENGINE. The notification must include the information in 40 CFR 63.9(b)(2)(i)-(v):
- a) The name and address of the owner or operator;
  - b) The address (i.e., physical location) of the affected source;
  - c) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
  - d) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and
  - e) A statement of whether the affected source is a major source or an area source.

The notification must also include a statement that EUEMERGENGINE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions). **(40 CFR 63.9(b)(2)(i)-(v), 40 CFR 63.6590(b)(1), 40 CFR 63.6645(f))**

**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. SVEMGRICE1	10.4	23	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

- 1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart JJJJ, as they apply to EUEMERGENGINE. **(40 CFR Part 60 Subparts A & JJJJ)**
- 2. The permittee shall comply with the provisions of the federal National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines as specified in 40 CFR Part 63 Subpart A and Subpart ZZZZ, as they apply to EUEMERGENGINE. **(40 CFR Part 63 Subparts A & ZZZZ)**

**The following conditions apply to:**  
**EUPROCESSHEATER**

**DESCRIPTION:** One 0.09 MMBTU/Hr natural gas fired heater (with two stacks)

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

1. The permittee shall burn only pipeline quality natural gas in EUPROCESSHEATER. (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The nameplate capacity of the heater in EUPROCESSHEATER shall not exceed 0.09 MMBTU/Hr. (R 336.1205(1)(a), 40 CFR 52.21(c) & (d))

**V. TESTING/SAMPLING**

NA

**VI. MONITORING/RECORDKEEPING**

NA

**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:

<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. SVH01A	6.6	10	40 CFR 52.21(c) & (d)
2. SVH01B	6.6	10	40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

NA

**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>
FGTURBINES	Two natural gas-fired CTs to drive compressors that will be used to transport natural gas through pipelines	EUTURBINE1, EUTURBINE2

**The following conditions apply to:**  
**FGTURBINES**

**DESCRIPTION:** Two natural gas-fired CTs to drive compressors that will be used to transport natural gas through pipelines.

**Emission Units:** EUTURBINE1, EUTURBINE2

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	100 ppm @ 15% oxygen (each unit)	Test Protocol*	EUTURBINE1, EUTURBINE2	SC V.1, SC V.2, SC VI.3	40 CFR 60.4320(a) 40 CFR 52.21(c) & (d)
2. NO <sub>x</sub>	7.24 lb/hr (each Unit)	Hourly	EUTURBINE1, EUTURBINE2	SC V.3, SC VI.3	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
3. SO <sub>2</sub>	0.06 lb/MMBTU (each unit)	Test Protocol*	EUTURBINE1, EUTURBINE2	SC VI.3	40 CFR 60.4330(a)(2) 40 CFR 52.21(c) & (d)

\*Test Protocol shall specify averaging time.

**II. MATERIAL LIMITS**

1. The permittee shall burn only pipeline quality natural gas in any unit in FGTURBINES. **(R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 60.4320, 40 CFR 60.4330)**
2. The pipeline quality natural gas shall not have a total sulfur content in excess of 5 gr of sulfur per 100 scf. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), 40 CFR 60.4330, 40 CFR 60.4365)**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate FGTURBINES unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 180 days of initial startup, 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 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 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**
2. The permittee shall not operate any unit in FGTURBINES unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **(R 336.1911, R 336.1912, 40 CFR 60.4333(a))**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The maximum rating of each unit in FGTURBINES shall not exceed 1679 HP (ISO). **(40 CFR 52.21(c) & (d))**

#### **V. TESTING/SAMPLING**

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

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify NO<sub>x</sub> emission rates from each unit in FGTURBINES, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)**
2. To demonstrate continuous compliance, the permittee shall perform subsequent performance tests to verify NO<sub>x</sub> emission rates from each unit in FGTURBINES, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense in accordance with 40 CFR 60.4400 of 40 CFR Part 60 Subparts A and KKKK:
  - a) If the previous performance test exceeded 75 percent of the NO<sub>x</sub> emission limit, SC I.1, then the permittee shall perform annual performance tests which are no more than 14 calendar months apart.
  - b) If the previous performance test was less than or equal to 75 percent of the NO<sub>x</sub> emission limit, SC I.1, then the permittee shall perform subsequent performance tests once every two years which are no more than 26 calendar months apart.

No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d), 40 CFR 60.4340(a), 40 CFR 60.4375(b), 40 CFR 60.4400(a), 40 CFR Part 60 Subpart KKKK)**

3. Within 180 days after commencement of initial startup, the permittee shall verify NO<sub>x</sub> emission rates from each unit in FGTURBINES at maximum routine operating conditions, by testing at owner's expense, in accordance with Department requirements. The permittee shall complete the required testing once every five years of operation, thereafter. Upon approval of the AQD District Supervisor, subsequent testing may be conducted for a single unit of FGTURBINES as a representative unit. The permittee shall not test the same representative unit in subsequent tests unless approved or requested by the AQD District Supervisor. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

#### **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. **(40 CFR 52.21(c) & (d), 40 CFR 60.4320(a), 40 CFR 60.4330)**
2. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for FGTURBINES on a monthly basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4320(a), 40 CFR 60.4330)**

3. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit for FGTURBINES. This information shall include, but shall not be limited to the following:
- a) Compliance tests and any testing required under the special conditions of this permit;
  - b) Monitoring data;
  - c) Total sulfur content of the natural gas as required by 40 CFR 60.4365(a);
  - d) Verification of the maximum rating in HP;
  - e) Identification, type, and amount of fuel combusted on a calendar month basis;
  - f) All records required by 40 CFR 60.7, including the initial startup notification and performance tests;
  - g) All calculations necessary to show compliance with the limits contained in this permit;
  - h) All records related to, or as required by, the MAP.

All of the above information shall be stored in a format acceptable to the AQD District Supervisor and shall be consistent with the requirements of 40 CFR 60.7. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1912, 40 CFR 52.21(c) & (d), 40 CFR 60.7, 40 CFR Part 60 Subpart KKKK)**

## **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 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 each unit in FGTURBINES. **(R 336.1216(1)(a)(v), R 336.1201(7)(a))**
2. The permittee shall provide written notification of the date construction commences and the actual date of initial startup of each unit in FGTURBINES, in accordance with 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(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. SVTURBINE1	28	36	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVTURBINE2	28	36	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 KKKK, as they apply to each unit in FGTURBINES. **(40 CFR Part 60 Subparts A & KKKK)**