



**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**

B011922

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: AUGUST 2026**

**OWNER OF OPERATOR (Co.#2116)**

Biogas Power System - Mojave, LLC  
20111 Shay Rd.  
Victorville, CA 92394

**EQUIPMENT LOCATION (Fac.#3465)**

Biogas Power Systems - Shay Road  
20111 Shay Rd.  
Victorville, CA 92394

**Description:**

DIGESTER GAS AND/OR NATURAL GAS IC ENGINE, PRIME COMBINED HEAT AND POWER, UNIT #1: PACKAGE SERIAL NUMBER M-0187 consisting of: A dual-fueled IC engine manufactured in 2013 with a Selective Catalytic Reduction and Oxidation Catalyst exhaust after-treatment device installed. Engine can be fueled by Digester Gas and/or PUC-Regulated pipeline quality natural gas. Exhaust flow is 2997 CFM at 910 Deg F:

One MWM, D-Gas fired internal combustion engine Model No. TCG 2016 V16 C and Serial No. 9298201, Direct Injected, Turbo Charged, After Cooled, Inter Cooled, Three-Way Catalyst (also NSCR), Air-To-Fuel Ratio Controller, Four-Stroke Lean Burn, Spark-Ignited, producing 1108 bhp with 16 cylinders at 1800 rpm while consuming a maximum of 6.551 MMBtu/hr. This equipment powers a 2G Cenergy Generator Model No. CHP Module Avus Series and Serial No. MZZ4862, rated at 800 KW.

**EMISSIONS RATES**

Emission Type	Est. Max Load	Unit
CO	1.0	gm/bhp-hr
NOx	0.4	gm/bhp-hr
PM10	0.06	gm/bhp-hr
SOx	0.054	gm/bhp-hr
VOC	0.4	gm/bhp-hr

**CONDITIONS:**

Fee Schedule: 2 (d)

Rating: 6551000 Btu

SIC: 4911

SCC: 20300702

Location/UTM(Km):  
473E/3956N

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.

Biogas Power System - Mojave, LLC  
705 Palomar Airport Road, Suite 200  
Carlsbad, CA 92011

By: **COPY**  
**Eldon Heaston**  
Air Pollution Control Officer

1. This stationary, spark-ignited internal combustion engine, air-fuel ratio controller, and control device (SCR and Oxidation Catalyst) shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants.

[40 CFR 60.4233(e), 60.4234, 60.4243(a),(d), and (g) - Subpart JJJJ - NSPS for Stationary Spark Ignition ICE]

2. This unit shall only be fired on PUC-Regulated Natural Gas fuel, Digester Gas, or any percentage mixture of the two gases, with a minimum annual average of 10% Digester Gas by volume.

[District Rules 431.1 and 1303]

3. The facility shall have the incoming Digester Gas analyzed for sulfur content within 90 days of initial engine startup to ensure that the carbon adsorption / iron sponge gas conditioning system is properly operating and the fuel going to the engine has no more than 35 ppmw Sulfur content. Furthermore, the engine shall not be run on Digester Gas that has not been properly processed through the gas conditioning system.

[District Rule 1302]

4. The owner/operator shall maintain an operations log for this unit 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 Federal personnel upon request. The log shall include, at a minimum, the information specified below:

- a. Monthly fuel usage for each fuel used (natural gas and digester gas) in cubic feet;
- b. Monthly and calendar year operation in terms of total hours;
- c. Monthly differential pressure readings across the catalytic converter.
- d. Records of all maintenance and repair actions performed on the engine, the AFRC, and the SCR/catalytic converter; and,
- e. Records of all required source tests and source test results.

[40 CFR 60.4245, 40 CFR 1048, District Rule 1110.2]

5. The catalytic converter shall be cleaned in accordance with the manufacturer's written procedures when the pressure differential across the converter exceeds two (2) inches water column above the initial difference measured at startup.

[40 CFR 60.4243, District Rule 1302]

6. This engine shall be source tested in accordance with the procedures outlined in 40 CFR 60.4244 no later than 90 days after initial engine startup and the source test results must verify that the engine meets the following maximum emission limits (measured at standard conditions):

- a. NO<sub>x</sub>: 0.40 g/bhp-hr
- b. VOC: 0.40 g/bhp-hr
- c. CO: 1.00 g/bhp-hr

These emission limits do not represent Best Available Control Technology (BACT). If, for any reason, the engine exceeds the BACT threshold of 25 lbs per day, the above limits will be significantly revised downward to reflect BACT limitations.

Additionally, the engine shall also be source tested in accordance with the procedures outlined in 40 CFR 60.4244 whenever any of the following events occur:

1. Within 90 days after the catalytic converter is replaced.
2. Within 90 days after reaching 8,760 hours of engine operation since the previous source test.
3. A maximum of 36 months from the previous source test.

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

7. The owner/operator must submit a compliance/source test protocol at least thirty (30) days prior to the compliance/source test date stipulated by condition 6. The owner/operator must conduct all required compliance/source 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/source test date so that an observer may be present. The final compliance/source test results must be submitted to the District not later than forty-five (45) days after the source test date. All compliance/source test notifications, protocols, and results may be submitted electronically to

reporting@mdaqmd.ca.gov.

[District Rule 404; 1303]

8. 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 1110.2(F)(1)(a)]

9. All criteria and toxic emissions from this engine must be reported to Victor Valley Wastewater Reclamation Authority's facility located at this same site (Company Number 0453, Facility Number 01124) no later than January 31 of each year for the previous calendar year for inclusion into their facility wide annual emissions inventory.  
[District rules 204 and 1302]

10. This engine is subject to the requirements of the New Source Performance Standards (NSPS) for Stationary Spark Ignition IC Engines (40 CFR 60, Subpart JJJJ).  
[District Rule 1302]