

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

November 15, 2019

**PERMIT TO INSTALL
44-16B**

**ISSUED TO
DTE Energy**

**LOCATED AT
3020 East Michigan Avenue
Ypsilanti, Michigan**

**IN THE COUNTY OF
Washtenaw**

**STATE REGISTRATION NUMBER
N7421**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. 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: September 3, 2019	
DATE PERMIT TO INSTALL APPROVED: November 15, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT 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 (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUTURBINE1	A nominally rated 7,700 HP (ISO), simple-cycle natural gas-fired combustion turbine (CT) with electric start for compressing natural gas.	7/10/2018	NA
EURICE1	A nominally rated 2,500 HP natural gas fired reciprocating internal combustion engine with an oxidation catalyst for compressing gas	4/25/2018	FGENGINES, FGENGMACT4Z
EURICE2	A nominally rated 2,500 HP natural gas fired reciprocating internal combustion engine with an oxidation catalyst for compressing gas	4/25/2018	FGENGINES, FGENGMACT4Z
EURICE3	A nominally rated 5,000 HP natural gas fired reciprocating internal combustion engine with an oxidation catalyst for compressing gas	4/25/2018	FGENGINES, FGENGMACT4Z
EUEMGRICE1	A nominally rated 1,818 HP natural gas-fueled emergency engine manufactured in 2011 or later. The engine is used to provide electrical power to the station and support equipment in the event power from the public utility grid system is lost.	6/8/2018	NA
EUBOILER1	A nominally rated 3 MMBtu/hr natural gas fired boiler used for heating in the existing Auxiliary Building. EUBOILER1, EUBOILER2, and EUBOILER3 share the same stack.	11/3/2017	FGNOX, FGBLRMACT
EUBOILER2	A nominally rated 3 MMBtu/hr natural gas fired boiler used for heating in the existing Auxiliary Building. EUBOILER1, EUBOILER2, and EUBOILER3 share the same stack.	11/3/2017	FGNOX, FGBLRMACT
EUBOILER3	A nominally rated 3 MMBtu/hr natural gas fired boiler used for heating in the existing Auxiliary Building. EUBOILER1, EUBOILER2, and EUBOILER3 share the same stack.	11/3/2017	FGNOX, FGBLRMACT
EUBOILER4	A nominally rated 1.5 MMBtu/hr natural gas fired boiler used for heating in the existing Auxiliary Building.	9/15/2017	FGNOX, FGBLRMACT
EUMODHTR1	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX
EUMODHTR2	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUMODHTR3	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX
EUMODHTR4	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX
EUMODHTR5	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX
EUMODHTR6	A nominally rated 125,000 Btu/hr heat input natural gas indirect fired heater used for comfort heating in the new utility building.	11/18/2017	FGNOX
EUHWHEATER	A nominally rated 125,000 Btu/hr heat input natural gas hot water heater used for heating water in the office building.	TBD	FGNOX
EUBARD	A nominally rated 75,000 Btu/hr heat input natural gas indirect fire heater used for comfort heating in the MCC building.	TBD	FGNOX
EUFURNACE	A nominally rated 150,000 but/hr heat input natural gas indirect fired heater/AC unit used for comfort heating in the office building.	TBD	FGNOX
EUILHTR1	A nominally rated 14 MMBtu/hr natural gas fired inline heater to be used for process heating. Located at the Willow Gate Station.	1/12/2017	FGNOX, FGBLRMACT
EUILHTR2	A nominally rated 14 MMBtu/hr natural gas fired inline heater to be used for process heating. Located at the Willow Gate Station.	1/12/2017	FGNOX, FGBLRMACT
EUILHTR3	A nominally rated 14 MMBtu/hr natural gas fired inline heater to be used for process heating. Located at the Willow Gate Station.	1/12/2017	FGNOX, FGBLRMACT
EUILHTR4	A nominally rated 13 MMBtu/hr natural gas fired inline heater to be used for process heating. Located at the Willow Gate Station.	1/12/2017	FGNOX, FGBLRMACT

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 336.1291.

**EUTURBINE1
EMISSION UNIT CONDITIONS**

DESCRIPTION

A nominally rated 7,700 HP (ISO), simple-cycle natural gas-fired combustion turbine (CT) with electric start for compressing natural gas.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dry ultra-low NOx burners and a combustion air inlet filter.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	15 ppmvd ^{a, b}	Hourly	EUTURBINE1	SC V.1, V.2, VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4320(a)
2. NO _x	150 ppmvd ^c	Hourly	EUTURBINE1	SC V.1, VI.2	40 CFR 60.4320(a)
3. CO	25 ppmvd ^b	Hourly	EUTURBINE1	SC V.3, VI.2	R 336.1205(1)(a)

ppmvd = parts per million by volume at 15 percent oxygen and on a dry gas basis

^aThe emission limit as required in 40 CFR 60.4320(a) is 25 ppm at 15 percent O₂. SC I.1 subsumes the NSPS emission limit.

^b Normal baseload operation is considered to be loads greater than 50 percent of peak load and at or above 0°F. These emission limits do not include startup and shutdown. Startup and shutdown is considered to be the ramping up or ramping down of the turbines through loads 50 percent or less.

^c Per Table 1 of 40 CFR Part 60 Subpart KKKK: operating at less than 75 percent of peak load and at temperatures less than 0°F.

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas in EUTURBINE1. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4320, 40 CFR 60.4330)**
2. The pipeline quality natural gas shall not have a total sulfur content in excess of 20 gr of sulfur per 100 scf. **(R 336.1205(1)(a), 40 CFR 60.4330, 40 CFR 60.4365)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUTURBINE1 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))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum nominal rating of EUTURBINE1 shall not exceed 7,700 HP (ISO). **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain EUTURBINE1 with dry ultra-low-NO_x burners and air inlet filter. **(R 336.1205(1)(a), R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas flow rate for EUTURBINE1 on a continuous basis. **(R 336.1205(1)(a))**

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_x emission rates from EUTURBINE1, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 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))**
2. To demonstrate continuous compliance, the permittee shall perform subsequent performance tests to verify NO_x emission rates from EUTURBINE1, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense in accordance with 40 CFR Part 60 Subparts A and KKKK:
 - a) If the previous performance test exceeded 75 percent of the NO_x 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_x 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 336.1205(1)(a), 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))**

3. Within 180 days after commencement of initial startup, the permittee shall verify CO emission rates from EUTURBINE1 at maximum routine operating conditions, by testing at owner's expense, in accordance with Department requirements. The permittee shall complete subsequent compliance testing once every five years of operation, thereafter. 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 monitor and record, in a satisfactory manner, the natural gas usage for EUTURBINE1 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))**
2. 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 EUTURBINE1. This information shall include, but shall not be limited to the following:
 - a) Compliance tests required by SC V.1-3.
 - b) Monitoring data.
 - c) Total sulfur content of the natural gas as required by SC II.2 of this section.
 - d) Verification of the nominal rating in ISO HP.
 - e) Amount of fuel combusted, on a calendar month basis.
 - f) Records of the initial startup notification and performance tests.
 - g) All records related to, or as required by, the MAP.
 - h) All records necessary to demonstrate compliance with the requirements contained in this permit.

All of the above information shall be stored in a format acceptable to the AQD District Supervisor. **(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 Part 60 Subpart A and KKKK)**

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 Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVTURBINE1	60	63	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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 EUTURBINE1. **(40 CFR Part 60 Subparts A & KKKK)**

Footnotes:

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

**EUEMGRICE1
EMISSION UNIT CONDITIONS**

DESCRIPTION

A nominally rated 1,818 HP natural gas-fired emergency engine. The engine is used to provide electrical power to the station and support equipment in the event power is lost.

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. NO _x	2.0 pph	Hourly	EUEMGRICE1	SC V.2, VI.1, VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
2. NO _x	2.0 g/HP-hr OR 160 ppmvd	Hourly	EUEMGRICE1	SC V.1, VI.1, VI.2	40 CFR 60.4233(e)
3. CO	4.0 g/HP-hr OR 540 ppmvd	Hourly	EUEMGRICE1	SC V.1, VI.1, VI.2	40 CFR 60.4233(e)
4. VOC	1.0 g/HP-hr ^a OR 86 ppmvd ^a	Hourly	EUEMGRICE1	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 For purposes of this emission limit, when calculating emissions of VOC, emissions of formaldehyde should not be included. (See Table 1 of 40 CFR 60 Subpart JJJJ.)

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas in EUEMGRICE1. **(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 RESTRICTION(S)

1. The permittee shall not operate EUEMGRICE1 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 EUEMGRICE1 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. EUEMGRICE1 may operate 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. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency 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 EUEMGRICE1 such that it meets the emission limits in SC I.2, I.3, and I.4 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
5. If EUEMGRICE1 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 EUEMGRICE1 and shall, to the extent practicable, maintain and operate EUEMGRICE1 in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUEMGRICE1 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 EUEMGRICE1 shall not exceed 1,300 kW (1,818 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 EUEMGRICE1 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.4 within 1 year after EUEMGRICE1 begins operating in a noncertified manner.
 - b) The performance tests shall be conducted according to 40 CFR 60.4244.
 - 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)**

2. Upon request from the AQD District Supervisor, the permittee may be required to verify the NO_x emission limit in SC I.1 from EUEMGRICE1 by testing at owner's expense, in accordance with Department requirements. 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 factors 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 keep, in a satisfactory manner, the following records for EUEMGRICE1:
 - a) If operated in a certified manner: The permittee shall keep records of the documentation from the manufacturer that the EUEMGRICE1 is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.
 - b) If operated in a non-certified manner: 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 EUEMGRICE1:
 - a) If operated in a certified manner: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EUEMGRICE1 has been maintained according to them, as specified in SC III.5.
 - b) If operated in a non-certified manner: The permittee shall keep records of a maintenance plan, as required by SC III.6 and maintenance activities.

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 EUEMGRICE1. The permittee shall document how many hours are spent for emergency operation of EUEMGRICE1 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 EUEMGRICE1. **(40 CFR 60.4245(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 Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMGRICE1	18	30	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

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 EUEMGRICE1. **(40 CFR Part 60 Subparts A & JJJJ)**

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

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
FGENGINES	Requirements for RICE subject to New Source Performance Standards (NSPS) for RICE, 40 CFR Part 60 Subpart JJJJ and NOx emission limit.	EURICE1, EURICE2, EURICE3
FGENGMACT4Z	Requirements for RICE subject to the National Emission Standards for Hazardous Air Pollutants 40 CFR Part 63, Subpart ZZZZ.	EURICE1, EURICE2, EURICE3
FGNOX	Natural gas fired boilers and heaters subject to NOx limit.	EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, EUMODHTR1, EUMODHTR2, EUMODHTR3, EUMODHTR4, EUMODHTR5, EUMODHTR6, EUILHTR1, EUILHTR2, EUILHTR3, EUILHTR4, EUHWHeater, EUBARD, EUFURNACE
FGBLRMACT	Boilers and process heaters subject to Industrial Boiler MACT (Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD).	EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, EUILHTR1, EUILHTR2, EUILHTR3, EUILHTR4

FGENGINES FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three (3) non-emergency natural gas-fired reciprocating internal combustion engines (RICE) equipped with oxidation catalysts. The engines are used for compressing gas and are subject to 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subpart ZZZZ.

Emission Unit: EURICE1, EURICE2, EURICE3

POLLUTION CONTROL EQUIPMENT

Oxidation catalysts to control CO emissions.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	2.76 pph (limit applies to each engine)	Hourly	EURICE1, EURICE2	SC V.1	40 CFR 52.21(c) & (d)
2. NO _x	5.51 pph	Hourly	EURICE3	SC V.1	40 CFR 52.21(c) & (d)
3. NO _x	1.0 g/HP-hr or 82 ppmvd at 15% O ₂ (limits apply to each engine)	Hourly	EURICE1, EURICE2, EURICE3	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR Part 60 Subpart JJJJ
4. VOC	0.7 g/HP-hr ^b or 60 ppmvd at 15% O ₂ ^b (limits apply to each engine)	Hourly	EURICE1, EURICE2, EURICE3	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR Part 60 Subpart JJJJ
5. CO	2.0 g/HP-hr ^c or 270 ppmvd at 15% O ₂ ^c (limits apply to each engine)	Hourly	EURICE1, EURICE2, EURICE3	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR Part 60 Subpart JJJJ

^bFor purposes of this emission limit, when calculating emissions of VOC, emissions of formaldehyde should not be included. (See Table 1 to 40 CFR 60 Subpart JJJJ.)

^c Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of 40 CFR part 60, subpart JJJJ. (i.e. If the engine meets FGEMACT4Z SC I.1a, then it is in compliance with FGENGINES SC I.5.)

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain each engine included in FGENGINES such that it meets the emission limits in SC I.3 – I.5 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
2. If each engine 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 FGENGINES:
 - 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.3. **(40 CFR 60.4243(b)(1))**

3. If an engine of FGENGINES is a non-certified engine and control device 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 that engine and shall, to the extent practicable, maintain and operate FGENGINES in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The nameplate capacity of FGENGINES shall not exceed 2,500 HP for EURICE1 or EURICE2, and 5,000 HP for EURICE3, as certified by the equipment manufacturer. **(R 336.1205, 40 CFR 60.4230)**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup, the permittee shall verify NO_x emission rates from each unit in FGENGINES 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 FGENGINES 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))**
2. For any engine included in FGENGINES that is a non-certified engine and control device 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.3 – I.5, within 1 year after any engine in FGENGINES is no longer operated as a certified engine.
 - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4244.
 - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years, whichever comes first.

If a performance test is required, 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, 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 each engine included in FGEngines:
 - a) If operated in a certified manner: The permittee shall keep records of the documentation from the manufacturer that each engine is certified to meet the emission standards testing required as applicable and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
 - b) The permittee shall keep records of testing required in SC V.1 and V.2.

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 each engine included in FGEngines:
 - a) If operated in a certified manner: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that each engine has been maintained according to them, as specified in SC III.2.
 - b) If operated in a non-certified manner: The permittee shall keep records of a maintenance plan, as required by SC III.3 and maintenance activities.

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 keep records of notifications submitted for the completion of construction and start-up of each engine in FGEngines. **(40 CFR 60.4245(a))**

VII. REPORTING

1. Except as provided in R 336.1285, if any engine included in FGEngines is replaced with an equivalent-emitting or lower-emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit acceptable emissions data to show that the alternate engine is equivalent-emitting or lower-emitting. The data shall be submitted within 30-days of the engine change out. **(R 336.1205, R 336.1702(a), R 336.1911, 40 CFR 52.21 (c) & (d))**

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 Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRICE1	24	63	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVRICE2	24	63	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVRICE3	32	63	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the New Source Performance Standards as specified in 40 CFR Part 60, Subpart A and Subpart JJJJ, as they apply to any engine included in FGENGINES. **(40 CFR Part 60 Subpart A and JJJJ)**

Footnotes:

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

**FGENGMACT4Z
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

New spark ignition RICE located at a Major Source of HAPs greater than 500 HP, non-emergency.

Emission Unit: EURICE1, EURICE2, EURICE3

POLLUTION CONTROL EQUIPMENT

Oxidation catalyst to control CO.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1a. CO	≥93% reduction ^b (limit applies to each engine)	Hourly	FGENGMACT4Z	SC V.1, SC V.2	40 CFR 63.6600(b) Table 2a
-OR-					
1b. Formaldehyde	≤14 ppmvd at 15% O ₂ ^b (limit applies to each engine)	Hourly	FGENGMACT4Z	SC V.3	40 CFR 63.6600(b) Table 2a

^bEmission limit is not applicable during start-up.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any engine of FGENGMACT4Z unless the catalytic oxidation system is installed, maintained, and operated in a satisfactory manner except as allowed in SC.III.5. Satisfactory manner includes the following:
 - a) Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load +/- 10 percent from the pressure drop across the catalysts that was measured during the initial performance test; and
 - b) Maintain the temperature of the exhaust for the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.
(40 CFR 63.6600 (b), Table 2b)
2. The permittee shall operate each engine of FGENGMACT4Z in compliance with the emission limitations and operating limitations. Each engine of FGENGMACT4Z, including associated air pollution control equipment and monitoring equipment, must be operated and maintained, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.6605)**
3. The permittee shall minimize the time spent at idle during startup and minimize the startup time of each engine of FGENGMACT4Z to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission limits in SC.I.1 apply. **(40 CFR 63.6625(h))**

4. The permittee must reestablish the values of the operating parameters measured during the initial performance test when a catalyst is changed for any engine of FGENGMACT4Z. When the operating parameters are reestablished, the permittee must also conduct a performance test to demonstrate compliance with the emission limits in SC I.1. **(40 CFR 63.6640(b))**
5. For new, reconstructed and rebuilt RICE, deviation from the emissions or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn in period) are not violations. **(40 CFR 63.6640(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each engine of FGENGMACT4Z with a catalytic oxidation system. **(40 CFR 63.6600 (b), Table 2b)**
2. The permittee shall install, calibrate, operate, and maintain each CPMS (thermocouple) in continuous operation according to the procedures in your site-specific monitoring plan. Continuous operation means the CPMS (thermocouple) must collect data (catalyst inlet temperature) at least once every 15 minutes when any engine of FGENGMACT4Z is operating. **(40 CFR Part 63.6625(b))**
3. For a CPMS measuring temperature range (thermocouple), the temperature sensor must have a minimum tolerance of 2.8°F or 1 percent of the measured range whichever is larger. The CPMS (thermocouple) must be verified according to the site-specific monitoring plan annually (calendar year). **(40 CFR Part 63.6625(b))**
4. If the permittee elects to install a CEMS, the permittee shall install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in 40 CFR Part 63.6625(a). If the permittee is meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and the outlet of the control device. If the permittee is meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device. **(40 CFR Part 63.6625(a))**

V. TESTING/SAMPLING

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

1. The permittee shall verify the formaldehyde emission rates, from each engine included in FGENGMACT4Z, or verify the catalytic system efficiency by utilizing CO emission rates as a surrogate, from each engine included in FGENGMACT4Z, by testing at owner's expense, in accordance with Department requirements. Testing must be conducted at 100 percent speed and load ± 10 percent. Initial testing shall be conducted within 180 days of start-up. Subsequent testing shall be conducted semiannually, until two consecutive semiannual passing events have been demonstrated. After two consecutive passing events, subsequent testing can be changed to annually. If fail annual test, revert to semiannual testing until two consecutive passing events. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD 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 336.2001, R 336.2003, R 336.2004, 40 CFR 63.6610(a), 40 CFR 63.6615, 40 CFR 63.6630(c) 40 CFR 63.6645(g) and (h))**
2. If any engine in FGENGMACT4Z is subject to performance testing is not operating, the engine does not need to be started solely to conduct the performance test. The performance test can be conducted when the engine is started up again. **(40 CFR 63.6620(b))**
3. When the catalyst is changed for any engine, the permittee shall, at the owner's expense and in accordance with Department requirements, reestablish the values of the operating parameters measured during the initial performance test and conduct a performance test to demonstrate the required emission limits are being met. Testing must be conducted at 100 percent speed and load ± 10 percent. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD 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 336.2001, R 336.2003, R 336.2004, 40 CFR 63.6640(b))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall continuously monitor, at least once every 15 minutes, the catalyst inlet temperature at all times that any engine for FGENGMACT4Z is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. This monitoring data shall be kept on file at the facility and made available to the Department upon request. **(40 CFR 63.6635(b), 40 CFR 63.6660, Table 6 of 40 CFR 63 Subpart ZZZZ)**
2. The permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee must, however, use all the valid data collected during all other periods. **(40 CFR 63.6635(c))**
3. The permittee shall keep the following records for each engine in FGENGMACT4Z:
 - a) A copy of notification of commencement of construction and initial start-up notification.
 - b) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or of the air pollution control and monitoring equipment.
 - c) Records of catalyst efficiency performance tests and performance evaluations.
 - d) Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - e) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.These records shall be kept on file at the facility and made available to the Department upon request **(40 CFR 63.6605(b), 40 CFR 63.6655(a), 40 CFR 63.6660)**
4. The permittee shall maintain the following records for each CMS on file at the facility and make available to the Department upon request:
 - a) Each period during which the CMS malfunctioned or was inoperative (including out-of-control periods).
 - b) The inlet temperature measurements, including raw data and 4 hour rolling average.
 - c) Thermocouple calibration checks.
 - d) Adjustments and maintenance performed on CMS.**(40 CFR 63.6655(b), 40 CFR 63.6660)**
5. The permittee shall maintain the following records to demonstrate continuous compliance with the emission limits in SC I.1. These records shall be kept on file at the facility and made available to the Department upon request.
 - a) Catalyst inlet temperature data reduced to 4-hour rolling averages.
 - b) Pressure drop across the catalyst measured monthly.**(40 CFR 63.6655(d), 40 CFR 63.6660, Table 6 of 40 CFR 63 Subpart ZZZZ)**

VII. REPORTING

1. A written stack test report of the average percent load determined during a performance test must be included in the notification of compliance status. The following information must be included in the written report:
 - a) The engine model number,
 - b) The engine manufacturer,
 - c) The year of purchase,
 - d) The manufacturer's site-rated brake horsepower,
 - e) The ambient temperature, pressure, and humidity during the performance test,
 - f) The calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. All assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.**(40 CFR 63.6620(i))**

2. The permittee shall report each instance in which they did not meet each emission limitation in SC I.1 or operating limitation in SC III.1. These instances are deviations from the emission and operating limitations in 40 CFR Part 63 Subpart ZZZZ. These deviations must be reported according to the requirements in §63.6650 in the semi-annual compliance report during the period in which they occurred. **(40 CFR 63.6640(b) & (d))**
 3. The permittee shall submit a first semiannual Compliance report which must cover the period beginning on the compliance date that is specified for the affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the start-up. The first Compliance report must be postmarked or delivered no later than September 15 or March 15, whichever date follows the end of the first calendar half after the compliance date that is specified for the start-up date. Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from September 15 or March 15. **(40 CFR 63.6650(b), Table 7 of 40 CFR Part 63 Subpart ZZZZ)**
 4. The permittee shall include the following information in each semi-annual Compliance report:
 - a) Company name and address.
 - b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - c) Date of report and beginning and ending dates of the reporting period.
 - d) If a malfunction occurred during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.
 - e) If there are no deviations from any emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period.
 - f) If there were no periods during which the CMS was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
 - g) If there was a deviation from an emission or operating limitation, the following information must be included.
 - i. The date and time that each malfunction started and stopped.
 - ii. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - iii. The date, time, and duration that each CMS was out-of-control, including the information required in the excess emissions and continuous monitoring system performance report.
 - iv. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - v. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
 - vi. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - vii. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
 - viii. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
 - ix. A brief description of the stationary RICE.
 - x. A brief description of the CMS.
 - xi. The date of the latest CMS certification or audit.
 - xii. A description of any changes in CMS, processes, or controls since the last reporting period.
- (40 CFR 63.6650(c) & (e), 40 CFR 63.8(c)(8), 40 CFR 63.10(e)(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to any engine included in FGENGMACT4Z. **(40 CFR 63.6595, 40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:

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

**FGNOX
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Boilers and heaters with NOx limits.

Emission Unit: EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, EUMODHTR1, EUMODHTR2, EUMODHTR3, EUMODHTR4, EUMODHTR5, EUMODHTR6, EUILHTR1, EUILHTR2, EUILHTR3, EUILHTR4, EUHWHeater, EUBARD, EUFURACE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	27.1 tpy ^a	12-month rolling time period as determined at the end of each month	FGNOX	SC VI.2	R 336.1205(3), 40 CFR 52.21(c) & (d)

^aThis limit is based on NOx emission factors contained in the most recent AP-42 (Compilation of Air Pollutant Emission Factors) Table 1.4-1.

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner device(s) to monitor and record the natural gas flow rate for FGNOX on a continuous basis. (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 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))

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, the natural gas usage for FGNOX on a monthly 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), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

- The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period NO_x emission calculation records for FGNOX using the natural gas usage, as required by SC VI.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

- 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 FGNOX. **(R 336.1216(1)(a)(v), R 336.1201(7)(a))**

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 Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER1	Shared Stack 20	Shared Stack 42	R 336.1225, 40 CFR 52.21(c) & (d))
2. SVBOILER2			
3. SVBOILER3			
4. SVBOILER4	6	32	
5. SVMODHTR1	12	15	
6. SVMODHTR2	12	15	
7. SVMODHTR3	12	15	
8. SVMODHTR4	12	15	
9. SVMODHTR5	12	15	
10. SVMODHTR6	12	15	
13. SVILHTR1	27.6	26.8	
14. SVILHTR2	27.6	26.8	
15. SVILHTR3	27.6	26.8	
16. SVILHTR4	27.6	26.8	
17. EUHWHeater	4	12	
18. EUBARD	2.5	8	
19. EUFURNACE	2	1	

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

**FGBLRMACT
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD.

Emission Unit:

Less than 5 MMBtu/hr	EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4
Equal to or greater than 5 MMBtu/hr and less than 10 MMBtu/hr	NA
Equal to or greater than 10 MMBtu/hr	EUILHTR1, EUILHTR2, EUILHTR3, EUILHTR4

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas in FGBLRMACT. **(40 CFR 63.7499(I))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the requirements in paragraphs (a)(1) and (3) of 40 CFR 63.7500, as listed below, except as provided in paragraphs (b) and (e) of 40 CFR 63.7500, stated in SC III.2 and SC III.3. The permittee must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of 40 CFR 63.7500. **(40 CFR 63.7500(a))**
 - a) The permittee must meet each work practice standard in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. **(40 CFR 63.7500(a)(1))**
 - b) At all times, the permittee must operate and maintain any affected source (as defined in 40 CFR 63.7490, stated in SC IX.1), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**
2. In a format acceptable to EPA, the permittee may request approval from EPA to use an alternative to the work practice standards. **(40 CFR 63.6(g), 40 CFR 63.7500(b))**
3. The permittee must perform compliance tune-ups for FGBLRMACT meeting the requirements in SC IX.5 according to the following frequency:
 - a) Any unit of FGBLRMACT less than or equal to 5 MMBtu per hour must complete a tune-up every 5 years (61 months) after the initial startup of the unit. Subsequent tune-ups shall be conducted no more than 5 years (61 months) after the previous tune-up.

- b) Any unit of FGBLRMACT greater than 5 MMBtu per hour and less than 10 MMBtu per hour must complete a tune-up every 2 years (25 months) after the initial startup of the unit. Subsequent tune-ups shall be conducted no more than 2 years (25 months) after the previous tune-up.
- c) Any unit of FGBLRMACT greater than 10 MMBtu per hour must complete a tune-up no later than one year (13 months) after the initial startup of the unit. Subsequent tune-ups shall be conducted no more than one year (13 months) after the previous tune-up. **(40 CFR 63.7500(e), 40 CFR64.7515(d))**

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 must keep records according to paragraphs (a)(1) and (2) of 40 CFR 63.7555, as listed below. **(40 CFR 63.7555(a))**
 - a) A copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or annual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
2. The permittee's records must be in a form suitable and readily available for expeditious review. **(40 CFR 63.10(b)(1), 40 CFR 63.7560(a))**
3. The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.10(b)(1), 40 CFR 63.7560(b))**
4. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3 years. **(40 CFR 63.10(b)(1), 40 CFR 63.7560(c))**

VII. REPORTING

1. The permittee must meet the notification requirements in 40 CFR 63.7545 according to the schedule in 40 CFR 63.7545, both stated in SC VII.2 through SC VII.3, and in Subpart A of 40 CFR 63. **(40 CFR 63.7495(d))**
2. The permittee must submit to the Administrator all of the notifications in), 40 CFR 63.9(b), (d), and (h) that apply to the permittee by the dates specified. **(40 CFR 63.7545(a))**
3. As specified in 40 CFR 63.9(b)(4) and (5) the permittee must submit an Initial Notification not later than 15 days after the actual date of startup of the new or reconstructed affected source. **(40 CFR 63.7545(c))**
4. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.7, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.5.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.5.c, and not subject to emission limits or operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, instead of a semi-annual compliance report. **(40 CFR 63.7550(b), 40 CFR 63.7550(a))**

- a) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler in 40 CFR 63.7495, stated in SC IX.3, and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for the source in 40 CFR 63.7495, stated in SC IX.3. **(40 CFR 63.7550(b)(1))**
 - b) Each subsequent compliance report must cover the 1, 2, or 5-year periods from January 1 to December 31. **(40 CFR 63.7550(b)(3))**
 - c) Each subsequent compliance report must be postmarked or submitted no later than March 15 following the year the tune up was conducted. **(40 CFR 63.7550(b)(4), 40 CFR 63.7550(b)(5))**
5. A compliance report must contain the following information depending on how the permittee chooses to comply with the limits set in this rule. **(40 CFR 63.7550(c))**
- a) The permittee must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (xiv), and (xvii) of 40 CFR 63.7550. **(40 CFR 63.7550(c)(1))**
 - b) 40 CFR 63.7550(c)(5) is as follows:
 - i. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
 - ii. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - iii. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - iv. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.5.b, or 5-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.5.c. Include the date of the most recent burner inspection if it was not done annually, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
 - v. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
6. The permittee must submit the reports according to the procedures specified in paragraph (h)(3) of 40 CFR 63.7550, as listed below. **(40 CFR 63.7550(h))**
- a) The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's CDX.) The permittee must use the appropriate electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR Part 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the EPA Region V Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. **(40 CFR 63.7550(h)(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. 40 CFR Part 63, Subpart DDDDD applies to new or reconstructed affected sources as described in paragraph (a)(2) of 40 CFR 63.7490, as listed below. **(40 CFR 63.7490(a))**
 - a) The affected source of 40 CFR Part 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler, as defined in 40 CFR 63.7575, located at a major source. **(40 CFR 63.7490(a)(2))**
2. A boiler is new if the permittee commences construction of the boiler after June 4, 2010, and the permittee meets the applicability criteria at the time the permittee commences construction. **(40 CFR 63.7490(b))**
3. If the permittee has a new or reconstructed boiler, the permittee must comply with 40 CFR Part 63, Subpart DDDDD upon startup of each boiler. **(40 CFR 63.7495(a))**

4. The permittee must be in compliance with the work practice standards of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7505(a))**
5. The permittee must demonstrate continuous compliance with the work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies according to the methods specified in paragraphs (a)(10) through (13) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a))**
 - a) If the boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540, as listed below. This frequency does not apply to units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. **(40 CFR 63.7540(a)(10))**
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - vi. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(10)(vi))**
 1. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 2. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 3. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
 - b) If the boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of 40 CFR 63.7540), the permittee must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. **(40 CFR 63.7540(a)(11))**
 - c) If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1 subcategory, the permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. The permittee may delay the burner inspection specified in paragraph (a)(10)(i) of 40 CFR 63.7540 until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. **(40 CFR 63.7540(a)(12))**
 - d) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**

6. Table 10 of 40 CFR Part 63, Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 applies to the permittee. **(40 CFR 63.7565)**

Footnotes:

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