

Special Conditions

Permit Number 17692

1. This permit authorizes turbine generators and testing operations at 16415 Jacintoport Boulevard in Houston, Harris County. It does not cover the sources claimed under Permit by Rule as of the date of permit issuance.

Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):
 - A. Subpart A, General Provisions.
 - B. Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
3. These facilities shall comply with all applicable requirements of the U.S. EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:
 - A. Subpart A, General Provisions.
 - B. Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
4. Emission points and sources shall be physically identified and marked in a conspicuous location as follows:
 - A. The facility identification number (FIN) as submitted to the Emissions Inventory Section of the Texas Commission on Environmental Quality (TCEQ).
 - B. The Emission Point Number (EPN) as listed on the maximum allowable emission rates table (MAERT) (if different than the FIN).
5. Site-wide emissions of hazardous air pollutants (HAPs) shall be less than 10 tons per year (tpy) for any individual HAP and less than 25 tpy for all HAPs combined. Records indicating compliance with the above limit shall be kept for a period of 5 years.

Turbine Testing Facilities

6. Emission and Operation Limitations
 - A. Opacity of emissions from any emission point shall not exceed 5 percent averaged over a six-minute period when using natural gas. Opacity of emissions from any emission point shall not exceed 20 percent over a six-minute period when using liquid fuel.
 - B. If visible emissions are present on any turbine that burns any fuel during daylight hours, then opacity from that turbine shall be measured by a trained observer using the U.S. Environmental Protection Agency Reference Method 9 on each turbine that burns any fuel during daylight hours. If visible emissions are present and Method 9 opacity observations are required, records of Method 9 readings shall be maintained. If opacity is in excess of limits in

Special Condition No. 6A, the turbine shall be shut down as soon as practicable and not restarted until the cause of excess opacity is corrected.

- C. Parking lots and plant roads shall be paved and regularly cleaned to minimize dust emissions.
- D. Fuel for auxiliary diesel generator engines and turbines under test is limited to:
 - (1) Pipeline-quality, sweet natural gas containing no more than 0.25 grain (gr) of hydrogen sulfide and 5.0 gr of total sulfur per 100 dry standard cubic feet.
 - (2) Refinery grade, distillate fuel oil containing no more than 0.4 percent of total sulfur by weight.
 - (3) Turbines may be tested in the and Dynamometer Test areas using naphtha, kerosene, higher sulfur distillate fuel oil containing no more than 0.5 percent of total sulfur by weight, and a mixture of natural gas and up to 27 percent propane when required to demonstrate performance with the specific fuel required by the customer.

The use of any other fuel will require modification to this permit.

7. Demonstration of Compliance

- A. If any condition or limitation of this permit or any TCEQ regulation is more stringent than another, then the more stringent condition or limitation shall govern and be the standard by which compliance will be demonstrated.
- B. To demonstrate compliance with the MAERT, actual emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), sulfur dioxide (SO₂), and particulate matter (PM) from EPNs DT-1 and DT-2 will be calculated according to the following formula:

$$\text{pounds of emissions} = \text{emission factor} \times \text{duration of test in hours}$$

The emission factor pounds per hour (in lb/hr) must be pollutant specific and representative of emission factors for the actual load, fuel type, and ambient conditions during the test. These factors are to be derived from the manufacturer's expected values found on Attachment III of the permit application submitted September 1, 1998 and/or GE Cycledeck emission modeling software. These factors may be corrected for ambient conditions at the test cell. Additional testing may be required upon request of the TCEQ Regional Director.

In the case of new turbine models not previously tested at the site, manufacturer's expected emission factors must be used to show compliance with the MAERT. The new factors must be submitted to the TCEQ during the next permit action.

Actual emissions of SO₂ will be calculated by using actual sulfur content of the fuel for liquid fuels and assuming that 100 percent of the sulfur in the fuel is converted to SO₂. The permit holder may base these calculations on full-load fuel consumption for the duration of the test rather than monitoring fuel consumption in each test cell.

- C. To demonstrate compliance with the MAERT, actual emissions of NO_x, CO, VOC, SO₂, and PM from EPNs AUX-2 will be calculated according to the following formula:

$$\text{pounds of emissions} = \text{emission factor} \times \text{operating hours}$$

The emission factor (lb/hr) must be pollutant specific and represented in the permit application submitted September 1, 1998.

Recordkeeping

8. General Condition No. 7 regarding information and data to be recorded shall be supplemented as follows:
 - A. For EPNs DT-1 and DT-2 the following data shall be recorded for each test run: model of turbine tested, the type of fuel fired, and the duration of the test. For EPN AUX-2 hours of operation shall be recorded.
 - B. The data required in Special Condition No. 8A shall be recorded daily, and a report shall be produced monthly that represents tons of NO_x, CO, VOC, SO₂, and PM emitted from each EPN in lbs/hr on a daily basis and tons emitted for the previous 12-month period. The data shall be reduced using the calculation methods specified in Special Condition No. 7B and C.
 - C. The daily, monthly, and 12-month rolling average records required in Special Condition No. 8A and 8B shall be kept in a central location with documentation of the method of data reduction including units, supporting calculations, conversion factors, assumptions, the basis of the assumptions, copies of manufacturer's expected factors or test reports to verify the emission factors used, and hours of operation, as applicable.
 - D. Records shall be kept of fuel analyses as obtained from the supplier on an annual basis.
9. Records required in Special Condition No. 8B shall constitute the method to demonstrate compliance with the limits specified in the MAERT.

Housekeeping

10. Lubricating oil spills shall be cleaned up immediately or washed into a waste oil handling system as soon as practicable.
11. Waste lubricating oil shall be stored in closed containers until taken off-site by an authorized waste disposal service.

Permits by Rule Authorizations

12. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all inclusive and can be altered without modifications to this permit

Authorization	Source or Activity
PBR No. 148591	Danobat Grinder (D-GRIND), Paint Booth with Oven (PB-1), and the Bearing Wash (BW-1)
PBR No. 158983	Arc Welding unit (ARCWELD), Cleaning Line Tanks (CLEANING LINE), Fluorescent Penetrant Inspection Line (FPI), and the Wastewater Evaporator 2 (EVAP-2).
30 TAC § 106.183	Hot Wash Heaters (HW3 and HW4).
30 TAC § 106.452	Blasting Booth (BLAST-1)

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