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

December 10, 2024

PERMIT TO INSTALL
141-24

ISSUED TO
Michigan State University

LOCATED AT
354 Service Road
East Lansing, Michigan 48824

IN THE COUNTY OF
Ingham

STATE REGISTRATION NUMBER
K3249

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: **November 13, 2024**	
DATE PERMIT TO INSTALL APPROVED: **December 10, 2024**	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_2e	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_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUEMGENCWP	A 314 bkW (421 bHP) natural gas-fired reciprocating internal combustion engine with a maximum fuel input of 4 MMBTU/hr. The engine meets the definition of an emergency stationary spark ignition (SI) internal combustion engine (ICE) for NSPS JJJJ.	NA
EUCOOLTWRCWP1	A wet mechanical draft cooling tower with up to four cells. Particulate in water droplets will be controlled with drift eliminators.	FGCOOLTWRSCWP
EUCOOLTWRCWP2	A wet mechanical draft cooling tower with up to four cells. Particulate in water droplets will be controlled with drift eliminators.	FGCOOLTWRSCWP
EUCOOLTWRCWP3	A wet mechanical draft cooling tower with up to four cells. Particulate in water droplets will be controlled with drift eliminators.	FGCOOLTWRSCWP
EUCTGHRSG11	A maximum rated 196 MMBTU/hr natural gas-fired combustion turbine generator (CTG) with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 122 MMBTU/hr to provide heat for additional steam production. The CTG is only capable of operating in combined-cycle mode where the exhaust is routed to the HRSG. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a selective catalytic reduction (SCR), and oxidation catalyst.	NA
EUCTFUELHTR1	A natural gas-fired fuel gas dew point heater with a maximum design heat input capacity of 1.5 MMBTU/hr	FGFUELHTR
EUCTFUELHTR2	A natural gas-fired fuel gas dew point heater with a maximum design heat input capacity of 1.5 MMBTU/hr	FGFUELHTR

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.

EUEMGENCWP
EMISSION UNIT CONDITIONS

DESCRIPTION

A 314 bkW (421 bHP) natural gas-fired reciprocating internal combustion engine with a maximum fuel input of 4 MMBTU/hr. The engine meets the definition of an emergency stationary spark ignition (SI) internal combustion engine (ICE) for NSPS JJJJ.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
CO	4.0 g/bHP-hr OR 540 ppmvd @ 15% O_2	Hourly	EUEMGENCWP	SC V.1 SC VI.2	40 CFR 60.4233 (e), Table 1 of 40 CFR 60, Subpart JJJJ
NO_x	2.0 g/bHP-hr OR 160 ppmvd @ 15% O_2	Hourly	EUEMGENCWP	SC V.1 SC VI.2	40 CFR 60.4233 (e), Table 1 of 40 CFR 60, Subpart JJJJ
VOC	1.0 g/bHP-hr[A] OR 86 ppmvd @ 15% O_2[A]	Hourly	EUEMGENCWP	SC V.1 SC VI.2	40 CFR 60.4233 (e), Table 1 of 40 CFR 60, Subpart JJJJ
[A] When calculating VOC emissions for this emission limit, emissions of formaldehyde should not be included.					

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in EUEMGENCWP. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMGENCWP for more than 500 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 500 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in 40 CFR 60.4243(d)(2)**. (R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee may operate EUEMGENCWP 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 AQD for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal,

State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4243(d)(2))**

3. EUEMGENCWP may operate up to 50 hours per calendar year, in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing as described in 40 CFR 60.4243(d)(2)). Except as provided in 40 CFR 60.4243(d)(3)(i)), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3)**

4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EUEMGENCWP: **(40 CFR 60.4243)**:

   a) Operate and maintain the certified engine and control device according to the manufacturer's emission related written instructions,
   b) May only adjust engine settings according to and consistent with the manufacturer's emission-related written instructions,
   c) Meet the requirements as specified in 40 CFR 1068 Subparts A through D.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine.

5. If the permittee purchases a non-certified engine, the permittee must keep a maintenance plan and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2)(ii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee must install and maintain a non-resettable hour meter on EUEMGENCWP. **(R 336.1201, R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4237(b))**

2. The maximum rated power output of EUEMGENCWP shall not exceed 314 bkW (421 bHP), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 60.4233)**

V. TESTING/SAMPLING

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

1. If the permittee purchased a non-certified engine or does not operate and maintain a certified engine and control device according to the manufacturer's written emission-related instructions, the permittee is required to perform initial performance testing as indicated in 40 CFR 60.4244, but is not required to conduct subsequent performance testing unless the stationary engine undergoes rebuild, major repair or maintenance. Therefore, the permittee must demonstrate compliance as follows:

   a) Conduct an initial performance test to demonstrate compliance with the applicable emission limits within 60 days after achieving the maximum production rate at which the engine will be operated, but not later than 180 days after initial startup, or within 1 year after the engine is no longer operated as a certified engine.

   b) The performance tests shall consist of three separate test runs of at least 1 hour, for each performance test required in 40 CFR 60.4244 and Table 2 to 40 CFR Part 60, Subpart JJJJ.

   No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.8, 40 CFR 60.4243(f), 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall 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) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d), 40 CFR Part 60, Subpart JJJJ)**

2. If the permittee purchases an engine certified according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, and operates and maintains the certified stationary SI combustion engine and control device according to the manufacturer's emission related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance. **(40 CFR 60.4243(a)(1), 40 CFR 60.4243(b)(1))**

3. If the permittee purchases an engine certified according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, and does not operate and maintain the certified stationary SI combustion engine and control device according to the manufacturer's emission related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance. In addition, the permittee must conduct an initial performance test, as specified in SC V.1, to demonstrate compliance. **(40 CFR 60.4243(a)(2)(i), 40 CFR 60.4243(b)(1))**

4. If the permittee purchases a non-certified engine, the permittee must keep records of conducted maintenance. In addition, the permittee must conduct an initial performance test, as specified in SC V.1, to demonstrate compliance. **(40 CFR 60.4243(b)(2)(i))**

5. The permittee must keep records of the following: (**40 CFR 60.4245(a))**

   a) All notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ and all documentation supporting any notification. **(40 CFR 60.4245(a)(1))**
   b) Maintenance conducted on EUEMGENCWP. **(40 CFR 60.4245(a)(2))**
   c) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 1048, 1054, and 1060, as applicable. **(40 CFR 60.4245(a)(3))**
   d) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. **(40 CFR 60.4245(a)(4))**

6. The permittee shall monitor and record, the total hours of operation for EUEMGENCWP on a monthly and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for EUEMGENCWP, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation for EUEMGENCWP, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), 40 CFR 60.4243, 40 CFR 60.4245(b))**

VII. REPORTING

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

2. The permittee shall submit a notification specifying whether EUEMGENCWP will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR 60 Subpart JJJJ)**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMGENCWP	6	7	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal Standards of Performance for Stationary Spark Ignition Internal Combustion Engines as specified in 40 CFR Part 60, Subparts A and Subpart JJJJ. **(40 CFR Part 60, Subparts A and JJJJ)**

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 EUEMGENCWP, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

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

EUCTGHRSG11
EMISSION UNIT CONDITIONS

DESCRIPTION

A maximum rated 196 MMBTU/hr natural gas-fired combustion turbine generator (CTG) with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 122 MMBTU/hr to provide heat for additional steam production. The CTG is only capable of operating in combined-cycle mode where the exhaust is routed to the HRSG. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a selective catalytic reduction (SCR), and oxidation catalyst.

Flexible Group: FGMACTYYYYOXICAT

POLLUTION CONTROL EQUIPMENT

SCR for NO_x control.
Oxidation catalyst for CO and VOC control.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	25 ppmvd at 15% O_2[C]	30-day rolling average, except during operation less than 75 percent of peak load	EUCTGHRSG11	SC V.2, SC VI.2, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK, 40 CFR 60.4380(b)(1)
2. NO_x	5.8 pph	24-hour rolling average as determined hourly	EUCTGHRSG11	SC VI.2, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. NOx	23 tpy	12-month rolling time period as determined at the end of each calendar month	EUCTGHRSG11	SC VI.3, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) &(d)
4. CO	11 pph[A,B]	Hourly, except during startup and shutdown	EUCTGHRSG11	SC V.1 SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(d)
5. CO	83 tpy	12-month rolling time period as determined at the end of each calendar month	EUCTGHRSG11	SC VI.3, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(d)
6. PM10	2.4 pph	Hourly	EUCTGHRSG11	SC V.1, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
7. PM2.5	2.4 pph	Hourly	EUCTGHRSG11	SC V.1, SC VI.5	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
8. VOC	2.7 pph[A,B]	Hourly, except during startup and shutdown	EUCTGHRSG11	SC V.1, SC VI.5	R 336.1205(1)(a) & (3), R 336.1702(a)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
9. VOC	20 tpy	12-month rolling time period as determined at the end of each calendar month	EUCTGHRSG11	SC VI.3, SC VI.5	R 336.1205(1)(a) & (3)
10. Formaldehyde	91 ppbvd @15% O_2	Hourly	EUCTGHRSG11	SC V.1 SC VI.6	R 336.1225

ppmvd = parts per million by volume at 15 percent O_2 and on a dry gas basis
lb/MWh = pound per megawatt hour

[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 150 ppmvd NO_x at 15 percent O_2 when the turbine is operating at less than 75 percent of peak load and at temperatures less than 0°F.

II. MATERIAL LIMITS

1. The permittee shall only burn natural gas in EUCTGHRSG11. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d), 40 CFR 60.4330)**

2. 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. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

3. The natural gas shall not have a total sulfur content in excess of 20 grains of sulfur per 100 standard cubic feet of gas in accordance with 60.4365(a). **(40 CFR 60.4365(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUCTGHRSG11 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 60 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 336.1205(1)(a) & (3), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c)&(d))**

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 days after plan submittal, the plan shall be deemed approved. **(R 336.1911, 40 CFR 52.21(c)&(d), 40 CFR 60.4333(a))**

3. The permittee shall operate and maintain EUCTGHRSG11, 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) & (3), R 336.1225, R 336.1702(a), 40 CFR 60.4333(a))**

4. The number of startup events for EUCTGHRSG11 shall not exceed 1460 events and the number of shutdown events for EUCTGHRSG11 shall not exceed 1460 events per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

5. The annual net-electric sales from EUCTGHRSG11 shall not exceed 219,000MWh or the product of the design efficiency and the potential electric output, whichever is greater. **(40 CFR 60.5509a(b)(3))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity for EUCTGHRSG11 shall not exceed, on a fuel heat input basis, 196 MMBTU/hr (HHV) for the turbine and 122 MMBTU/hr (HHV) for the HRSG duct burner. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c)&(d))**

2. The permittee shall not operate EUCTGHRSG11 unless the SCR, and oxidation catalyst 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 EUCTGHRSG11 as required in SC III.1. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1910)**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x emissions, and O_2 or CO_2 content of the exhaust gas from EUCTGHRSG11 on a continuous basis. The permittee shall install and operate the CEMS to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (3), 40 CFR 60.4345)**

4. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the natural gas flow rate from EUCTGHRSG11 on a continuous basis. The device shall be operated in accordance with 40 CFR 60.4345(c). **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c)&(d), 40 CFR 60.4345)**

V. TESTING/SAMPLING

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

1. Within 60 days after achieving the maximum production rate, but no later than after 180 days after commencement of initial startup, the permittee shall verify CO, VOC, PM10, PM2.5, and formaldehyde emission rates from EUCTGHRSG11, by testing at owner's expense, in accordance with Department 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:

Pollutant	Test Method Reference
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
Formaldehyde	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing,

including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

2. The permittee shall verify NO_x emission rates from EUCTGHRSG11, within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of trial operation, 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_x-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, 40 CFR 60.4375(b), 40 CFR 60.4400(a))**

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, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record, 24-hour rolling mass emission records and 30-day rolling average NOx concentrations for NO_x from EUCTGHRSG11 on a continuous basis. The permittee shall operate each CEMS or equivalent Predictive Emissions Monitoring System (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. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 60.4345, 40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK)**

3. The permittee shall keep, in a satisfactory manner, records of monthly and 12-month rolling NOx, CO, and VOC emission records for EUCTGHRSG1, as required by SC I.3, I.5, and I.9. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to a method approved by the District Supervisor. **(R 336.1205(1)(a) &(3), 40 CFR 52.21(c) & (d))**

4. The permittee shall keep, in a satisfactory manner, monthly records of each startup and shut down event, including duration of each event. The permittee shall calculate startup and shut down emissions using the data as supplied by the vendor on a per event basis for purposes of CO and VOC in SC VI.3. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

5. 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 EUCTGHRSG11. 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, and type of fuel combusted on a calendar month basis.
   f) All records required by 40 CFR 60.7.
   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 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) & (3), R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 52.21(c) & (d), 40 CFR 60.7(f), 40 CFR 60.4365, 40 CFR Part 60 Subpart KKKK)**

6. The permittee shall maintain records of annual net-electric sales from EUCTGHRSG11. Where Net electric sales are defined as: **(40 CFR 60.5509a(b)(3))**
   a) The gross electric sales to the utility power distribution system minus purchased power; or
   b) For combined heat and power facilities, where at least 20.0 percent of the total gross energy output consists of useful thermal output on a 12-operating month basis, the gross electric sales to the utility power distribution system minus the applicable percentage of purchased power of the thermal host facility or facilities. The applicable percentage of purchase power for CHP facilities is determined based on the percentage of the total thermal load of the host facility supplied to the host facility by the CHP facility. For example, if a CHP facility serves 50 percent of a thermal host's thermal demand, the owner/operator of the CHP facility would subtract 50 percent of the thermal host's electric purchased power when calculating net-electric sales.
   c) Electricity supplied to other facilities that produce electricity to offset auxiliary loads are included when calculating net-electric sales.
   d) Electric sales during a system emergency are not included when calculating net-electric sales

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 EUCTGHRSG11. **(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 30th 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 EUCTGHRSG11, 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))**

4. The permittee shall develop and keep on-site a quality assurance (QA) plan for all continuous monitoring equipment described in 40 CFR 60.4335(a), (c), and (d). For the CEMS and fuel flow meters, the owner or operator may, with AQD District Supervisor approval, satisfy the requirements of this condition by implementing the QA program and plan described in 40 CFR 75 (Appendix B)(1). **(40 CFR 60.4345)**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCTGHRSG11	80	130	R 336.1225 40 CFR 52.21(c)& (d)

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_x emissions, the permittee shall submit a protocol for approval

by Environmental Protection Agency (EPA). **(Performance Specifications 16 of Appendix B to 40 CFR Part 60)**

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 EUCTGHRSG11. **(40 CFR Part 60, Subparts A and KKKK)**

3. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, as specified in 40 CFR Part 63, Subparts A and YYYY, as they apply to EUCTGHRSG11. **(40 CFR Part 63, Subparts A and YYYY)**

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFUELHTR	Two (2) natural gas-fired fuel gas dew point heaters.	EUCTFUELHTR1, EUCTFUELHTR2
FGCOOLTWRSCWP	Three wet mechanical draft cooling towers with up to four cells each. Particulate in water droplets will be controlled with drift eliminators.	EUCOOLTWRCWP1 EUCOOLTWRCWP2 EUCOOLTWRCWP3
FGMACTYYYYOXICAT	40 CFR Part 63, Subpart YYYY requirements for each new stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine with a rated peak power output of equal to or greater than 1.0 megawatt (MW) and equipped with an oxidation catalyst located at a major source of HAP emissions. Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric generating system.	EUCTGHRSG11

FGFUELHTR
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

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

Emission Unit: EUCTFUELHTR1, EUCTFUELHTR2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in either unit of FGFUELHTR. **(R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each unit in FGFUELHTR shall not exceed 1.5 MMBTU per hour on a fuel heat input basis. **(R 336.1225, 40 CFR 52.21(c)&(d))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep manufacturer documentation showing the maximum heat input for each unit in FGFUELHTR. **(R 336.1225, 40 CFR 52.21(c)&(d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCTFUELHTR1	12	30	R 336.1225, 40 CFR 52.21(c)&(d)
2. SVCTFUELHTR2	12	30	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

NA

FGCOOLTWRSCWP
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three wet mechanical draft cooling towers with up to four cells each. Particulate in water droplets will be controlled with drift eliminators.

Emission Unit: EUCOOLTWRCWP1, EUCOOLTWRCWP2, EUCOOLTWRCWP3

POLLUTION CONTROL EQUIPMENT

Drift eliminators.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain FGCOOLTWRSCWP with mist/drift eliminators with a vendor-certified maximum drift rate of 0.0005 percent or less. **(R 336.1331(1)(c), R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. If a valid vendor certification is not available, the permittee may be required, upon request by the Department, to verify drift loss from FGCOOLTWRSCWP by testing, at owner's expense, in accordance with Department requirements. The permittee shall use the most recent version of the Cooling Technology Institute's Acceptable Test Code (ATC) 140, unless the AQD approves use of an alternate method. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of drift loss includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a record of the vendor’s certification required in SC IV.1, for the life of FGCOOLTWRSCWP. **(R 336.1331(1)(c), R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall maintain a record of any maintenance conducted for FGCOOLTWRSCWP. **(40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVCWPCT3A	318	76	40 CFR 52.21(c) & (d)
2. SVCWPCT3B	318	76	40 CFR 52.21(c) & (d)
3. SVCWPCT3C	318	76	40 CFR 52.21(c) & (d)
4. SVCWPCT3D	318	76	40 CFR 52.21(c) & (d)
5. SVCWPCT2A	318	76	40 CFR 52.21(c) & (d)
6. SVCWPCT2B	318	76	40 CFR 52.21(c) & (d)
7. SVCWPCT2C	318	76	40 CFR 52.21(c) & (d)
8. SVCWPCT2D	318	76	40 CFR 52.21(c) & (d)
9. SVCWPCT1A	108	44.7	40 CFR 52.21(c) & (d)
10. SVCWPCT1B	108	44.7	40 CFR 52.21(c) & (d)
11. SVCWPCT1C	108	44.7	40 CFR 52.21(c) & (d)
12. SVCWPCT1D	108	44.7	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

FGMACTYYYYOXICAT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

40 CFR Part 63, Subpart YYYY requirements for each new stationary combustion turbine which is a lean premix gas-fired stationary combustion turbine with a rated peak power output of equal to or greater than 1.0 megawatt (MW) and equipped with an oxidation catalyst located at a major source of HAP emissions. Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, the combustion turbine portion of any stationary cogeneration cycle combustion system, or the combustion turbine portion of any stationary combined cycle steam/electric generating system.

Emission Unit: EUCTGHRSG11

POLLUTION CONTROL EQUIPMENT

EUCTGHRSG11 shall be equipped with an oxidation catalyst

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/Testing Method	Underlying Applicable Requirements
1. Formaldehyde	91 ppbvd or less at 15-percent O_2	Hourly / at all times except during turbine startup*	EUCTGHRSG11	SC V.1, SC VI.2	**40 CFR 63.6100 40 CFR 63 Subpart YYYY, Table 1**

* Startup begins at the first firing of fuel in the stationary combustion turbine. For simple cycle turbines, startup ends when the stationary combustion turbine has reached stable operation or after 1 hour, whichever is less. For combined cycle turbines, startup ends when the stationary combustion turbine has reached stable operation or after 3 hours, whichever is less.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must operate and maintain each stationary combustion turbine, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the AQD which 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 63.6105(c))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee using an oxidation catalyst must continuously monitor and maintain the 4-hour rolling average of the catalyst inlet temperature within the range suggested by the catalyst manufacturer. The permittee is not required to use the catalyst inlet temperature data that is recorded during engine startup in the calculations of the 4-hour rolling average catalyst inlet temperature. **(40 CFR 63.6100, 40 CFR 63.6125(a), 40 CFR 63.6140, 40 CFR Part 63, Subpart YYYY, Tables 2.1 and 5.1)**

2. Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), the permittee must conduct all parametric monitoring at all times the stationary combustion turbine is operating. Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of 40 CFR Part 63, Subpart YYYY, including data averages and calculations. The permittee must use all the data collected during all other periods in assessing the performance of the control device or in assessing emissions from each stationary combustion turbine. **(40 CFR 63.6135(a) and (b))**

V. TESTING/SAMPLING

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

1. The permittee shall verify formaldehyde emission rates from EUCTGHRSG11 by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using approved EPA Methods listed in:

Pollutant	Test Method Reference
Formaldehyde	40 CFR Part 63, Subpart YYYY, Table 3

Testing must be conducted within 10 percent of 100-percent load. Performance tests shall be conducted under such conditions based on representative performance of the affected source for the period being tested. The permittee must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. 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 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.6120(a), (c), and (d), 40 CFR Part 63, Subpart YYYY, Table 3)**

2. The permittee shall verify the formaldehyde emission rate from EUCTGHRSG11 on an annual basis. **(R 336.1201(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR Part 63, Subpart YYYY, Table 3.a)**

3. The permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor. **(R 336.1201(3), 40 CFR 63.9(e), 40 CFR 63.6145(e))**

VI. MONITORING/RECORDKEEPING

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

1. For each combustion turbine in FGMACTYYYYOXICAT, the permittee must keep the records described as follows: **(40 CFR 63.6155(a))**

   a) A copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart YYYY, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.6155(a)(1))**

   b) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.6155(a)(2))**

   c) Records of all maintenance on the air pollution control equipment as required in 40 CFR 63.10(b)(2)(iii). **(40 CFR 63.6155(a)(5))**

   d) Records of the date, time, and duration of each startup period, recording the periods when the affected source was subject to the standard applicable to startup. **(40 CFR 63.6155(a)(6))**

   e) Record the number of deviations. For each deviation, record the date, time, cause, and duration of the deviation. **(40 CFR 63.6155(a)(7)(i))**

f) For each deviation, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions. **(40 CFR 63.6155(a)(7)(ii))**

g) Record actions taken to minimize emissions in accordance with 40 CFR 63.6105(c) (SC III.1), and any corrective actions taken to return the affected unit to its normal or usual manner of operation. **(40 CFR 63.6155(a)(7)(iii))**

2. For each combustion turbine in FGMACTYYYYOXICAT, the permittee must keep records to demonstrate continuous compliance with the operating limitations required in Table 5 of 40 CFR Part 63, Subpart YYYY as follows: **(40 CFR 63.6155(c))**

a) Monitor and record the catalyst inlet temperature and reduce these data to 4-hour rolling averages; **(40 CFR Part 63, Subpart YYYY, Table 5.1)**

b) Records demonstrating that maintaining the 4-hour rolling average of the inlet temperature within the range suggested by the catalyst manufacturer. **(40 CFR Part 63, Subpart YYYY, Table 5.1)**

3. The permittee must maintain all applicable records in such a manner that can be readily accessed and are suitable for inspection according to 40 CFR 63.10(b)(1). **(40 CFR 63.6160(a))**

4. 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 63.6160(b))**

5. The permittee must retain records of the most recent 2 years on site or records must be accessible on site. Records of the remaining 3 years may be retained off site. **(40 CFR 63.6160(c))**

VII. REPORTING

1. For each performance test required to demonstrate compliance with the emission limitation for formaldehyde, the permittee must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and the appropriate District Office, in a format approved by the AQD. **(R 336.1201(3)(c), R 336.2001(5), 40 CFR 63.9(h)(2)(ii), 40 CFR 63.6145(f))**

2. The permittee must submit a semiannual compliance report according to Table 6 of 40 CFR Part 63, Subpart YYYY to the appropriate AQD District Office per SC VII.2. The semiannual compliance report must contain the information described in 40 CFR 63.6150(a)(1) through (5) and the excess emissions and monitoring system performance reports as follows: **(40 CFR 63.6150(a))**

a) Company name and address. **(40 CFR 63.6150(a)(1))**

b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. **(40 CFR 63.6150(a)(2))**

c) Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.6150(a)(3))**

d) Report each deviation as follows:

i. Report the number of deviations. For each instance, report the start date, start time, duration, and cause of each deviation, and the corrective action taken. **(40 CFR 63.6150(a)(5)(i))**

ii. For each deviation, the report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions. **(40 CFR 63.6150(a)(5)(ii))**

iii. Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks), as applicable, and the corrective action taken. **(40 CFR 63.6150(a)(5)(iii))**

iv. Report the total operating time of the affected source during the reporting period. **(40 CFR 63.6150(a)(5)(iv))**

4. The permittee must submit the following to the USEPA via the Compliance and Emissions Data Reporting Interface (CEDRI):

   a) Within 60 days after the date of completing each performance test required by 40 CFR Part 63, Subpart YYYY, the permittee must submit the results of the performance test (as specified in 40 CFR 63.6145(f)) following the procedures specified: **(40 CFR 63.6150(f))**

      i. For data collected using test methods supported by the USEPA's Electronic Reporting Tool (ERT) as listed on the USEPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert), submit the results of the performance test via CEDRI, which can be accessed through the USEPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The data must be submitted in a file format generated through the use of the USEPA's ERT. Alternatively, submit an electronic file consistent with the extensible markup language (XML) schema listed on the USEPA's ERT website. **(40 CFR 63.6150(f)(1))**

      ii. For data collected using test methods that are not supported by the USEPA's ERT as listed on the EPA's ERT website, the results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the USEPA's ERT website. Submit the ERT generated package or alternative file to the USEPA via CEDRI. **(40 CFR 63.6150(f)(2))**

   b) Submit reports required in Table 6 of 40 CFR Part 63, Subpart YYYY to the USEPA via CEDRI, which can be accessed through the USEPA's CDX (https://cdx.epa.gov/). The permittee must use the appropriate electronic report template on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri). The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline regardless of the method in which the report is submitted. **(40 CFR 63.6150(g))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and YYYY for Stationary Combustion Turbines. **(40 CFR Part 63, Subparts A and YYYY)**

APPENDIX A
Continuous Emission Monitoring System (CEMS) Requirements

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

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

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

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

Pollutant	Applicable PS*
NO_x	2
O_2 & CO_2	3
*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 shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS, listed in the table above, of Appendix B to 40 CFR Part 60.

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

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each 6-month period. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CEMS downtime and corrective action.
   c) A report of the total operating time of EUCTGHRSG11 during the reporting period.
   d) A report of any periods that the CEMS exceeds the instrument range.
   e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

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