



MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

14306 Park Avenue Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

PERMIT TO OPERATE

B010211

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If a copy is posted, the original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: OCTOBER 2025

OWNER OF OPERATOR (Co. #453)

Victor Valley Wastewater Reclamation Authority
20111 Shay Road
Victorville, CA 92394

EQUIPMENT LOCATION (Fac. #1124)

VVWRA - 20111 Shay
20111 Shay Road
Victorville, CA 92394

Description:

DIGESTER GAS AND NATURAL GAS IC ENGINE (BLOWER #4) consisting of: Blower to supply air to waste water treatment plant. Year of Manufacturer 2007; date installed 10/2007; operated in conjunction with a supplemental electric-motor powered blower.

One Waukesha, D-Gas fired internal combustion engine Model No. VGF Series H24GLD and Serial No. C-17132/1, producing 450 bhp with 8 cylinders at 1800 rpm while consuming a maximum of 5790 scf/hr. This equipment powers a Turblex Inc Blower Model No. KA22SV-GC205 and Serial No. 7162, rated at 10,046 cfm.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.6	gm/bhp-hr
NOx	0.6	gm/bhp-hr
PM10	0.1	gm/bhp-hr
SOx	0.28	gm/bhp-hr
VOC	0.75	gm/bhp-hr

CONDITIONS:

1. This engine, and any associated air pollution control equipment, shall be installed, operated, and maintained in strict accord with those recommendations of the manufacturer/supplier and/or in a manner consistent with safety and good air pollution control practices for minimizing emissions. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications

Fee Schedule: 1 (c) Rating: 450bhp SIC: 4952 SCC: 20300702 Location/UTM(Km): 467E/3831N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

Victor Valley Wastewater Reclamation
Authority
20111 Shay Road
Victorville, CA 92394

By: **COPY**
Brad Poiriez
Air Pollution Control Officer

submitted with the application for this permit.
[40 CFR 60.4243(b)(2)(i)]

2. This equipment shall not be operated without venting through the properly operating selective catalytic reduction system manufactured by Miratech Model No. 1QS-16-08-L1. This requirement shall not apply during a catalyst break-in period not to exceed thirty days beginning with the first firing of fuel in this unit. Also, during initial testing of the waste water treatment plant this engine can be operated 400 hours on natural gas only.
[District Rules 204 and 1303]

3. This IC engine shall only burn digester gas produced at the facility and/or natural gas.
[District Rules 1302 and 1320]

4. A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.
[District Rule 1302(C)(2)(a)]

5. Emissions from this equipment to the atmosphere shall not exceed the following emission limits:

a. Hourly rates, verified by compliance tests (initial compliance test in the case of PM10 and formaldehyde):

- i. NOx as NO2 - 0.595 lb/hr and 0.60 gram/bhp-hr (averaged over one hour)
- ii. VOC as CH4 - 0.744 lb/hr and 0.75 gram/bhp-hr
- iii. CO - 0.595 lb/hr and 0.6 gram/bhp-hr
- iv. PM10 - 0.10 lb/hr (front and back half)

b. Annual rates, based on a rolling 12 month summary, verified by fuel use and compliance tests:

- i. NOx - 5214 pounds/year
- ii. VOC - 6518 pounds/year
- iii. PM10 - 652 pounds/year (front and back half)
- iv. CO - 5214 pounds/year

[40 CFR 60.4243(b)(2)(i), 40 CFR 60.4244, District Rules 1302 and 1303]

6. The owner/operator shall perform the following compliance tests, once every twelve month period, beginning in 2009 in accordance with the MDAQMD Compliance Test Procedural Manual. The following compliance tests are required:

- a. NOx as NO2 in gm/bhp-hr and lb/hr (measured per USEPA Reference Methods 19 and 20)
- b. VOC as CH4 in gm/bhp-hr and lb/hr (measured per USEPA Reference Methods 25A or 18)
- c. CO in gm/bhp-hr and lb/hr (measured per USEPA Reference Method 10)
- d. Flue gas flow rate in dscfm
- e. Ammonia slip in ppmvd at 15% oxygen

[40 CFR 60.4243(b)(2)(i), 40 CFR 60.4244, District Rules 1302 and 1303]

The owner/operator must submit a compliance/certification test protocol at least thirty (30) days prior to the compliance/certification test date. The owner/operator must conduct all required compliance/certification tests in accordance with a District-approved test protocol. The owner/operator must notify the District a minimum of ten (10) days prior to the compliance/certification test date so that an observer may be present. The final compliance/certification test results must be submitted to the District within sixty (60) days of completion of the test. All compliance/certification test notifications, protocols, and results may be submitted electronically to reporting@mdaqmd.ca.gov

7. The owner/operator shall maintain an operations log for this equipment current and on-site (or at a central location) for a minimum of five (5) years, and this log shall be provided to District, State and/or Federal personnel, upon request. The log shall include, at a minimum, the information specified below:

- a. "Hour Meter" reading at the beginning and end of each day,
- b. The total hours operated each day,
- c. The amount of digester gas and natural gas burned each day, and
- d. Hourly catalyst performance data (inlet temperature and differential pressure across catalyst).
- e. Maintenance performed on this equipment; and,
- f. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment; and,
- g. Records of actions taken during periods of malfunction to minimize emissions in accordance with condition 1, including corrective

actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation [40 CFR 60.4243(b)(2)(i)].

8. Emissions from this facility, including all stationary and portable emissions, may not exceed the following emission limits, based on a rolling 12 month summary:

- a. NO_x - 24.9 tons/year, verified by compliance tests and hours of operation,
- b. VOC as CH₄ - 24.9 tons/year, verified by compliance tests and hours of operation,
- c. PM₁₀ - 14.9 tons/year, verified by compliance tests and hours of operation,
- d. Single Federal Hazardous Air Pollutant (HAP) - 9.9 ton/year, verified by emission calculations, and
- e. All HAPs - 24.9 tons/year, verified by emission calculations.

[District Rule 1303]

9. A facility wide Comprehensive Emission Inventory (CEI) for all emitted criteria and toxic air pollutants must be submitted to the District, in a format approved by the District, upon District request.

[District Rule 107(b), H&S Code 39607 & 44341-44342, and 40 CFR 51, Subpart A]