

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

July 19, 2021

PERMIT TO INSTALL
116-01B

ISSUED TO
DTE Electric Company, Belle River Peakers

LOCATED AT
4505 King Road
China Township, Michigan 48054

IN THE COUNTY OF
St. Clair

STATE REGISTRATION NUMBER
B2796

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of 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: July 8, 2021	
DATE PERMIT TO INSTALL APPROVED: July 19, 2021	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS	2
POLLUTANT / MEASUREMENT ABBREVIATIONS.....	3
GENERAL CONDITIONS	4
EMISSION UNIT SPECIAL CONDITIONS	6
EMISSION UNIT SUMMARY TABLE	6
FLEXIBLE GROUP SPECIAL CONDITIONS	7
FLEXIBLE GROUP SUMMARY TABLE	7
FG-CTG-DP	8
APPENDIX DP.....	13
Appendix 3-DP. Monitoring Requirements.....	13
APPENDIX 7-DP. Emission Calculations	13

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
EU-CTG12-2-DP	Dean Peakers CTG 12-2 natural gas-fired, simple-cycle combustion turbine generator with dry low-NOx burner peaking unit nominally rated at 82.4 megawatts at ISO conditions.	5-10-2002	FG-CTG-DP
EU-CTG12-1-DP	Dean Peakers CTG 12-1 natural gas-fired, simple-cycle combustion turbine generator with dry low-NOx burner peaking unit nominally rated at 82.4 megawatts at ISO conditions.	5-13-2002	FG-CTG-DP
EU-CTG11-1-DP	Dean Peakers CTG 11-1 natural gas-fired, simple-cycle combustion turbine generator with dry low-NOx burner peaking unit nominally rated at 82.4 megawatts at ISO conditions.	5-4-2002	FG-CTG-DP
EU-CTG11-2-DP	Dean Peakers CTG 11-2 natural gas-fired, simple-cycle combustion turbine generator with dry low-NOx burner peaking unit nominally rated at 82.4 megawatts at ISO conditions.	4-21-2002	FG-CTG-DP

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.

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
FG-CTG-DP	Dean Peakers - Four (4) DTE Energy Services (DTEES) natural gas-fired simple cycle combustion turbine generator peaking units each nominally rated at 82.4 MW at ISO conditions. Peak mode means operation is above the nominally rated capacity of the turbine, as specified by equipment manufacturer, to supply additional output on a short-term basis with the potential for greater than normal wear on the turbine and increased frequency for periodic inspection and maintenance of the turbine. Base mode includes all operation up to 100% of nominally rated capacity excluding startups/shutdowns/malfunctions. Combustion turbines are equipped with dry low-NOx burners.	EU-CTG11-1-DP EU-CTG11-2-DP EU-CTG12-1-DP EU-CTG12-2-DP

**FG-CTG-DP
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Dean Peakers - Four (4) natural gas-fired simple cycle combustion turbine generator peaking units each nominally rated at 82.4 MW at ISO conditions. Peak mode means operation is above the nominally rated capacity of the turbine, as specified by equipment manufacturer, to supply additional output on a short-term basis with the potential for greater than normal wear on the turbine and increased frequency for periodic inspection and maintenance of the turbine. Base mode includes all operation up to 100% of nominally rated capacity excluding startups/shutdowns/malfunctions Combustion turbines are equipped with dry low-NOx burners.

Emission Unit:

- EU-CTG11-1-DP Dean Peaker CTG Unit 11-1 natural gas-fired combustion turbine generator
- EU-CTG11-2-DP Dean Peaker CTG Unit 11-2. natural gas-fired combustion turbine generator
- EU-CTG12-1-DP Dean Peaker CTG Unit 12-1. natural gas-fired combustion turbine generator
- EU-CTG12-2-DP Dean Peaker CTG Unit 12-2. natural gas-fired combustion turbine generator

POLLUTION CONTROL EQUIPMENT

Dry Low-NOx Burners

I. EMISSION LIMIT(S)

Pollutant	Limit ^a	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	9 ppm by volume at 15% oxygen & on a dry gas basis	Base load, average of all operating hours in a calendar day, excluding startup, shutdown and malfunction	Each emission unit in FG-CTG-DP	SC V.1, and Appendix 7-DP	R 336.1205(1(a) & (b), 40 CFR 52.21(j))
2. NOx	21 ppm by volume at 15% oxygen & on a dry gas basis	Peak mode, average of all operating hours in a calendar day excluding startup, shutdown and malfunction	Each emission unit in FG-CTG-DP	SC V.1 and Appendix 7-DP	R 336.1205(1(a) & (b), 40 CFR 52.21(j))
3. NOx	60 ppm by volume at 15% oxygen & on a dry basis	Hourly	Each emission unit in FG-CTG-DP	SC IV.2	40 CFR 52.21 (c) &(d), 40 CFR 52.21(j))
4. NOx	100 ppm by volume at 15% oxygen & dry gas basis	Hourly, rolling arithmetic 4-unit operating hour average, determined at the end of each Unit Operating Hour, excluding startup, shutdown, and malfunction	Each emission unit in FG-CTG-DP	SC IV.2	40CFR 60.332 (a)(1), 40CFR 60.8(c)
5. NOx	230 tons per year	Based on a rolling 12-month period, as determined at the end of each month	FG-CTG-DP	SC IV.2, SC VI.4 and Appendix 7-DP	R 336.1205(1((a) & (b), 40 CFR 52.21(j))

Pollutant	Limit ^a	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. CO	25 ppm by volume at 15% oxygen & on a dry gas basis	Average of all operating hours in a calendar day excluding startup, shutdown and malfunction	Each emission unit in FG-CTG-DP	SC V.1 and Appendix 7-DP	R 336.1205(1)((a) & (b), 40 CFR 52.21(j))
7. CO	350 tons per year	Based on a rolling 12-month period, as determined at the end of each month excluding startup, shutdown and malfunction	FG-CTG-DP	SC V.1 and Appendix 7-DP	R 336.1205(1)((a) & (b), 40 CFR 52.21(j))
8. PM-10	9.0 pounds per hour	Average of all operating hours in a calendar day excluding startup, shutdown and malfunction	Each emission unit in FG-CTG-DP	SC V.2 and Appendix 7-DP	R 336.1205(1)((a) & (b), 40 CFR 52.21(j))
9. PM-10	46.4 tons per year	Based on a rolling 12-month period, as determined at the end of each month excluding startup, shutdown and malfunction	FG-CTG-DP	SC V.2 and Appendix 7-DP	R 336.1205(1)((a) & (b), 40 CFR 52.21(j))
10. HCOH	4.5 tons per year	Based on a rolling 12-month period, as determined at the end of each month excluding startup, shutdown and malfunction	FG-CTG-DP	SC V.3	R 336.1205(2)
11. Opacity	10%, except for uncombined water vapor	6-minute average excluding startup, shutdown and malfunction	Each emission unit in FG-CTG-DP	SC V.4	R 336.1301 40 CFR 52.21(j))
12. Sulfur in Natural Gas	0.8 grain per 100 standard cu. ft.	As-fired excluding startup, shutdown and malfunction	FG-CTG-DP	SC III.1	R 336.1225, R 336.1702(a) 40 CFR 52.21(j) 40 CFR 60.333 (b)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	12,400 MMCF	Based on a rolling 12-month period, as determined at the end of each month	FG-CTG-DP	Section VI.10	R 336.1205(1)(a) & (b), 40 CFR 52.21(j))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn pipeline quality natural gas in each turbine. **(R 336.1225, R 336.1702(a), 40 CFR 52.21, 40 CFR 60.333(b))**
2. The permittee shall operate not the turbines in FG-CTG-DP at base load for more than a total of 12,400 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j))**
3. The permittee shall not operate the turbines in FG-CTG-DP at peak load for more than a total of 800 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j))**
4. The permittee must minimize the NO_x, CO and PM-10 emission rates during startup and shutdown in accordance with the turbine manufacturer recommendations. **(R 336.1912, 40 CFR 52.21(j))**
5. The total hours for startup and shutdown for FG-CTG DP shall not exceed 500 hours per turbine per 12-month rolling time period as determined at the end of each calendar month. Startup is defined as the period of time from initiation of combustion firing until the unit reaches steady state operation (i.e., when premix operation is achieved Shutdown is defined as that period of time from the initial lowering of the turbine output, with the intent to shut down, until the point at which the combustion process has stopped. **(40 CFR 52.21(j))**
6. The permittee shall not operate FG-CTG-DP unless all provisions of the Federal Prevention of Significant Deterioration regulations, 40 CFR 52.21, are met. **(40 CFR 52.21)**
7. The permittee shall maintain and implement the EGLE approved plan describing how emissions are minimized during startup(s), shutdown(s) and malfunction(s). The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Alternative plans or modifications to the approved plan must be approved by the District Supervisor. 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 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each turbine with a dry low-NO_x combustor. **(R 336.1910, 40 CFR 52.21(j))**
2. The permittee shall install, calibrate, maintain, and operate devices or equipment to monitor and record the NO_x emissions and oxygen (O₂) or (CO₂) content of the exhaust gas from each turbine in FG-CTG-DP on a continuous basis, and to meet the timelines and reporting requirements as described in Appendix 3-DP. The Continuous Emission Monitoring System (CEMS) shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 for NO_x and PS 3 for O₂ or CO₂ of Appendix B to 40 CFR Part 60. **(R 336.1205(1)(a) & (b), R 336.2150(1)(b), (d), and (e), 40 CFR 52.21(c) & (d), 40 CFR 60.13 40 CFR 75.12(d)(2), 40 CFR 72.12(c), 40 CFR Part 75 Appendix B & F)**

V. TESTING/SAMPLING

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

1. The permittee shall conduct NO_x and CO emission rate testing, at owner's expense, for each turbine at least once every 20 calendar quarters. NO_x and CO emissions testing will be conducted at two operating load points, one at maximum load and one other mid load. Testing shall be performed using approved EPA Test Methods listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol 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 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 shall notify the AQD no less than 7 days prior to the anticipated test date. The permittee must submit

a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1902, R 336.2001, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 52.21(j), 40 CFR 60.8 & 60.335, 40 CFR 75 Appendix E2)**

2. The permittee shall test PM-10 once every five years. Testing must be done for each turbine at 100% load conditions. **(R 336.2001, R 336.2003, R 336.2004)**
3. Emission factors developed from previous stack tests at 65%, 100% and peak load conditions will be used along with hourly fuel usage data to demonstrate compliance with annual HCOH limits. **(R 336.2001, R 336.2003, R 336.2004)**
4. The permittee shall conduct federal Reference Method 9 visible emissions reading for each turbine at least once per 825 hours of operation. **(R 336.1301, 40 CFR 52.21)**

VI. MONITORING/RECORDKEEPING

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

1. For each turbine, the permittee shall keep a record of federal Reference Method 9 visible emissions reading conducted at least once per 825 hours of operation. **(R 336.1301, 40 CFR 52.21)**
2. The permittee shall keep records for each turbine operating in base mode, of the calendar day NOx emission calculations (ppmv NOx). All such records and calculations (stack test results) are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the AQD upon request. **See Appendix 7-DP. (R 336.1205(1)(a) & (b), 40 CFR 52.21(j), 40 CFR 60 Subpart GG)**
3. The permittee shall keep records for each turbine operating in peak mode, of the calendar day NOx emission calculations (ppmv NOx). All such records and calculations (stack test results) are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the AQD upon request. **See Appendix 7-DP. (R 336.1205(1)(a) & (b), 40 CFR 52.21(j), 40 CFR 60 Subpart GG)**
4. For each turbine, the permittee shall calculate and keep monthly records of the monthly and 12-month rolling total hours of operation at base and peak loads. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j))**
5. For each turbine, the permittee shall calculate and keep records of the monthly and 12-month rolling NOx emissions. **See Appendix 7-DP. (R 336.1205(1)(a) & (b), 40 CFR 52.21, 40 CFR 60 Subpart GG)**
6. For each turbine, the permittee shall calculate and keep records of the monthly and 12-month rolling CO emissions. **See Appendix 7-DP. (R 336.1205(1)(a) & (b), 40 CFR 52.21)**
7. For each turbine, the permittee shall calculate and keep records of the monthly and 12-month rolling PM-10 emission calculations. **(R 336.1205(1)(a) & (b), 40 CFR 52.21)**
8. For each turbine, the permittee shall calculate and keep records of the monthly and 12-month rolling HCOH emission calculations. **(R 336.1205(2))**
9. For each turbine, the permittee shall continuously monitor and record the hourly natural gas usage in a manner and with instrumentation acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (b), 40 CFR 52.21)**
10. For each turbine, the permittee shall keep records of hours of startup and shutdown. **(40 CFR 52.21(j))**
11. Monitoring and recording of emissions and operating information for each turbine is required to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A, and Subpart GG, 60.334. **(40 CFR 60.334 & CFR 75, Appendix F)**

VII. REPORTING

1. After CEMS are installed, the permittee shall report NO_x and either O₂ or CO₂ emissions in accordance with 40 CFR Part 75 within 30 days following the end of each calendar quarter. **(40 CFR 75.64)**
2. After NO_x CEMs installed, in accordance with 40 CFR 60.7(c) & (d), the permittee shall submit two copies of an excess emission report (EER) and monitoring system performance report in an acceptable format to the AQD District Supervisor and the TPU Supervisor within 30 days following the end of each calendar quarter. The monitoring system performance report shall follow the format of Figure 1 in 40 CFR 60.7(d). The NO_x excess emissions (EER) shall include the following information:
 - a. A report of each exceedance above specified permit limits for NO_x. 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 each combustion turbine in FG-CTG-DP 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.**(40 CFR 60.7(c) & (d))**

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-TURBINE1	108 x 228	56	R 336.1225, 40CFR52.21(c) & (d)
2. SV-TURBINE2	108 x 228	56	R 336.1225, 40CFR52.21(c) & (d)
3. SV-TURBINE3	108 x 228	56	R 336.1225, 40CFR52.21(c) & (d)
4. SV-TURBINE4	108 x 228	56	R 336.1225, 40CFR52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall conduct a visual inspection of the silencer elements associated with each turbine once each quarter that the turbine is operated. The visual inspection will evaluate whether or not silencer material has been lost due to operation of the turbines. If there is evidence that silencer material has been lost, the permittee shall notify the District Office of the positive results and take immediate action to replace the silencer elements. Records of the quarterly visual inspections shall be kept on file for a period of at least five years and made available to the AQD upon request. **(R 336.1901)**
2. The permittee shall comply with all the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and GG, as they apply to FG-CTG-DP. **(40 CFR 60, Subparts A and GG)**

Footnotes:

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

APPENDIX DP

Appendix 3-DP. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-CTG-DP.

Continuous Emission Monitoring System

The CEMS performance specifications defined in 40 CFR Part 75, Appendix B are adopted.

Methods of measurement, frequency of measurement and recordkeeping methods for CEMS required under 40 CFR 75 are outlined in the most recent version of the Acid Rain Program –Dean Peakers Monitoring Plan.

The data reduction procedures defined in 40 CFR 75.12(c) will be used calculate hourly, quarterly, and annual NO_x emission rates (in lb/MMBtu) by combining the NO_x concentration (in ppm), diluent concentration (in percent O₂ or CO₂), and percent moisture (if applicable) measurements according to the procedures in Appendix F of 40 CFR Part 75. Additionally, the CEMS shall ensure that the data obtained is directly correlated with the emission limits established in FG-CTG-DP SC I.1 and SC I.2.

The data conversion procedures defined in Appendix F in 40 CFR Part 75 will calculate the hourly heat input, MMBtu.

APPENDIX 7-DP. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-CTG-DP:

Natural gas usage is monitored continuously but recorded once per hour and tracked on a monthly basis.

The CO and PM₁₀ calendar day ppmv limits are assured by the latest stack testing results. The worst-case concentration data (in ppmv) from the tested operating loads are compared to permit limits.

From stack testing, emission factors for CO and PM-10 are developed in lbs pollutant/million cubic feet of natural gas, for the corresponding loads specified in FG-CTG-DP SC V.2 (CO) and V.3 (PM-10). Emission factors for each pollutant are calculated at each tested load point from the last representative stack test. Based upon the average of the three one-hour test runs for each test point, the higher EF value between the tested load points for each pollutant shall be multiplied by each hour's monitored fuel usage to calculate and ensure compliance with CO's and PM-10's rolling 12-month period emission limits.

Continuous Emission Monitoring System

Once CEMS are installed, compliance with the NO_x emission limits based on hourly and 12-month rolling time periods will be determined using the hourly NO_x emission rate (lb/MMBtu) and hourly heat rate (MMBtu/hr) values, described in Appendix DP and 40 CFR Part 75 Appendix F indicated below. The NO_x emission limit for steady state operations which are based on the average of all operating hours in a calendar day shall continue to be based upon stack testing results.

Use the following procedures to convert continuous emission monitoring system measurements of NO_x concentration (ppm) and diluent concentration (percentage) into NO_x emission rates (in lb/mmBtu). Perform measurements of NO_x and diluent (O₂ or CO₂) concentrations on the same moisture (wet or dry) basis. When the NO_x continuous emission monitoring system uses O₂ as the diluent, and measurements are performed on a dry basis, use the following conversion procedure:

$$E = K C_A F \frac{20.9}{20.9 - \%O_2}$$

When the NO_x continuous emission monitoring system uses CO₂ as the diluent, use the following conversion procedure:

$$E = K C_h F_c \frac{100}{\%CO_2}$$

where:

K = 1.194×10^{-7} (lb/dscf)/ppm NO_x.

E = Pollutant emissions during unit operation, lb/mmBtu.

C_h = Hourly average pollutant concentration during unit operation, ppm.

%O₂, %CO₂ = Oxygen or carbon dioxide volume during unit operation (expressed as percent O₂ or CO₂)