



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

B010375

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 2026

OWNER OF OPERATOR (Co.#1769)

Solar Partners II, LLC
HCR1 Box 280
Nipton, CA 92364

EQUIPMENT LOCATION (Fac.#3007)

Ivanpah 1
Near Ca/Nev border at Primm
Ivanpah, CA 92364

Description:

BOILER, NATURAL GAS consisting of: Rentech D-type water tube boiler manufactured in 2012, Serial Number 2011-07, equipped with Todd-Coen Ultra Low-NOx Burners rated at a maximum heat input of 249 MMBTU/hr, and flue gas recirculation (FGR or EGR) fueled exclusively on utility grade natural gas. Equipment shall use 242,500 cu-ft/hr of fuel and provide 175,000 lb/hr of steam. Boiler is equipped with a stack that is 130 feet high and 60 inches in diameter. June 2021 Source Test resulted in the following averages: Stack Gas Velocity = 64.53 fps Stack Gas Temperature = 283.83 Degrees F Stack Gas Flowrate = 39,885 dscfm Facility Elevation is 2880 feet above sea level.

EQUIPMENT

Capacity	Equipment Description
249	MILLION BTU/HR BOILER

CONDITIONS:

1. This equipment shall be installed, operated and maintained in strict accordance with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit. [District Rule 204; 40 CFR 63, Subpart DDDDD: 63.7500]

Fee Schedule: 2 (f)

Rating: 249000000 Btu

SIC: 4911

SCC: 10300601

Location/UTM(Km):
640E/3933N

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.

Solar Partners II, LLC
HCR1 Box 280
Nipton, CA 92364

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

2. This boiler shall use only utility grade natural gas as fuel and shall be equipped with a meter measuring fuel consumption in standard cubic feet.

[District Rules 204, 1303; 40 CFR 60 Subpart Db, Section 60.49b]

3. The owner/operator shall maintain a current, on-site (at a central location if necessary) log for this equipment for five (5) years, which shall be provided to District, state or federal personnel upon request. This log shall include calendar year fuel use for this equipment in standard cubic feet, or BTUs, and daily hours of operation.

[40 CFR 60 Subpart Db, Section 60.49b]

4. The owner/operator shall perform annual (at least once every 12 months) compliance tests in accordance with the District Compliance Test Procedural Manual. 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 forty-five (45) days of completion of the test. All compliance/certification test notifications, protocols, and results may be submitted electronically to reporting@mdaqmd.ca.gov

Prior to performing these annual tests, the boiler shall be tuned in accord with the manufacturers specified tune-up procedure, by a qualified technician. Subsequent tests shall demonstrate that this equipment does not exceed the following emission maximums:

// Pollutant // ppmv // Lb/MMBTU // **Lb/hr

*NO_x // 9.0 // 0.011 // 2.7 (Per USEPA Methods 7E and 19)

SO₂ // 1.7 // 0.003 // 0.7

*CO // 25.0 // 0.018 // 4.5 (Per USEPA Method 10)

VOC // 12.6 // 0.005 // 1.3 (Per USEPA Methods 25A and 18)

PM₁₀ // n/a // 0.007 // 1.7 (Per USEPA Method 5 or 201A, and 202)

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*corrected to 3% oxygen, on a dry basis, averaged over one hour

Flue gas flow rate shall be quantified in dscf per USEPA Methods 1 through 5

**As indicated in the District Compliance Manual, the District may approve alternatives, modifications and/or deviations to the methods specified in this condition.

[District Rule 1303(A); BACT]

5. This boiler shall be operated in compliance with all applicable requirements of 40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS Db) including but not limited to recordkeeping and reporting requirements.

[District Rule 204]

6. Records of fuel supplier certifications of fuel sulfur content shall be maintained to demonstrate compliance with the sulfur dioxide and particulate matter emission limits; PUC regulated pipeline quality natural gas meets this requirement.

[40 CFR 60 Subpart Db, Section 60.48b; Emission monitoring for particulate matter and nitrogen oxides]

7. The owner/operator shall continuously monitor and record fuel flow rate and flue gas oxygen level.

[40 CFR 60 Subpart Db, Section 60.49b; Reporting and Recordkeeping Requirements]

8. In lieu of installing CEMs to monitor NO_x emissions, and pursuant to 40 CFR 60 Subpart Db, Section 60.49b(c), the owner/operator shall monitor boiler operating conditions and estimate NO_x emission rates per a District approved emissions estimation plan. The plan shall be based on the annual source tests required by condition 4. The plan shall include test results, operating parameters, analysis, conclusions and proposed NO_x estimating relationship consistent with established emission chemistry and operational effects. Any proposed changes to a District-approved plan shall include subsequent test results, operating parameters, analysis, and any other pertinent information to support the proposed changes. The District must approve any emissions estimation plan or revision for estimated NO_x emissions to be considered valid.

[40 CFR 60 Subpart Db, Section 60.49b(c)]

9. The combined fuel use from the auxiliary boilers and nighttime preservation boilers shall not exceed 525 MMSCF of natural gas in any calendar year; combined fuel use is the sum total of natural gas combusted from Boilers with MDAQMD permit numbers B010375 and B011544 (Ivanpah 1) and shall not exceed a total of 525 mmscf in any calendar year in that boiler pair, B010376 and B011572 (Ivanpah 2) and shall not exceed a total of 525 mmscf in any calendar year in that boiler pair, B010377 and B011573 (Ivanpah 3) and shall not exceed a total of 525 mmscf in any calendar year in that boiler pair.

[District Rules 204, 1302(C)(2)(a); CEC Condition Of Certification]

10. 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]