

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

January 11, 2022

**PERMIT TO INSTALL**  
74-18B

**ISSUED TO**  
Lansing Board of Water & Light

**LOCATED AT**  
3725 South Canal Road  
Delta Energy Plant  
Lansing, Michigan 48917

**IN THE COUNTY OF**  
Eaton

**STATE REGISTRATION NUMBER**  
B4001

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>November 4, 2021</b>	
DATE PERMIT TO INSTALL APPROVED: <b>January 11, 2022</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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## COMMON ACRONYMS

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

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

### POLLUTANT / MEASUREMENT ABBREVIATIONS

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

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

## EMISSION UNIT SPECIAL CONDITIONS

### EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUCTGHRSG2	A nominally rated 667 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 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NO <sub>x</sub> burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst.	5/27/2021 (HRSG Bypass mode) and 11/1/2021 (combined cycle mode)	FGCTGHRSG
EUCTGHRSG3	A nominally rated 667 MMBTU/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	5/27/2021 (HRSG Bypass mode) and 10/31/2021 (combined cycle mode)	FGCTGHRSG
EUCTGSC1	A nominally rated 667 MMBTU/hr natural gas-fired simple cycle CTG. The CTG will utilize DLNB and good combustion practices.	5/27/2021	NA
EUAUXBOILER	A natural gas-fired auxiliary boiler rated at less than or equal to 50 MMBTU/hr will facilitate startup of the CTG/HRSG trains and provide steam to the steam turbine generator (STG) seals. The boiler will also provide warming steam to the HRSG, and other related services. The boiler will not produce high pressure steam for use in electric generation. The auxiliary boiler will utilize low NO <sub>x</sub> burners (LNB) and/or flue gas recirculation (FGR).	10/6/2021	FGBOILERMACT

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EUEMGD	A 2,206 HP diesel-fueled emergency engine manufactured after 2006 serving a 1,500 kW generator with associated fuel oil tank. The engine generator is used to charge the batteries in the uninterruptible power supply battery system and to facilitate operations during idling of the plant for routine maintenance checks and readiness testing.	4/21/2021	NA
EUFPRICE	A 315 HP diesel-fueled emergency engine manufactured after 2009, with a heat input of 2.5 MMBTU/hr and associated fuel oil tank. The engine powers a fire pump used for fire suppression during an emergency.	4/6/2021	NA
EUCOOLTWR	A five-cell, wet mechanical draft cooling tower. Particulate in water droplets will be controlled with drift eliminators.	11/9/2021	NA
EUSPACEHTR1	Backup natural gas-fired space heater rated at 3.1 MMBTU/hr heat input.	11/10/2021	FGSPACEHTRS
EUSPACEHTR2	Backup natural gas-fired space heater rated at 3.1 MMBTU/hr heat input.	11/10/2021	FGSPACEHTRS
EUSPACEHTR3	Backup natural gas-fired space heater rated at 3.1 MMBTU/hr heat input.	11/10/2021	FGSPACEHTRS
EUSPACEHTR4	Backup natural gas-fired space heater rated at 3.1 MMBTU/hr heat input.	11/10/2021	FGSPACEHTRS

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EUEMGD  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A 2,206 HP diesel-fueled emergency engine manufactured after 2006 serving a 1,500 kW engine generator with associated fuel oil tank. The engine generator is used to charge the batteries in the uninterruptible power supply battery system and to facilitate operations during idling of the plant for routine maintenance checks and readiness testing.

**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 <sub>x</sub>	6.4 g/kW-hr	Hourly	EUEMGD	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(b) <sup>A</sup>
2. CO	3.5 g/kW-hr	Hourly	EUEMGD	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810, 40 CFR 60.4205(b) <sup>A</sup>
3. PM	0.20 g/kW-hr	Hourly	EUEMGD	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.1331(1)(c), 40 CFR 60.4205(b) <sup>A</sup>
4. PM10	1.0 pph	Hourly	EUEMGD	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	1.0 pph	Hourly	EUEMGD	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHGs as CO <sub>2e</sub>	590 tpy	12-month rolling time period as determined at the end of each calendar month	EUEMGD	SC VI.3, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

<sup>A</sup> 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), for the NSPS. Using the NTE limits does not apply to demonstrating compliance with BACT.

**II. MATERIAL LIMITS**

- The permittee shall burn only ultra-low sulfur diesel fuel, in EUEMGD 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 336.1401, 40 CFR 60.4207(b), 40 CFR 1090.305)**

### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EUEMGD for more than 4 hours per day, except during emergency conditions and required stack testing, 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 500 hours includes the hours 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, R336.2810, 40 CFR 52.21(j))**
2. The permittee may operate EUEMGD 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. EUEMGD 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 EUEMGD:
  - 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.
  - c) Meet the requirements as specified in 40 CFR Parts 1068, as they apply to EUEMGD.

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. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211)**

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 EUEMGD and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211(g))**

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

1. The permittee shall equip and maintain EUEMGD with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4209)**
2. The nameplate capacity of EUEMGD, shall not exceed 2,206 HP. **(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. The permittee shall conduct an initial performance test for EUEMGD within one year after startup of the engine to demonstrate compliance with NMHC + NO<sub>x</sub>, CO, and PM emission limits in 40 CFR 60.4205 unless the engines have been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60 Subpart IIII. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212, and the hourly emission rates shall be determined by the average of the acceptable three test runs. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test

results to the AQD Technical Programs Unit and District Office. **(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, 40 CFR 60.4211, 40 CFR 60.4212, 40 CFR Part 60, Subpart IIII)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM10 and PM2.5 emission rates from EUEMGD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, 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 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 keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating EUEMGD meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If EUEMGD is or becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211)**
3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUEMGD, on a daily, monthly, calendar year, and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of EUEMGD, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**
4. The permittee shall keep, in a satisfactory manner, diesel fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel used in EUEMGD, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the diesel fuel and either the Cetane index or aromatic content. **(R 336.1205(1)(a) & (b), R 336.1401, 40 CFR 1090.305)**
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO<sub>2e</sub> mass emissions for EUEMGD, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

6. The permittee shall keep, in a satisfactory manner, the following records for EUEMGD:
- a) For a certified engine, the permittee shall keep records of the manufacturer certification documentation.
  - b) For an 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)**
7. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUEMGD:
- a) For a certified engine, the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.3.
  - b) For an 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)**

## **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 EUEMGD. **(R 336.1201(7)(a))**
2. The permittee must submit an initial notification as required in 40 CFR 63.6645(f) for EUEMGD. The notification must include the information in 40 CFR 63.9(b)(2)(i) through (v), and a statement the stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions (40 CFR 63.6590(b)). **(40 CFR 63.6645(f))**

## **VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVEMGD	14	20	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 EUEMGD. **(40 CFR Part 60, Subparts A and IIII)**
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 EUEMGD, upon startup. **(40 CFR Part 63, Subparts A and ZZZZ, 40 CFR 63.6590)**

### **Footnotes:**

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

**EUFPRICE  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A 315 HP diesel-fueled emergency engine manufactured after 2009, with a heat input of 2.5 MMBTU/hr and associated fuel oil tank. The engine powers a fire pump used for fire suppression during an emergency.

**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 <sub>x</sub>	3.0 g/HP-hr	Hourly	EUFPRICE	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(c) <sup>A</sup>
2. CO	2.6 g/HP-hr	Hourly	EUFPRICE	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810, 40 CFR 60.4205(c) <sup>A</sup>
3. PM	0.15 g/HP-hr	Hourly	EUFPRICE	SC V.1, SC VI.2, SC VI.6	R 336.1205(1)(a) & (b), R 336.1331(1)(c) 40 CFR 60.4205(c) <sup>A</sup>
4. PM10	0.12 pph	Hourly	EUFPRICE	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.12 pph	Hourly	EUFPRICE	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHGs as CO <sub>2e</sub>	20 tpy	12-month rolling time period as determined at the end of each calendar month	EUFPRICE	SC VI.1, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

<sup>A</sup> 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), for the NSPS. Using the NTE limits does not apply to demonstrating compliance with BACT.

**II. MATERIAL LIMITS**

- The permittee shall burn only ultra-low sulfur diesel fuel, in EUFPRICE 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 336.1401, 40 CFR 60.4207(b), 40 CFR 1090.305)**

### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EUFPRICE for more than 4 hours per day, except during emergency conditions and required stack testing, 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 100 hours includes the hours for the purpose of 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, R336.2810, 40 CFR 52.21(j))**
2. The permittee may operate EUFPRICE 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. EUFPRICE 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 EUFPRICE:
  - 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.
  - c) Meet the requirements as specified in 40 CFR Part 1068, as they apply to EUFPRICE.

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 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

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 EUFPRICE 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), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

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

1. The permittee shall equip and maintain EUFPRICE 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, 40 CFR 60.4209)**
2. The nameplate capacity of EUFPRICE shall not exceed 315 HP. **(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. The permittee shall conduct an initial performance test for EUFPRICE within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engine has been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60, Subpart IIII. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212, and the hourly emission rates shall be determined by the average of the acceptable three test runs. No less than 30 days prior to testing, a complete test plan shall be submitted to

the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.

**(R 336.2001, R 336.2003, R 336.2004, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4211, 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM10 and PM2.5 emission rates from EUFPRICE, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, 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 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 keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUFPRICE meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If EUFPRICE becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211)**
3. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EUFPRICE, on a daily, monthly, calendar year, 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 EUFPRICE, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4211, 40 CFR 60.4214)**
4. The permittee shall keep, in a satisfactory manner, diesel fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUFPRICE, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the fuel oil and either the Cetane index or aromatic content. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, 40 CFR 1090.305)**
5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO<sub>2e</sub> mass emissions for EUFPRICE, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

6. The permittee shall keep, in a satisfactory manner, the following records for EUFPRICE:
- a) For a certified engine, the permittee shall keep records of the manufacturer certification documentation.
  - b) For an 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)**
7. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUFPRICE:
- a) For a certified engine, the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.3.
  - b) For an 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)**

## **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 EUFPRICE. **(R 336.1201(7)(a))**

## **VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVFPRICE	6	5	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 EUFPRICE. **(40 CFR Part 60, Subparts A and 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 EUFPRICE, upon startup. **(40 CFR Part 63, Subparts A and ZZZZ, 40 CFR 63.6590)**

### **Footnotes:**

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

**EUAUXBOILER  
EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A natural gas-fired auxiliary boiler rated at less than or equal to 50 MMBTU/hr will facilitate startup of the CTG/HRSG trains and provide steam to the steam turbine generator (STG) seals. The boiler will also provide warming steam to the HRSG, and other related services. The boiler will not produce high pressure steam for use in electric generation. The auxiliary boiler will utilize low NO<sub>x</sub> burners (LNB) and/or flue gas recirculation (FGR).

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Low NO<sub>x</sub> burners or flue gas recirculation (FGR) for NO<sub>x</sub> control.

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	30 ppmvd at 3% O <sub>2</sub>	Hourly	EUAUXBOILER	SC V.1, SC VI.4	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
2. CO	50 ppmvd at 3% O <sub>2</sub>	Hourly	EUAUXBOILER	SC V.1, SC VI.4	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
3. PM10	0.4 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.4	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
4. PM2.5	0.4 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.4	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810,
5. VOC	0.3 pph	Hourly	EUAUXBOILER	SC V.1, SC VI.4	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
6. GHGs as CO <sub>2e</sub>	25,644 tpy	12-month rolling time period as determined at the end of each calendar month	EUAUXBOILER	SC VI.2, SC VI.3, SC VI.4	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

**II. MATERIAL LIMITS**

- The permittee shall burn only natural gas in EUAUXBOILER. The natural gas shall not have a total sulfur content greater than 1 grain of sulfur per 100 standard cubic feet of gas based on a 12-month rolling time period. (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

- The permittee shall not operate EUAUXBOILER unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 180 days after trial operation, and is implemented and maintained. 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 60 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 336.1911)**

- 2. Within 180 days after trial operation, the permittee shall submit a plan, to the AQD District Supervisor for approval, that describes how emissions will be minimized during startups, shutdowns, and malfunctions. 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)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

- 1. The maximum design heat input capacity for EUAUXBOILER shall not exceed 50 MMBTU/hr (HHV) on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR Part 60 Subpart Dc)**
- 2. The permittee shall not operate EUAUXBOILER unless the dry low NO<sub>x</sub> burners and/or flue gas recirculation system are installed, maintained, and operated in a satisfactory manner. **(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 fuel usage rate for EUAUXBOILER on a continuous basis. **(R 336.1205(1)(a) & (b), 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 NO<sub>x</sub>, CO, VOC, PM10, and PM2.5 emission rates, from EUAUXBOILER at maximum routine operating conditions, by testing at owner's expense, in accordance with Department requirements. The hourly emission rate shall be determined by the average of three test runs per the method requirements. The permittee shall complete the testing once every five years for NO<sub>x</sub>, CO, and VOC, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed:

<b>Pollutant</b>	<b>Test Method Reference</b>
NO <sub>x</sub>	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A; or Method 320 of Appendix A of 40 CFR Part 63

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

## **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 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 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 and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), 40 CFR 60.48c(g))**
3. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO<sub>2e</sub> mass emissions for EUAUXBOILER, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**
4. 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 a calendar month basis.
  - e) All records required by 40 CFR 60.7 and 40 CFR 60.48c.
  - f) All calculations 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 AQD and shall be consistent with the requirements of 40 CFR 60.7(f). **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), R 336.1912, R 336.2803, R 336.2804, 40 CFR 60.7(f))**

## **VII. REPORTING**

1. The permittee shall provide written notification of the date construction commences and actual startup of EUAUXBOILER, in accordance with 40 CFR 60.7 and 40 CFR 60.48c. The notification shall include the design heat input, an identification of the fuels to be combusted and the annual capacity factor for EUAUXBOILER. 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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVAUXBOILER	24	125	R 336.1225, R 336.2803, R 336.2804

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to EUAUXBOILER. **(40 CFR Part 60, Subparts A & Dc)**
2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and DDDDD, as they apply to EUAUXBOILER. **(40 CFR Part 63, Subparts A & DDDDD)**

**Footnotes:**

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

**EUCTGSC1  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A nominally rated 667 MMBTU/hr, natural gas-fired simple cycle CTG. The CTG will utilize DLNB and good combustion practices.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

DLNB and good combustion practices.

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. NO <sub>x</sub>	25 ppmvd at 15% Oxygen (O <sub>2</sub> ) <sup>C</sup>	4-hour rolling average, except during operation less than 75 percent of peak load	EUCTGSC1	SC V.2, SC V.3, SC VI.3, SC VI.6	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK <sup>C</sup>
2. NO <sub>x</sub>	60.0 pph	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGSC1	SC V.3, SC VI.3, SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
3. CO	9.0 pph <sup>A,B</sup>	Hourly, except during startup and shutdown	EUCTGSC1	SC V.1, SC VI.6	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
4. VOC	5.0 pph <sup>A,B</sup>	Hourly, except during startup and shutdown	EUCTGSC1	SC V.1, SC VI.6	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
5. PM <sub>2.5</sub>	4.5 pph	Hourly	EUCTGSC1	SC V.1, SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. PM <sub>10</sub>	4.5 pph	Hourly	EUCTGSC1	SC V.1, SC VI.6	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
7. GHGs as CO <sub>2</sub> e	72,695 tpy	12-month rolling time period as determined at the end of each calendar month	EUCTGSC1	SC VI.2, SC VI.4, SC VI.6	R 336.1205(1)(a) & (b), 40 CFR 52.21(j)
8. CO <sub>2</sub>	120 lb/MMBTU	Based on fuel purchase records	EUCTGSC1	SC VI.5	R 336.1205(1)(a) & (b), 40 CFR 60.5520(a), Table 2 of 40 CFR Part 60 Subpart TTTT

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
ppmvd = parts per million by volume at 15 percent oxygen (O <sub>2</sub> ) and on a dry gas basis					
A Does not include startup and shutdown. B 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. C Table 1 of 40 CFR Part 60 Subpart KKKK also allows 96 ppmvd NO <sub>x</sub> at 15 percent O <sub>2</sub> when the turbines are operating at less than 75 percent of peak load and at temperatures less than 0°F.					

**II. MATERIAL LIMITS**

- The permittee shall burn only natural gas in EUCTGSC1. The natural gas shall not have a total sulfur content in excess of 1 grain of sulfur per 100 standard cubic feet of gas based on a 12-month rolling time period. This condition subsumes the 40 CFR Part 60, Subpart KKKK requirement of 20 grains of sulfur per 100 standard cubic feet of gas. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4365(a))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

- Within 180 days after trial operation, the permittee shall submit, implement, and maintain a MAP as described in Rule 911(2) for EUCTGSC1. The MAP shall, at a minimum, specify the following:
  - 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.
  - 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.
  - 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 60 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 336.1911)**

- Within 180 days after trial operation, the permittee shall submit a plan, to the AQD District Supervisor for approval, that describes how emissions will be minimized during startups, shutdowns, and malfunctions. 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)**
- The permittee shall operate and maintain EUCTGSC1, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. **(R 336.2810, 40 CFR 60.4333(a))**

4. The total hours of operation for EUCTGSC1 shall not exceed 2,000 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, 40 CFR 52.21(j))**

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

1. The maximum nominal rating of EUCTGSC1 shall not exceed 667 MMBTU/hr (higher heating value (HHV) on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**
2. The permittee shall not operate EUCTGSC1 unless its respective dry low NO<sub>x</sub> burner and combustion air inlet filter is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining EUCTGSC1 in accordance with an approved MAP as 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 natural gas flow rate for EUCTGSC1 on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**
4. The permittee shall install, calibrate, maintain, and operate one of the following continuous monitoring systems for compliance with the NO<sub>x</sub> emission limits:
  - a) Continuous emission monitoring as described in 40 CFR 60.4340(b)(1) and 40 CFR 60.4345.
  - b) Continuous parameter monitoring as described in 40 CFR 60.4340(b)(2).
  - c) If EUCTGSC1 is also regulated under 40 CFR Part 75, with approval from the AQD District Supervisor, the permittee may monitor the NO<sub>x</sub> emission rate using the methodology in 40 CFR Part 75, Appendix E, or the low mass emissions methodology in 40 CFR 75.19, as described in 40 CFR 60.4340(b)(2)(iv).
  - d) Alternative monitoring system approved under 40 CFR Part 60, Subpart A.  
**(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4340(b), 40 CFR 60.4345, 40 CFR Part 75, Subpart E, 40 CFR Part 75.66(d))**

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

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

1. Before May 22, 2022, the permittee shall verify CO, VOC, PM10, and PM2.5 emission rates from EUCTGSC1, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed:

<b>Pollutant</b>	<b>Test Method Reference</b>
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A; or Method 320 of Appendix A of 40 CFR Part 63
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

2. Before May 22, 2022, the permittee shall verify NO<sub>x</sub> emission rates from EUCTGSC1, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR 60.4400 of 40 CFR Part 60, Subparts A and KKKK. If the permittee elects to install and certify a NO<sub>x</sub>-diluent CEMS under 40 CFR 60.4345, then the alternate initial performance test may be performed as specified in 40 CFR 60.4405. 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) & (3), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4375(b), 40 CFR 60.4400(a))**

3. If the permittee elects to utilize the methodology in 40 CFR Part 75, Appendix E for compliance with the NO<sub>x</sub> emission limits as specified in SC IV.4, the permittee shall test for NO<sub>x</sub> every 20 calendar quarters in accordance with the methods in 40 CFR Part 75, Appendix E. **(40 CFR 60.4340(b)(2)(iv), 40 CFR Part 75 Appendix E)**

## **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 monitor and record, in a satisfactory manner, the natural gas usage for EUCTGSC1 on an hourly and monthly basis. The heating value of the natural gas in BTU per cubic foot shall be determined on a monthly basis using a default heating value or one sample taken from the main gas pipeline to the facility on the permittee's property. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j), 40 CFR Part 75, Appendix D)**
3. If the permittee elects to utilize continuous emission monitoring for compliance with the NO<sub>x</sub> emission limits as specified in SC IV.4, the permittee shall monitor and record hourly NO<sub>x</sub> emissions, 4-hour rolling average NO<sub>x</sub> concentration, and 24-hour rolling mass emission records for NO<sub>x</sub> from EUCTGSC1 on a continuous basis. The permittee shall operate each CEMS or equivalent PEMS to meet the timelines, requirements and reporting detailed in Appendix A and shall use the CEMS or equivalent PEMS data for determining compliance with SC I.1 and SC I.2. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4345, 40 CFR Part 75, Subpart E, 40 CFR Part 75.66(d))**
4. The permittee shall calculate and record, in a satisfactory manner, records of monthly and 12-month rolling total CO<sub>2e</sub> mass emissions for EUCTGSC1, 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 using the method included in Appendix B unless a new method is approved by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j))**
5. The permittee shall maintain, in a satisfactory manner, purchase records of the natural gas combusted in EUCTGSC1. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.5520(a) & (d)(1))**
6. 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 EUCTGSC1. This information shall include, but shall not be limited to the following:
  - a) Compliance tests and any testing required under the special conditions of this permit.
  - b) Monitoring data.
  - c) Total sulfur content of the natural gas as required by 40 CFR 60.4365(a).
  - d) Verification of the nominal input rating in ISO, of EUCTGSC1.
  - e) All records as required by 40 CFR 60.7, including the initial startup notification and performance tests.
  - f) Monthly hours of operation including all startup and shutdown hours.
  - g) All calculations necessary to show compliance with the limits contained in this permit.
  - h) All records related to, or as required by, the MAP.

All of the above information shall be stored in a format acceptable to the AQD District Supervisor and shall be consistent with the requirements of 40 CFR 60.7. **(R 336.1205(1)(a) & (b), R 336.1225, 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)**

## **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 EUCTGSC1. **(R 336.1201(7)(a))**
2. 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 60.4380. The reports shall be postmarked by the 30<sup>th</sup> day following the end of each 6-month period. **(40 CFR 60.7(c), 40 CFR 60.4375, 40 CFR 60.4380, 40 CFR 60.4395)**
3. The permittee shall provide written notification of the date construction commences and the actual date of initial startup of EUCTGSC1, in accordance with 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7(a), 40 CFR 60.5550(a))**

## **VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVCTGSC1	144	100	R 336.1225, R 336.2803, R 336.2804

## **IX. OTHER REQUIREMENTS**

1. If the permittee chooses to use a Predictive Emissions Monitoring System (PEMS) in lieu of a CEMS or other approved methodology to monitor NO<sub>x</sub> emissions, the permittee shall submit a protocol for approval by Environmental Protection Agency (EPA). **(40 CFR Part 75, Subpart E, 40 CFR Part 75.66(d))**
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 KKKK, as they apply to EUCTGSC1. **(40 CFR Part 60, Subparts A and KKKK)**
3. 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 EUCTGSC1. **(40 CFR Part 60, Subparts A and TTTT)**
4. The permittee shall comply with all provisions of the federal Cross-State Air Pollution Rule (CSAPR) as specified in 40 CFR Part 97, as they apply to EUCTGSC1. **(40 CFR Part 97)**
5. The permittee shall comply with all provisions of the federal Standards of Continuous Emission Monitoring as specified in 40 CFR Part 75, as they apply to EUCTGSC1. **(40 CFR Part 75).**

### **Footnotes:**

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

<b>EUCOOLTWR EMISSION UNIT CONDITIONS</b>
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**DESCRIPTION**

A five-cell, wet mechanical draft cooling tower. Particulate in water droplets will be controlled with drift eliminators.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Drift eliminators.

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. Within 180 days after startup of FGCTGHRSG, the permittee shall submit to the AQD District Supervisor, an inspection and maintenance program for EUCOOLTWR. The permittee shall comply with the program until the AQD District Supervisor approves an amended program. At any time, the permittee may submit a modified program to the AQD District Supervisor for review and approval. Unless notified by the District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **(R 336.2810)**
2. The permittee shall perform inspections of EUCOOLTWR, in accordance with the inspection and maintenance program and manufacturer recommendations, to ensure proper operation of the mist/drift eliminators at a drift rate of 0.0005 or less. If a defect is observed that may affect drift rate, the permittee shall initiate corrective action within 10 days or at the time of the next scheduled outage. The permittee shall maintain records of inspections and any maintenance performed on EUCOOLTWR to demonstrate ongoing compliance with the vendor-certified drift rate required in SC IV.1. **(R 336.2810)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall equip and maintain EUCOOLTWR with mist/drift eliminators with a vendor-certified maximum drift rate of 0.0005 percent or less. **(R 336.1205, 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))**

1. The permittee shall maintain a record of the vendor's certification required in SC IV.1, for the life of EUCOOLTWR. **(R 336.1205, R 336.1910, R 336.2810)**
2. The permittee shall maintain a record of any maintenance conducted for EUCOOLTWR. **(R 336.2810)**

**VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU COOLTWR. **(R 336.1201(7)(a))**

**VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVCOOLTWR1-1	324	40.4	R 336.2803, R 336.2804
2. SVCOOLTWR1-2	324	40.4	R 336.2803, R 336.2804
3. SVCOOLTWR1-3	324	40.4	R 336.2803, R 336.2804
4. SVCOOLTWR1-4	324	40.4	R 336.2803, R 336.2804
5. SVCOOLTWR1-5	324	40.4	R 336.2803, R 336.2804

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

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

## FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCTGHRSG	Two (2) nominally rated 667 MMBTU/hr natural gas-fired CTGs, each coupled with a HRSG. Each HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. Each CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. Each CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	EUCTGHRSG2, EUCTGHRSG3
FGBOILERMACT	Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters equal to or greater than 10 MMBTU/hr at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD.	EUAUXBOILER
FGSPACEHTRS	Four (4) natural gas-fired space heaters.	EUSPACEHTR1, EUSPACEHTR2, EUSPACEHTR3, EUSPACEHTR4

**FGCTGHRSG  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Two (2) nominally rated 667 MMBTU/hr natural gas-fired CTG's each coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or operated in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG.

**Emission Units:** EUCTGHRSG2, EUCTGHRSG3

**POLLUTION CONTROL EQUIPMENT**

Dry low NO<sub>x</sub> burners and selective catalytic reduction for NO<sub>x</sub> control for each CTG/HRSG unit. An oxidation catalyst for CO and VOC control for each CTG/HRSG unit.

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. NO <sub>x</sub>	3 ppmvd at 15% Oxygen (O <sub>2</sub> ) <sup>A,B</sup>  (each unit in combined cycle mode)	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC VI.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810
2. NO <sub>x</sub>	25 ppmvd at 15% O <sub>2</sub> <sup>C</sup>  (each unit in HRSG bypass mode)	4-hour rolling average, except during operation less than 75 percent of peak load	EUCTGHRSG2, EUCTGHRSG3	SC V.4 SC VI.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK, 40 CFR 60.4380(b)(1)
3. NO <sub>x</sub>	25 ppmvd at 15% O <sub>2</sub> <sup>C</sup>  (each unit in combined cycle mode)	30-day rolling average, except during operation less than 75 percent of peak load	EUCTGHRSG2, EUCTGHRSG3	SC V.4, SC VI.2, SC VI.9	R 336.1205(1)(a) & (b), 40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK, 40 CFR 60.4380(b)(1)
4. NO <sub>x</sub>	60.0 pph  (each unit in combined cycle mode)	Hourly, including startup or shutdown	EUCTGHRSG2, EUCTGHRSG3	SC VI.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. NO <sub>x</sub>	60.0 pph  (each unit in HRSG bypass mode)	24-hour rolling average as determined each operating hour	EUCTGHRSG2, EUCTGHRSG3	SC VI.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
6. CO	4 ppmvd at 15% O <sub>2</sub> <sup>A,B</sup>  (each unit in combined cycle mode)	24-hour rolling average as determined each operating hour, except during startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC VI.3, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810
7. CO	9.0 pph <sup>A,B</sup>  (each unit in HRSG bypass mode)	Hourly, except during startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC V.1, SC V.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810
8. CO	289.0 pph  (each unit, in combined cycle mode)	Hourly, including startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC VI.3, SC VI.9	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
9. PM10	6.02 pph  (each unit, during all operating modes)	Hourly	EUCTGHRSG2, EUCTGHRSG3	SC V.1, SC V.2, SC V.3 SC V.4 SC VI.9	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
10. PM2.5	6.02 pph  (each unit, during all operating modes)	Hourly	EUCTGHRSG2, EUCTGHRSG3	SC V.1, SC V.2, SC V.3 SC V.4 SC VI.9	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
11. VOC	3 ppmvd at 15% O <sub>2</sub> <sup>A,B</sup>  (each unit in combined cycle mode)	Hourly, except during startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC V.1, SC V.3 SC VI.9	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
12. VOC	5 pph <sup>A,B</sup>  (each unit in HRSG bypass mode)	Hourly, except during startup and shutdown	EUCTGHRSG2, EUCTGHRSG3	SC V.1, SC V.2, SC VI.9	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
13. GHGs as CO <sub>2</sub> e	430,349 tpy  (each unit, during all operating modes)	12-month rolling time period as determined at the end of each calendar month	EUCTGHRSG2, EUCTGHRSG3	SC VI.4, SC VI.5, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)
14. CO <sub>2</sub>	1,000 lb/MWh gross energy output  (each unit, during all operating modes)	12-operating month rolling average <sup>D</sup> , as determined at the end of each calendar month	EUCTGHRSG2, EUCTGHRSG3	SC VI.7, SC VI.8, SC VI.9	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j), 40 CFR 60.5520(a), Table 2 of 40 CFR Part 60 Subpart TTTT

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
<p>ppmvd = parts per million by volume at 15 percent O<sub>2</sub> and on a dry gas basis                      lb/MWh = pound per megawatt hour</p> <p>A Does not include startup and shutdown.                      B 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.                      C Table 1 of 40 CFR Part 60 Subpart KKKK allows 96 ppmvd NO<sub>x</sub> at 15 percent O<sub>2</sub> when the turbines are operating at less than 75 percent of peak load and at temperatures less than 0°F.                      D 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).</p>					

**II. MATERIAL LIMITS**

1. The natural gas burned in FGCTGHRSG shall not have a total sulfur content in excess of 1 grain of sulfur per 100 standard cubic feet of gas based on a 12-month rolling time period. This condition subsumes the 40 CFR Part 60, Subpart KKKK requirement of 20 grains of sulfur per 100 standard cubic feet of gas. **(R 336.1205(1)(a) & (b), R336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4365(a))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate any unit in FGCTGHRSG unless a MAP as described in Rule 911(2), has been submitted within 180 days after trial operation, and is implemented and maintained. 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 60 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 336.1910, R 336.1911)**

2. Within 180 days after trial operation, the permittee shall submit a plan to the AQD District Supervisor for approval, that describes how emissions will be minimized during startups, shutdowns, and malfunctions. 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)**

3. The permittee shall operate and maintain FGCTGHRSG, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4333(a))**
4. The total hours for HRSG bypass mode operation for each CTG of FGCTGHRSG shall not exceed 2,000 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810, 40 CFR 52.21(j))**
5. The permittee shall prepare a monitoring plan for FGCTGHRSG to quantify the hourly CO<sub>2</sub> mass emission rate (tons/hour) from each CTG/HRSG, in accordance with the applicable provisions in 40 CFR Part 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 40 CFR Part 60 Subpart TTTT. 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. **(40 CFR 60.5535(a))**

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

1. The maximum design heat input capacity for FGCTGHRSG shall not exceed, on a fuel heat input basis, 667 MMBTU/hr (HHV) for each CTG and 204 MMBTU/hr (HHV) for each HRSG duct burner. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**
2. The permittee shall not operate EUCTGHRSG2 or EUCTGHRSG3 of FGCTGHRSG in combined-cycle mode unless each respective DLNB, SCR, and oxidation catalyst; or in HRSG bypass mode unless each DLNB, are installed, maintained, and operated in a satisfactory manner. 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 a device to monitor and record the NO<sub>x</sub> emissions, and O<sub>2</sub> or CO<sub>2</sub> content of the exhaust gas from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG operating in combined-cycle mode and simple-cycle mode (HRSG Bypass mode), on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System and Continuous Emission Rate Monitoring System (CEMS/CERMS) 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 60.4345, 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 of the exhaust gas from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG operating in combined-cycle mode on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System and Continuous Emission Rate Monitoring System (CEMS/CERMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), R 336.2804, R 336.2810)**
5. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the natural gas flow rate from EUCTGHRSG2 and EUCTGHRSG3 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(c), (d), & (j), 40 CFR 60.4345)**
6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the gross energy output from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**
7. 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 EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG. If EUCTGHRSG2 and EUCTGHRSG3 serve a common electric generator, the permittee shall apportion the combined hourly gross energy output to the individual EGUs according to

the fraction of the total steam load or the fraction of the total heat input contributed by each of EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG. **(40 CFR 60.5535(d)(1), 40 CFR 60.5535(e))**

8. The permittee shall install, calibrate, maintain, and operate one of the following continuous monitoring systems for compliance with the NO<sub>x</sub> emission limits SC I.2 and I.5:
  - a) Continuous emission monitoring as described in 40 CFR 60.4340(b)(1) and 40 CFR 60.4345.
  - b) Continuous parameter monitoring as described in 40 CFR 60.4340(b)(2).
  - c) If EUCTGHRSG2 or EUCTGHRSG3 are also regulated under 40 CFR Part 75, with approval from the AQD District Supervisor, the permittee may monitor the NO<sub>x</sub> emission rate using the methodology in 40 CFR Part 75, Appendix E, or the low mass emissions methodology in 40 CFR 75.19, as described in 40 CFR 60.4340(b)(2)(iv).
  - d) Alternative monitoring system approved under 40 CFR Part 60 Subpart A.  
**(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4340(b), 40 CFR 60.4345, 40 CFR Part 75, Subpart E, 40 CFR Part 75.66(d))**

**V. TESTING/SAMPLING**

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

1. The permittee shall verify the emission rates of CO and VOC in simple-cycle mode (HRSG bypass mode) and VOC, PM10, and PM2.5 in combined-cycle mode from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG, by testing at owner's expense, in accordance with Department requirements and SC V.3 and V.4. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

<b>Pollutant</b>	<b>Test Method Reference</b>
CO	40 CFR Part 60, Appendix A
PM10 / PM2.5	40 CFR Part 51, Appendix M
VOCs	40 CFR Part 60, Appendix A; or Method 320 of Appendix A of 40 CFR Part 63

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall verify the emission rates of PM10 and PM2.5 in HRSG bypass mode from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG, by testing at owner's expense, in accordance with Department requirements and SC V.3. The permittee shall perform subsequent testing as requested by the AQD District Supervisor. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

3. Before May 22, 2022, the permittee shall verify CO, VOC, PM10 and PM2.5 emission rates from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG in simple-cycle mode (HRSG Bypass mode) as specified in SC V.1 and SC V.2. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**
4. Within 60 days after achieving the maximum production rate, but no later than 180 days after commencement of initial startup of EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG in combined-cycle mode, the permittee shall verify VOC, PM10, and PM2.5 emission rates from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG in combined-cycle mode as specified in SC V.1. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**
- 5.. Before May 22, 2022, the permittee shall verify NO<sub>x</sub> emission rates from EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG in simple-cycle mode (HRSG bypass); and within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of trial operation in combined-cycle mode, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR 60.4405 of 40 CFR Part 60, Subparts A and KKKK. If the permittee elects to install and certify a NO<sub>x</sub>-diluent CEMS under 40 CFR 60.4345, then the alternate initial performance test may be performed as specified in 40 CFR 60.4405. 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) & (3), R 336.2001, R 336.2003, R 336.2004, R 336.2810, 40 CFR 60.4375(b), 40 CFR 60.4400, 40 CFR 60.4405)**

#### **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, R 336.2810, 40 CFR 52.21(j))**
2. The permittee shall keep, in a satisfactory manner, hourly, 24-hour rolling average, and 30-day rolling average NO<sub>x</sub> concentration and hourly NO<sub>x</sub> mass emission records for EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG operating in combined cycle mode, as required by SC I.1, I.3, and I.4. The permittee shall also monitor and record hourly NO<sub>x</sub> emissions, 4-hour rolling average NO<sub>x</sub> concentration, and 24-hour rolling mass emission records for EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG operating in HRSG bypass mode, as required by SC I.2 and I.5. 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)**
3. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average CO concentration and hourly CO mass emission records for EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG operating in combined cycle mode, as required by SC I.6 and I.8. 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)**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO<sub>2e</sub> mass emissions for EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG, as required by SC I.13. The calculations shall be performed using the method included in Appendix B unless a new method is approved by the AQD District Supervisor. 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))**
5. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for each unit in FGCTGHRSG on an hourly and 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 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), R 336.2810, 40 CFR 52.21(j))**
6. The permittee shall keep, in a satisfactory manner, a written log of the monthly hours of HRSG bypass mode operation for each unit of FGCTGHRSG. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.2810, 40 CFR 52.21(j))**

7. The permittee shall keep, in a satisfactory manner, records of the determined values for hourly CO<sub>2</sub> mass emissions and hourly gross energy output for both EUCTGHRSG2 and EUCTGHRSG3 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 each 12-operating-month period required by SC I.14 and according to the procedures in described below and in 40 CFR 60.5540:
  - a) Total data is determined by summing valid operating hours for either CO<sub>2</sub> mass emissions or gross energy output.
  - b) To determine compliance with SC I.13, the total CO<sub>2</sub> mass emissions for each unit, EUCTGHRSG2 and EUCTGHRSG3 of FGCTGHRSG, shall be divided by the total gross energy output value of the same unit, EUCTGHRSG2 or EUCTGHRSG3 of FGCTGHRSG.
  - c) The final calculated value shall be rounded to two significant figures if the calculated value is less than 1,000 lb/MWh and to three significant figures if the calculated value is greater than 1,000 lb/MWh. **(40 CFR 52.21(j), 40 CFR 60.5540(a) & (b), 40 CFR 60.5560)**
9. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit for each unit in 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 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 HRSG bypass mode operation.
  - 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 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), & (j), 40 CFR 60.7(f), 40 CFR 60.4365, 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 FGCTGHRSG. **(R 336.1201(7)(a))**
2. 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 60.4380. The reports shall be postmarked by the 30<sup>th</sup> day following the end of each 6-month period. **(40 CFR 60.7(c), 40 CFR 60.4375, 40 CFR 60.4380, 40 CFR 60.4395)**
3. The permittee shall provide written notification of the date construction commences and the actual date of initial startup of FGCTGHRSG, in accordance with 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7 and 40 CFR 60.19, as applicable. **(40 CFR 60.7(a), 40 CFR 60.5550(a))**
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 EUCTGHRSG2 and EUCTGHRSG3 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 75.64a, which is also listed in 40 CFR 60.5555(c)(3)(i).  
**(40 CFR 60.5555(c)(1) & (c)(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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVCTGHRSG2	120	150	R 336.1225, R 336.2803, R 336.2804
2. SVBYPASS2	144	150	R 336.1225, R 336.2803, R 336.2804
3. SVCTGHRSG3	120	150	R 336.1225, R 336.2803, R 336.2804
4. SVBYPASS3	144	150	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 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 FGCTGHRSG.  
**(40 CFR Part 60, Subparts A and TTTT)**
3. The permittee shall comply with all provisions of the federal Cross-State Air Pollution Rule (CSAPR) as specified in 40 CFR Part 97, as they apply to FGCTGHRSG. **(40 CFR Part 97)**
4. The permittee shall comply with all provisions of the federal Standards of Continuous Emission Monitoring as specified in 40 CFR Part 75, as they apply to FGCTGHRSG. **(40 CFR Part 75).**

**Footnotes:**

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

## **FGBOILERMACT FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply with this subpart upon startup.

**Emission Units:** EUAUXBOILER (equal to or greater than 10 MMBTU/hr)

### **POLLUTION CONTROL EQUIPMENT**

NA

#### **I. EMISSION LIMIT(S)**

NA

#### **II. MATERIAL LIMIT(S)**

NA

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee must complete an initial tune-up of each emission unit installed after June 4, 2010 that has a continuous oxygen trim system as specified in SC III.2 by no later than 61 months after startup. **(40 CFR 63.7510(g))**
2. The permittee shall conduct a tune up of each boiler or process heater as specified below. **(40 CFR 63.7500(a)(1), 40 CFR 63.7515(d), Table 3 of 40 CFR Part 63, Subpart DDDDD)**
  - a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown. Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
  - b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
  - c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
  - d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
  - e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**

3. If the unit is not operated on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
4. The permittee shall conduct a tune-up of each emission unit that has an oxygen trim system installed in FGBOILERMACT of the burner(s) and combustion controls, as applicable, every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi). **(40 CFR 63.7500(d), 40 CFR 63.7540(a)(12), Table 3 of 40 CFR Part 63, Subpart DDDDD)**
  - a. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. **(40 CFR 63.7515(d))**
  - b. The permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months. **(40 CFR 63.7540(a)(12))**
  - c. If the unit is not operating on the required date for the tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
5. At all times, the permittee must operate and maintain each existing gas 1 boiler or process heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

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

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

NA

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee must keep a copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that the permittee submitted. **(40 CFR 63.7555(a)(1))**
2. If the permittee uses an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under 40 CFR Part 63, Other Gas 1 fuel, or gaseous fuel subject to another subpart of 40 CFR Part 60 or Part 61, or Part 65, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. **(40 CFR 63.7555(h))**
3. The permittee shall maintain on-site and submit, if requested by the AQD, tune-up reports containing the information listed below.
  - a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
  - b. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
  - c. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
4. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**

5. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5-years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**
6. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least 2-years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee can keep the records off site for the remaining 3-years. **(40 CFR 63.7560(c))**

## **VII. REPORTING**

1. The permittee must submit an Initial Notification not later than 15-days after the actual date of startup of the affected source. **(40 CFR 63.7545(c))**
2. If the permittee intends to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65, or Other Gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575, the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575. The notification must include the information as listed below.
  - a. Company name and address. **(40 CFR 63.7545(f)(1))**
  - b. Identification of the affected unit. **(40 CFR 63.7545(f)(2))**
  - c. Reason the permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began. **(40 CFR 63.7545(f)(3))**
  - d. Type of alternative fuel that the permittee intends to use. **(40 CFR 63.7545(f)(4))**
  - e. Dates when the alternative fuel use is expected to begin and end. **(40 CFR 63.7545(f)(5))**
3. The permittee must submit boiler and process heater tune-up compliance reports to the appropriate AQD District Office. For units that are subject only to a requirement to conduct subsequent 5-year tune-ups, the permittee may submit only a 5-year compliance report. The reports must be postmarked or submitted by March 15<sup>th</sup> and must cover the period of January 1 through December 31 of the reporting period. For new units, the first report should cover the period of startup to December 31 of the reporting period. Compliance reports must also be submitted to EPA using the Compliance and Emissions Data Reporting Interface (CEDRI) which is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). **(40 CFR 63.7550(b))**
4. The permittee must submit a compliance report containing the following information.
  - a) Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
  - b) Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
  - c) Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
  - d) Include the date of the most recent tune-up for each unit. Include the date of the most recent burner inspection if it was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
  - e) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. **(40 CFR 63.7550(c)(5)(xvii))**
10. The permittee must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the EPA Region V at the appropriate address listed in 40 CFR 63.13 and to the appropriate AQD District Office. **(40 CFR 63.7550(h)(3))**

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters as specified in 40 CFR Part 63, Subparts A and DDDDD. **(40 CFR Part 63, Subparts A and DDDDD)**

**Footnotes:**

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

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

<b>FGSPACEHTRS FLEXIBLE GROUP CONDITIONS</b>
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**DESCRIPTION:** Four (4) natural gas-fired space heaters.

**Emission Units:** EUSPACEHTR1, EUSPACEHTR2, EUSPACEHTR3, EUSPACEHTR4

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

1. The permittee shall burn only natural gas in FGSPACEHTRS. (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))

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The maximum design heat input capacity for each space heater in FGSPACEHTRS shall not exceed 3.1 MMBTU per hour on a fuel heat input basis. (R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 228.2810, 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 336.2803, 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 and Continuous Emission Rate**  
**Monitoring System (CEMS/CERMS) 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/CERMS.
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/CERMS to the AQD for approval.
3. The permittee shall complete the installation and testing of the CEMS/CERMS
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS/CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS*
NO <sub>x</sub>	2
CO	4
CO <sub>2</sub> /O <sub>2</sub>	3
CERMS	6
*Or other PS as approved by the AQD.	

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS/CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, 4, and 6 (see No. 4 above) of Appendix B to 40 CFR Part 60 or 40 CFR Part 75, Appendices A and B, as applicable.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS/CERMS set forth in Appendix F of 40 CFR Part 60 or 40 CFR Part 75, Appendix B. 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 of 40 CFR Part 60).
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 Emission Limits 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/CERMS downtime and corrective action.
  - c) A report of the total operating time of each emission unit during the reporting period.
  - d) A report of any periods that the CEMS/CERMS exceeds the instrument range.
  - e) If no exceedances or CEMS/CERMS downtime occurred during the reporting period, the permittee shall report that fact.
9. The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

## APPENDIX B CO<sub>2</sub>e Emission Calculations

### For EUCTGSC1, EUCTGHRSG2, and EUCTGHRSG3:

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

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, supplier data, or fuel sampling data if available

CO<sub>2</sub> EF (lb/MMBTU) = emission factor from equipment manufacturer or updated value based on CEMS data, or from the GHG Mandatory Reporting Rule (MRR) (40 CFR Part 98)

CH<sub>4</sub> EF (lb/MMBTU) = emission factor from equipment manufacturer, U.S. EPA AP-42 Ch. 3.1 (April 2000), or from the GHG MRR (40 CFR Part 98)

N<sub>2</sub>O EF (lb/MMBTU) = emission factors from U.S. EPA AP-42 Ch. 3.1 (April 2000) or from the GHG MRR (40 CFR Part 98)

CO<sub>2</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

CH<sub>4</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

N<sub>2</sub>O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

### For EUAUXBOILER:

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

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, supplier data, or fuel sampling data, if available

CO<sub>2</sub> EF (lb/MMBTU) = emission factor from equipment manufacturer (fuel heater), and emission factors from U.S. EPA AP-42 Ch. 1.4 (auxiliary boiler, July 1998), or emission factor from the GHG MRR (40 CFR Part 98)

CH<sub>4</sub> EF (lb/MMBTU) = emission factors from U.S. EPA AP-42 Ch. 1.4 (auxiliary boiler, July 1998) or from the GHG MRR (40 CFR Part 98)

N<sub>2</sub>O EF (lb/MMBTU) = emission factors from U.S. EPA AP-42 Ch. 1.4 (auxiliary boiler, July 1998) or from the GHG MRR (40 CFR Part 98)

CO<sub>2</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

CH<sub>4</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

N<sub>2</sub>O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

### For EUEMGD and EUFPRICE:

$$\text{CO}_2\text{e emissions (tons/month)} = [(\text{Fuel Usage (gal/month)} \times \text{Higher Heating Value (MMBTU/gal)}) \times (\text{CO}_2 \text{ EF (lb/MMBTU)} \times \text{CO}_2 \text{ GWP} + \text{CH}_4 \text{ EF (kg/MMBTU)} \times 2.2046 \text{ (lb/kg)} \times \text{CH}_4 \text{ GWP} + \text{N}_2\text{O EF (kg/MMBTU)} \times 2.2046 \text{ (lb/kg)} \times \text{N}_2\text{O GWP})] \times 1/2000 \text{ (ton/lb)}$$

Where:

Fuel Usage (gal/month) = monthly fuel usage data based on hours of operation

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

CO<sub>2</sub> EF (lb/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)

CH<sub>4</sub> EF (kg/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)  
N<sub>2</sub>O EF (kg/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)  
CO<sub>2</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)  
CH<sub>4</sub> GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)  
N<sub>2</sub>O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)