



## 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

C009623

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: NOVEMBER 2025**

#### **OWNER OF OPERATOR (Co.#87)**

Commanding Officer, MCLB Barstow, CA  
Box 110570 Bldg 196 Attn: Air Program Manager  
Barstow, CA 92311-5050

#### **EQUIPMENT LOCATION (Fac.#587)**

USMC MCLB - Yermo Annex  
USMC Logistics Base  
Barstow, CA 92311-5013

#### **Description:**

RECUPERATIVE THERMAL OXIDIZER (BLDG 634) consisting of: Munters Zeol System, Model Number IZS-3546-TH that includes: Concentrator (a continuously rotating rotor made of an absorptive medium, zeolite), which operates in three modes, adsorption, regeneration and cooling; and A Recuperative Thermal Oxidizer (TO), which utilizes one Eclipse RatioMatic Model RM500 Low NOx Burner, with a maximum heat input of 3.2 MMBtu/hr of natural gas, and the combustion chamber is heated to approximately 1375 degrees F. Facility Elevation is 1964 ft above MSL.

#### **CONDITIONS:**

1. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. Unless otherwise noted, this equipment shall be operated in compliance with all data and specifications submitted with the application under which this permit is issued.  
[District Rule 1302(B)(1)(a)]

1. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. Unless otherwise noted, this equipment shall be operated in compliance with all data and specifications submitted with the application under which this permit is issued.  
[District Rule 1302(B)(1)(a)]

2. This thermal oxidizer shall be fully functional and operating whenever the spray booth with valid District permit S009622 is in use.  
[District Rule 1302(B)(1)(a)]

Fee Schedule: 7 (h)

Rating: 1 device

SIC: 9711

SCC: 40299998

Location/UTM(Km): 512E/3861N

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.

Commanding Officer, MCLB Barstow, CA  
Box 110570 Attn: Air Program Manager  
Barstow, CA 92311-5050

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

2.This thermal oxidizer shall be fully functional and operating whenever the spray booth with valid District permit S009622 is in use.  
[District Rule 1302(B)(1)(a)]

3.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. Results of initial Capture Efficiency source test results;
- b. Results of annual Destruction Efficiency demonstrations;
- c. Monthly and rolling consecutive twelve month period VOC release records; and
- d. Descriptions of all malfunctions and corrective actions taken.

[District Rule 1302(B)(1)(a); 40 CFR 70.6(a)(3)(ii)(b)]

3.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. Results of initial Capture Efficiency source test results;
- b. Results of annual Destruction Efficiency demonstrations;
- c. Monthly and rolling consecutive twelve month period VOC release records; and
- d. Descriptions of all malfunctions and corrective actions taken.

[District Rule 1302(B)(1)(a); 40 CFR 70.6(a)(3)(ii)(b)]

4.The combined emissions from all equipment described in District permits S008392, S008393, S008394, S008395, S008396, S009622, S009969, C008397, C009623, and C009968 (the entire Paint and Undercoat Facility) to the atmosphere shall not exceed 3089 pounds of VOC in any consecutive twelve month period. Compliance with this condition shall be verified through reaction chamber temperature and VOC release records, calibrated with initial capture efficiency source test results and annual destruction efficiency demonstrations.

[District Rules 204, 1115, 1116, and 1303 - Requirements; Version in SIP Approved 11/13/1996, 40 CFR 52.220(c)(239)(i)(A)(1), 61 FR 58133]

4.The combined emissions from all equipment described in District permits S008392, S008393, S008394, S008395, S008396, S009622, S009969, C008397, C009623, and C009968 (the entire Paint and Undercoat Facility) to the atmosphere shall not exceed 3089 pounds of VOC in any consecutive twelve month period. Compliance with this condition shall be verified through reaction chamber temperature and VOC release records, calibrated with initial capture efficiency source test results and annual destruction efficiency demonstrations.

[District Rules 204, 1115, 1116, and 1303 - Requirements; Version in SIP Approved 11/13/1996, 40 CFR 52.220(c)(239)(i)(A)(1), 61 FR 58133]

5.This equipment shall operate with a control efficiency of 95 percent (capture times destruction), comparing total VOC release in the booths and ovens and actual VOC emissions exhausted to the atmosphere from this device. Compliance tests described below, in conjunction with initial capture efficiency source test results, shall be used to demonstrate this control efficiency.

The owner/operator shall conduct compliance tests at least once every twelve (12) months at the concentrator outlet/oxidizer inlet, oxidizer outlet, and concentrator exhaust to determine VOC concentrations at high VOC loading and corresponding destruction efficiency (over three separate complete concentrator cycles), in accordance with the MDAQMD Compliance Test Procedural Manual. VOC concentrations shall be determined in accordance with USEPA Test Methods 25, 25A, or 25B, with USEPA Test Method 18, or CARB Method 422 used to determine exempt compound concentrations.

VOC concentrations in the concentrator exhaust shall be less than 10 ppm as methane. VOC emissions to the atmosphere shall be determined as the sum of emissions from the oxidizer outlet and concentrator exhaust. The concentrator exhaust flow rate shall be assumed as the sum of maximum design flow rates from all connected spray booths if not measured as part of the compliance test procedures.

Compliance Test Notifications, Protocols, and Results:

- a. The owner/operator must submit a compliance/source test protocol at least thirty (30) days prior to the compliance/source test date. The owner/operator must conduct all required compliance/certification tests in accordance with a District-approved test protocol.
- b. 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.
- c. The final compliance/source test results must be submitted to the District within forty-five (45) days of completion of the test.

d. All compliance/source test notifications, protocols, and results may be submitted electronically to [reporting@mdaqmd.ca.gov](mailto:reporting@mdaqmd.ca.gov).  
[Rule 1302(B)(1)(a)]

5. This equipment shall operate with a control efficiency of 95 percent (capture times destruction), comparing total VOC release in the booths and ovens and actual VOC emissions exhausted to the atmosphere from this device. Compliance tests described below, in conjunction with initial capture efficiency source test results, shall be used to demonstrate this control efficiency.

The owner/operator shall conduct compliance tests at least once every twelve (12) months at the concentrator inlet, and combined oxidizer and concentrator exhaust to determine VOC concentrations at high VOC loading and corresponding destruction efficiency (over three separate complete concentrator cycles), in accordance with the MDAQMD Compliance Test Procedural Manual. VOC concentrations shall be determined in accordance with USEPA Test Methods 25, 25A, or 25B, with USEPA Test Method 18, or CARB Method 422 used to determine exempt compound concentrations.

[Rule 1302(B)(1)(a)]

6. This thermal oxidizer shall only use PUC-regulated pipeline quality natural gas for fuel.

[District Rule 1303]

6. Emissions from this equipment shall not exceed the following emission limits at nominal full load and in accordance with test methods described in conditions below:

a. BACT concentration limits, verified by compliance test(s):

i. NO<sub>x</sub> as NO<sub>2</sub> - 30 ppmvd corrected to 15% oxygen.

ii. CO - 100 ppmvd corrected to 15% oxygen.

[District Rule 1303(A)]

7. 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.

[Rule 107(b), HSC 39607 and 44341-44342, 40 CFR 51, Subpart A]

7. The owner/operator shall perform the following initial compliance tests for compliance demonstration with condition 6 in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District not later than 180 days after date of initial start-up. The following compliance tests are required:

a. NO<sub>x</sub> as NO<sub>2</sub> in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20);

b. VOC as CH<sub>4</sub> in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18);

c. SO<sub>x</sub> as SO<sub>2</sub> in ppmvd at 15% oxygen and lb/hr;

d. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10);

e. PM<sub>10</sub> in mg/m<sup>3</sup> at 15% oxygen and lb/hr (measured per USEPA Reference Methods 5 and 202 or CARB Method 5 or equivalent);

f. Flue gas flow rate in dscfm;

g. Opacity (measured per USEPA Reference Method 9).

[District Rule 1303(A)]

8. After the initial compliance test specified in Condition 7 is completed, the owner/operator shall perform compliance tests at least once every twelve (12) months on this equipment for compliance demonstration with condition 6 in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit. The following compliance tests are required:

a. NO<sub>x</sub> as NO<sub>2</sub> in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20);

b. VOC as CH<sub>4</sub> in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18);

c. CO in ppmvd at 15% oxygen and lb/hr (measured per USEPA Reference Method 10).

[District Rule 1303(A)]

9. Compliance Test Notifications, Protocols, and Results:

a. The owner/operator must submit a compliance/source test protocol at least thirty (30) days prior to the compliance/source test date. The owner/operator must conduct all required compliance/certification tests in accordance with a District-approved test protocol.

b. 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.

c. The final compliance/source test results must be submitted to the District within forty-five (45) days of completion of the test.

d. All compliance/source test notifications, protocols, and results may be submitted electronically to [reporting@mdaqmd.ca.gov](mailto:reporting@mdaqmd.ca.gov).

[District Rule 204]

10.This thermal oxidizer shall only use PUC-regulated pipeline quality natural gas for fuel.

[District Rule 1303]

11.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.

[Rule 107(b), HSC 39607 and 44341-44342, 40 CFR 51, Subpart A]