MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park AvenueVictorville,CA92392-2310
760.245.1661 -- 800.635.4617 -- FAX760.245.2022

PERMIT TO OPERATE

B000295

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.#31)

Southern California Gas Co. - MD
9400 Oakdale Avenue
Chatsworth,CA91313

EQUIPMENT LOCATION (Fac.#66)

SCG - Adelanto
Koala/Rancho Roads
Adelanto,CA92301

Description:
SPARK-IGNITED (SI) NATURAL GAS IC ENGINE, GENERATOR UNIT No. 1 consisting of:Year of Manufacture; Unknown; 4SRB; Woodward RELi E3 Air/Fuel Ratio Control; Engine is Subject to RICE NESHAP 40 CFR Part 63 Subpart ZZZZ and is Located at a HAP Area Source Equipment Elevation is 2960 feet above sea level. Stack height is 22 feet, stack diameter is 0.8 feet, stack gas exhausts at 1556 cfm at 900 deg F and at a velocity of 3095 fpm.

OneWaukesha,NG fired internal combustion engine Model No.L5790-GU and Serial No.254301,Air-To-Fuel Ratio Controller,Four-Stroke Rich Burn,Three-Way Catalyst (also NSCR), producing465 bhp with cylinders at900 rpm while consuming a maximum of5.92MMBtu/hr. This equipment powers aWaukeshaGenerator Model No.P303391 and Serial No.173-917911, rated at400 KW.

CONDITIONS:

1.This equipment, and any associated air pollution control device(s), shall be installed, operated, and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles in a manner consistent with good air pollution control practice for minimizing emissions. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit.
[40 CFR 63.6605(b) and District Rule 1302(C)(2)(a)]

2.This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 1.0 grains per 100 dscf on a rolling twelve month average basis. Compliance with this limit shall be demonstrated by providing evidence of a contract, tariff sheet or other approved documentation that shows that the fuel meets the definition of pipeline quality gas.
[District Rule 1302(C)(2)(a)]

Fee Schedule:1 (c) Rating:465bhp SIC:4923 SCC:20200202 Location/UTM(Km):459E/3824N

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.

Southern California Gas Co. - MD
PO Box 2300, SC 9314
Chatsworth,CA91313-2300

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

3.The engine shall only be used with a properly maintained and properly functioning RELi E3 Air Fuel Ratio Controller (AFRC) system and three-way catalysts/non-selective catalytic reduction (NSCR) device with "Quick Lid" housing, manufactured by DCL. The AFRC must be maintained and operated appropriately in order to ensure proper operation of the engine and NSCR so as to minimize emissions at all times as required by 60.4243(g).

The owner/operator shall only replace this catalyst and AFRC with the same manufacturers and model numbers unless otherwise approved by the MDAQMD.
[40 CFR 60.4243(g) and District Rule 1302]

4.This engine is located at an Area HAP Source and subject to the applicable requirements of 40 CFR 63, Subpart ZZZZ, and pursuant to this federal regulation, this engine is required to meet the following compliance requirements:

The owner/operator of this equipment shall demonstrate continuous compliance by committing to a maintenance schedule inclusive of the management practice requirements listed below:

a. Change oil and oil filter every 1,440 hours of operation or annually, whichever comes first (source has the option to utilize an oil analysis program pursuant to 40 CFR 63.6625(i) in order to extend the specified oil change requirement.);
b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and replace as necessary;
c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.
[Table 2 d to Subpart ZZZZ of Part 63]

5.At least once every calendar quarter, or, after every 2,000 hours of engine operation, the Owner/Operator shall conduct an inspection, perform any required testing, maintenance, and/or other procedures that ensures the Internal Combustion Engine is operated in strict accordance with the manufacturer's specifications and in continual compliance with the provisions of District Rule 1160. To ensure ongoing compliance, 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 [40 CFR 63.6660]. This log shall include, at a minimum, the information specified below, and shall be provided to District, State and/or Federal personnel, upon request:
a. Dates of operation;
b. Records of testing, as applicable;
c. Records of Maintenance performed on this equipment, inclusive of the management practice requirements of condition 6 below [40 CFR 63.6655(a)(4)];
d. Hours of operation;
e. Fuel consumption in standard cubic feet per calendar month;
f. Catalyst performance data (inlet temperature and inlet oxygen content, or as specified by the District-approved Parametric Monitoring Protocol);
g. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment [40 CFR 63.6655(a)(2)]; and,
h. Records of actions taken during periods of malfunction to minimize emissions in accordance with condition 1, including corrective actions conducted to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
[40 CFR 63.6655, District Rule 1302(C)(2)(a),District Rule 1160]

6.The owner/operator must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply.
[40 CFR 63.6625(h)]

7.This unit is subject to the requirements of 40 CFR 63 Subpart ZZZZ (RICE NESHAPs), District Rule 1160, and these permit conditions. In the event of conflict between conditions and the referenced regulatory citation, the more stringent requirements shall govern.
[District Rule 204]

8.The owner/operator shall not operate this engine without direct coupling to a generator and without the installed speed controller functioning properly and maintaining the rpm equal to 900. The engine shall be bhp restricted to a maximum load limit of 350 kW. The limit is approximately 465 bhp at 900 rpm.
[District Rule 1302]

9.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) and Rule 1160(E)(1)(b)(i)b]

10.The Air-to-Fuel Ratio Controller shall be used in conjunction with the control device, and shall be maintained and operated appropriately to ensure proper operation of the engine and control device.
[District Rule 1160(E)(1)(b)(i)(c)]

11.Pursuant to District Rule 1160, the owner/operator must comply with the ppmvd emission standards over the entire life of the engine; compliance shall be demonstrated through an emission compliance test. At a minimum, emissions compliance testing shall be conducted for NOX, VOC, CO and oxygen (O2) levels in compliance with the provisions of the District's Compliance Test Procedural Manual. Emissions concentrations shall not exceed the following values:
a. NOX: 50 ppmvd at 15% O2 (Rule 1160 Table 1);
b. VOC: 106 ppmvd at 15% O2 (Rule 1160 Table 2), and
c. CO: 4,500 ppmvd at 15% O2 (Rule 1160 Table 3).
[Emission standards from District Rule 1160]

12.The owner/operator must conduct an initial performance test within 180 days of the modified engines startup, and conduct subsequent performance testing once every 12 months thereafter to demonstrate compliance with condition 11. If a compliance test demonstrates compliance with condition 11, the testing frequency may be extended to once every 24 months. Failure of a compliance test, or failure to complete the test within the required frequency, resets the compliance test frequency to once every 12 months.
[District Rule 1160(E)(1)(d)]

13.Pursuant to District Rule 1160, the owner/operator shall perform compliance testing in accord with the following test procedures or any other method approved by USEPA and the APCO:
a. Oxides of nitrogen - EPA Method 7E, or ARB Method 100.
b. Carbon monoxide - EPA Method 10, or ARB Method 100.
c. Stack gas oxygen - EPA Method 3 or 3A, or ARB Method 100.
d. Volatile organic compounds - EPA Method 18, 25A or 25B, or ARB Method 100.
e. Determination of the exempt compounds, shall be performed in accordance with ASTM Test Method D 4457-85 (Solvents and Coatings) and be consistent with the provisions set forth in the Federal Register (FR, Vol. 56, No. 52, March 18, 1991). Perfluorocarbon compounds shall be assumed to be absent from a product or process unless a manufacturer or facility operator identifies a specific compound or compounds from the broad classes of perfluorocarbons listed in 40 CFR 51.100(s)(1) as being present in the product or process. When such compounds are identified, the facility shall provide the test method to determine the amount(s) of the specific compound(s).
[District Rule 1160]

14.The owner/operator must provide a written performance test plan or protocol at least thirty days prior to the test date. The owner/operator must conduct all required compliance/performance 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/performance test date so that an observer may be present. The final compliance/performance test results must be submitted to the District not later than forty-five (45) days after the source test date. All compliance/performance test notifications, protocols, and results may be submitted electronically to reporting@mdaqmd.ca.gov.
[District Rule 1160(E)(1)(d)]

15.The owner/operator shall ensure the emission concentrations from this engine, as indicated in Condition 11 above, are achieved no later than January 22, 2019.
[District Rule 1160]

16.The owner/operator shall operate this engine in accordance with the most recently approved Compliance Assurance Monitoring (CAM) plan. A copy of the plan is included in the facilities Federal Operating Permit, 3100066, Part VIII - CAM PLAN.

To achieve the required emission reductions, proper Catalyst operating environment must be maintained as required by the Catalyst Manufacturer and 40 CFR 60, Subpart ZZZZ; the exhaust temperature, therefore, must be maintained within the effective operating range specified and oxygen content as specified by the manufacture for the associated NSCR.

The CAM plan provides an alternative method for temperature and oxygen content monitoring required for proper NSCR operation.

Key features of the plan include:

a. Engine exhaust temperatures shall be maintained between 750F and 1350F.
b. Oxygen levels shall be maintained below 0.5%.
c. Proper operation of the AFRC and engine control system, which checks for open and out of range thermocouples (inlet and outlet temperatures).
d. Thermocouples' Calibration shall be verified annually or replaced;
e. Records of this activity shall be kept and made available to State, Federal or District Staff upon request.
f. Records of out of range Alarms and corrective action shall be kept and made available to State, Federal and District Staff upon request.
[40 CFR Part 64.2 for NOx]

17.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]