

PERMIT TO INSTALL

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms.....	2
General Conditions.....	3
Special Conditions.....	5
Emission Unit Summary Table.....	5
Special Conditions for EUAUXBOILER.....	6
Special Conditions for EUENGINE.....	11
Special Conditions for EUPENGINE.....	16
Special Conditions for EUCOLDCLEANER.....	21
Flexible Group Summary Table.....	23
Special Conditions for FGCTGHRSG.....	24
Special Conditions for FGFUELHTR.....	31
Special Conditions for FGFUEL TANK.....	34
Special Conditions for FGSPACEHTRS.....	35
Appendix A.....	36
Appendix B.....	37

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

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUCTGHRSG1	A 3,421 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 740 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 dry low NO _x burner (DLNB), selective catalytic reduction (SCR), and an oxidation catalyst.	FGCTGHRSG
EUCTGHRSG2	A 3,421 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 740 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 dry low NO _x burner (DLNB), selective catalytic reduction (SCR), and an oxidation catalyst.	FGCTGHRSG
EUAUXBOILER	A natural gas-fired auxiliary boiler, rated at 182 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).	NA
EUFUELHTR1	A natural gas-fired 27 MMBTU/hr heat input fuel gas dew point heater for superheating the natural gas fuel above the hydrocarbon dew point temperature.	FGFUELHTR
EUFUELHTR2	A natural gas-fired 27 MMBTU/hr heat input fuel gas dew point heater for superheating the natural gas fuel above the hydrocarbon dew point temperature.	FGFUELHTR
EUENGINE	A 2,922 HP (2,179 kilowatts (kW)) diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder.	NA
EUFENGINE	A 260 brake HP diesel-fueled emergency fire pump engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder.	NA
EUENGINEFUEL TANK	A 3,500 gallon closed-roof tank for purposes of storing ultra-low sulfur diesel fuel. This tank services the diesel-fueled emergency engine.	FGFUEL TANK
EUFENGINEFUEL TANK	A 500 gallon closed-roof tank for purposes of storing ultra-low sulfur diesel fuel. This tank services the diesel-fueled emergency fire pump engine.	FGFUEL TANK
EUCOLD CLEANER	New closed-cover cold cleaner.	NA
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

The following conditions apply to:
EUAUXBOILER

DESCRIPTION: A natural gas-fired auxiliary boiler, rated at 182 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: NA

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	0.04 lb/MMBTU	30-day rolling average time period	EUAUXBOILER	SC VI.2, SC VI.3, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.44b(i) ^A , 40 CFR 60.44b(l)(1) ^A
2. CO	0.04 lb/MMBTU	Test Protocol*	EUAUXBOILER	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
3. PM	0.005 lb/MMBTU	Test Protocol*	EUAUXBOILER	SC V.1, SC VI.10	R 336.1331(1)(c), R 336.2810
4. PM10	1.36 pph	Hourly, Test Protocol*	EUAUXBOILER	SC V.2, SC VI.7, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	1.36 pph	Hourly, Test Protocol*	EUAUXBOILER	SC V.2, SC VI.7, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. SO ₂	0.6 lb/MMscf	Based upon fuel receipt records.	EUAUXBOILER	SC VI.6, SC VI.8, SC VI.10	R 336.2803, R 336.2804, R 336.2810
7. VOC	0.004 lb/MMBTU	Test Protocol*	EUAUXBOILER	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
8. GHGs as CO ₂ e	93,346 tpy	12-month rolling time period as determined at the end of each calendar month.	EUAUXBOILER	SC VI.9, SC VI.10	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

* Test Protocol shall specify averaging time.

^A The emission limit as required in 40 CFR 60.44b(l)(1) is 0.20 lb/MMBTU at a high heat release rate. SC I.1 subsumes the NSPS emission limit.

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas in EUAUXBOILER, with a sulfur content of 2,000 gr per MMscf or less. **(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 Subpart Db, 40 CFR 63.11195(e))**

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 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. **(R 336.1911, R 336.1912, R 336.2810, 40 CFR 52.21(j))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for EUAUXBOILER shall not exceed 182 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 Db)**
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), 40 CFR 60.49b(d))**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the NO_x emissions, and oxygen (O₂), or carbon dioxide (CO₂), content of the exhaust gas from EUAUXBOILER 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 60.48b(b))**

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 CO, PM, and VOCs emission rates from EUAUXBOILER, at maximum routine operation, 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 336.1331(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 factors from EUAUXBOILER by testing at owner's expense, in accordance with Department requirements. The permittee shall use the emission factors to demonstrate hourly compliance with SC I.4 and SC I.5. All tests shall comply with the following:
 - a. 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.
 - b. 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 336.2001, 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), 40 CFR 60.44b(i), 40 CFR 60.49b(d), (g), & (w))**
2. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x emissions and the O₂, or CO₂, emissions from EUAUXBOILER. The permittee shall operate each Continuous Emission Monitoring System (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. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.48b(b))**
3. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average NO_x emission rate records for EUAUXBOILER, as required by SC I.1. 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 60.44b(i), 40 CFR 60.49b(g))**
4. 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 bases 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 60.49b(d))**
5. The permittee shall calculate and keep, in a satisfactory manner, records of the monthly and 12-month rolling annual capacity factor for natural gas for EUAUXBOILER. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.49b(d))**

6. The permittee shall keep, in a satisfactory manner, records of the fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the natural gas meets the definition of natural gas defined in 40 CFR 60.41b and records indicating the sulfur content of the natural gas for EUAUXBOILER on file at the facility 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 Part 60 Subpart Db, 40 CFR 60.49b(r)(1))**
7. The permittee shall calculate and keep, in a satisfactory manner, records of hourly PM10 and PM2.5 mass emissions for EUAUXBOILER, 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)**
8. The permittee shall calculate and keep, in a satisfactory manner, records validating the SO₂ emission factor in SC I.6 based upon the most recent fuel receipts, required by SC VI.6, 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 336.2803, R 336.2804, R 336.2810)**
9. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO₂e mass emissions for EUAUXBOILER, as required by SC I.8. 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))**
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. 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 60.49b.
 - 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 Db)**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 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. **(40 CFR 60.7(a))**
2. The permittee shall provide written notification of the actual date of initial startup to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.49b(a). The notification 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 this notification to the AQD District Supervisor within 15 days after initial startup occurs. **(R 336.1201(7)(a), 40 CFR 60.7(a)(3), 40 CFR 60.49b(a))**

3. The permittee shall submit all reports required by the federal Standards of Performance for New Stationary Sources, 40 CFR 60.49b, as applicable. The permittee shall submit these reports to the AQD District Supervisor within the time frames specified in 40 CFR 60.49b and/or 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.49b(b), (h) & (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. SVAUXBOILER	48	85	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 Db, as they apply to EUAUXBOILER. **(40 CFR Part 60 Subparts A & Db)**

The following conditions apply to:
EUENGINE

DESCRIPTION: A 2,922 HP (2,179 kilowatts (kW)) diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NMHC+NO _x	6.4 g/kW-hr ^B	Test Protocol*	EUENGINE	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	Test Protocol*	EUENGINE	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	Test Protocol*	EUENGINE	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	1.58 pph	Hourly	EUENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	1.58 pph	Hourly	EUENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. VOC	1.87 pph	Test Protocol*	EUENGINE	SC V.2, SC VI.4	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
7. GHGs as CO ₂ e	928 tpy	12-month rolling time period as determined at the end of each calendar month	EUENGINE	SC VI.7	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

* Test Protocol shall specify averaging time.

^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 EUENGINE 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), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUENGINE for more than 4 hours 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 EUENGINE 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. EUENGINE 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 the permittee purchased 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 EUENGINE:
 - 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 EUENGINE.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine. **(40 CFR 60.4211(a) & (c), R 336.2810, 40 CFR 52.21(j))**

4. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EUENGINE 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 EUENGINE 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 EUENGINE shall not exceed a nameplate capacity of 2,179 kW (2,922 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))**
3. The permittee shall monitor, in a satisfactory manner, the diesel fuel usage for EUENGINE 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 EUENGINE 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 EUENGINE 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 EUENGINE:
 - a. For certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b. For uncertified 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. **(40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUENGINE:
 - a. For 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. For uncertified 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. **(40 CFR 60.4211)**

4. The permittee shall keep, in a satisfactory manner, test reports for EUENGINE required by SC V.2 on file at the facility. The permittee shall make the records available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**
5. The permittee shall keep, in a satisfactory manner, records of the diesel fuel usage for EUENGINE 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 EUENGINE, 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 EUENGINE, 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))**
8. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUENGINE, 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 EUENGINE, 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 EUENGINE, 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), R 336.2803, R 336.2804, R 336.2810, 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 EUENGINE. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUENGINE 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. SVENGINE	21.6	40	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 EUENGINE. **(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 EUENGINE, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

The following conditions apply to:
EUFENGINE

DESCRIPTION: A 260 brake HP diesel-fueled emergency fire pump engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NMHC+NO _x	3.0 g/bhp-hr ^B	Test Protocol*	EUFENGINE	SC V.1, SC VI.2, SC VI.3	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	2.6 g/bhp-hr ^B	Test Protocol*	EUFENGINE	SC V.1, SC VI.2, SC VI.3	R 336.2804, R 336.2810, 40 CFR 60.4205(c), Table 4 of 40 CFR Part 60 Subpart IIII
3. PM	0.15 g/bhp-hr ^B	Test Protocol*	EUFENGINE	SC V.1, SC VI.2, SC VI.3	R 336.1331(1)(c), R 336.2810, 40 CFR 60.4205(c), Table 4 of 40 CFR Part 60 Subpart IIII
4. PM10	0.57 pph	Hourly	EUFENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.57 pph	Hourly	EUFENGINE	SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. VOC	0.64 pph	Test Protocol*	EUFENGINE	SC V.2, SC VI.4	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
7. GHGs as CO ₂ e	13.58 tpy	12-month rolling time period as determined at the end of each calendar month	EUFENGINE	SC VI.7	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

* Test Protocol shall specify averaging time.

^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 EUPENGINE 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), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUPENGINE for more than 1 hour per day, except during emergency conditions and required stack testing in SC V.1 and SC V.2, 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 hour 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 EUPENGINE 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. EUPENGINE 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 the permittee purchased 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 EUPENGINE:
 - 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 EUPENGINE.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine. **(40 CFR 60.4211(a) & (c), R 336.2810, 40 CFR 52.21(j))**

4. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EUPENGINE 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 EUPENGINE 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 input of EUPENGINE shall not exceed a nameplate capacity of 260 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 EUPENGINE 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 EUPENGINE 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)**

2. Within 180 days after commencement of trial operation, the permittee shall verify VOC mass emissions from EUPENGINE 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 EUPENGINE:
 - a. For certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b. For uncertified 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. **(40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUPENGINE:
 - a. For 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. For uncertified 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. **(40 CFR 60.4211)**

4. The permittee shall keep, in a satisfactory manner, test reports for EUPENGINE required by SC V.2 on file at the facility. The permittee shall make the records available to the Department upon request. **(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 EUPENGINE 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 EUPENGINE, 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 EUPENGINE, 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))**
8. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUPENGINE, 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 EUPENGINE, 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 EUPENGINE, 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), R 336.2803, R 336.2804, R 336.2810, 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 EUPENGINE. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUPENGINE 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	10	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 EUPENGINE. **(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 EUPENGINE, 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: NA

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:
- 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.
 - The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0.
 - 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))**

- 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)**
- The permittee shall maintain the following information on file for each cold cleaner:
 - A serial number, model number, or other unique identifier for each cold cleaner.
 - The date the unit was installed, manufactured or that it commenced operation.
 - The air/vapor interface area.
 - The Reid vapor pressure of each solvent used.
 - If applicable, the option chosen to comply with SC IV.5.**(R 336.1225, R 336.1702(a), R 336.1707(2))**
- 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))**
- 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 (2) combined-cycle natural gas-fired CTG with HRSG in a 2x1 configuration with a steam turbine generator. Each CTG/HRSG is equipped with dry low NO _x burners (DLNB), selective catalytic reduction (SCR), and an oxidation catalyst.	EUCTGHRSG1, EUCTGHRSG2
FGFUELHTR	Two (2) natural gas-fired fuel gas dew point heaters.	EUFUELHTR1, EUFUELHTR2
FGFUELTANK	Two (2) closed-roof tanks for purposes of storing ultra-low sulfur diesel fuel.	EUEMFUELTANK, EUFPFUELTANK
FGSPACEHTRS	Up to 44 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.	NA

The following conditions apply to:
FGCTGHRSG

DESCRIPTION: Two (2) combined-cycle natural gas-fired CTG with HRSG in a 2x1 configuration with a steam turbine generator. Each CTG/HRSG is equipped with dry low NO_x burners (DLNB), selective catalytic reduction (SCR), and an oxidation catalyst.

Emission Units: EUCTGHRSG1, EUCTGHRSG2

POLLUTION CONTROL EQUIPMENT: DLNB and SCR for NO_x control for each CTG/HRSG unit. An oxidation catalyst for CO and VOC control for each CTG/HRSG unit.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO _x	3 ppmvd at 15% O ₂ (each unit)	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3	R 336.1205(1)(a) & (b), R 336.2810
2. NO _x	15 ppm at 15% O ₂ (each unit) ^D	30-day rolling average as determined each operating day	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3	40 CFR 60.4320(a) ^E , Table 1 of 40 CFR Part 60 Subpart KKKK
3. NO _x	38.1 pph (each unit) ^D	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
4. NO _x	286 pph (each unit) ^F	Operating hour during startup or shutdown ^F	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.3, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. CO	4 ppmvd at 15% O ₂ (each unit) ^D	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4	R 336.1205(1)(a) & (b), R 336.2810
6. CO	24.7 pph (each unit) ^D	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
7. CO	3,537 pph (each unit) ^F	Operating hour during startup or shutdown ^F	EUCTGHRSG1, EUCTGHRSG2	SC VI.2, SC VI.4, SC VI.10	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
8. PM	9.9 pph (each unit)	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1331(1)(c), R 336.2810
9. PM10	19.8 pph (each unit)	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
10. PM2.5	19.8 pph (each unit)	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
11. SO ₂	11.7 pph (each unit)	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
12. SO ₂	0.060 lb/MMBTU	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC VI.10	40 CFR 60.4330
13. VOC	4 ppmvd at 15% O ₂ (each unit) ^D	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
14. Sulfuric acid mist (H ₂ SO ₄)	4.6 pph (each unit)	Test Protocol*	EUCTGHRSG1, EUCTGHRSG2	SC V.1, SC VI.10	R 336.1205(1)(a) & (b), R 336.2810
15. GHGs as CO ₂ e	2,097,001 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)
16. CO ₂	802 lb/MWh	12-operating- month rolling average basis as determined at the end of each operating calendar month. ^G	EUCTGHRSG1, EUCTGHRSG2	SC VI.6, SC VI.10	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.5520(a) ^H , Table 2 of 40 CFR Part 60 Subpart TTTT ^H

ppmvd = parts per million by volume at 15 percent oxygen (O₂) and on a dry gas basis

lb/MWh = pound per megawatt hour

* Test Protocol shall specify averaging time.

^D Does not include startup and shutdown.

^E Table 1 of 40 CFR Part 60 Subpart KKKK also allows 96 ppm at 15 percent O₂ when the turbines are operating at less than 75 percent of peak load and at temperatures less than 0°F.

^F 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.

^G 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).

^H 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 CO₂/MWh. SC I.14 subsumes the NSPS emission limit.

II. MATERIAL LIMITS

1. The permittee shall only burn pipeline quality natural gas in any unit in FGCTGHRSG. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4330)**
2. The pipeline quality natural gas shall not have a total sulfur content in excess of 20 gr of sulfur per 100 scf. **(40 CFR 60.4365)**

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, 3,421 MMBTU per hour and the design heat input capacity for each duct burner in FGCTGHRSG shall not exceed, on a fuel heat input basis, 740 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 (O₂), or carbon dioxide (CO₂), 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 (O₂), or carbon dioxide (CO₂), 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 a device to monitor and record the natural gas flow rate for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG on a continuous basis. The 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 a sufficient number of watt meters 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 commencement of initial startup, the permittee shall verify PM, PM₁₀, PM_{2.5}, SO₂, VOC, and H₂SO₄ 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 336.2810, 40 CFR 52.21(j))**
2. The permittee shall continuously monitor and record, in a satisfactory manner, the NO_x and CO emissions and the O₂, or CO₂, 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 CO₂e mass emissions for EUCTGHRSG1 and EUCTGHRSG2 of FGCTGHRSG, as required by SC I.15. 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 CO₂ mass emissions and hourly gross energy output for both 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 CO₂ 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 and each subsequent 12-operating-month calculation required by SC I.16 according to the procedures described in 40 CFR 60.5540:
 - a. Total data is determined by summing valid operating hours for either CO₂ mass emissions or gross energy output.
 - b. To determine compliance with SC I.16, the total CO₂ 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 each CTG/HRSG train in FGCTGHRSG. 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. All records required by 40 CFR 60.7;
 - h. Records of the duration of all dates and times of startup and shutdown events;
 - i. All calculations necessary to show compliance with the limits contained in this permit;
 - j. 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	264	170	R 336.1225, R 336.2803, R 336.2804
2. SVCTGHRSG2	264	170	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:
FGFUELHTR

DESCRIPTION: Two (2) natural gas-fired fuel gas dew point heaters.

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	2.65 pph (each unit)	Hourly	EUFUELHTR1, EUFUELHTR2	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
2. CO	2.22 pph (each unit)	Hourly	EUFUELHTR1, EUFUELHTR2	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
3. PM	0.002 lb/MMBTU (each unit)	Test Protocol*	EUFUELHTR1, EUFUELHTR2	SC V.1, SC VI.5, SC VI.7	R 336.1331(1)(c), R 336.2810
4. PM10	0.20 pph (each unit)	Hourly	EUFUELHTR1, EUFUELHTR2	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.20 pph (each unit)	Hourly	EUFUELHTR1, EUFUELHTR2	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. VOC	0.15 pph (each unit)	Hourly	EUFUELHTR1, EUFUELHTR2	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
7. GHGs as CO _{2e}	13,848 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)

* Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

- The permittee shall burn only pipeline quality natural gas in either unit of FGFUELHTR, with a sulfur content of 2,000 gr per MMscf or less. **(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 Subpart Dc, 40 CFR 63.11195(e))**

III. PROCESS/OPERATIONAL RESTRICTIONS

- The permittee shall not operate EUFUELHTR1 and EUFUELHTR2 at the same time, with the exception of startup/shutdown or other unit transition periods. The total combined heat input shall not exceed 27 MMBTU/hr. **(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))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for each unit in FGFUELHTR shall not exceed 27 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 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 from a representative unit of FGFUELHTR, at maximum routine operation, 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. The permittee shall not test the same representative unit in subsequent tests unless approved or requested by the AQD District Supervisor. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331(1)(c), 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), 40 CFR 60.44b(i), 40 CFR 60.48c(j) & (g))**
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 keep a log of operating hours when both units in FGFUELHTR are operating and calculate and keep, in a satisfactory manner, records of the total hourly natural gas usage in MMBTU per hour for those 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))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of hourly NO_x, CO, PM₁₀, PM_{2.5}, and VOC mass emissions for each unit in FGFUELHTR, as required by SC I.1, SC I.2, SC I.4, SC I.5, and 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 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

5. The permittee shall keep, in a satisfactory manner, test reports for any unit in FGFUELHTR required by SC V.1 on file at the facility. The permittee shall make the records available to the Department upon request. **(R 336.1331(1)(c), R 336.2001, R 336.2003, R 336.2004, R 336.2810)**
6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO₂e mass emissions for FGFUELHTR, 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))**
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 of each unit in FGFUELHTR, 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 for each unit in FGFUELHTR. 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. SVFUELHTR	19	30	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 each unit in FGFUELHTR. **(40 CFR Part 60 Subparts A & Dc)**

The following conditions apply to:
FGFUELTANK

DESCRIPTION: Two (2) closed-roof tanks for purposes of storing ultra-low sulfur diesel fuel.

Emission Units: EUEMFUELTANK, EUFPFUELTANK

POLLUTION CONTROL EQUIPMENT: Conservation vent valves for VOC control.

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 FGFUELTANK. (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: Up to 44 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: NA

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

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 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

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 EUAUXBOILER, 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
CO₂e Emission Calculations

For EUAUXBOILER and FGFUELHTR:

$$\text{CO}_2\text{e emissions (tons/month)} = [(\text{Fuel Usage (MMscf/month)} \times \text{Higher Heating Value (MMBTU/MMscf)}) \times (\text{CO}_2 \text{ EF (kg/MMBTU)} \times \text{CO}_2 \text{ GWP} + \text{CH}_4 \text{ EF (kg/MMBTU)} \times \text{CH}_4 \text{ GWP} + \text{N}_2\text{O EF (kg/MMBTU)} \times \text{N}_2\text{O GWP})] \times 2.20462 \text{ (lb/kg)} \times 1/2000 \text{ (ton/lb)}$$

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

CO₂ EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-1 (January 1, 2014)

CH₄ EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

N₂O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

CO₂ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

CH₄ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

N₂O GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

For EUENGINE and EUPENGINE:

$$\text{CO}_2\text{e emissions (tons/month)} = [(\text{Fuel Usage (gallons/month)} \times \text{Higher Heating Value (MMBTU/gallons)}) \times (\text{CO}_2 \text{ EF (kg/MMBTU)} \times \text{CO}_2 \text{ GWP} + \text{CH}_4 \text{ EF (kg/MMBTU)} \times \text{CH}_4 \text{ GWP} + \text{N}_2\text{O EF (kg/MMBTU)} \times \text{N}_2\text{O GWP})] \times 1/2000 \text{ (ton/lb)}$$

Where:

Fuel Usage (gallons/month) = monthly fuel usage data

Heat Content (MMBTU/gallons) = standard value in AP-42 for natural gas or supplier data, if available

CO₂ EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-1 (January 1, 2014)

CH₄ EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

N₂O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

CO₂ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

CH₄ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

N₂O 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 CO₂ CEMS:

$$\text{CO}_2 \text{ emissions (tons/month)} = \text{CO}_2 \text{ EF (scf/MMBTU)} \times \text{Fuel Usage (MMscf/month)} \times \text{Higher Heating Value (MMBTU/MMscf)} \times \text{CO}_2 \text{ MW (lb/lb-mol)} \times \text{CO}_2 \text{ GWP} / \text{molar volume (scf/lb-mol)}$$

Where:

CO₂ 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

CO₂ MW (lb/lb-mol) = 44 [C = 6; O = 8; 6 + (8 x 2) = 22]

CO₂ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

Molar volume (scf/lb-mol) = 385

$$\text{CO}_2\text{e emissions (tons/month)} = \text{CO}_2 \text{ emissions (tons/month)} + [(\text{Fuel Usage (MMscf/month)} \times \text{Higher Heating Value (MMBTU/MMscf)}) \times (\text{CH}_4 \text{ EF (kg/MMBTU)} \times \text{CH}_4 \text{ GWP} + \text{N}_2\text{O EF (kg/MMBTU)} \times \text{N}_2\text{O GWP})] \times 2.20462 \text{ (lb/kg)} \times 1/2000 \text{ (ton/lb)}$$

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

CH₄ EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

N₂O EF (kg/MMBTU) = emission factors from 40 CFR Part 98, Subpart C, Table C-2 (January 1, 2014)

CH₄ GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)

N₂O GWP = global warming potential from 40 CFR Part 98, Subpart A, Table A-1 (January 1, 2014)