MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

July 16, 2018

PERMIT TO INSTALL
19-18

ISSUED TO
DTE Electric Company – Belle River Combined Cycle

LOCATED AT
4505 King Road
China Township, Michigan

IN THE COUNTY OF
St. Clair

STATE REGISTRATION NUMBER
B2796

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: **June 22, 2018**	
DATE PERMIT TO INSTALL APPROVED: **July 16, 2018**	SIGNATURE: MaryAnn Dolehanty
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	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_2e	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
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	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.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUCTGHRSG1	A 3,658 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 800 MMBTU/hr to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a combined oxidation catalyst for the control of CO and VOC's, and selective catalytic reduction (SCR) with dry low NOx burners for the control of nitrogen oxides.	FGCTGHRSG, FGPROJECT
EUCTGHRSG2	A 3,658 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 800 MMBTU/hr to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a combined oxidation catalyst for the control of CO and VOC's, and selective catalytic reduction (SCR) with dry low NOx burners for the control of nitrogen oxides.	FGCTGHRSG, FGPROJCECT
EUAUXBOILER	A natural gas-fired auxiliary boiler, rated at 99.9 MMBTU/hr to facilitate startup of the CTG/HRSG trains and to operate as needed to keep the HRSG warm during periods of facility shutdown and startup and to provide steam to the steam turbine generator seals. The auxiliary boiler is equipped with low NO_x burners (LNB) and flue gas recirculation (FGR).	FGMACT, FGPROJECT
EUFUELHTR1	A natural gas-fired 20.8 MMBTU/hr heat input HP fuel heater.	FGFUELHTRS, FGMACT, FGPROJECT
EUFUELHTR2	A natural gas-fired 3.8 MMBTU/hr heat input LP fuel heater.	FGFUELHTRS, FGMACT, FGPROJECT
EUEMENGINE	A nominal 2 MW diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is an EPA Tier 2 certified engine subject to NSPS IIII.	FGPROJECT
EUFPENGINE	A 399 brake HP diesel-fueled emergency fire pump engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is an EPA Tier 3 certified engine subject to NSPS IIII.	FGPROJECT
EUCTLUBEOILTANKS	Two combustion turbine lube oil tanks with a total storage capacity of 10,800 gallons.	FGTANKS
EUSTLUBEOILTANKS	A steam turbine lube oil tank with a storage capacity of 5,600 gallons.	FGTANKS, FGPROJECT
EUSTHYDROOILTANK	A steam turbine hydraulic oil tank with a storage capacity of 740 gallons.	FGTANKS

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUSTSEALOILTANK	A steam turbine seal oil tank with a storage capacity of 275 gallons.	FGTANKS
EUFUELOILTANK	A 600-gallon closed-roof tank for purposes of storing ultra-low sulfur diesel fuel. This tank services the diesel-fueled emergency fire pump engine.	FGTANKS
EUGCLUBEOILTNKS	Three gas compressor lube oils tanks with a total storage capacity of 330 gallons.	FGTANKS
EUBFPOILTANKS	Four boiler feedwater pump oil tanks with a total storage capacity of 212 gallons.	FGTANKS
EUEMFUELTANK	A 3,400-gallon closed-roof tank for purposes of storing ultra-low sulfur diesel fuel. This tank services the diesel-fueled emergency engine.	FGTANKS
EUDLNNH3TANKS	Two tanks for storage of 19% aqueous NH3 solution. Total storage capacity is 100,000 gallons.	FGTANKS
EUSPACEHEATERS	Natural gas-fired space heaters with a combined rating of 10 MMBTU/hr or less to provide building heating.	FGSPACEHTRS, FGPROJECT
EUCOOLINGTOWER	A 14 cell wet mechanical draft cooling tower equipped with drift eliminators.	FGCOOLINGTWR, FGPROJECT
EUCOLDCLEANER	Closed-cover cold cleaner.	FGPROJECT
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:
EUAUXBOILER

DESCRIPTION: A natural gas-fired auxiliary boiler, rated at 99.9 MMBTU/hr to facilitate startup of the CTG/HRSG trains and to provide steam to the steam turbine generator seals. The auxiliary boiler is equipped with low NO_x burners (LNB) and flue gas recirculation (FGR).

Flexible Group ID: FGMACT, FGPROJECT

POLLUTION CONTROL EQUIPMENT: Low NO_x burners and flue gas recirculation for NO_x control.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	0.036 lb/MMBTU	Hourly	EUAUXBOILER	SC V.1	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
2. NOx	3.60 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.2, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
3. CO	0.075 lb/MMBTU	Hourly	EUAUXBOILER	SC V.1	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
4. CO	7.49 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.2, SC VI.5	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
5. PM	0.007 lb/MMBTU	Hourly	EUAUXBOILER	SC V.1	R 336.1205(1)(a) & (b), R 336.1331(1)(c), R 336.2810
6. PM	0.7 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.2, SC VI.5	R 336.1331(1)(c), R 336.2810
7. PM10	0.007 lb/MMBtu	Hourly	EUAUXBOILER	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
8. PM10	0.7 pph	Hourly	EUAUXBOILER	SC V.2, SC VI.2, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
9. PM2.5	0.007 lb/MMBtu	Hourly	EUAUXBOILER	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
10. PM2.5	0.7 pph	Hourly	EUAUXBOILER	SC V.2, SC VI.2, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
11. SO_2	0.0012 lb/MMBtu	Monthly	EUAUXBOILER	SC VI.4	R 336.1205(1)(a) & (b)
12. VOC	0.008 lb/MMBTU	Hourly	EUAUXBOILER	SC V.1	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
13. VOC	0.80 pph	Hourly	EUAUXBOILER	SC V.1	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
14.GHGs as CO_2e	25,623 tpy	12-month rolling time period as determined at the end of each calendar month.	EUAUXBOILER	SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline natural gas in EUAUXBOILER, with a sulfur content of 0.34 gr per 100 scf or less on a monthly basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Within 180 days of initial startup, the permittee shall submit, implement, and maintain a malfunction abatement plan (MAP) as described in Rule 911(2) for EUAUXBOILER. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(1)(a) & (b), R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not operate EUAUXBOILER unless an acceptable plan that describes how emissions will be minimized during all startups, shutdowns and malfunctions has been submitted to the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. The permittee shall submit the emission minimization plan and any modifications to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or modified plan shall be considered approved. **(R 336.1911, R 336.1912, R 336.2810, 40 CFR 52.21(j))**

3. The permittee shall not operate EUAUXBOILER for greater than 4,380 hours per 12-month rolling period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for EUAUXBOILER shall not exceed 99.9 MMBTU per hour on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR Part 60 Subpart Dc)**

2. The permittee shall not operate EUAUXBOILER unless the low NO_x burners and flue gas recirculation system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the air pollution control equipment in accordance with the MAP required in SC III.1. **(R 336.1205(1)(a) & (b), R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the hourly and daily natural gas usage rate for EUAUXBOILER. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

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 NOx, CO, PM, and VOCs emission rates from EUAUXBOILER by testing at the owner's expense, in accordance with Department requirements. The permittee shall complete the required testing once every five years, thereafter, unless an alternate testing schedule is approved by the District Supervisor. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NOx	40 CFR Part 60, Appendix A
SO2	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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) & (b), R 336.1331(1)(c), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

2. Within 180 days after commencement of initial startup, the permittee shall verify PM10 and PM2.5 emission rates from EUAUXBOILER by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using the approved EPA Method, 40 CFR Part 51, Appendix M. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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) & (b), R 336.1331(1)(c), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep hourly and daily natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a clock hour and calendar day basis and shall calculate and keep monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used in EUAUXBOILER. 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) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.48c(g))**

3. The permittee shall record hours of operation of EUAUXBOILER in a format acceptable to the AQD District Supervisor, indicating the total hours of operation in an individual calendar month and a 12-month rolling time period basis. 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) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall keep, in a satisfactory manner, records indicating the monthly sulfur content of the natural gas to meet SC II.1 for EUAUXBOILER on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (b))**

5. The permittee shall calculate and keep, in a satisfactory manner, records of hourly NOx, CO, PM, PM10 and PM2.5 mass emissions (pph) for EUAUXBOILER. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using a method approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUAUXBOILER. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

7. The permittee shall maintain monthly records of the heat value content of the natural gas based on information from the natural gas supplier. The permittee shall keep record on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 60.40c(a))**

8. The permittee shall calculate and keep records of hourly heat input (MMBtu/hr) for EUAUXBOILER based on the monthly heat value and hourly gas usage to show compliance with SC IV.1. The permittee shall keep record on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 60.40c(a))**

9. 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. 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. Verification of heat input capacity required to show compliance with SC IV.1.
   d. Identification, type and the amounts of fuel combusted in EUAUXBOILER on an hourly basis, calendar day basis, and calendar month basis.
   e. All records required by 40 CFR 60.7 and 60.48c.
   f. All calculations or documents necessary to show compliance with the limits contained in this permit.

   All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.7(f), 40 CFR Part 60 Subpart Dc)**

VII. REPORTING

1. The permittee shall provide written notification for the date construction is commenced, postmarked no later than 30 days after such date and provide written notification for the actual date of startup, postmarked within 15 days after such date, as provided by 40 CFR 60.7. The notifications shall include:
   a. The design heat input capacity of EUAUXBOILER and identification of the fuels to be combusted in EUAUXBOILER.
   b. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired. The permittee shall submit the notification(s) to the AQD District Supervisor within the time frames specified in 40 CFR 60.7.

   (40CFR60.7(a), 40 CFR 60.48c(a))

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVAUXBOILER	43	60	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

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

The following conditions apply to:
EUEMENGINE

DESCRIPTION: A nominal 2 MW diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is an EPA Tier 2 certified engine subject to NSPS IIII.

Flexible Group ID: FGPROJECT

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. $NMHC^{A}+NO_x$	6.4 g/kW-hr[B]	Hourly	EUEMENGINE	SC V.1, SC VI.2, SC VI.3	R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), Table 1 of 40 CFR 89.112
2. CO	3.5 g/kW-hr[B]	Hourly	EUEMENGINE	SC V.1, SC VI.2, SC VI.3	R 336.2804, R 336.2810, 40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), Table 1 of 40 CFR 89.112
3. PM	0.20 g/kW-hr[B]	Hourly	EUEMENGINE	SC V.1, SC VI.2, SC VI.3	R 336.1331(1)(c), R 336.2810, 40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), Table 1 of 40 CFR 89.112
4. PM10	1.18 pph	Hourly	EUEMENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	1.18 pph	Hourly	EUEMENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHGs as CO_2e	161 tpy	12-month rolling time period as determined at the end of each calendar month	EUEMENGINE	SC VI.7	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)
7. VOC	1.89 pph	Hourly	EUEMENGINE	SC V.2	R 336.1205(1)(a) & (b), R 336.1702, R 336.2810

[A] NMHC = nonmethane hydrocarbon

[B] These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c) where NTE requirements = (1.25) x (the 89.112 standard for each pollutant).

II. MATERIAL LIMITS

1. The permittee shall burn only diesel fuel in EUEMENGINE with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUEMENGINE for more than 4 hour per day, except during emergency conditions and required stack testing in SC V.1 and SC V.2, and not more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 4 hours and the 500 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee may operate EUEMENGINE 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. EUEMENGINE 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. Except as provided in 40 CFR 60.4211(f)(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 60.4211(f))**

3. If EUEMENGINE is purchased and installed as a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year and maximum engine power, the permittee shall meet the following requirements for EUEMENGINE:
   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
   b. Change only those emission-related settings that are permitted by the manufacturer; and
   c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply to EUEMENGINE.

   If the permittee does not operate and maintain the certified engine and control device according to SC III.3 a through c, the engine will be considered to be operating as a non-certified engine. **(40 CFR 60.4211(a) & (c), R 336.2810, 40 CFR 52.21(j))**

4. If the permittee is operating EUEMENGINE as a non-certified engine, the permittee shall keep a maintenance plan for EUEMENGINE and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3), R 336.2810, 40 CFR 52.21(j))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EUEMENGINE with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4209(a))**

2. The maximum rated power output of EUEMENGINE shall not exceed a nominal capacity of 2.0 MW. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

3. The permittee shall monitor, in a satisfactory manner, the diesel fuel usage for EUEMENGINE on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

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

1. If EUEMENGINE is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
   a. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
   b. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.
   c. Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

   No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. 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. **(40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

2. Within 180 days after commencement of trial operation, the permittee shall verify VOC mass emissions from EUEMENGINE by testing at owner's expense, in accordance with Department requirements. The permittee shall complete the required testing once every five years, thereafter, unless an alternate testing schedule is approved by the 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) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2810)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

2. The permittee shall keep, in a satisfactory manner, the following records for EUEMENGINE:
   a. If operated as a certified engine: The permittee shall keep records of the manufacturer certification documentation.
   b. If operated as a non-certified engine: 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 336.2810, 40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUEMENGINE:
   a. If operated as a certified engine: The permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.3.
   b. If operated as a non-certified engine: The permittee shall keep records of a maintenance plan, as required by SC III.4, and maintenance activities.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.2810, 40 CFR 60.4211)**

4. The permittee shall keep, in a satisfactory manner, test reports for EUEMENGINE required by SC V.2 on file at the facility. The permittee shall make the records available to the Department upon request. Records shall be maintained on file for a period of five years. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2810)**

5. The permittee shall keep, in a satisfactory manner, records of the diesel fuel usage for EUEMENGINE on an hourly, monthly, and 12-month rolling time period basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

6. The permittee shall calculate and keep, in a satisfactory manner, records of hourly PM10 and PM2.5 mass emissions for EUEMENGINE, as required by SC I.4 and SC I.5. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using a method approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

7. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUEMENGINE, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

8. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUEMENGINE, on an hourly, daily, monthly, and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUEMENGINE, including what classified the operation as emergency. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

9. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUEMENGINE, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b), as specified in SC II.1. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

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 EUEMENGINE. **(R 336.1201(7)(a))**

2. The permittee shall submit a notification specifying whether EUEMENGINE 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 the engine and within 30 days of switching the manner of operation. **(R 336.1201(3))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMENGINE	18	16	R 336.1225, R 336.2803, R 336.2804

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 IIII, as they apply to EUEMENGINE. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590)**

2. The permittee shall comply with the 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 EUEMENGINE, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

The following conditions apply to:
EUFPENGINE

DESCRIPTION:

A 399 brake HP diesel-fueled emergency fire pump engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is an EPA Tier 3 certified engine subject to NSPS IIII.

Flexible Group ID: FGPROJECT

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NMHC[A]+NO_x	4.0 g/kW-hr[B]	Hourly	EUFPENGINE	SC V.1, SC VI.2, SC VI.8	R 336.2803, R 336.2804, R 336.2810 40 CFR 60.4205(c), Table 4 of 40 CFR Part 60 Subpart IIII
2. CO	3.5 g/kW-hr[B]	Hourly	EUFPENGINE	SC V.1, SC VI.2, SC VI.8	R 336.2804, R 336.2810, 40 CFR 60.4205(c), Table 4 of 40 CFR Part 60 Subpart IIII
3. PM	0.20 g/kW-hr[B]	Hourly	EUFPENGINE	SC V.1, SC VI.2, SC VI.8	R 336.1331(1)(c), R 336.2810, 40 CFR 60.4205(c), Table 4 of 40 CFR Part 60 Subpart IIII
4. PM10	0.13 pph	Hourly	EUFPENGINE	SC VI.4	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.13 pph	Hourly	EUFPENGINE	SC VI.4	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. VOC	0.13 pph	Hourly	EUFPENGINE	SC VI.9	R 336.1205(1)(a) & (b), R 336.1702, R 336.2810
7. GHGs as CO_2e	86 tpy	12-month rolling time period as determined at the end of each calendar month	EUFPENGINE	SC VI.5	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

[A] NMHC = nonmethane hydrocarbon

[B] These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c).

II. MATERIAL LIMITS

1. The permittee shall burn only diesel fuel in EUFPENGINE with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUFPENGINE for more than 1 hour per day, except during emergency conditions and required stack testing in SC V.1, and not more than 100 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 1 hours and the 100 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee may operate EUFPENGINE 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. EUFPENGINE 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. Except as provided in 40 CFR 60.4211(f)(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 60.4211(f))**

3. EUFPENGINE is purchased and installed as a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year and maximum engine power. The permittee shall meet the following requirements for EUFPENGINE:
   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
   b. Change only those emission-related settings that are permitted by the manufacturer; and
   c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply to EUFPENGINE.

   If the permittee does not operate and maintain the certified engine and control device according to SC III.3 a through b, the engine will be considered to be operating as a non-certified engine. **(40 CFR 60.4211(a) & (c), R 336.2810, 40 CFR 52.21(j))**

4. If the permittee is operating EUFPENGINE as a non-certified engine, the permittee shall keep a maintenance plan for EUFPENGINE and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(2), R 336.2810, 40 CFR 52.21(j))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EUFPENGINE with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4209(a))**

2. The maximum rated power output of EUFPENGINE shall not exceed a nameplate capacity of 399 brake HP. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), Table 4 of 40 CFR Part 60 Subpart IIII)**

3. The permittee shall monitor, in a satisfactory manner, the diesel fuel usage for EUFPENGINE on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

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

1. If EUFPENGINE is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
   a. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
   b. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.

   No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. 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. **(40 CFR 60.4211(g)(2), 40 CFR 60.4212)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

2. The permittee shall keep, in a satisfactory manner, the following records for EUFPENGINE:
   a. If operated as a certified engine: The permittee shall keep records of the manufacturer certification documentation.
   b. If operated as a non-certified engine: 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 336.2810, 40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, records of the diesel fuel usage for EUFPENGINE on an hourly, monthly, and 12-month rolling time period basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

4. The permittee shall calculate and keep, in a satisfactory manner, records of hourly PM10 and PM2.5 mass emissions for EUFPENGINE, as required by SC I.4 and SC I.5. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using a method approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUFPENGINE, as required by SC I.7. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

6. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUFPENGINE, on an hourly, daily, monthly, and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUFPENGINE, including what classified the operation as emergency. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

7. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUFPENGINE, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b), as specified in SC II.1. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

8. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUFPENGINE:
   a. If operated as a certified engine: The permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SCIII.3.
   b. If operated as a non-certified engine: The permittee shall keep records of a maintenance plan, as required by SC III.4, and maintenance activities.

   The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.2810, 40 CFR 60.4211)**

9. The permittee shall calculate and keep, in a satisfactory manner, records of hourly VOC mass emissions for EUFPENGINE, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using a method approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810)**

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 EUFPENGINE. **(R 336.1201(7)(a))**

2. The permittee shall submit a notification specifying whether EUFPENGINE 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 the engine and within 30 days of switching the manner of operation. **(R 336.1201(3))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFPENGINE	6	13	R 336.1225, R 336.2803, R 336.2804

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 IIII, as they apply to EUFPENGINE. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590)**

2. The permittee shall comply with the 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 EUFPENGINE, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

The following conditions apply to:
EUCOLDCLEANER

DESCRIPTION: New closed-cover cold cleaner.

Flexible Group ID: FGPROJECT

POLLUTION CONTROL EQUIPMENT: Closed cover when not in use.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1225, R 336.1702(a), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The cold cleaner must meet one of the following design requirements:
   a. The air/vapor interface of the cold cleaner is no more than ten square feet.
   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment.
   (R 336.1225, R 336.1702(a))

2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1225, R 336.1702(a), R 336.1707(3)(b))**

3. The cold cleaner shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1707(3)(a), R 336.1910, R 336.2810)**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1225, R 336.1702(a), R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
   a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7.
   b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0.
   c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD.

   (R 336.1225, R 336.1702(a), R 336.1707(2)(a), (b), & (c))

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. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1225, R 336.1707)**

2. The permittee shall maintain the following information on file for each cold cleaner:
   a. A serial number, model number, or other unique identifier for each cold cleaner.
   b. The date the unit was installed, manufactured or that it commenced operation.
   c. The air/vapor interface area.
   d. The Reid vapor pressure of each solvent used.
   e. If applicable, the option chosen to comply with SC IV.5.

   (R 336.1225, R 336.1702(a), R 336.1707(2))

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1910, R 336.1707(4))**

4. As noted in Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1225, R 336.1702(a), R 336.1707(3)(c))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

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
FGCTGHRSG	Two 3,658 MMBTU/hr natural gas-fired combustion turbine generators (CTGs) coupled with heat recovery steam generators (HRSGs). The HRSGs are equipped with natural gas-fired duct burners rated at 800 MMBTU/hr to provide heat for additional steam production. The HRSGs are not capable of operating independently from the CTG. The CTGs/HRSGs are equipped with a combined oxidation catalyst for the control of CO and VOCs, and selective catalytic reduction (SCR) with dry low NO_x burners for the control of NO_x.	EUCTGHRSG1, EUCTGHRSG2
FGCOOLINGTWR	A 14 cell wet mechanical draft cooling tower equipped with drift eliminators.	EUCOOLINGTWR
FGFUELHTRS	Two (2) natural gas-fired fuel gas heaters. One heater (EUFUELHTR1) is a high pressure heater rated at 20.8 MMBtu/hr and the other heater (EFFUELHTR2), is a low pressure heater rated at 3.8 MMBtu/hr.	EUFUELHTR1, EUFUELHTR2
FGTANKS	Miscellaneous storage tanks.	EUEMFUELTANK, EUCTLUBEOILTANKS, EUSTLUBEOILTANKS, EUSTHYDROOILTANK, EUSTSEALOILTANK, EUFUELOILTANK, EUGCLUBEOILTNKS, EUBFPOILTANKS, EUDLNNH3TANKS
FGSPACEHTRS	Natural gas-fired space heaters and air makeup units with a combined rating of 10 MMBTU/hr or less to provide building heating and ventilation.	EUSPACEHEATERS
FGMACT	All equipment subject to the Industrial Boiler MACT.	EUFUELHTR1, EUFUELHTR2, EUAUXBOILER

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGPROJECT	All equipment associated with the natural gas combined cycle power plant.	EUCTGHRSG1, EUCTGHRSG2, EUAUXBOILER, EUFUELHTR1, EUFUELHTR2, EUEMENGINE, EUFPENGINE, EUCTLUBEOILTANKS, EUSTLUBEOILTANKS, EUSTHYDROOILTANK, EUSTELOILTANK, EUFUELOILTANK, EUGCLUBEOILTNKS, EUBFPOILTANKS, EUEMFUELTANK, EUDLNNH3TANKS, EUCOOLINGTOWER, EUCOLDCLEANER, EUSPACEHEATERS

The following conditions apply to:
FGCTGHRSG

DESCRIPTION: Two 3,658 MMBTU/hr natural gas-fired combustion turbine generators (CTGs) coupled with heat recovery steam generators (HRSGs). The HRSGs are equipped with natural gas-fired duct burners rated at 800 MMBTU/hr to provide heat for additional steam production. The HRSGs are not capable of operating independently from the CTGs.

Emission Units: EUCTGHRSG1, EUCTGHRSG2

POLLUTION CONTROL EQUIPMENT: The CTGs/HRSGs are equipped with a combined oxidation catalyst for the control of CO and VOCs, and selective catalytic reduction (SCR) with dry low NO_x burners for the control of NO_x.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	2.0 ppmvd at 15% O_2 (each unit)[C]	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3, SC VI.10	R 336.2810
2. NO_x	15 ppm at 15% O_2 (each unit)[C]	30-day rolling average as determined each operating day	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3, SC VI.10	40 CFR 60.4320(a)[E], Table 1 of 40 CFR Part 60 Subpart KKKK
3. NO_x	28.90 pph (each unit,)[C]	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3, SC VI.10	R 336.2803, R 336.2804, R 336.2810
4. NO_x	262.4 pph (each unit)[E]	Operating hour during startup or shutdown[E]	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3, SC VI.10	R 336.2803, R 336.2804, R 336.2810
5. CO	0.0045 lb/MMBtu (each unit)[C]	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4, SC VI.10	R 336.2810
6. CO	17.59 pph (each unit)[C]	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4, SC VI.10	R 336.2804, R 336.2810
7. CO	791.5 pph (each unit)[E]	Operating hour during startup or shutdown[E]	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4, SC VI.10	R 336.2804, R 336.2810
8. PM	16 pph (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1331(1)(c), R 336.2810
9. PM	12.2 pph (each unit without duct burner firing)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1331(1)(c), R 336.2810

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
10. PM10	16 pph (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
11. PM10	12.2 pph (each unit without duct burner firing)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
12. PM2.5	16 pph (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
13. PM2.5	12.2 pph (each unit without duct burner firing)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
14. SO_2	4.45 pph (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804
15. SO_2	0.0012 lb/MMBTU[H]	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC VI.10	R 336.2803, R 336.2804, 40 CFR 60.4330
16. VOC	0.0026 lb/MMBtu (each unit)[C]	Hourly, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
17. VOC	0.0013 lb/MMBTU (each unit without duct burner firing)[C]	Hourly, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
18. Sulfuric acid mist (H_2SO_4)	0.0013 lb/MMBtu (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.2810
19. Sulfuric acid mist (H_2SO_4)	5.04 pph (each unit)	Hourly	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.2810
20. GHGs as CO_2e	2,042,773 tpy (each unit)	12-month rolling time period as determined at the end of each calendar month.	EUCTGHRSG1, EUCTGHRSG2	SC VI.5, SC VI.6, SC VI.10	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)
21. CO_2	794 lb/MWh (each unit)	12-operating-month rolling average basis as determined at the end of each operating calendar month.[F]	EUCTGHRSG1, EUCTGHRSG2	SC VI.7, SC VI.8, SC VI.10	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.5520(a)[G], Table 2 of 40 CFR Part 60 Subpart TTTT[G]

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
ppmvd = parts per million by volume at 15 percent oxygen (O_2) and on a dry gas basis. lb/MWh = pound per megawatt hour. Unless otherwise noted, the limits apply at all times, both with the duct burners operating, and without the duct burners operating [C] Does not include startup and shutdown. [D] Table 1 of 40 CFR Part 60 Subpart KKKK also allows 96 ppm at 15 percent O_2 when the turbines are operating at less than 75 percent of peak load and at temperatures less than 0°F. [E] Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2. [F] Compliance is determined monthly at the end of the initial and each subsequent 12-operating-month period. The first month of the initial compliance period is defined in 40 CFR 60.5525(c)(1)(i). [G] The emission limit as required in 40 CFR 60.5520(a) and Table 2 of 40 CFR Part 60 Subpart TTTT is 1,000 lb CO_2/MWh. SC I.21 subsumes the NSPS emission limit. [H] The emission limit as required in 40 CFR 40 CFR 60.4330 is 0.060 lb SO_2/MMBTU. SC I.15 subsumes the NSPS emission limit.					

II. MATERIAL LIMITS

1. The permittee shall only burn pipeline natural gas with a sulfur content of 0.34 grains per 100 scf or less on an annual basis in any unit in FGCTGHRSG. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4365, 40 CFR 60.4330)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Within 180 days of trial operation, the permittee shall submit, implement, and maintain a malfunction abatement plan (MAP) as described in Rule 911(2) for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
   d. Identification of the source, and operating variables and ranges for varying loads, shall be monitored and recorded. The normal operating range of these variables and a description of the method of monitoring shall be 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 90 days after such an event occurs. The permittee shall also amend the MAP within 90 days, if new equipment is installed or upon request from the AQD 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 336.1205(1)(a) & (b), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall not operate any unit in FGCTGHRSG 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, and shall describe the demonstrated percent of design capacity, or demonstrated steady state level. 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, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4333(a))**

3. The total hours for startup and shutdown for each CTG/HRSG train in FGCTGHRSG shall not exceed 500 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall operate and maintain EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG, including associated equipment and monitors, in a manner consistent with safety and good air pollution control practice. **(40 CFR 60.4333(a), 40 CFR 60.5525(b))**

5. The permittee shall prepare a monitoring plan to quantify the hourly CO2 mass emission rate (tons/hr), in accordance with the applicable provisions in 40 CFR 75.53(g) and (h). The electronic portion of the monitoring plan must be submitted using the ECMPS Client Tool and must be in place prior to reporting emissions data and/or the results of monitoring system certification tests under this subpart. The monitoring plan must be updated as necessary. Monitoring plan submittals must be made by the Designated Representative (DR), the Alternate DR, or a delegated agent of the DR (see 40 CFR 60.5555(c)). **(40 CFR 60.5535(a), 40 CFR 60.5535(d)(1))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for each turbine in FGCTGHRSG shall not exceed, on a fuel heat input basis, 3,658 MMBTU/hr per hour and the design heat input capacity for each duct burner in FGCTGHRSG shall not exceed, on a fuel heat input basis, 800 MMBTU per hour. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall not operate EUCTGHRSG1 or EUCTGHRSG2 of FGCTGHRSG unless each respective dry low NO_x burners, selective catalytic reduction, and oxidation catalyst are installed, maintained, and operated in a satisfactory manner, for each CTG/HRSG. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for FGCTGHRSG as required in SC III.1. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the NO_x emissions and oxygen (O_2), or carbon dioxide (CO_2), content of the exhaust gas from both EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4340(b)(1), 40 CFR 60.4345, 40 CFR Part 75)**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the CO emissions and oxygen (O_2), or carbon dioxide (CO_2), content of the exhaust gas from both EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), R 336.2804, R 336.2810, 40 CFR Part 75)**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the natural gas flow rate for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG on a continuous basis. Each device shall be operated in accordance with 40 CFR 60.4345(c). **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4345)**

6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to continuously measure and record the hourly gross electric output from EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.5535(d)(1))**

V. TESTING/SAMPLING

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

1. Within 180 days after initial startup, the permittee shall verify PM, PM10, PM2.5, SO_2, VOC, and H_2SO_4 emission rates from EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG at maximum routine operating conditions, by testing at owner's expense, in accordance with Department requirements. The permittee must complete the required testing once every five years of operation, thereafter. Upon approval of the AQD District Supervisor, subsequent testing may be conducted upon EUCTGHRSG1 or EUCTGHRSG2 as a representative unit. However, 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. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1331(1)(c), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4345)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x and CO emissions and the O_2, or CO_2, emissions from EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG. The permittee shall operate each CEMS to meet the timelines, requirements and reporting detailed in Appendix A and shall use the CEMS data for determining compliance with SC I.1, SC I.2, SC I.3, SC I.4, SC I.5, SC I.6, and SC I.7. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4345)**

3. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average NO_x concentration and mass emission records, and 30-day rolling average NO_x concentration records for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG, as required by SC I.1, SC I.2, SC I.3, and SC I.4. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4345)**

4. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average CO concentration and mass emission records for EUCTGHRSG1, and EUCTGHRSG2 of FGCTGHRSG, as required by SC I.5, SC I.6, and SC I.7. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2804, R 336.2810)**

5. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG 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) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUCTGHRSG1, and EUCTGHRSG2 of FGCTGHRSG, as required by SC I.20. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

7. The permittee shall determine the hourly CO_2 mass emissions and hourly gross energy output for EUCTGHRSG1, and EUCTGHRSG2 of FGCTGHRSG according to 40 CFR 60.5535(b) or (c) and 40 CFR 60.5540(a). The permittee shall keep records of the determined values for hourly CO_2 mass emissions and hourly gross energy output for both EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG. **(40 CFR 60.5535(c), 40 CFR 60.5540(a), 40 CFR 60.5560)**

8. The permittee shall calculate and keep, in a satisfactory manner, records of the monthly and initial calculations, and each subsequent 12-operating-month calculation required by SC I.21 according to the procedures described in 40 CFR 60.5540:
   a. Total data is determined by summing valid operating hours for either CO_2 mass emissions or gross energy output.
   b. To determine compliance with SC I.21, the total CO_2 mass emissions for each unit, EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG, shall be divided by the total gross energy output value of the same unit, EUCTGHRSG1 or EUCTGHRSG2 of FGCTGHRSG.
   c. The final calculated value shall be rounded to two significant figures if the calculated value is less than 1,000 and to three significant figures if the calculated value is greater than 1,000.

   (R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.5540(a) & (b), 40 CFR 60.5560)

9. The permittee shall keep, in a satisfactory manner, a record of the monthly and 12-month rolling total hours of startup and shutdown for EUCTGHRSG1 and EUCTGHRSG2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.2803, R 336.2804, R 336.2810)**

10. 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 FGCTGHRSG. 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 and potential sulfur emissions, as applicable, of the natural gas as required by 40 CFR 60.4365(a) or (b).
    d. Verification of heat input capacity.
    e. Identification, type, and amount of fuel combusted on a calendar month basis.
    f. Gross energy output on a calendar month basis.
    g. Records of the duration of all dates and times of startup and shutdown events.
    h. All calculations necessary to show compliance with the limits contained in this permit.
    i. All records related to, or as required by, the MAP and the startup and shutdown plan.

    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(f). **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.7(f), 40 CFR 60.4345, 40 CFR 60.4365, 40 CFR 60.5525(b), 40 CFR 60.5560)**

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 EUCTGHRSG1 or EUCTGHRSG2. **(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 the notification(s) to the AQD District Supervisor within the time frames specified in 40 CFR 60.7 and 40 CFR 60.19, where applicable. **(40 CFR 60.7(a), 40 CFR 60.5550(a))**

3. The permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c) and with 40 CFR 60.4375 and 40 CFR 4380. The reports shall be postmarked by the 30th day following the end of each 6-month period. **(40 CFR 60.7(c), 40 CFR 60.4375(a), 40 CFR 60.4380, 40 CFR 60.4395)**

4. The permittee shall prepare and submit the notifications specified in 40 CFR 60.19, as applicable, and 40 CFR 75.61, as applicable, for each unit, EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG. **(40 CFR 60.5550(a) & (b))**

5. The permittee shall submit electronic quarterly reports as follows:
   a. After each unit has accumulated the first 12-operating months, the permittee shall submit a report for the calendar quarter that includes the twelfth operating month no later than 30 days after the end of that quarter.
   b. Thereafter, the permittee shall submit a report for each subsequent calendar quarter, no later than 30 days after the end of the quarter.
   c. Each quarterly report shall include the information specified in 40 CFR 60.5555(a)(2).
   d. The final quarterly report of each calendar year shall include the information specified in 40 CFR 60.5555(a)(3).
   e. All electronic reports shall be submitted using the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool provided by the Clean Air Markets Division in the Office of Atmospheric Programs of EPA.

   (40 CFR 60.5555(a) & (b))

6. The permittee shall meet all applicable reporting requirements and submit reports as required under 40 CFR Part 75 Subpart G in accordance with 40 CFR 75.64(a), which is also listed in 40 CFR 60.5555(c)(3)(i). **(40 CFR 60.5555(c)(1) & (3)(i))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCTGHRSG1	276	200	R 336.1225, R 336.2803, R 336.2804
2. SVCTGHRSG2	276	200	R 336.1225, R 336.2803, R 336.2804

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 FGCTGHRSG. **(40 CFR Part 60 Subparts A and KKKK)**

2. 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 TTTT, as they apply to each unit in FGCTGHRSG. **(40 CFR Part 60 Subparts A and TTTT)**

The following conditions apply to:
FGCOOLINGTWR

DESCRIPTION: A 14 cell mechanical draft (wet) cooling tower.

Emission Units: EUCOOLINGTWR

POLLUTION CONTROL EQUIPMENT: Drift eliminators.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	4.03 pph	Hourly	EUCOOLTWR	SC VI.6	R 336.1205(1)(a) & (b), R 336.1331, R 336.2810
2. PM10	0.48 pph	Hourly	EUCOOLTWR	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
3. PM2.5	0.48 pph	Hourly	EUCOOLTWR	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Total Dissolved Solids (TDS) in cooling water	3,000 ppmw	Based on monthly sampling	EUCOOLTWR	SC VI.4	R 336.1205(1)(a) & (b), R 336.2810

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Within 180 days after start-up of the plant, the permittee shall submit, to the AQD District Supervisor, an inspection and maintenance program for FGCOOLINGTWR. The permittee shall comply with the submitted program until the AQD District Supervisor approves the program or approves an amended program. Thereafter, the permittee shall comply with the approved program. At any time, the permittee may submit a modified program to the AQD District Supervisor for review and approval. **(R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the cooling tower (FGCOOLINGTWR) with drift eliminators with a vendor-certified maximum drift rate of 0.0005 percent or less. **(R 336.1910, R 336.2810)**

V. TESTING/SAMPLING

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

1. Within 180 days after start-up of the plant, and every seven years thereafter, the permittee shall determine drift loss from each cooling tower by testing, at owner's expense, in accordance with Department requirements. The permittee shall use the most recent version of the Cooling Technology Institute's Acceptable Test Code (ATC) 140, unless the AQD approves use of an alternate method. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of drift loss includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2803, R336.2804, R 336.2810)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

2. For FGCOOLINGTWR, the permittee shall maintain a record, for the life of the cooling tower, of the vendor's certification required in SC IV.1. **(R 336.2810)**

3. The permittee shall monitor the following for FGCOOLINGTWR:
   a. On a weekly basis, parameters needed to determine the total dissolved solids content of the circulating water.
   b. On a monthly basis, parameters needed to determine the water recirculation rate.
   (R 336.2810)

4. The permittee shall calculate and keep records of the TDS in the circulating water for each cooling tower in FG-COOLTWRS on a monthly basis. **(R 336.1205(1)(a) & (b), R 336.2810)**

5. The permittee shall keep, for FGCOOLINGTWR, a record of the date the two most recent drift loss determinations were conducted. **(R 336.2810)**

6. The permittee shall calculate and keep records of the PM, PM10, and PM2.5 emission rates, as specified in SC I.1 through SC I.3, for each cooling tower in FG-COOLTWRS on a monthly basis.
   (R 336.1205(1)(a) & (b), R 336.2810)

VII. REPORTING

1. The permittee shall submit a complete report of the performance test results to the AQD within 60 days following the last date of the test. **(R 336.2001, R 336.2002, R 336.2003)**

2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification of FGCOOLINGTWR 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 FGCOOLINGTWR. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCOOLTWR1	396 (33 feet)	55	R 336.2803, R 336.2804
2. SVCOOLTWR2	396 (33 feet)	55	R 336.2803, R 336.2804
3. SVCOOLTWR3	396 (33 feet)	55	R 336.2803, R 336.2804
4. SVCOOLTWR4	396 (33 feet)	55	R 336.2803, R 336.2804
5. SVCOOLTWR5	396 (33 feet)	55	R 336.2803, R 336.2804
6. SVCOOLTWR6	396 (33 feet)	55	R 336.2803, R 336.2804
7. SVCOOLTWR7	396 (33 feet)	55	R 336.2803, R 336.2804
8. SVCOOLTWR8	396 (33 feet)	55	R 336.2803, R 336.2804
9. SVCOOLTWR9	396 (33 feet)	55	R 336.2803, R 336.2804
10. SVCOOLTWR10	396 (33 feet)	55	R 336.2803, R 336.2804
11. SVCOOLTWR11	396 (33 feet)	55	R 336.2803, R 336.2804
12. SVCOOLTWR12	396 (33 feet)	55	R 336.2803, R 336.2804
13. SVCOOLTWR13	396 (33 feet)	55	R 336.2803, R 336.2804
14. SVCOOLTWR14	396 (33 feet)	55	R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

NA

The following conditions apply to:
FGFUELHTR

DESCRIPTION: Two (2) natural gas-fired fuel gas heaters. One heater (EUFUELHTR1) is a high pressure heater rated at 20.8 MMBtu/hr and the other heater (EFFUELHTR2), is a low pressure heater rated at 3.8 MMBtu/hr.

Emission Units: EUFUELHTR1, EUFUELHTR2

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	0.75 pph	Hourly	EUFUELHTR1	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
2. NO_x	0.14 pph	Hourly	EUFUELHTR2	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
3. CO	0.77 pph	Hourly	EUFUELHTR1	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
4. CO	0.14 pph	Hourly	EUFUELHTR2	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
5. PM	0.15 pph	Hourly	EUFUELHTR1	SC V.1, SC VI.5, SC VI.7	R 336.1331(1)(c), R 336.2810
6. PM	0.03 pph	Hourly	EUFUELHTR2	SC V.1, SC VI.5, SC VI.7	R 336.1331(1)(c), R 336.2810
7. PM10	0.15 pph	Hourly	EUFUELHTR1	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
8. PM10	0.03 pph	Hourly	EUFUELHTR2	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
9. PM2.5	0.15 pph	Hourly	EUFUELHTR1	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
10. PM2.5	0.03 pph	Hourly	EUFUELHTR2	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
11. VOC	0.17 pph	Hourly	EUFUELHTR1,	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
12. VOC	0.03 pph	Hourly	EUFUELHTR2	SC VI.5, SC VI.7	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
13. GHGs as CO_2e	6,310 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFUELHTR	SC VI.6, SC VI.7	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline natural gas in FGFUELHTR, with a sulfur content of 0.34 gr per 100 scf or less on an annualized basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for EUFUELHTR1 shall not exceed 20.8 MMBTU per hour on a fuel heat input basis. The maximum design heat input capacity for EUFUELHTR2 shall not exceed 3.8 MMBTU per hour on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the hourly and monthly natural gas usage rate for each unit in FGFUELHTR. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.48c(g))**

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 PM emission rates, as an emission factor and pph, from each unit in FGFUELHTR by testing at the owner's expense, in accordance with Department requirements. The permittee shall complete the required testing once every five years, thereafter, unless an alternate testing schedule is approved by the District Supervisor. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A and Part 10 of the Michigan Air Pollution Control Rules. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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 336.1331(1)(c), R 336.2001, R 336.2003, R 336.2004, R 336.2810)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep hourly and monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a clock hour basis for each unit in FGFUELHTR, and shall calculate and keep monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis for each unit in FGFUELHTR and a 12-month rolling time period basis for FGFUELHTR. 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) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.48c(g))**

3. The permittee shall maintain monthly records of the heating value content of the natural gas based on information from the natural gas supplier. The permittee shall make records available to the Department upon request. **(R336.1205(1)(a), 40 CFR 60.40c(a))**

4. The permittee shall calculate and keep records of hourly heat input (MMBtu/hr) for each heater in FGFUELHTR based on the monthly heat value of natural gas and the hourly gas usage to show compliance with SC IV.1. The permittee shall make records available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

5. The permittee shall calculate and keep, in a satisfactory manner, records of hourly NO_x, CO, PM, PM10, PM2.5, and VOC mass emissions for each unit in FGFUELHTR, as required by SC I.1 through SC 1.12. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed using a method approved by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for FGFUELHTR, as required by SC I.13. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

7. 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. 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. Verification of heat input capacity required to show compliance with SC IV.1.
   d. Identification, type and the amounts of fuel combusted in each unit in FGFUELHTR on a calendar month basis.
   e. Sulfur content of the fuel combusted in each unit in FGFUELHTR.
   f. All records required by 40 CFR 60.7 and 60.48c.
   g. All calculations or documents necessary to show compliance with the limits contained in this permit.

   All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.7, 40 CFR Part 60 Subpart Dc)**

VII. REPORTING

1. The permittee shall provide written notification of the date construction commences and actual startup for EUFUELHTR1 in accordance with 40 CFR 60.7 and 60.48c. The notification shall include the design heat input, an identification of the fuels to be combusted, and the annual capacity factor. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.48c)**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFUELHTR1	30	16	R 336.1225, R 336.2803, R 336.2804
2. SVFUELHTR2	18	11	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to EUFUELHTR1. **(40 CFR Part 60 Subparts A & Dc)**

The following conditions apply to:
FGTANKS

DESCRIPTION: Miscellaneous storage tanks.

Emission Units: EUEMFUELTANK, EUCTLUBEOILTANKS, EUSTLUBEOILTANKS EUSTHYDROOILTANK, EUSTSEALOILTANK, EUFUELOILTANK, EUGCLUBEOILTNKS, EUBFPOILTANKS, EUDLNNH3TANKS

POLLUTION CONTROL EQUIPMENT: Conservation vent valves for VOC control on EUFUELOILTANK.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, maintain and operate in a satisfactory manner, conservation vent valves on FGTANKS. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.2810)**

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))**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGSPACEHTRS

DESCRIPTION: Natural gas-fired space heaters and air makeup units with a combined rating of 10 MMBTU/hr or less to provide building heating and ventilation.

Emission Units: EUSPACEHEATERS

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas in FGSPACEHTRS. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum combined design heat input capacity for FGSPACEHTRS shall not exceed 10 MMBTU per hour on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep manufacturer documentation showing the maximum heat input for each space heater in FGSPACEHTRS. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGMACT

DESCRIPTION: All equipment subject to the Industrial Boiler MACT.

Emission Units: EUAUXBOILER, EUFUELHTR1, EUFUELHTR2

POLLUTION CONTROL EQUIPMENT: See each emission unit.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall meet the tune-up work practice standards for EUAUXBOILER, EUFUELHTR1, and EUFUELHTR2 according to 40 CFR 63.7540(a)(10) and (12) as applicable. The procedures described in SC IX.4 a-f shall be followed for all compliance tune ups. **(40 CFR 63.7540(a)(10) & (12), 40 CFR Part 63, Subpart DDDDD Table 3).**

2. If EUAUXBOILER and EUFUELHTR1 are not equipped with a continuous oxygen trim system, the first compliance tune-up must be no later than 13 months after the initial startup of the new affected source. Each subsequent tune-up specified in 40 CFR 63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up, except as allowed in SC III.8. **(40 CFR 63.7500(a)(1), 40 CFR 63.7510(g), 40 CFR 63.7515(d), 63.7540(a)(10), 40 CFR Part 63, Subpart DDDDD Table 3, No. 3)**

3. If EUAUXBOILER and EUFUELHTR1 are equipped with a continuous oxygen trim system that maintains an optimum air to fuel ratio, the first compliance tune-up must be no later than 61 months after the initial startup of the new affected source. Each subsequent tune-up specified in 40 CFR 63.7540(a)(10) & (12) must be conducted no more than 61 months after the previous tune-up, except as allowed in SC III.8. **(40 CFR 63.7500(a)(1), 40 CFR 63.7510(g), 40CFR 63.7515(d), 63.7540(a)(10) & (12), 40 CFR Part 63, Subpart DDDDD Table 3, No. 1)**

4. For EUFUELHTR2, the first compliance tune-up must be no later than 61 months after the initial startup of the new affected source. Each subsequent tune-up specified in 40 CFR 63.7540(a)(10) & (12) must be conducted no more than 61 months after the previous tune-up, except as allowed in SC III.7. **(40 CFR 63.7500(a)(1), 40 CFR 63.7510(g), 40CFR 63.7515(d), 63.7540(a)(10) & (12), 40 CFR Part 63, Subpart DDDDD Table 3, No. 1)**

5. If a continuous Oxygen trim system is utilized on EUAUXBOILER and FGFUELHTR1 to reduce the tune-up frequency to once every five years (61 months), the oxygen level must be set no lower than the oxygen concentration measured during the most recent tune-up. **(40 CFR 63.7540(a)(12))**

6. If the unit is not operating on the required date for a tune-up, the permittee must conduct the tune-up within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**

7. The permittee may obtain approval from EPA to use an alternative to the work practice standards noted in SC III.1. **(40 CFR 63.7500(b)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. 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 offsite for the remaining 3 years. **(40 CFR 63.7560(a), (b), & (c))**

VII. REPORTING

1. The permittee shall submit an Initial Notification not later than 15 days after the actual date of startup of each affected source, as specified in 40 CFR 63.9(b)(4) and (5). **(40 CFR 63.7545(c))**

2. As specified in 40 CFR 63.7550(b)(1) through (4), the permittee must submit a one or 5-year compliance report based on a requirement to conduct a tune-up every one or 5 years, as applicable. The first compliance report must cover the period beginning on the date of startup and ending within one or 5 years of the initial startup, depending on the required tune-up frequency. The first one or 5-year compliance report must be postmarked or submitted no later than March 15 after the applicable one or 5-year period. Each subsequent one or 5-year compliance report must cover the one or 5-year periods from January 1 to December 31 and must be postmarked or submitted no later than March 15 following the applicable one or 5-year period. **(40 CFR 63.7550(b))**

3. The permittee must include the following information in the compliance report specified in SC VII.3. **(40 CFR 63.7550(a) and (c)):**
   a. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
   b. Process unit information for each boiler, including boiler identification, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
   c. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
   d. Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
   e. 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)**

4. 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 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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the applicable provisions of 40 CFR 63 Subpart DDDDD upon the startup of each heater as defined in § 63.7575. **(40 CFR 63.7495(a))**

2. The permittee shall comply with the applicable work practice standards in 40 CFR Part 63 Subpart DDDDD. **(40 CFR 63.7505(a))**

3. The permittee must demonstrate continuous compliance with the tune-up requirement by completing the following: **(40 CFR 63.7540(a))**
   a. Inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune up or delay the burner inspection until the next scheduled unit shutdown). 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))**
   b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern.
   c. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
   d. 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). **(40 CFR 63.7540(a)(10)(iii))**
   e. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
   f. 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))**
   g. Maintain on-site and submit, if requested by the Administrator, the most recent periodic report containing the information as listed below. **(40 CFR 63.7540(a)(10)(vi))**
      i. 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))**
      ii. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
      iii. 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))**
   h. If the heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, the permittee may delay the burner inspection specified in SC IX.4.a 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))**

The following conditions apply to:
FGPROJECT

DESCRIPTION: All equipment associated with the natural gas combined cycle power plant.

Emission Units: EUCTGHRSG1, EUCTGHRSG2, EUAUXBOILER, EUFUELHTR1, EUFUELHTR2, EUEMENGINE, EUFPENGINE, EUCTLUBEOILTANKS, EUSTLUBEOILTANKS, EUSTHYDROOILTANK, EUSTSEALOILTANK, EUFUELOILTANK, EUGCLUBEOILTNKS, EUBFPOILTANKS, EUEMFUELTANK, EUDLNNH3TANKS, EUSPACEHEATERS, EUCOOLINGTOWER, EUCOLDCLEANERS,

POLLUTION CONTROL EQUIPMENT: See each emission unit.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. SO_2	39.42 tpy	12 month rolling time period as determined at the end of each calendar month	FGPROJECT	SC VI.1, SC VI.2, SC VI.3, SC VI.4, SC VI.5, SC VI.6	R 336.1205(a) & (b), R 336.2902(2)(d)

II. MATERIAL LIMITS

1. The permittee shall only burn pipeline natural gas with a sulfur content of 0.34 grains per 100 scf or less on an annual basis in any unit which combusts natural gas in FGPROJECT. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

2. The permittee shall burn only diesel fuel in FGPROJECT with the maximum sulfur content of 15 ppm (0.0015 percent) by weight for any emission unit which combusts diesel fuel. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

3. The natural gas usage for FGPROJECT shall not exceed 81,158 million cubic feet per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

4. The diesel fuel usage for FGPROJECT shall not exceed 35,731 gallons per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. The permittee shall monitor the sulfur content in the natural gas at a minimum of once per month. Monitoring will be done using fuel sample test data using ASTM standards, or an alternative method approved by the AQD District Supervisor. Sulfur content monitoring will be used to determine compliance with Special Conditions I.1. and II.1. **(R 336.1205(1)(a) & (b))**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

2. The permittee shall keep, in a satisfactory manner, records indicating the monthly sulfur content of the natural gas to meet SC II.1 for FGPROJECT on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

3. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data for each delivery of diesel fuel oil combusted in FGPROJECT, to meet SC II.2. The certification or test data shall include the name of the oil supplier or laboratory and the sulfur content of the fuel oil. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

4. The permittee shall calculate and keep, in a satisfactory manner records of monthly and 12-month rolling total SO_2 mass (tons) emissions for FGPROJECT. The calculations shall be performed using the most recent natural gas sulfur content sampling results as specified in FGPROJECT SC V.1 using a calculation method as approved by the AQD District Supervisor. All records and calculations shall be kept on file and made available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

5. The permittee shall monitor, record, and keep, in a satisfactory manner, the natural gas usage for FGPROJECT on a monthly basis. The permittee shall calculate and keep, in a satisfactory manner, records of the cubic feet of natural gas fired in FGPROJECT on a 12-month rolling basis. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

6. The permittee shall monitor, record, and keep, in a satisfactory manner, the diesel fuel usage for FGPROJECT on a monthly basis. The permittee shall calculate and keep, in a satisfactory manner, records of the gallons of diesel fuel fired in FGPROJECT on a 12-month rolling basis. **(R 336.1205(1)(a) & (b), R 336.2902(2)(d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

APPENDIX A
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of initial start-up, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.

2. Within 150 calendar days after commencement of initial start-up, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.

3. Within 180 calendar days after commencement of initial start-up, the permittee shall complete the installation and testing of the CEMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS
NO_x	2
O_2 & CO_2	3
CO	4

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and the PS, listed in the table above, of Appendix B to 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CEMS downtime and corrective action.
   c) A report of the total operating time of EUCTGHRSG1, or EUCTGHRSG2 during the reporting period.
   d) A report of any periods that the CEMS exceeds the instrument range.
   e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

APPENDIX B
CO_2e Emission Calculations

For EUAUXBOILER and FGFUELHTR:

CO_2e emissions (tons/month) = [(Fuel Usage (MMscf/month) x Higher Heating Value (MMBTU/MMscf)) x (CO_2 EF (kg/MMBTU) x CO_2 GWP + CH_4 EF (kg/MMBTU) x CH_4 GWP + N_2O EF (kg/MMBTU) x N_2O GWP)] x 2.20462 (lb/kg) x 1/2000 (ton/lb)

Where:
Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meter
Heat Content (MMBTU/MMscf) = standard value in AP-42 for natural gas or supplier data, if available
CO_2 EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-1 (January 1, 2014)
CH_4 EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
N_2O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
CO_2 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
CH_4 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
N_2O GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

For EUEMENGINE and EUFPENGINE:

CO_2e emissions (tons/month) = [(Fuel Usage (gallons/month) x Higher Heating Value (MMBTU/gallons)) x (CO_2 EF (kg/MMBTU) x CO_2 GWP + CH_4 EF (kg/MMBTU) x CH_4 GWP + N_2O EF (kg/MMBTU) x N_2O GWP)] x 1/2000 (ton/lb)

Where:
Fuel Usage (gallons/month) = monthly fuel usage data
Heat Content (MMBTU/gallons) = standard value in AP-42 for diesel fuel or supplier data, if available
CO_2 EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-1 (January 1, 2014)
CH_4 EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
N_2O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
CO_2 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
CH_4 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
N_2O GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

For EUCTGHRSG1 and EUCTGHRSG2:

If not utilizing a CO_2 CEMS:

CO_2 emissions (tons/month) = CO_2 EF (scf/MMBTU) x Fuel Usage (MMscf/month) x Higher Heating Value (MMBTU/MMscf) x CO_2 MW (lb/lb-mol) x CO_2 GWP / molar volume (scf/lb-mol) x 1/2000 (ton/lb)

Where:
CO_2 EF (scf/MMBTU) = carbon based F-factor for natural gas according to the methodology from equation G-4 of Appendix G to Part 75
Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meter
Heat Content (MMBTU/MMscf) = standard value in AP-42 for natural gas or supplier data, if available
CO_2 MW (lb/lb-mol) = 44 [C = 6; O = 8; 6 + (8 x 2) = 22]
CO_2 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
Molar volume (scf/lb-mol) = 385

CO_2e emissions (tons/month) = CO_2 emissions (tons/month) + [((Fuel Usage (MMscf/month) x Higher Heating Value (MMBTU/MMscf)) x (CH_4 EF (kg/MMBTU) x CH_4 GWP + N_2O EF (kg/MMBTU) x N_2O GWP)) x 2.20462 (lb/kg) x 1/2000 (ton/lb)]

Where:
Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meter
Heat Content (MMBTU/MMscf) = standard value in AP-42 for natural gas or supplier data, if available
CH_4 EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
N_2O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)
CH_4 GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)
N_2O GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)