

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

August 30, 2022

**PERMIT TO INSTALL
16-21A**

ISSUED TO

Consumers Energy Company – Muskegon River Compressor Station

**LOCATED AT
8613 Pine Road
Marion, Michigan 49665**

**IN THE COUNTY OF
Osceola**

**STATE REGISTRATION NUMBER
N2901**

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: August 1, 2022	
DATE PERMIT TO INSTALL APPROVED: August 30, 2022	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

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

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal 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
EUTURBINE2-2	Natural gas-fired Solar Taurus 70 turbine rated at 11,419 hp with a maximum design heat input capacity of 96.5 MMBtu/hr (HHV). The turbine is equipped with SoLoNOx dry-low-NOx combustion control.	February 9, 2022	FGMACTYYYY

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.

**EUTURBINE2-2
EMISSION UNIT CONDITIONS**

DESCRIPTION

Natural gas-fired Solar Taurus 70 turbine rated at 11,419 hp with a maximum design heat input capacity of 96.5 MMBtu/hr (HHV).

Flexible Group ID: FGMACTYYYY

POLLUTION CONTROL EQUIPMENT

SoLoNOx dry-low-NOx combustion control.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	25 ppmvd or 150 ng/J of useful output (1.2 lb/MWh) ^{A,B,C}	Hourly ^D	EUTURBINE2-2	SC V.1, SC VI.5, SC VI.7	40 CFR 60.4320(a), Table 1 of 40 CFR Part 60 Subpart KKKK
2. NO _x	5.3 pph ^{A, B}	Hourly, except during startup and shutdown, and cold weather operations	EUTURBINE2-2	SC V.1, SC VI.5, SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c) & (d)
3. NO _x	23.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUTURBINE2-2	SC VI.6, SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c) & (d)
4. SO ₂	0.060 lb/MMBtu	Hourly	EUTURBINE2-2	SC VI.7	40 CFR 60.4330

ppmvd = parts per million by volume at 15 percent O₂ 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 combustion process ends at flame-off. 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 O₂ when the turbines are operating at less than 75 percent of peak load, or at temperatures less than 0°F.

^D For turbines using continuous emissions monitoring or continuous parameter monitoring, the time period is a 4-hour rolling unit operating hour average (40 CFR 60.4380(b))

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Sulfur content in natural gas	5 gr/100 scf ^A	At all times	EUTURBINE2-2	SC VI.7	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)

^A The sulfur content limit in 40 CFR 60.4365 is 20 gr/100 scf. SC II.1 subsumes the NSPS requirement.

2. The permittee shall only burn natural gas in EUTURBINE2-2. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 60.4330)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Within 180 days of initial startup, the permittee shall submit, implement, and maintain a malfunction abatement plan (MAP) as described in Rule 911(2) for EUTURBINE2-2. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
 - d) Operating variables and ranges under various load conditions shall be monitored and recorded. The normal operating range of these variables and a description of the method of monitoring shall be maintained.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 60.4333(a))**

2. Within 180 days of initial startup, the permittee shall submit, implement, and maintain a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporate 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, 40 CFR 60.4333(a))**
3. The total events for startup and shutdown for EUTURBINE2-2 shall not exceed 100 startup and 100 shutdown events per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
4. The permittee shall not operate EUTURBINE2-2 unless the SoLoNO_x control is operating at all times, not including startups and shutdowns. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for EUTURBINE2-2 shall not exceed, on a fuel heat input basis, 96.5 MMBTU per hour (HHV) at 32°F, as described in the manufacturer's product documentation. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate EUTURBINE2-2 unless the dry-low-NO_x (SoLoNO_x) control is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each turbine in accordance with an approved MAP for EUTURBINE2-2 as required in SC III.1. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage rate for EUTURBINE2-2 on a continuous basis. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the operation of the SoLoNO_x control for EUTURBINE2-2 on a continuous basis. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
5. As an alternative to subsequent stack test requirement listed in SC V.1, the permittee shall install, calibrate, maintain and operate in a satisfactory manner one of the following continuous monitoring systems to monitor and record the NO_x emissions and O₂ or CO₂ content of the exhaust gas from EUTURBINE2-2 on a continuous basis:
 - a) Continuous emission monitoring system (CEMS) as described in 40 CFR 60.4340(b)(1) and 40 CFR 60.4345; or
 - b) Continuous parameter monitoring system (as described in 40 CFR 60.4340(b)(2); or
 - c) If EUTURBINE2-2 is also regulated under 40 CFR Part 75, with approval from the AQD District Supervisor, the permittee may monitor the NO_x 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); or
 - d) Alternative monitoring system approved under 40 CFR Part 60 Subpart A.

The permittee shall install and operate the CEMS or Alternative Monitoring System (AMS) to meet the timelines and requirements detailed in Appendix A.

(R 336.1205(1)(a) & (b), 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. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup, the permittee shall verify NO_x emission rates from EUTURBINE2-2, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed in accordance with applicable Federal Reference Methods, 40 CFR Part 60 Appendix A, and 40 CFR 60.4400. Testing must be conducted annually (at least every 14 calendar months). If the stack test result is less than or equal to 75 percent of the NO_x limits in SC I.1, the test plan can be changed to once every two years (at least every 26 calendar months). If subsequent test results yield NO_x emissions greater than 75 percent of the NO_x limit in SC I.1, annual testing must be resumed.

As an alternative, if the permittee elects to use a CEMS or AMS as described by SC IV.5, the permittee shall comply with the following applicable initial performance testing requirements:

- a) If using a NO_x-diluent CEMS to show compliance, the initial performance test shall be performed in accordance with 40 CFR 60.4405; or
- b) If the permittee elects to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, as specified in 40 CFR 60.4410 and 40 CFR 60.4355; or
- b) If EUTURBINE2-2 is also regulated under 40 CFR Part 75, with approval from the AQD District Supervisor, the permittee may monitor the NO_x 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).

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. If a CEMS or AMS is being used, the permittee shall meet the timelines and requirements detailed in Appendix A. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4340, 40 CFR 60.4400, 40 CFR 60.4405, 40 CFR 60.4410, 40 CFR Part 60 Subpart KKKK, 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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), 40 CFR 60.4345)**
2. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUTURBINE2-2 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) & (3))**
3. The permittee shall monitor and record, in a satisfactory manner, the status of the SoLoNO_x operation on EUTURBINE2-2 for all operating hours on an hourly basis, in order to show compliance with SC III.4. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
4. The permittee shall keep, in a satisfactory manner, a record of the date and time of each startup and shutdown event, and monthly and 12-month rolling total number of startup and shutdown events for EUTURBINE2-2. 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 52.21(c) & (d))**
5. If the permittee elects to utilize a CEMS or AMS for compliance with the NO_x emission limits in SC I.1 and I.2, the permittee shall monitor and record hourly NO_x mass emissions and 4-hour rolling unit operating hour average NO_x concentration, for EUTURBINE2-2. 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(c) & (d), 40 CFR 60.4345)**
6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling NO_x mass emissions for EUTURBINE2-2. The permittee shall keep records of the basis of the calculations, including any product documentation from the turbine manufacturer used to determine emissions during startup and shutdown. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**
7. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit for EUTURBINE2-2. 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 (gr/100 scf) and potential SO₂ emissions (lb/MMBtu) of the natural gas as required by 40 CFR 60.4365(a) or (b);
 - d) Verification of heat input capacity as required by SC IV.1;
 - e) Identification, type, and amount of fuel combusted on a calendar month basis as required by SC VI.2;
 - f) All records required by 40 CFR 60.7;
 - g) Records of the dates and times of startup and shutdown events;
 - h) All calculations necessary to show compliance with the limits contained in this permit;
 - i) All records related to, or as required by, the MAP and the startup and shutdown plan.

All of the above information shall be stored in a format acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.1702(a), R 336.1912, 40 CFR 60.7, 40 CFR 60.4365, 40 CFR Part 60 Subpart KKKK)**

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 EUTURBINE2-2. **(R 336.1201(7)(a))**

2. The permittee shall provide written notification of the date construction commences and the actual date of initial startup of EUTURBINE2-2, in accordance with 40 CFR 60.7. The permittee shall submit the notification(s) to the AQD District Supervisor within the time frames specified in 40 CFR 60.7 where applicable. **(40 CFR 60.7(a))**
3. If the permittee elects to use a CEMS or AMS to demonstrate compliance with NOx emission limits, the permittee shall submit excess emissions and monitor downtime reports required under 40 CFR 60.7(c) by the 30th day following the end of each 6-month period. **(40 CFR 60.7(c), 40 CFR 60.4375(a), 40 CFR 60.4380, 40 CFR 60.4395)**

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. SVTURBINE2-2	71.5	60	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and KKKK, as they apply to EUTURBINE2-2. **(40 CFR Part 60 Subparts A & KKKK)**
2. The permittee shall comply with all provisions of the federal 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 EUTURBINE2-2. **(40 CFR Part 63 Subparts A & 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
FGMACTYYYY	Requirements for stationary combustion turbines located at major sources of HAP emissions not using an oxidation catalyst	EUTURBINE2-2

**FGMACTYYYY
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Requirements for a stationary combustion turbines located at major sources of HAP emissions not using an oxidation catalyst

Emission Unit: EUTURBINE2-2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Formaldehyde	91 ppbv at 15% oxygen except during startup ^A	Hourly	Each unit in FGMACTYYYY	SC V.1, SC V.2, SC IV.2	40 CFR 63.6100, 40 CFR Part 63 Subpart YYYYY Table 1.1

^A The period of time for startup is subject to the limits specified in the definition of startup 40 CFR 63.6175

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 at all times. **(40 CFR 63.6105(c))**
2. The permittee shall comply with the emissions limitations, operating limitations, and other requirements in 40 CFR Part 63, Subpart YYYYY at all times. **(40 CFR 63.6105(a))**
3. If the stationary combustion turbine is not equipped with an oxidation catalyst, the permittee must petition the USEPA for operating limitations that the permittee must monitor to demonstrate compliance with the formaldehyde emission limit in SC I.1. **(40 CFR 63.6120(e))**
4. If the stationary combustion turbine is not equipped with an oxidation catalyst and the permittee petition the USEPA for approval of additional operating limitation to demonstrate compliance with the formaldehyde emission limitation in SC I.1, the petition much include the following information **(40 CFR 63.6120(f))**:
 - a) Identification of the specific parameters proposed to use as additional operating limitations;
 - b) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with change in these parameters and how limitations on these parameters will serve to limit HAP emissions;
 - c) A discussion on how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
 - d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

- e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

IV. DESIGN/EQUIPMENT PARAMETER(S)

- 1. The permittee shall install, maintain, and operate a device to measure the operating parameters from the petition in SC III.4 during the initial performance test and continuously monitor thereafter. **(40 CFR 63.6120(e), 40 CFR 63.6125(b))**
- 2. The permittee must demonstrate continuous compliance with SC I.1 and operating limitations in Table 1 and Table 2 according to methods specified in Table 5 of 40 CFR 63 Subpart YYYY. **(40 CFR 63.6140(a))**

V. TESTING/SAMPLING

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

- 1. Not later than 120 calendar days after each unit becomes subject to 40 CFR 63 Subpart YYYY, the permittee shall conduct the initial performance test for formaldehyde emission rates from each unit by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

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

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 60 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. **(40 CFR 63.6120, 40 CFR 6145(e), 40 CFR Part 63, Subpart YYYY, Tables 1 and 3)**

- 2. The permittee shall verify the formaldehyde emission rates from each emission unit annually as specified in Table 3 in 40 CFR Part 63 Subpart YYYY. **(40 CFR 63.6115)**

VI. MONITORING/RECORDKEEPING

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

- 1. The permittee shall keep the records as described in 40 CFR 63.6155(a), (c), and (d). **(40 CFR 63.6155(a), (c), and (d))**
- 2. If the stationary combustion turbine is not equipped with an oxidation catalyst, the permittee must continuously monitor any parameter specified in the approved petition to the USEPA, in order to comply with the operating limitations in Table 2 and Table 5 in 40 CFR Part 63 Subpart YYYY. **(40 CFR 63.6125(b))**
- 3. The permittee must conduct all parametric monitoring at all times while the stationary combustion turbine is operating except during 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). **(40 CFR 63.6135(a))**

VII. REPORTING

- 1. The permittee shall provide a written initial notification not later than 120 calendar days after the stationary combustion turbine becomes subject to 40 CFR 63 Subpart YYYY. The notification must include the information in 40 CFR 63.9(b)(2)(i) through (v) and a statement that your new or reconstructed stationary combustion turbine has no additional emission limitation requirements and must explain the basis of the exclusion. **(40 CFR 63.9(b), 40 CFR 63.6095(d), 40 CFR 63.6145)**

2. The permittee shall submit applicable notifications specified in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), 40 CFR 63.8(f)(4), and 40 CFR 63.9(b) and (h). **(40 CFR 63.6145)**
3. The permittee shall submit all semiannual compliance reports and semiannual reports of monitoring and deviations from any emissions limitation or operation and maintenance requirement as required by 40 CFR 63.6150(a), (b), and (d). **(40 CFR 63.6150(a), (b), and (d))**
4. The permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii) for each performance test required to demonstrate compliance with the emission limitations for formaldehyde before the close of business on the 60th calendar day following the completion of the performance test. **(40 CFR 63.6145(f))**
5. The permittee must submit all performance test required by 40 CFR 63.6145(f) electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). **(40 CFR 63.6150(f))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

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

APPENDIX A
CEMS and AMS Requirements

1. Not less than 30 calendar days prior to commencement of initial start-up of a CEMS or AMS for compliance monitoring purposes, 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/AMS.
2. Not less than 30 calendar days prior to commencement of initial start-up up of a CEMS/AMS for compliance monitoring purposes, the permittee shall submit two copies of a complete test plan for the CEMS/AMS to the AQD for approval.
3. The permittee shall complete the installation and testing of the CEMS/AMS before such system is used for compliance monitoring purposes.
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, as applicable:

Pollutant	Applicable PS
NOx	2
O ₂ & CO ₂	3
AMS	As specified in an EPA approval under 40 CFR Part 60, Subpart A.

5. The span value of the CEMS shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and the PS, listed in the table above, of Appendix B to 40 CFR Part 60. If an AMS is installed in lieu of a CEMS, the AMS shall be installed, maintained, and operated in accordance with any requirements stipulated in EPA's approval of the AMS under 40 CFR Part 60, Subpart A.
7. Each calendar quarter that the CEMS is used for compliance monitoring purposes, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. As an alternative, the permittee may perform the Quality Assurance Procedures for CEMS set forth in Appendix B of 40 CFR Part 75 for the EUCOMBTURB01. Within 30 days following the end of each 6-month period, 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 6-month period that the CEMS/AMS is used for compliance monitoring purposes. 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/AMS downtime and corrective action.
 - c) A report of the total operating time of EUCOMBTURB01 during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS/AMS 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.