



# MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

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

## AUTHORITY TO CONSTRUCT

B015242

If construction is not completed by the expiration date of this permit, it may be renewed for one additional year upon payment of applicable fees. Any additional extension will require the written approval of the Air Pollution Control Officer. This Authority to Construct may serve as a temporary Permit to Operate provided the APCO is given prior notice of intent to operate and the Permit to Operate is not specifically denied.

### EXPIRES LAST DAY OF: JUNE 2025

#### OWNER OF OPERATOR (Co. #2500)

5E Boron Americas, LLC  
9329 Mariposa Rd. Suite # 210  
Hesperia, CA 92344

#### EQUIPMENT LOCATION (Fac. #3893)

5E Boron Americas, LLC  
27555 Hector Road  
Newberry Springs, CA 92365

#### Description:

NATURAL GAS IC ENGINE, PORTABLE GENERATOR consisting of: A portable prime power, rich burn, spark ignited internal combustion engine. Engine family KPSIB21.9NGP-020, exhaust flow rate 2995 CFM @ 1350F.

One Doosan, NG fired internal combustion engine Model No. 21.9L and Serial No. EZYOF904035, Three-Way Catalyst (also NSCR), Air-To-Fuel Ratio Controller, Charge Air Cooler, Turbo Charged, producing 581 bhp with 4 cylinders at 1800 rpm while consuming a maximum of 4230 scf/hr. This equipment powers a Mesa Solutions Generator Model No. 22L-S-MVS1-DF-400F and Serial No. TBD, rated at 350 kW.

#### EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	2.00	gm/bhp-hr
NOx	1.00	gm/bhp-hr
PM10	0.03	gm/bhp-hr
PM2.5	0.03	gm/bhp-hr
SOx	0.00	gm/bhp-hr
VOC	0.70	gm/bhp-hr

#### CONDITIONS:

1. This equipment 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. Unless otherwise noted, this equipment

Fee Schedule: 1 (c)      Rating: 581 bhp      SIC: 1479      SCC: 20100202      Location/UTM(Km): 552E/3846N

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.

5E Boron Americas, LLC  
9329 Mariposa Rd. Suite # 210  
Hesperia, CA 92344

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

shall also be operated in accordance with all data and specifications submitted with the application for this permit.  
[District Rule 1302]

2.This unit may be operated only on the following fuels which comply with the sulfur limits specified in District Rule 431(C):

- a. PUC regulated Pipeline quality natural gas fuel
- b. propane
- c. liquified natural gas

[District Rule 431]

3.Owner/operator shall not discharge into the atmosphere a visible emission with a shade as dark or darker than Ringelmann 1, or with an opacity of 20% or greater, for a period aggregating more than three minutes in any one hour.

[District Rule 401]

4.This engine shall not be operated more than 19 hours in any rolling 24 hour period nor more than 6,935 hours in any consecutive rolling 12 month period.

[Rule 1303 BACT]

5.This engine shall not be operated unless the Non-Selective Catalytic Reduction is operating and properly functioning. Furthermore, no changes shall be made to the emissions control systems unless done so by a factory certified technician or as allowed with prior APCO written permission.

[District Rule 1303]

6.In the event that the NSCR is replaced, the replacement must be of the same manufacturer and model and it must be installed according to manufacturer's specifications to avoid follow-on source testing.

If the manufacturer or the model designation of the replacement control is not identical to the original or if the unit is not installed according to manufacturer's specification, then the engine shall be source tested within 90 days after startup of the new control device. The source test results must verify that the engine meets the following maximum emission limits specified in permit condition #4.

[District Rule 1303 BACT]

7.The owner/operator shall maintain an operations and inspection 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 following information:

- a. Daily, Monthly, and rolling twelve month operation in terms of total hours (from the engine hour timer);
- b. Initial and periodic Differential Pressure readings across the NSCR 3 way catalyst (see Condition #10);
- c. Records of all maintenance and repair actions performed on the engine, the AFRC, and the NSCR
- d. Coordinates lat/long where operation occurs; and,
- e. Distance to closest receptor in meters.

[District Rule 204]

8.An 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 to minimize emissions at all times.

[District Rules 1303 and 1320]

9.The differential pressure across the NSCR three way catalyst must be measured and recorded at intervals not to exceed 1,000 hours since the most recent previous reading. If the engine runtime exceeds the 1,000 hour interval, it must be shut down until a differential pressure reading is properly taken and recorded.

[District Rules 204 and 1303]

10.The NSCR shall be cleaned in accordance with the manufacturer's written procedures when the pressure differential across the catalyst exceeds two (2) inches water column above its initial reading at startup.

[District Rule 1303]

11.This engine may not be operated within 500 meters (1640 feet) of any receptor. Such operation will require the submittal of an application for a revised permit to operate and may require a Health Risk Assessment.  
[District Rule 1320]

12.This equipment cannot be operated at the same engine-print (spot) for more than 365 consecutive days. This equipment must be moved for a valid business purpose annually.  
[District Rules 1303 and 40 CFR 60 Subpart JJJJ]

13.The owner/operator must contact the MDAQMD PRIOR to adding any new equipment or modifying any existing equipment which requires submission of a MDAQMD permit application and may require a Health Risk Assessment.  
[District Rule 1320]

14.Pilot plant equipment permitted under B015240, B015241, B015242, B015243, B015244, B015248, B015245 and B015249 shall not be operated with equipment under permits B013333, B013334, B013335, B013336, B013337, B013338, B013344, B013345, B013346, B013347, B014763, B013320, B013321, B013323, B013325, B013326, B013327, B013328, B013329, B013330, B013331 and T013324 but may be operated with B013319 and B013318.  
[District Rules 1303 and 1320]

15.Emissions from the entire facility shall not exceed the following limits:  
a. Oxides of Nitrogen (NOx): 24 tons per consecutive twelve month period, measured as NO<sub>2</sub>;  
b. Oxides of Sulfur (SOx): 24 tons per consecutive twelve month period;  
c. Volatile Organic Compounds (VOC): 24 tons per consecutive twelve month period;  
d. Carbon Monoxide (CO): 95 tons per consecutive twelve month period;  
e. Hydrogen Sulfide (H<sub>2</sub>S): 9.5 tons per consecutive twelve month period;  
f. Lead (Pb): 0.5 tons per consecutive twelve month period;  
g. Particulate Matter 10 microns and less (PM<sub>10</sub>): 14.5 tons per consecutive twelve month period;  
h. Any single Hazardous Air Pollutant (HAP): 9.5 tons per consecutive twelve month period; and  
i. All HAPs combined: 24 tons per consecutive twelve month period.

Compliance shall be demonstrated to the District through the submission of a District approved Comprehensive Emission Inventory Report (CEI) or other equivalent and District approved method.  
[District Rules 1302 and 1320]

16.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]