

Special Conditions

Permit Number

1. This permit authorizes emissions only from those emission points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. Also, this permit authorizes the emissions from planned maintenance, startup, and shutdown (MSS).

Federal Regulations

2. The permitted sources at these facilities shall comply with all applicable requirements of the following federal regulations:
 - A. The U.S. Environmental Protection Agency (EPA) Standards of Performance for New Stationary Sources (NSPS) in Title 40 Code of Federal Regulations (40 CFR) Part 60:
 - (1) Subpart A: General Provisions
 - (2) Subpart KKKK: Stationary Combustion Turbines
 - (3) Subpart IIII: Stationary Compression Ignition Internal Combustion Engines
 - B. The EPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories in 40 CFR Part 63:
 - (1) Subpart A: General Provisions
 - (2) Subpart ZZZZ: Stationary Reciprocating Internal Combustion Engines
3. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

Operational Specifications

4. Opacity of emissions from sources authorized by this permit shall not exceed 5 percent averaged over any six minute period. During periods of startup, shutdown or maintenance, the opacity from the stacks shall not exceed 15 percent over any six minute period.
 - A. Visible emission observations shall be conducted each calendar quarter for each stack during normal operation, unless the emission unit is not operating for the entire calendar quarter. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission points. Up to three emissions points may be read concurrently, provided that all three emission points are within a 70 degree viewing sector in front of the observer and the sun is positioned at the observer's back.
 - B. If visible emissions are observed from the stack(s), then opacity shall be determined by EPA Reference Method 9 within 24 hours of observing visible emissions. Contributions from uncombined water shall not be included in determining compliance with this condition.
 - C. If the opacity limits of this Special Condition are exceeded, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.
5. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any local air pollution control program having jurisdiction, the permit holder shall provide a sample and/or an analysis of the fuel fired in the gas turbines or engines, or shall allow an air pollution control agency representative to obtain a sample for analysis.

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6. Fuel for each turbine shall be pipeline-quality natural gas containing no more than 2.0 grains total sulfur per 100 dry standard cubic feet (dscf) on an hourly basis, and 0.25 grains total sulfur per 100 dscf on an annual basis.
7. Each turbine shall be limited to 2500 hours of operation per year, including periods of MSS.
8. Exhaust gases from each turbine shall not exceed the following concentrations in parts per million by volume, dry basis (ppmvd) at 15 percent oxygen (O₂):

Pollutant	Averaging Time	Concentration
Oxides of Nitrogen (NOX)	3-hr rolling average	9.0
Carbon Monoxide (CO)	3-hr rolling average	9.0
Volatile Organic Compound (VOC)	3-hr rolling average	2.0

- A. Each turbine's normal operating range is from 60 to 100 percent of base load except for periods of planned MSS.
 - B. Reduced load operation below base load not associated with planned MSS is authorized and not subject to the above concentration limits, provided the emission rates specified in the MAERT are not exceeded.
 - C. Planned startup events for each turbine are excluded from the above concentration limits. Each startup event shall not exceed one hour and is defined as the period that begins when an initial flame detection signal is recorded in the plant's data acquisition and handling system (DAHS) and ends when the turbine enters lean pre-mix operating mode.
 - D. Planned shutdown events for each turbine are excluded from the above concentration limits. Each shutdown event shall not exceed one hour and is defined as the period that begins when the DAHS received a shutdown signal and exits the lean pre-mix operating mode and ends when the flame detection signal is no longer detected by the plant's DAHS.
 - E. Emissions from maintenance activities (Attachment A) shall be excluded. Compliance shall be demonstrated by comparing the pollutant's total hourly emissions as calculated or measured by the Continuous Emissions Monitoring System (CEMS) to the hourly MSS rates listed in the MAERT. The permit holder shall sum all emissions from planned maintenance activities on a rolling 12-month basis for each Emission Point Number (EPN) to demonstrate compliance with the MAERT.
9. Each dew point heater shall be designed to emit no more than 0.06 pound NO_x per million British thermal unit (lb/MMBtu) (higher heating value (HHV) basis) fuel fired on a 1-hour block average.
 10. The following requirements apply to each engine:
 - A. Fuel for each engine shall be limited to ultra-low sulfur diesel (ULSD) containing no more than 15 parts per million by weight (ppmw) total sulfur.
 - B. Each engine shall be limited to 100 hours per year during non-emergency situations.
 - C. Each engine shall be equipped with a non-resettable hour meter.

Initial Determination of Compliance

11. Sampling ports and platforms shall be incorporated into the design of the turbine exhaust stacks according to the specifications set forth in the TCEQ "Guidelines for Stack Sampling Facilities". Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

The permit holder shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from each gas turbine. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and EPA Reference Methods. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling upon request.

Fuel sampling using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for sulfur dioxide (SO₂) or the permit holder may be exempted from fuel monitoring of SO₂ as provided under 40 CFR § 60.4365. If fuel sampling is used, compliance with NSPS Subpart KKKK SO₂ limits shall be based on 100 percent conversion of the sulfur in the fuel to SO₂. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. Fuel sampling using the methods and procedures of 40 CFR § 60.4360 may be conducted in lieu of stack testing for SO₂.

- A. The appropriate TCEQ Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
- (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.
 - (5) Method or procedure to be used in sampling.
 - (6) Procedure used to determine turbine load during and after the sampling period.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

- B. Air contaminants and diluents from the turbine to be sampled and analyzed include NO_x, CO, particulate matter (PM), VOC, SO₂, opacity, and O₂. Fuel sampling using the methods and procedures of the applicable NSPS may be conducted in lieu of stack sampling for SO₂.
- C. Each turbine shall be tested at a minimum and maximum load of the permitted operating range that is defined in this permit for the atmospheric conditions which exist during testing. Each tested load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in 40 CFR Part 60, Subpart KKKK for combustion gas turbines.
- D. Test waivers and alternate or equivalent procedure proposals which must have EPA approval shall be submitted to the TCEQ Air Permits Division.

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- E. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial startup of the facilities and at other times when required by the TCEQ Regional Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.
- F. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports, including distribution instructions, shall comply with Chapter 14 of the TCEQ Sampling Procedures Manual.

Continuous Demonstration of Compliance

- 12. The permit holder shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of NO_x, CO, and diluent gases (carbon dioxide (CO₂) or O₂) from each gas turbine stack.
 - A. The NO_x and diluent gas CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 2 and 3, 40 CFR Part 60, Appendix B. The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1.
 - B. Compliance with the CEMS requirements of 40 CFR Part 60 can be demonstrated by meeting the applicable requirements of 40 CFR Part 75 provided that the holder of this permit demonstrates compliance with all applicable 40 CFR Part 60 emission standards.
 - C. The CO CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 60, Appendix B, Performance Specification No. 4.
 - D. All CEMS shall meet the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, except that cylinder gas audits (CGA) conducted in all four quarters may be used in lieu of the annual relative accuracy test audit. Quarterly CGAs shall be conducted at least 60 days apart. Relative accuracy exceedances (as specified in 40 CFR 60, Appendix F), CGA exceedances of ±15 percent accuracy, and any CEMS downtime shall be reported to the TCEQ regional office, and necessary corrective action shall be taken. Supplemental stack sampling may be required at the discretion of the TCEQ Regional Director.
 - E. If any emission monitor fails to meet specified performance, it shall be repaired or replaced immediately. If repair or replacement is not immediately feasible, the monitor shall be repaired or replaced no later than seven days after the failure is first detected by an employee at the site, unless written permission is obtained from the TCEQ Regional Office which allows for longer repair/replacement time. The holder of this permit shall develop an operation and maintenance program (including stocking necessary spare parts) to ensure that the continuous monitors are available as required. A monitor with downtime due to breakdown or repair of more than 10 percent of the facility operating time for any calendar year will be considered as a defective monitor and the monitor must be replaced within two weeks after exceeding the 10 percent threshold.
 - F. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed. The individual average concentrations shall be reduced to units of lbs/hr at least once every day.

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- G. The monitoring data and quality-assurance data shall be maintained by the permit holder at the facility site. The data from the CEMS will be used to determine compliance with the conditions of this permit. During periods where the CEMS data is unavailable or not quality assured, compliance may alternatively be determined by using manufacturer emission factors or valid and representative data previously measured and recorded by the unit's CEMS under similar operating conditions.
 - H. The TCEQ Regional Office shall be notified at least 21 days prior to any required relative accuracy test audit, and Regional Office personnel shall be provided with an opportunity to observe the testing.
 - I. If applicable, the requirements of 40 CFR Part 75, Appendices A and B, may be used as an alternative to the performance specifications and quality assurance requirements (respectively) of 40 CFR Part 60 for the NO_x and O₂ CEMS.
13. The holder of this permit shall either measure, or develop a program to calculate, the total mass flow rate through the stacks to ensure continuous compliance with the emission limitations specified in the MAERT. The permit holder shall calculate hourly mass emissions in pounds per hour (lbs/hr) using the measured or calculated exhaust flow rate and the measured concentrations of NO_x and CO from the CEMS required in this permit.
14. The permit holder shall monitor fuel consumption from each gaseous fuel combustion device individually and continuously, using monitoring devices that are accurate to ±2.0 percent of the unit's maximum flow and maintain, calibrate, and operate the devices in accordance with the manufacturer's specifications. The devices shall be calibrated in accordance with the manufacturer's recommendations or at least annually.
15. After the initial demonstration of compliance, ongoing compliance with the VOC and PM tons per year emission rates in the MAERT shall be demonstrated by calculating rolling 12-month annual emissions from emission factors (lb/MMBtu, HHV) obtained from the results of the sampling required by this permit and the monthly total heat input (MMBtu, HHV) from natural gas fuel.

Recordkeeping Requirements

16. The following records (written or electronic) shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any local air pollution control program having jurisdiction:
- A. A copy of this permit.
 - B. The initial permit application and subsequent representations submitted to the TCEQ.
 - C. A complete copy of the testing reports and records of the initial performance testing completed to demonstrate initial compliance.
 - D. Stack sampling results or other air emissions testing (other than CEMS data).
17. The following records shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
- A. The CEMS data to demonstrate compliance with the emission rates listed in the Special Conditions and the MAERT.

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- B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems in a permanent form suitable for inspection.
- C. Records for the hourly calculated values required to determine mass flow rates from CEMS data and compliance with the MAERT shall be cumulatively added during each hour of the month and stored electronically.
- D. Records of the hours of operation and the quantity of natural gas fired in the gas turbines.
- E. Records of dates and times for startups and shutdowns of each turbine.
- F. Records of fuel sampling conducted pursuant to 40 CFR Part 60, Subpart KKKK.
- G. Records of fuel delivery including sulfur content based on receipts or chemical analyses. Fuel designated as ULSD on the receipt is acceptable.
- H. Record of visible emissions or opacity observations, including corrective actions taken.
- I. Records of planned maintenance activities.

Date: _____

Attachment A - Maintenance Activities

The following list of maintenance activities is authorized by this permit. This list is not intended to be all-inclusive of activities at the site.

Planned Maintenance Activity	EPN	Emissions				
		NO _x	CO	VOC	PM	SO ₂
Combustion optimization ¹	CTG1 and/or CTG2	X	X	X	X	X
Turbine washing online ²	CTG1 and/or CTG2				X	
Miscellaneous particulate filter maintenance ³	MAINT				X	
Gaseous fuel venting ⁴	MAINT			X		
Water-based washing	MAINT			X		
Management of sludge from pits, ponds, sumps, and water conveyances ⁵	MAINT			X		
Organic chemical usage	MAINT			X		
Inspection, repair, replacement, adjusting, testing, and calibration of analytical equipment, process instruments including sight glasses, meters, gauges, CEMS, or Periodic Emissions Monitoring System (PEMS)	MAINT	X	X	X		
Small equipment and fugitive component repair and replacement in VOC service ⁶	MAINT			X		
Maintenance of storage vessels storing materials with a vapor pressure <0.5 psia	MAINT			X		
Maintenance of storage vessels storing gasoline of other materials with a vapor pressure > 0.5 psia	MAINT			X		
Maintenance of storage vessels storing gasoline of other materials with a vapor pressure > 0.5 psia that require clearing of the vessels to allow for entry of personnel	MAINT			X		

Date: _____

¹ Includes, but is not limited to, (1) leak or operability checks (e.g. turbine over-speed test, troubleshooting), (ii) balancing, and (iii) tuning activities that occur during seasonal tuning or after completion of initial construction, combustor change-out, major repair, combustor maintenance, or other similar circumstances.

² Involves the use of water only.

³ Includes, but is not limited to, process-related building air filters, and combustion turbine air intake filters.

⁴ Includes, but is not limited to, venting prior to pipeline pigging and meter proving.

⁵ Includes, but is not limited to, management by vacuum truck/dewatering of materials in open pits, ponds, sumps, tanks, and other closed/open vessels. Material include water and sludge materials containing miscellaneous VOCs such as diesel, lube oil, and other waste oils.

⁶ Includes, but is not limited to, (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters, and screens in natural gas, diesel oil, lube oil, and gasoline service, (ii) vehicle and mobile equipment maintenance that may involve VOC emissions, such as oil changes, transmission service, and hydraulic system service.