



FEDERAL OPERATING PERMIT

Permit No.: **17693007**

Company: **Solar Partners II, I, VIII, LLC**

Facility: **Ivanpah 1, 2, and 3**

Issue date: **May 19, 2016**

Expiration date: **May 19, 2021**

**MOJAVE DESERT
AIR QUALITY
MANAGEMENT
DISTRICT**

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A handwritten signature in blue ink, appearing to read 'Brad Poiriez', is written over a horizontal line.

Signed and issued by

BRAD POIRIEZ

EXECUTIVE DIRECTOR/

AIR POLLUTION CONTROL OFFICER

PERMIT REVISIONS

April 9, 2019: Administrative Change:

Title V Permit Section II B, requirements numbered as 4 & 5 respectively, on pages II-20, and II-21. Updates incorporated hard dates as to when the Annual Compliance Certification are required and to clarify the requirement for Semi-Annual Monitoring reports and their Hard Dates as well. Additionally, a revised cover page and minor formatting updates have been incorporated. Changes by Samuel J Oktay, PE

May 19, 2016: Initial Title IV and Title V Permit Issuance

By: Samuel J Oktay, PE

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PART I
INTRODUCTORY INFORMATION

A. **FACILITY IDENTIFYING INFORMATION:**

Owner/Company Name: Ivanpah Solar Electric Generating System
Facility Names: Ivanpah 1, Ivanpah 2, Ivanpah 3
Facility Location: Ivanpah Valley, near CA/NV Border
Mailing Address: 100302 Yates Well Road, Nipton, CA 92364
Federal Operating Permit Number: 17693007
MDAQMD Company Number: 1769
MDAQMD Facility Number: 3007, 3008, 3009

Responsible Official: Mr. Eric Leuze
Vice President
(916) 200-6187

Facility "Site" Contact(s): Mr. Freddie Guyote
(702) 815-2016

Facility "Off Site" Contact(s): Mr. Timothy Sisk
(760) 710-2129

Nature of Business: Electrical Power Generation
SIC/NAICS Code: 4911 – Electrical Services
Facility Coordinates UTM (km) 644E/ 3934N

B. DESCRIPTION OF FACILITY:

The ISEGS is located in southern California's Mojave Desert, in Ivanpah Valley, at 100302 Yates Well Road in Nipton, within the San Bernardino County jurisdiction of California. It is comprised of three facilities: two 125-MW plants (Ivanpah 2 and 3) and a 120-MW plant (Ivanpah 1), along with a shared controlled Common Logistics Area (CLA). Each site is comprised of approximately 850 acres (or 1.3 square miles); total area for the three facilities, including the administration/operations area, maintenance building and substation, is approximately 3,520 acres. Each of the three Ivanpah units is a separate facility under separate ownership and control. They were, however, designed and developed by a single entity and continue to share some common utilities.

The three facilities consist of large solar arrays focusing solar energy onto solar boilers to power steam turbines for commercially available electricity production. The heliostat (or mirror) fields focus solar energy on the power tower receivers near the center of each of the heliostat arrays. There is one complete Rankin-cycle system per facility including one mirror array for each.

Although primary energy input is solar power; supplemental heat input does occur via six natural gas fired boilers, 2 at each facility. To control emissions of associated air pollutants, and to ensure the facilities qualify as solar electric generating facilities, natural gas fuel combustion is limited to 525MMscf/Power Block per year.

This ISEGS is not a Title V facility based on emissions but rather it is a Title V facility because the auxiliary boilers are subject to Acid Rain regulations pursuant to Federal Title IV Regulations.

As a result of the cumulative impacts, the use of common area and common operational controls, the three facilities, Ivanpah 1, 2, and 3, are combined for purposes of the Title V and Title IV Federal programs.

C. MDAQMD PERMITTED EQUIPMENT DESCRIPTION:

The following summarizes equipment that is permissible by the Mojave Desert AQMD as stationary sources of air contaminants.

1) Ivanpah 1 Facility:

MDAQMD Permit B010375; One BOILER, Year of Manufacture 2012, equipped with Todd-Coen Ultra Low-NOx Burners rated at a maximum heat input of 249 MMBtu/hr; also equipped with flue gas recirculation (FGR or EGR); boiler is fueled on utility grade natural gas.

MDAQMD Permit B011544; One BOILER, NIGHTTIME PRESERVATION, Year of Manufacture 2012, equipped with Low-NOx Burners rated at a maximum heat input of 6.3MMBtu/hr; boiler is fueled on utility grade natural gas.

MDAQMD Permit E010378; One DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2010, Rated at 316 bhp.

MDAQMD Permit E010379; One DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II, Rated at 2206 bhp.

MDAQMD Permit E011546; One DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2011, Tier III, Rated at 398 bhp

MDAQMD Permit E011547; One DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2011, Tier III, Rated at 156.9 bhp.

2) Ivanpah 2 Facility:

MDAQMD Permit B010376; One BOILER, Year of Manufacture 2012, equipped with Todd-Coen Ultra Low-NOx Burners rated at a maximum heat input of 249 MMBtu/hr; also equipped with flue gas recirculation (FGR or EGR); fueled on utility grade natural gas.

MDAQMD Permit B011572; One BOILER, NIGHTTIME PRESERVATION, Year of Manufacture 2012, equipped with Low-NOx Burners rated at a maximum heat input of 6.3 MMBtu/hr; fueled on utility grade natural gas.

MDAQMD Permit E010380; One DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2011, Tier III, Rated at 316 bhp.

MDAQMD Permit E010381; One DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II, producing 2206 bhp.

3) Ivanpah 3 Facility:

MDAQMD Permit B010377; One BOILER, Year of Manufacture 2012, equipped with Todd-Coen Ultra Low-NOx Burners rated at a maximum heat input of 249 MMBtu/hr; also equipped with flue gas recirculation (FGR or EGR); fueled on utility grade natural gas.

MDAQMD Permit B011573; One BOILER, NIGHTTIME PRESERVATION, Year of Manufacture 2012, equipped with Low-NOx Burners rated at a maximum heat input of 6.3MMBtu/hr; fueled on utility grade natural gas.

MDAQMD Permit E010382; One DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II, producing 2206 bhp.

MDAQMD Permit E010384; DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2012, Tier III, producing 316 bhp.

PART II
FACILITYWIDE APPLICABLE REQUIREMENTS;
EMISSIONS LIMITATIONS; MONITORING, RECORDKEEPING,
REPORTING AND TESTING REQUIREMENTS; COMPLIANCE CONDITIONS;
COMPLIANCE PLANS

A. REQUIREMENTS APPLICABLE TO ENTIRE FACILITY AND EQUIPMENT:

1. A permit is required to operate this facility.
[Rule 203 - Permit to Operate]
2. The equipment at this facility shall not be operated contrary to the conditions specified in the District Permit to Operate.
[Rule 203 - Permit to Operate]
3. The Air Pollution Control Officer (APCO) may impose written conditions on any permit.
[Rule 204 - Permit Conditions]
4. Commencing work or operation under a permit shall be deemed acceptance of all the conditions so specified.
[Rule 204 – Permit Conditions]
5. Posting of the Permit to Operate is required on or near the equipment or as otherwise approved by the APCO/District.
[Rule 206 - Posting of Permit to Operate]
6. Owner/Operator shall not willfully deface, alter, forge, or falsify any permit issued under District rules.
[Rule 207 - Altering or Falsifying of Permit]
7. Permits are not transferable.
[Rule 209 - Transfer and Voiding of Permit]
8. The APCO may require the Owner/Operator to provide and maintain such facilities as are necessary for sampling and testing.
[Rule 217 - Provision for Sampling And Testing Facilities]
9. The equipment at this facility shall not require a District permit or be listed on the Title V permit if such equipment is listed in Rule 219 and meets the applicable criteria contained in Rule 219 (B). However, any exempted insignificant activities/equipment are still subject to all applicable facility-wide requirements.
[Rule 219 - Equipment Not Requiring a Written Permit]
10. The Owner/Operator of this facility shall obtain a Federal Operating Permit for operation of this facility.

[Rule 221 - Federal Operating Permit Requirement]

11. Owner/Operator shall pay all applicable MDAQMD permit fees.
[Rule 301 - Permit Fees]
12. Owner/Operator shall pay all applicable MDAQMD Title V Permit fees.
[Rule 312 - Fees for Federal Operating Permits]
13. Stack and point source visible emissions from this facility, of any air contaminant (including smoke) into the atmosphere, shall not equal or exceed Ringelmann No. 1 for a period or periods aggregating more than three minutes in any one hour:
 - (a) While any unit is fired on Public Utilities Commission (PUC) grade natural gas, Periodic Monitoring for combustion equipment is not required to validate compliance with the Rule 401 Visible Emissions limit. However, the Owner/Operator shall comply with the recordkeeping requirements stipulated elsewhere in this permit regarding the logging of fuel type, amount, and suppliers' certification information.
 - (b) While any unit is fired on diesel fuel, Periodic Monitoring, in addition to required recordkeeping, is required to validate compliance with Rule 401 Visible Emissions limit as indicated below:
 - (i) Reciprocating engines equal or greater than 1000 horsepower, firing on only diesel with no restrictions on operation, a visible emissions inspection is required every three (3) months or during the next scheduled operating period if the unit ceases firing on diesel/distillate within the 3-month time frame.
 - (ii) Diesel Standby and emergency reciprocating engines using California low sulfur fuels require no additional monitoring for opacity.
 - (iii) Diesel/Distillate-Fueled Boilers firing on California low sulfur fuels require a visible emissions inspection after every 1 million gallons diesel combusted, to be counted cumulatively over a 5-year period.
 - (iv) On any of the above, if a visible emissions inspection documents opacity, an U.S. Environmental Protection Agency (EPA) Method 9 "Visible Emissions Evaluation" shall be completed within 3 working days, or during the next scheduled operating period if the unit ceases firing on diesel/distillate within the 3 working day time frame.

[Rule 204 - Permit Conditions, Rule 401 - Visible Emissions]

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

14. Owner/Operator is limited to use of the following quality fuels for fuel types specified elsewhere in this permit: PUC quality natural gas fuel - sulfur compounds shall not exceed 800 parts per million (ppm) calculated as hydrogen sulfide at standard conditions; diesel fuel - sulfur content shall not exceed 0.5 percent by weight. Compliance with Rule 431 fuel sulfur limits is assumed for PUC quality natural gas fuel and CARB certified diesel fuel. Records shall be kept on-site and available for review by District, state, or

federal personnel at any time. The sulfur content of non-CARB certified diesel fuel shall be determined by use of American Society for Testing and Materials (ASTM) method D 2622-82 or ASTM method D 2880-71, or equivalent.

[Rule 431 - Sulfur Content of Fuels]

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

15. Emissions of fugitive dust from any transport, handling, construction, or storage activity at this facility shall not be visible in the atmosphere beyond the property line of the facility.
[Rule 403 - Fugitive Dust]
16. Owner/Operator shall comply with the applicable requirements of Rule 403.2 unless an “Alternative PM₁₀ Control Plan” (ACP) pursuant to Rule 403.2(G) has been approved.
[Rule 403.2 - Fugitive Dust Control for the Mojave Desert Planning Area]
17. Owner/Operator shall not discharge into the atmosphere from this facility, particulate matter (PM) except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Rule 404, Table 404 (a).
 - (a) Where the volume discharged is between figures listed in the table the exact concentration permitted to be discharged shall be determined by linear interpolation.
 - (b) This condition shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.
 - (c) For the purposes of this condition, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.[Rule 404 - Particulate Matter Concentration]
18. Owner/Operator shall not discharge into the atmosphere from this facility, solid PM including lead and lead compounds in excess of the rate shown in Rule 405, Table 405(a).
 - (a) Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.
 - (b) For the purposes of this condition, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period.[Rule 405 - Solid Particulate Matter, Weight]
19. Owner/Operator shall not discharge into the atmosphere from this facility, from any single source of emissions whatsoever, sulfur compounds, which would exist as a liquid or gas at standard conditions, calculated as sulfur dioxide (SO₂), greater than or equal to 500 ppm by volume.
[Rule 406 - Specific Contaminants]
20. Owner/Operator shall not discharge into the atmosphere from this facility, carbon monoxide (CO) exceeding 2000 ppm measured on a dry basis, averaged over a minimum of 15 consecutive minutes.
 - (a) The provisions of this condition shall not apply to emissions from internal combustion engines.[Rule 407 - Liquid and Gaseous Air Contaminants]

21. Owner/Operator shall not build, erect, install, or use any equipment at this facility, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission that would otherwise constitute a violation of Chapter 3 (commencing with Section 41700) of Part 4, of Division 26 of the Health and Safety Code or of District Rules.
 - (a) This condition shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code, or of District Rule 402.
[Rule 408 - Circumvention]

22. Owner/Operator shall not discharge into the atmosphere from this facility from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions averaged over a minimum of 25 consecutive minutes.
[Rule 409 - Combustion Contaminants]

23. APCO, at his/her discretion, may refrain from enforcement action against an Owner/Operator of any equipment that has violated a technology-based emission limitation, including but not limited to conditions contained in any permit issued by the District establishing such emission limitation, provided that a Breakdown has occurred and:
 - (a) Any breakdown that results in emissions exceeding a technology-based emission limitation is reported to the District within one hour of such breakdown or within one hour of the time a person knew or reasonably should have known of the occurrence of such breakdown; and
 - (b) An estimate of the repair time is provided to the District as soon as possible after the report of the breakdown; and
 - (c) All reasonable steps are immediately taken to minimize the levels of emissions and to correct the condition leading to the excess emissions.
 - (d) The equipment is operated only until the end of a cycle or twenty-four (24) hours, whichever is sooner, at which time it shall be shut down for repairs unless a petition for an emergency variance has been filed with the clerk of the Hearing Board in accordance with Regulation V.
 - (e) If the breakdown occurs outside normal District working hours, the intent to file an emergency variance shall be transmitted to the District in a form and manner prescribed by the APCO.
[Rule 430 - Breakdown Provisions]

24. Owner/Operator of this facility shall not discharge organic materials into the atmosphere from equipment in which organic solvents or materials containing organic solvents are used, unless such emissions have been reduced by at least 85% or to the following:
 - (a) Organic materials that come into contact with flame or are baked, heat cured, or heat polymerized are limited to 1.4 kilograms (3.1 pounds) per hour not to exceed 6.5 kilograms (14.3 pounds) per day.
 - (b) Organic materials emitted into the atmosphere from the use of photo-chemically reactive solvents are limited to 3.6 kilograms (7.9 pounds) per hour, not to exceed 18

kilograms (39.6 pounds) per day, except as provided in Rule 442, subsection (a)(1). All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.

- (c) Organic materials emitted into the atmosphere from the use of non-photo-chemically reactive solvents are limited to 36.8 kilograms (81 pounds) per hour not to exceed 272 kilograms (600 pounds) per day. All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.
- (d) The provisions of this condition shall not apply to the manufacture of organic solvents, or the transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.
- (e) The provisions of this rule shall not apply to:
 - (i) The manufacture of organic solvents, or the transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.
 - (ii) The use of equipment for which other requirements are specified by Rules 461, 462, 463, and 464 or which are exempt from air pollution control requirements by said rules.
 - (iii) The spraying or other employment of organic solvents as insecticides, pesticides or herbicides.
 - (iv) The use of water reducible materials, provided that:
 - a. the volatile content of such material is not photo-chemically reactive and consists of at least 80 percent water by volume, and
 - b. the organic solvent or any material containing organic solvent does not come into contact with flame.
 - (v) The use of high solid materials, provided that:
 - a. the volatile content of such material is not photochemically reactive and does not exceed 20 percent by volume of said material, and
 - b. more than 50 percent by volume of such volatile material is evaporated before entering a chamber heated above ambient application temperature, and
 - c. the organic solvent or any material containing organic solvent does not come into contact with flame.
 - (vi) The use of ultra high solid materials, provided that:
 - a. the volatile content of such material is not photo-chemically reactive and does not exceed 5 percent by volume of said material, and
 - b. the organic solvent or any material containing organic solvent does not come into contact with flame.
 - (vii) The use of equipment or materials for which other requirements are specified in source specific rules of Regulation XI after the compliance dates specified in such source specific rules.
 - (viii) The use of 1-1-1 Trichloroethane.

[Rule 442 – Usage of Solvents]

25. Owner/Operator shall not set open outdoor fires unless in compliance with Rule 444.

Outdoor fires burned according to an existing District permit are not considered “open outdoor fires” for the purposes of Rule 444 (reference Rule 444(B)(10)).

[Rule 444 – Open Outdoor Fires]

26. Owner/Operator of this facility shall comply with the Organic Solvent Degreasing Operations requirements of Rule 1104 when engaged in wipe cleaning, cold solvent cleaning, and/or vapor cleaning (degreasing) operations for metal/non-metal parts/products. These requirements are listed as follows:
- (a) All degreasers shall be equipped with a cover, which reduces solvent evaporation and minimizes disturbing the vapor zone.
 - (b) A permanent, conspicuous label summarizing the applicable operating requirements contained in Rule 1104. In lieu of a label, operating instructions may be posted near the degreaser where the operators can access the proper operating requirements of this rule.
 - (c) Cold Solvent Degreasers - Freeboard Requirements:
 - (i) Cold solvent degreasers using only low volatility solvents, which are not agitated, shall operate with a freeboard height of not less than 6 inches.
 - (ii) Cold solvent degreasers using only low volatility solvents may operate with a freeboard ratio equal to or greater than 0.50 when the cold solvent degreaser has a cover, which remains closed during the cleaning operation.
 - (iii) Any cold solvent degreasers using solvent which is agitated, or heated above 50°C (120°F) shall operate with a freeboard ratio equal to or greater than 0.75.
 - (iv) A water cover may be used as an acceptable control method to meet the freeboard requirements, when the solvent is insoluble in water and has a specific gravity greater than one.
 - (d) Cold Solvent Degreasers - Cover Requirements:
 - (i) Cold solvent degreasers using high volatility solvent shall have a cover that is a sliding, rolling or guillotine (bi-parting) type, which is designed to easily open and close without disturbing the vapor zone.
 - (e) Cold Solvent Degreasers - Solvent Level Identification:

A permanent, conspicuous mark locating the maximum allowable solvent level conforming to the applicable freeboard requirements.
 - (f) All Degreasers shall comply with the following operating requirements:
 - (i) Any solvent cleaning equipment and any emission control device shall be operated and maintained in strict accord with the recommendations of the manufacturer.
 - (ii) Degreasers shall not be operating with any detectable solvent leaks.
 - (iii) All solvent, including waste solvent and waste solvent residues, shall be stored in closed containers at all times. All containers for any solvent(s) shall have a label indicating the name of the solvent/material they contain.
 - (iv) Waste solvent and any residues shall be disposed of by one of the following methods: a commercial waste solvent reclamation service licensed by the State of California; or a federally or state licensed facility to treat, store or dispose of such waste; or the originating facility may recycle the waste

- solvent and materials in conformance with requirements of Section 25143.2 of the California Health and Safety Code.
- (v) Degreasers shall be covered to prevent fugitive leaks of vapors, except when processing work or to perform maintenance.
 - (vi) Solvent carry-out shall be minimized by the following methods:
 - a. Rack workload arranged to promote complete drainage
 - b. Limit the vertical speed of the power hoist to 3.3 meters per minute (11 ft/min) or less when such a hoist is used.
 - c. Retain the workload inside of the vapor zone until condensation ceases.
 - d. Tip out any pools of solvent remaining on the cleaned parts before removing them from the degreaser if the degreasers are operated manually.
 - e. Do not remove parts from the degreaser until the parts are visually dry and not dripping/leaking solvent. (This does not apply to an emulsion cleaner workload that is rinsed with water within the degreaser immediately after cleaning.)
 - (vii) The cleaning of porous or absorbent materials such as cloth, leather, wood or rope is prohibited.
 - (viii) Except for sealed chamber degreasers, all solvent agitation shall be by either pump recirculation, a mixer, or ultrasonics.
 - (ix) The solvent spray system shall be used in a manner such that liquid solvent does not splash outside of the container. The solvent spray shall be a continuous stream, not atomized or shower type, unless, the spray is conducted in a totally enclosed space, separated from the environment.
 - (x) For those degreasers equipped with a water separator, no solvent shall be visually detectable in the water in the separator.
 - (xi) Wipe cleaning materials containing solvent shall be kept in closed containers at all times, except during use.
 - (xii) A degreaser shall be located so as to minimize drafts being directed across the cleaning equipment, the exposed solvent surface, or the top surface of the vapor blanket.
 - (xiii) A method for draining cleaned material, such as a drying rack suspended above the solvent and within the freeboard area, shall be used so that the drained solvent is returned to the degreaser or container.
 - (g) Rule 442 Applicability: Any solvent using operation or facility which is not subject to the source-specific Rule 1104 shall comply with the provisions of Rule 442. Any solvent using operation or facility which is exempt from all or a portion of the volatile organic compound (VOC) limits, equipment limits or the operational limits of Rule 1104 shall be subject to the applicable provisions of Rule 442.
 - (h) Solvent Usage Records. Owner/Operator subject to Rule 1104 or claiming any exemption under Rule 1104, Section (E), shall comply with the following requirements:
 - (i) Maintain and have available during an inspection, a current list of solvents in use at the facility which provides all of the data necessary to evaluate

compliance, including the following information separately for each degreaser, as applicable:

- a. product name(s) used in the degreaser, and
 - b. the mix ratio of solvent compounds mixtures of solvents are used, and
 - c. VOC content of solvent or mixture of compounds as used, and
 - d. the total volume of the solvent(s) used for the facility, on a monthly basis, and
 - e. the name and total volume applied of wipe cleaning solvent(s) used, on a monthly basis.
- (ii) Additionally, for any degreaser utilizing an add-on emission control device/system as a means of complying with provisions of Rule 1104 shall, on a monthly basis, maintain records of key system operating and maintenance data. Such data are recorded for the purpose of demonstrating continuous compliance during periods of emission producing activities. The data shall be recorded in a manner as prescribed by the District.
 - (iii) Documentation shall be maintained on site of the disposal or on-site recycling of any waste solvent or residues.
 - (iv) Records shall be retained (at facility) and available for inspection by District, state or federal personnel for the previous 5-year period as required by this Title V / Federal Operating Permit (Reference Rule 1203(D)(1)(d)(ii)).

[Rule 1104 - Organic Solvent Degreasing Operations]

27. Owner/Operator's use of Architectural Coatings at this facility shall comply with the applicable requirements of Rule 1113, including the VOC limits specified in Rule 1113, part C, Table of Standards, as listed below:

MDAQMD Rule 1113, Table 1

Coating Category	
Effective 1 January 2013	
VOC Grams/Liter	
Primary Coatings	
Flat Coatings	50
Nonflat Coatings	100
Nonflat-High Gloss Coatings	150
Specialty Coatings	
Aluminum Roof Coatings	400
Basement Specialty Coatings	400
Bituminous Roof Coatings	50
Bituminous Roof Primers	350
Bond Breakers	350
Concrete Curing Compounds	350
Concrete/Masonry Sealers	100
Driveway Sealers	50
Dry Fog Coatings	150
Faux Finish Coatings	350
Fire Resistive Coatings	350
Floor Coatings	100
Form-Release Compounds	250
Graphic Arts Coatings (Sign Paints)	500

High Temperature Coatings	420
Industrial Maintenance Coatings	250
Low Solids Coatings	120a
(a: Limit is expressed as VOC Actual)	
Magnesite Cement Coatings	450
Mastic Texture Coatings	100
Metallic Pigmented Coatings	500
Multi-Color Coatings	250
Pre-Treatment Wash Primers	
420	
Primers, Sealers, and Undercoaters	100
Reactive Penetrating Sealers	350
Recycled Coatings	250
Roof Coatings	50
Rust Penetrative Coatings	250
Shellacs:	
Clear	730
Opaque	550
Specialty Primers, Sealers, and Undercoaters	100
Stains	250
Stone Consolidants	450
Swimming Pool Coatings	340
Traffic Marking Coatings	100
Tub and Tile Refinish Coatings	420
Waterproofing Membranes	250
Wood Coatings	275
Wood Preservatives	350
Zinc-Rich Primers	340

[Rule 1113]

28. Owner/Operator's use of *Wood Products Coatings* at this facility shall comply with the applicable requirements of Rule 1114, including the VOC limits specified in Rule 1114, part C, Table of Standards, as listed below:

(a) VOC Content of Coatings & Adhesives

- (i) Any Owners and/or Operators of Wood Products Coating Application Operations shall not apply any Coating or Adhesive to a Wood Product which has a VOC Content, including any VOC-containing material added to the original Coating supplied by the manufacturer, which exceeds the applicable limit specified below, unless emissions to the atmosphere are controlled by air pollution abatement equipment with an Overall Control Efficiency of at least 85 percent. Any Coating subject to this rule that meets either of the two VOC Content limit formats (grams per liter or pounds per gallon [lb/gal]) is in compliance with this subsection.

(ii) Limits

Grams of VOC Per Liter of Coating,
 Less Water and Less Exempt Compounds (VOC Content)

Coating	Current Limit g/L (lb/gal)	On and After 7/1/97		On and After 7/1/2005
		Column I or g/L (lb/gal)	Column II g/L (lb/gal)	g/L (lb/gal)
Clear Sealers	680 (5.7)	550 (4.6)	680 (5.7)	275 (2.3)
Clear Topcoat	680 (5.7)	550 (4.6)	275 (2.3)	275 (2.3)
Pigmented Primers, Sealers and Undercoats	600 (5.0)	550 (4.6)	600 (5.0)	275 (2.3)
Pigmented Topcoats	600 (5.0)	550 (4.6)	275 (2.3)	275 (2.3)

Effective July 1, 1997, a person or facility shall use Coatings on Wood Products that comply with either all VOC Content limits in Column I or all VOC Content limits in Column II. A person or facility that applies a Pigmented Primer, Sealer or Undercoat, but not a Clear Topcoat or Pigmented Topcoat, to a Wood Product shall be subject to column I for that product.

- (iii) Notwithstanding the requirements of subsection (C)(1)(a)(i), a person or facility that applies a topcoat and a primer, sealer or undercoat to a Shutter may, until July 1, 2005, choose to comply with the VOC Content limits specified below for that Shutter:

Grams of VOC Per Liter of Coating,
 Less Water and Less Exempt Compounds (VOC Content)

Coating	g/L (lb/gal)
Clear Sealers	275 (2.3)
Clear Topcoat	680 (5.7)
Pigmented Primers, Sealers & Undercoats	275 (2.3)
Pigmented Topcoats	600 (5.0)

Grams of VOC Per Liter of Coating,
 Less Water and Less Exempt Compounds (VOC Content)

Coating	Current Limit g/L (lb/gal)	On and After 7/1/97	On and After 7/1/2005
		g/L (lb/gal)	g/L (lb/gal)
Fillers	500 (4.2)	500 (4.2)	275 (2.3)
High-Solid Stains	700 (5.8)	550 (4.6)	350 (2.9)
Inks	500 (4.2)	500 (4.2)	500 (4.2)
Mold-Seal Coatings	750 (6.3)	750 (6.3)	750 (6.3)
Multi-Colored Coatings	685 (5.7)	685 (5.7)	275 (2.3)
Low-Solids Stains, Toners and Washcoats	800 (6.7)	480 (4.0)	120 (1.0)
Adhesives	250 (2.1)	250 (2.1)	250 (2.1)

[Rule 1114]

29. Owner/Operator's use of *Metal Parts and Products Coatings* at this facility shall comply with the applicable requirements of Rule 1115, including the VOC limits specified in Rule 1115, as listed below:

- (a) Owner/Operator shall not apply to metal parts and products any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits specified below unless emissions to the atmosphere are controlled to an equivalent level by air pollution abatement equipment with a capture and control system Combined Efficiency of at least 85 percent:

LIMITS

(Grams of VOC Per Liter of Coating, Less Water and Less Exempt Compounds)

<u>Coating</u>	<u>Air Dried</u>		<u>Baked</u>	
	g/L	(lb/gal)	g/L	(lb/gal)
General	420	(3.5)	360	(3.0)
Military Specification	420	(3.5)	360	(3.0)
Etching Filler	420	(3.5)	420	(3.5)
Solar-Absorbent	420	(3.5)	360	(3.0)
Heat-Resistant	420	(3.5)	360	(3.0)

High-Gloss	420	(3.5)	360	(3.0)
Extreme High-Gloss	420	(3.5)	360	(3.0)
Metallic	420	(3.5)	420	(3.5)
Extreme Performance	420	(3.5)	360	(3.0)
Prefabricated Architectural				
Component	420	(3.5)	275	(2.3)
Touch Up	420	(3.5)	360	(3.0)
Repair	420	(3.5)	360	(3.0)
Silicone-Release	420	(3.5)	420	(3.5)
High Performance				
Architectural	420	(3.5)	420	(3.5)
Camouflage	420	(3.5)	420	(3.5)
Vacuum-Metalizing	420	(3.5)	420	(3.5)
Mold-Seal	420	(3.5)	420	(3.5)
High-Temperature	420	(3.5)	420	(3.5)
Electric-Insulating Varnish	420	(3.5)	420	(3.5)
Pan-Backing	420	(3.5)	420	(3.5)
Pretreatment Wash Primer	420	(3.5)	420	(3.5)
Clear Coating	520	(4.3)	520	(4.3)
[Rule 1115]				

30. Owner/Operator shall comply with all requirements of the District's Title V Program, MDAQMD Rules 1200 through 1210 (Regulation XII - *Federal Operating Permits*). [Applicable via Title V Program interim approval 02/05/96 61 FR 4217]

B. FACILITY-WIDE MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS:

- Any data and records generated and/or kept pursuant to the requirements in this federal operating permit (Title V Permit) shall be kept current and on site for a minimum of five (5) years from the date generated. Any records, data, or logs shall be supplied to District, state, or federal personnel upon request. [40 CFR 70.6(a)(3)(ii)(B); Rule 1203(D)(1)(d)(ii)]
- Any Compliance/Performance testing required by this Federal Operating Permit shall follow the administrative procedures contained in the District's Compliance Test Procedural Manual. Any required annual Compliance and/or Performance Testing shall be accomplished by obtaining advance written approval from the District pursuant to the District's Compliance Test Procedural Manual. All emission determinations shall be made as stipulated in the Written Test Protocol accepted by the District. When proposed testing involves the same procedures followed in prior District approved testing, then the previously approved Written Test Protocol may be used with District concurrence. [Rule 204 - Permit Conditions]
- Owner/Operator of permit units subject to Comprehensive Emissions Inventory Report /

Annual Emissions Determinations for District, state, and federal required Emission Inventories shall monitor and record the following for each unit:

- (a) The cumulative annual usage of each fuel type. The cumulative annual usage of each fuel type shall be monitored from utility service meters, purchase or tank fill records.
- (b) Fuel suppliers' fuel analysis certification/guarantee including fuel sulfur content shall be kept on site and available for inspection by District, state or federal personnel upon request. The sulfur content of diesel fuel shall be determined by use of ASTM method D2622-82, or (ASTM method D 2880-71, or equivalent). Vendor data meeting this requirement are sufficient.

[Rule 204 - Permit Conditions]

[40 CFR 70.6(a)(3)(B) – Periodic Monitoring Requirements]

- 4. Owner/Operator shall submit, annually, a Compliance Certification as prescribed by District Rule 1203(F)(1) and District Rule 1208, in a format approved by MDAQMD. Compliance Certifications by a Responsible Official shall certify the truth, accuracy and completeness of the document submitted and contain a statement to the effect that the certification is based upon information and belief, formed after a reasonable inquiry; the statements and information in the document are true, accurate, and complete.

[District Rule 1203(D)(1)(g)(v-x)]

[District Rule 1203(D)(1)(g)(v-x)]

[40 CFR 72.90.a; 40 CFR 70.6(c)(5)(i)]

- (a) Owner/Operator shall include in any Compliance Certification the methods used for monitoring such compliance.

[District Rule 1203(D)(1)(g)(viii)]

[40 CFR 70.6(c)(5)(ii)]

- (b) Owner/Operator shall comply with any additional certification requirements as specified in 42 United States Code (U.S.C.) §7414(a)(3), Recordkeeping, Inspections, Monitoring and Entry (Federal Clean Air Act §114(a)(3)) and 42 U.S.C. §7661c(b), Permit Requirements and Conditions (Federal Clean Air Act §503(b)), or in regulations promulgated thereunder.

[District Rule 1203 (D)(1)(g)(x)]

- (c) Each report shall be certified to be true, accurate, and complete by “The Responsible Official” and a copy of this annual report shall also be contemporaneously submitted to the EPA Region IX Administrator.

[District Rule 1203 (D)(1)(g)(v - x)]

[40 CFR 72.90.a]

- (d) The annual Compliance Certification shall be submitted as follows:

- (i) The annual certification period is January 1st of the previous year through December 31st of the previous year, and shall be submitted with postmark no later than January 31st of each year.

- 5. The owner/operator shall submit, semi-annually, a Monitoring Report to the APCO/District. The Monitoring Reports shall be certified to be true, accurate, and complete, signed by the Responsible Official, and shall include the following information

and/or data:

- (a) Summary of deviations from any federally enforceable requirement in this permit.
- (b) Summary of all emissions monitoring and analysis methods required by any Applicable Requirement/federally - enforceable requirement.
- (c) Summary of all periodic monitoring, testing or record keeping (including test methods sufficient to yield reliable data) to determine compliance with any Applicable Requirement/federally - enforceable requirement that does not directly require such monitoring.
- (d) Summary of necessary requirements concerning use and maintenance of equipment including the installation and maintenance of monitoring equipment. (e) The semi-annual reporting periods shall be submitted as follows:
 - (i) January 1st through June 30th, due with postmark no later than July 31st of each year; and,
 - (ii) July 1st through December 31st, due with postmark no later than January 31st of each year.

[District 1203(D)(1)(c)(i - iii); District 1203(D)(1)(d)(i); District Rule 1203(D)(1)(e)(i - ii); District Rule 1203(D)(1)(g)(v - x)]

6. Owner/Operator shall promptly report all deviations from Federal Operating Permit requirements including, but not limited to, any emissions in excess of permit conditions, deviations attributable to breakdown conditions, and any other deviations from permit conditions. Such reports shall include the probable cause of the deviation and any corrective action or preventative measures taken as a result of the deviation. [Rule 1203(D)(1)(e)(ii) and Rule 430(C)]

Prompt reporting shall be determined as follows:

- (a) For deviations involving emissions of air contaminants in excess of permit conditions including but not limited to those caused by a breakdown, prompt reporting shall be within one hour of the occurrence of the excess emission or within one hour of the time a person knew or reasonably should have known of the excess emission. Documentation and other relevant evidence regarding the excess emission shall be submitted to the District within sixty (60) days of the date the excess emission was reported to the District. [SIP Pending: Rule 430 - Breakdown Provisions as amended 12/21/94 and submitted 2/24/95]
 - (b) For other deviations from permit conditions not involving excess emissions of air contaminants shall be submitted to the District with any required monitoring reports at least every six (6) months. [Rule 1203(D)(1)(e)(i)]
7. If any facility unit(s) should be determined not to be in compliance with any federally-enforceable requirement during the 5-year permit term, then Owner/Operator shall obtain a Schedule of Compliance approved by the District Hearing Board pursuant to the requirements of MDAQMD Regulation 5 (Rules 501 - 518). In addition, Owner/Operator shall submit a Progress Report on the implementation of the Schedule of

Compliance. The Schedule of Compliance shall contain the information outlined in (b), below. The Progress Report shall contain the information outlined in (c), below. The Schedule of Compliance shall become a part of this Federal Operating Permit by administrative incorporation. The Progress Report and Schedule of Compliance shall comply with Rule 1201(I)(3)(iii) and shall include:

- (a) A narrative description of how the facility will achieve compliance with such requirements; and
- (b) A *Schedule of Compliance* which contains a list of remedial measures to be taken for the facility to come into compliance with such requirements, an enforceable sequence of actions, with milestones, leading to compliance with such requirements and provisions for the submission of *Progress Reports* at least every six (6) months. The *Schedule of Compliance* shall include any judicial order, administrative order, and/or increments of progress or any other schedule as issued by any appropriate judicial or administrative body or by the District Hearing Board pursuant to the provisions of Health & Safety Code §42350 et seq.; and
- (c) *Progress Reports* submitted under the provisions of a *Schedule of Compliance* shall include: Dates for achieving the activities, milestone, or compliance required in the schedule of compliance; and dates when such activities, milestones or compliance were achieved; and an explanation of why any dates in the schedule of compliance were not or will not be met; and any preventive or corrective measures adopted due to the failure to meet dates in the schedule of compliance. [Rule 1201 (I)(3)(iii); Rule 1203 (D)(1)(e)(ii); Rule 1203 (D)(1)(g)(v)]

C. FACILITY-WIDE COMPLIANCE CONDITIONS:

1. Owner/Operator shall allow an authorized representative of the MDAQMD to enter upon the permit holder's premises at reasonable times, with or without notice. [40 CFR 70.6(c)(2)(i); Rule 1203(D)(1)(g)(i)]
2. Owner/Operator shall allow an authorized representative of the MDAQMD to have access to and copy any records that must be kept under condition(s) of this Federal Operating Permit. [40 CFR 70.6(c)(2)(ii); Rule 1203(D)(1)(g)(ii)]
3. Owner/Operator shall allow an authorized representative of the MDAQMD to inspect any equipment, practice or operation contained in or required under this Federal Operating Permit. [40 CFR 70.6(c)(2)(iii); Rule 1203(D)(1)(g)(iii)]
4. Owner/Operator shall allow an authorized representative of the MDAQMD to sample and/or otherwise monitor substances or parameters for the purpose of assuring compliance with this Federal Operating Permit or with any Applicable Requirement.

[40 CFR 70.6(c)(2)(iv); Rule 1203(D)(1)(g)(iv)]

5. Owner/Operator shall remain in compliance with all Applicable Requirements / federally enforceable requirements by complying with all compliance, monitoring, record-keeping, reporting, testing, and other operational conditions contained in this Federal Operating Permit. Any noncompliance constitutes a violation of the Federal Clean Air Act and is grounds for enforcement action; the termination, revocation and re-issuance, or modification of this Federal Operating Permit; and/or grounds for denial of a renewal application. [1203 (D)(1)(f)(ii)]
6. Owner/Operator shall comply in a timely manner with all applicable requirements / federally - enforceable requirements that become effective during the term of this permit. [Rule 1201 (I)(2); Rule 1203(D)(1)(g)(v)]
7. Owner/Operator shall insure that all applicable subject processes comply with the provisions of 40 CFR 61, National Emission Standards for Hazardous Air Pollutants, subpart A, General Provisions, and subpart M, Asbestos. [40 CFR 61, subparts A and M]
8. Owner/Operator shall notify APCO/District at least 10 working days before any applicable asbestos stripping or removal work is to be performed as required by section 61.145.b of 40 CFR 61 subpart M, National Emission Standard for Asbestos. [40 CFR 61.145.b]
9. Owner/Operator shall notify the APCO/District, on an annual basis, postmarked by December 17 of the calendar year, of the predicted asbestos renovations for the following year as required by section 61.145.b of 40 CFR 61, subpart M [see cite for threshold triggering and applicability]. [40 CFR 61.145.b]

PART III
EQUIPMENT SPECIFIC APPLICABLE REQUIREMENTS;
EMISSIONS LIMITATIONS; MONITORING, RECORDKEEPING,
REPORTING AND TESTING REQUIREMENTS; COMPLIANCE CONDITIONS;
COMPLIANCE PLANS

A. IVANPAH 1 FACILITY:

- A. MDAQMD Permit E010375; Conditions Applicable to BOILER, Year of Manufacture 2012, Serial Number 2011-07, consisting of: Rentech D-type water tube boiler, 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.
1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]
 2. The owner/operator (o/o) shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all information submitted with the application for this permit, which produce the minimum emission of air contaminants.
[Rule 1302(C)(2)(a)]
 3. This boiler shall use only natural gas as fuel and shall be equipped with a meter measuring fuel consumption.
[40 CFR 60 Subpart Db, Section 60.49b]
 4. The o/o 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 Btu's, and daily hours of operation.
[40 CFR 60 Subpart Db, Section 60.49b]
 5. The owner/operator shall perform annual compliance tests in accordance with the District Compliance Test Procedural Manual. 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
*NOx	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)

*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. [Rule 1303(A); BACT]

6. 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. [Rule 204]
7. 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]
8. The o/o 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]
9. In lieu of installing CEMs to monitor NOx emissions, and pursuant to 40 CFR 60 Subpart Db, Section 60.49b(c), the owner/operator shall monitor boiler operating conditions and estimate NOx emission rates per a District approved emissions estimation plan. The plan shall be based on the annual source tests required by condition 5. The plan shall include test results, operating parameters, analysis, conclusions and proposed NOx 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 NOx emissions to be considered valid. [40 CFR 60 Subpart Db, Section 60.49b(c)]
10. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]

- B. MDAQMD Permit B011544; Conditions Applicable to BOILER, NIGHTTIME PRESERVATION consisting of: Boiler, Hurst, Year of Manufacture 2012, Serial Number S750-200-6, equipped with Low-NOx Power Flame Burners, Model NVC5-G-30 rated at a maximum heat input of 6.3 MMBtu, fueled exclusively on utility grade natural gas. Equipment shall use 9,730 cu-ft/hr of fuel and provide 5,175 lb/hr of steam.
1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
 2. The owner/operator shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all information submitted with the application for this permit, which produce the minimum emission of air contaminants. [Rule 1302(C)(2)(a)]
 3. This boiler shall use only natural gas as fuel. [Rule 1302(C)(2)(a)]
 4. 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 Btu's, and daily hours of operation. [Rule 204]
 5. The owner/operator shall perform annual tune-ups in accordance with the unit manufacturer's specified tune-up procedure, by a qualified technician. [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. [Rule 204]
 7. The owner/operator shall continuously monitor and record fuel flow rate into this power block known as Ivanpah 1. [Rule 204]
 8. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]
- C. MDAQMD Permit E010378; Conditions Applicable to DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2010

One John Deere, Diesel fired internal combustion engine Model No. 6068HFC48 and Serial No. PE6068L117510, After Cooled, Direct Injected, Electronic Control Module, Exhaust Gas Recirculation, High Pressure Fuel Injection (also EM), Turbo Charged, producing 316 bhp with 6 cylinders at 2350 rpm while consuming a maximum of 12.2 gal/hr. This equipment powers a Clarke Pump Model No. 6AEF17 and Serial No. 9927021649-10-A, rated at 2350 rpm 167 bhp.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.4	gm/bhp-hr
NOx+NMHC	2.5	gm/bhp-hr
PM10	0.08	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205 and 60.4211]

2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]

3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]

4. This unit shall be limited to use for emergency purposes, defined as in response to a fire. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. The 50 hour limit can be exceeded when the emergency fire pump assembly is driven directly by a stationary diesel fueled CI engine operated per and in accord with the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition. This requirement includes usage during emergencies. [District Rule 1302(C)(2)(a) and Rule 1304 (D)(1)(a)] and 17 CCR 93115.3(n); hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements.]

5. 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing, etc.);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours [17 CCR 93115]; and,

- d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log.) [17 CCR 93115.10]
- 6. These engines may operate in response to fire suppression requirements and needs. [Rule 204]
- 7. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart III (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]
- D. MDAQMD Permit E010379; Conditions Applicable to DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II; EPA Family ACPXL58.6T2X; CARB Executive Order U-R-001-0397; EPA Engine Complies with 40 CFR PART 60 SUBPART III

One Caterpillar, Diesel fired internal combustion engine Model No. 3512C and Serial No. EBG00874, After Cooled, Direct Injected, Electronic Control Module, High Pressure Fuel Injection (also EM), Turbo Charged, producing 2206 bhp with 16 cylinders at 1800 rpm while consuming a maximum of 105 gal/hr. This equipment powers a Caterpillar Generator Model No. SR4B-GD and Serial No. G6J00518, rated at 1500Kw.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.9	gm/bhp-hr
NOx+NMHC	4.3	gm/bhp-hr
PM10	0.1	gm/bhp-hr

- 1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205, and 60.4211]
- 2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]
- 3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]
- 4. This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical

power supplier. [17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]

5. This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. [NSR and 17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
6. The o/o 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log). [17 CCR 93115.10]
7. This genset is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern. [Rule 204]
- E. MDAQMD Permit E011546; Conditions Applicable to DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2011, Tier III, EPA Family BCPXL08.8NZS Located in the Common Logistics Area; EPA Engine Complies with 40 CFR PART 60 SUBPART IIII

One Caterpillar, Diesel fired internal combustion engine Model No. C9 and Serial No. S9L03837, After Cooled, Direct Injected, Turbo Charged, producing 398 bhp with 6 cylinders at 1800 rpm while consuming a maximum of 19.4 gal/hr. This equipment powers a Caterpillar Generator Model No. LCS and Serial No. G5A04954, rated at 250Kw.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.7	gm/Kw-hr
NOx+NMHC	2.2	gm/Kw-hr
PM10	0.13	gm/Kw-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205, and 60.4211]

2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]
 3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]
 4. This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical power supplier. [17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
 5. This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. [NSR and 17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
 6. The o/o 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log). [17 CCR 93115.10]
 7. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [60.4209]
 8. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]
- F. MDAQMD Permit E011547; Conditions Applicable to DIESEL IC ENGINE, FIRE PUMP

consisting of: Year of Manufacture 2011, Tier III, EPA Engine Family BJDXL06.8105; CARB Executive Order: U-R-004-0429; EPA Certificate: JDX-NRCI-11-14; EPA Engine Complies with 40 CFR PART 60 SUBPART IIII

One John Deere, Diesel fired internal combustion engine Model No. 4045HFC28A,B,C,D and Serial No. PE4045L162845, Direct Injected, producing 156.9 bhp with 4 cylinders at 1760 rpm while consuming a maximum of 8.9 gal/hr. This equipment powers a Clarke Fire Pump Model No. 6AEF16G and Serial No. 9927021646-10-A, rated at 1760 rpm 76 bhp.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	1.1	gm/bhp-hr
NOx+NMHC	2.5	gm/bhp-hr
PM10	0.19	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205 and 60.4211]

2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]

3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]

4. This unit shall be limited to use for emergency purposes, defined as in response to a fire. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. The 50 hour limit can be exceeded when the emergency fire pump assembly is driven directly by a stationary diesel fueled CI engine operated per and in accord with the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition. This requirement includes usage during emergencies. [District Rule 1302(C)(2)(a) and Rule 1304 (D)(1)(a)] and 17 CCR 93115.3(n); hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements.]

5. 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. Date of each use and duration of each use (in hours);

- b. Reason for use (testing & maintenance, emergency, required emission testing, etc.);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours [17 CCR 93115]; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log.) [17 CCR 93115.10]
6. These engines may operate in response to fire suppression requirements and needs. [Rule 204]
 7. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]

II. IVANPAH II FACILITY

- A. MDAQMD Permit B010376; Conditions Applicable to BOILER, Year of Manufacture 2012, Serial Number 2011-08, consisting of: Rentech D-type water tube boiler, equipped with Todd-Coen Ultra Low-NO_x 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.
 1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
 2. The owner/operator (o/o) shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all information submitted with the application for this permit, which produce the minimum emission of air contaminants. [Rule 1302(C)(2)(a)]
 3. This boiler shall use only natural gas as fuel and shall be equipped with a meter measuring fuel consumption. [40 CFR 60 Subpart Db, Section 60.49b]
 4. The o/o 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 Btu's, and daily hours of operation. [40 CFR 60 Subpart Db, Section 60.49b]
 5. The owner/operator shall perform annual compliance tests in accordance with the District Compliance Test Procedural Manual. 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
*NOx	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)

*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. [Rule 1303(A); BACT]

6. 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. [Rule 204]
7. 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]
8. The o/o 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]
9. In lieu of installing CEMs to monitor NOx emissions, and pursuant to 40 CFR 60 Subpart Db, Section 60.49b(c), the owner/operator shall monitor boiler operating conditions and estimate NOx emission rates per a District approved emissions estimation plan. The plan shall be based on the annual source tests required by condition 5. The plan shall include test results, operating parameters, analysis, conclusions and proposed NOx 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 NOx emissions to be considered valid. [40 CFR 60 Subpart Db, Section 60.49b(c)]
10. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]

- B. MDAQMD Permit B011572; Conditions Applicable to BOILER, NIGHTTIME PRESERVATION consisting of: Boiler, Hurst, Year of Manufacture 2012, Serial Number S750-200-7, equipped with Low-NOx Power Flame Burners, Model NVC5-G-30 rated at a maximum heat input of 6.3 MMBtu, fueled exclusively on utility grade natural gas. Equipment shall use 9,730 cu-ft/hr of fuel and provide 5,175 lb/hr of steam.
1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
 2. The owner/operator shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all information submitted with the application for this permit, which produce the minimum emission of air contaminants. [Rule 1302(C)(2)(a)]
 3. This boiler shall use only natural gas as fuel. [Rule 1302(C)(2)(a)]
 4. 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 Btu's, and daily hours of operation. [Rule 204]
 5. The owner/operator shall perform annual tune-ups in accordance with the unit manufacturer's specified tune-up procedure, by a qualified technician. [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. [Rule 204]
 7. The owner/operator shall continuously monitor and record fuel flow rate into this power block known as Ivanpah 1. [Rule 204]
 8. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]
- C. MDAQMD Permit E010380; Conditions Applicable to DIESEL IC ENGINE, FIRE PUMP

consisting of: Year of Manufacture 2011, Tier III, EPA Engine Family BJDXL06.8131; CARB Executive Order: Not Applicable; EPA Certificate: JDX-NRCI-11-30; EPA Engine Complies with 40 CFR PART 60 SUBPART IIII

One John Deere, Diesel fired internal combustion engine Model No. 6068HFC48 and Serial No. PE6068L185615, After Cooled, Direct Injected, Electronic Control Module, Exhaust Gas Recirculation, High Pressure Fuel Injection (also EM), Turbo Charged, producing 316 bhp with 6 cylinders at 2350 rpm while consuming a maximum of 12.2 gal/hr. This equipment powers a Clarke Pump Model No. 6AEF17 and Serial No. 9927021651-10-B, rated at 2350 rpm 167 bhp.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.5	gm/bhp-hr
NOx+NMHC	2.8	gm/bhp-hr
PM10	0.07	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205 and 60.4211]
2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]
3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]
4. This unit shall be limited to use for emergency purposes, defined as in response to a fire. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. The 50 hour limit can be exceeded when the emergency fire pump assembly is driven directly by a stationary diesel fueled CI engine operated per and in accord with the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition. This requirement includes usage during emergencies. [District Rule 1302(C)(2)(a) and Rule 1304 (D)(1)(a)] and 17 CCR 93115.3(n); hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements.]
5. 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing, etc.);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours [17 CCR 93115]; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log.) [17 CCR 93115.10]
6. These engines may operate in response to fire suppression requirements and needs. [Rule 204]
7. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]
- D. MDAQMD Permit E010381; Conditions Applicable to DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II; EPA Family ACPXL58.6T2X; CARB Executive Order U-R-001-0397; EPA Engine Complies with 40 CFR PART 60 SUBPART IIII

One Caterpillar, Diesel fired internal combustion engine Model No. 3512C and Serial No. EBG00875, After Cooled, Direct Injected, Electronic Control Module, High Pressure Fuel Injection (also EM), Turbo Charged, producing 2206 bhp with 16 cylinders at 1800 rpm while consuming a maximum of 105 gal/hr. This equipment powers a Caterpillar Generator Model No. SR4B-GD and Serial No. G6J00521, rated at 1500Kw.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.9	gm/bhp-hr
NOx+NMHC	4.3	gm/bhp-hr
PM10	0.1	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205, and 60.4211]
2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]
3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]

4. This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical power supplier. [17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
5. This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. [NSR and 17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
6. The o/o 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log). [17 CCR 93115.10]
7. This genset is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern. [Rule 204]

III. IVANPAH 3 FACILITY:

- A. MDAQMD Permit B010377; Conditions Applicable to BOILER, Year of Manufacture 2012, Serial Number 2011-09, consisting of: Rentech D-type water tube boiler, 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.
 1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
 2. The owner/operator (o/o) shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all in-

formation submitted with the application for this permit, which produce the minimum emission of air contaminants. [Rule 1302(C)(2)(a)]

3. This boiler shall use only natural gas as fuel and shall be equipped with a meter measuring fuel consumption. [40 CFR 60 Subpart Db, Section 60.49b]
4. The o/o 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 Btu's, and daily hours of operation. [40 CFR 60 Subpart Db, Section 60.49b]
5. The owner/operator shall perform annual compliance tests in accordance with the District Compliance Test Procedural Manual. 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
*NOx	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)

*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. [Rule 1303(A); BACT]

6. 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. [Rule 204]
7. 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]
8. The o/o 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]
9. In lieu of installing CEMs to monitor NOx emissions, and pursuant to 40 CFR 60 Subpart Db, Section 60.49b(c), the owner/operator shall monitor boiler operating conditions and estimate

NOx emission rates per a District approved emissions estimation plan. The plan shall be based on the annual source tests required by condition 5. The plan shall include test results, operating parameters, analysis, conclusions and proposed NOx 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 NOx emissions to be considered valid. [40 CFR 60 Subpart Db, Section 60.49b(c)]

10. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]
- B. MDAQMD Permit B011573; Conditions Applicable to BOILER, NIGHTTIME PRESERVATION consisting of: Boiler, Hurst, Year of Manufacture 2012, Serial Number S750-200-8, equipped with Low-NOx Power Flame Burners, Model NVC5-G-30 rated at a maximum heat input of 6.3 MMBtu, fueled exclusively on utility grade natural gas. Equipment shall use 9,730 cu-ft/hr of fuel and provide 5,175 lb/hr of steam.
 1. Operation of this equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
 2. The owner/operator shall operate this equipment in strict accord with the recommendations of the manufacturer or supplier and/or sound engineering principles and consistent with all information submitted with the application for this permit, which produce the minimum emission of air contaminants. [Rule 1302(C)(2)(a)]
 3. This boiler shall use only natural gas as fuel. [Rule 1302(C)(2)(a)]
 4. 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 Btu's, and daily hours of operation. [Rule 204]
 5. The owner/operator shall perform annual tune-ups in accordance with the unit manufacturer's specified tune-up procedure, by a qualified technician. [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. [Rule 204]
 7. The owner/operator shall continuously monitor and record fuel flow rate into this power block known as Ivanpah 1. [Rule 204]
 8. 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. [Rule 204; Rule 1302(C)(2)(a); CEC Condition Of Certification]
- C. MDAQMD Permit E010382; Conditions Applicable to DIESEL IC ENGINE, EMERGENCY GENERATOR consisting of: Year of Manufacture 2010, Tier II; EPA Family ACPXL58.6T2X; CARB Executive Order U-R-001-0397; EPA Engine Complies with 40 CFR PART 60 SUBPART III

One Caterpillar, Diesel fired internal combustion engine Model No. 3512C and Serial No. EBG00864, After Cooled, Direct Injected, Electronic Control Module, High Pressure Fuel Injection (also EM), Turbo Charged, producing 2206 bhp with 16 cylinders at 1800 rpm while consuming a maximum of 105 gal/hr. This equipment powers a Caterpillar Generator Model No. SR4B-GD and Serial No. G6J00517, rated at 1500Kw.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.7	gm/bhp-hr
NOx+NMHC	4.2	gm/bhp-hr
PM10	0.10	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205, and 60.4211]
2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]
3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed

and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]

4. This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical power supplier. [17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements]
5. This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. [NSR and 17 CCR 93115; hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements.]
6. 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing, etc.);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours [17 CCR 93115]; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log.) [17 CCR 93115.10]
7. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]
- E. MDAQMD Permit E010384; Conditions Applicable to DIESEL IC ENGINE, FIRE PUMP consisting of: Year of Manufacture 2012, Tier III, EPA Engine Family CJDXL13.5103; CARB Executive Order: Not Applicable; EPA Certificate: CJDXL13.5103-020; EPA Engine Complies with 40 CFR PART 60 SUBPART IIII

One John Deere, Diesel fired internal combustion engine Model No. 6068HFC48 and Serial No. PE6068L228483, After Cooled, Direct Injected, Electronic Control Module, Exhaust Gas Recirculation, High Pressure Fuel Injection (also EM), Turbo Charged, producing 316 bhp with 6 cylinders at 2350 rpm while consuming a maximum of 12.2 gal/hr. This equipment powers a Clarke Pump Model No. 6AEF17 and Serial No. 9927021652-10-A, rated at 2350 rpm 158 bhp.

EMISSIONS RATES

Emission Type	Est. Max Load	Unit
CO	0.4	gm/bhp-hr
NOx+NMHC	2.5	gm/bhp-hr
PM10	0.07	gm/bhp-hr

1. This engine, certified in accordance with 40 CFR Part 89, and after treatment control device (if any) shall be installed, operated and maintained according to the manufacturer's emission-related written instructions. Further, the owner/operator shall change only those emission-related settings that are permitted by the manufacturer. 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 Part 60 Subparts 60.4205 and 60.4211]

2. This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. [17 CCR 93115; 60.4207(b)]

3. A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed and maintained on this unit to indicate elapsed engine operating time. [Title 17 CCR 93115.10(e)(1); 60.4209(a)]

4. This unit shall be limited to use for emergency purposes, defined as in response to a fire. In addition, this unit shall be operated no more than 1.0 hrs per day for a total of 50 hours per year for testing and maintenance. The 50 hour limit can be exceeded when the emergency fire pump assembly is driven directly by a stationary diesel fueled CI engine operated per and in accord with the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition. This requirement includes usage during emergencies. [District Rule 1302(C)(2)(a) and Rule 1304 (D)(1)(a)] and 17 CCR 93115.3(n); hours allowed by federal regulation 40 CFR 60.42(f) streamlined out as these permit requirements are more stringent than the federal regulatory requirements.]

5. 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. Date of each use and duration of each use (in hours);
 - b. Reason for use (testing & maintenance, emergency, required emission testing, etc.);
 - c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours [17 CCR 93115]; and,
 - d. Fuel sulfur concentration (the o/o may use the supplier's certification of sulfur content if it is maintained as part of this log.) [17 CCR 93115.10]

6. These engines may operate in response to fire suppression requirements and needs. [Rule 204]

7. This unit is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for

Stationary Compression Ignition Engines (17 CCR 93115) and 40 CFR Part 60, Subpart IIII (NSPS). In the event of conflict between these conditions and the ATCM or NSPS, the more stringent requirements shall govern. [Rule 204]

PART IV STANDARD FEDERAL OPERATING PERMIT CONDITIONS

A. STANDARD CONDITIONS:

1. If any portion of this Federal Operating Permit is found to be invalid by the final decision of a court of competent jurisdiction the remaining portion(s) of this Federal Operating Permit shall not be affected thereby. [40 CFR 70.6(a)(5); Rule 1203(D)(1)(f)(i)]
2. Owner/Operator shall comply with all condition(s) contained herein. Noncompliance with any condition(s) contained herein constitutes a violation of the Federal Clean Air Act and of MDAQMD Regulation XII and is grounds for enforcement action; termination, revocation and re-issuance, or modification of this Federal Operating Permit; and/or grounds for denial of a renewal of this Federal Operating Permit. [40 CFR 70.6(a)(6)(i); Rule 1203(D)(1)(f)(ii)]
3. It shall not be a defense in an enforcement action brought for violation(s) of condition(s) contained in this Federal Operating Permit that it would have been necessary to halt or reduce activity to maintain compliance with those condition(s). [40 CFR 70.6(a)(6)(ii); Rule 1203(D)(1)(f)(iii)]
4. This Federal Operating Permit may be modified, revoked, reopened or terminated for cause. [40 CFR 70.6(a)(6)(iii); Rule 1203(D)(1)(f)(iv)]
5. The filing of an application for modification; a request for revocation and re-issuance; a request for termination; notifications of planned changes; or anticipated noncompliance with condition(s) does not stay the operation of any condition contained in this Federal Operating Permit. [40 CFR 70.6(a)(6)(iii); Rule 1203(D)(1)(f)(v)]
6. The issuance of this Federal Operating Permit does not convey any property rights of any sort nor does it convey any exclusive privilege. [40 CFR 70.6(a)(6)(iv); Rule 1203(D)(1)(f)(vi)]
7. Owner/Operator shall furnish to the MDAQMD, within a reasonable time as specified by the MDAQMD, any information that the MDAQMD may request in writing.
[40 CFR 70.6(a)(6)(v); Rule 1203(D)(1)(f)(vii)]
8. Owner/Operator shall furnish to District, state or federal personnel, upon request, copies of any records required to be kept pursuant to condition(s) of this Federal Operating Permit. [40 CFR 70.6(a)(6)(v); Rule 1203(D)(1)(f)(viii)]
9. Any records required to be generated and/or kept by any portion of this Federal Operating Permit shall be retained by the facility Owner/Operator for at least five (5) years from the date the records were created. [40 CFR 70.6(a)(3)(ii)(B); Rule 1203(D)(1)(d)(ii)]
10. Owner/Operator shall pay all applicable fees as specified in MDAQMD Regulation III, including those fees related to permits as set forth in Rules 301 and 312. [40 CFR 70.6(a)(7); Rule

1203(D)(1)(f)(ix)]

11. Owner/Operator shall not be required to revise this permit for approved economic incentives, marketable permits, emissions trading or other similar programs provided for in this permit. [40 CFR 70.6(a)(8); Rule 1203(D)(1)(f)(x)]
12. Compliance with condition(s) contained in this Federal Operating Permit shall be deemed compliance with the Applicable Requirement underlying such condition(s). The District clarifies that “only” Applicable Requirements listed & identified elsewhere in this Title V Permit are covered by this Permit Shield and does not extend to any unlisted/unidentified conditions pursuant to the requirements of 40 CFR 70.6(f)(1)(i). [40 CFR 70.6(f)(1)(i); Rule 1203(G)(1)]
13. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to limit the emergency powers of USEPA as set forth in 42 U.S.C. §7603. [40 CFR 70.6(f)(3)(i); Rule 1203(G)(3)(a)]
14. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to limit liability for violations, which occurred prior to the issuance of this Federal Operating Permit. [40 CFR 70.6(f)(3)(ii); Rule 1203(G)(3)(b)]
15. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to alter any Applicable Requirement Contained in the Acid Rain Program. [40 CFR 70.6(f)(3)(iii); Rule 1203(G)(3)(c)]
16. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to limit the ability of USEPA or the MDAQMD to obtain information pursuant to other provisions of law including but not limited to 42 U.S.C. §7414. [40 CFR 70.6(f)(3)(iv); Rule 1203(G)(3)(d)]
17. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to apply to emissions trading pursuant to provisions contained in an applicable State Implementation Plan. [40 CFR 70.4(b)(12)(ii)(B); Rule 1203(G)(3)(e)]
18. The Permit Shield set forth above, in condition 12 of Part IV, shall not be construed to apply to changes made which are not expressly allowed by this Federal Operating Permit. [40 CFR 70.4(b)(14)(iii); Rule 1203(G)(3)(f)]
19. The Permit Shield set forth in Part IV, condition 12, shall not be construed to apply to changes made pursuant to the Significant Permit Modification provisions until such changes are included in this Federal Operating Permit. [40 CFR 70.5(a)(1)(ii), 70.7(e)(2)(vi); Rule 1203 (G)(3)(g)]
20. If Owner/Operator performs maintenance on, or services, repairs, or disposes of appliances, Owner/Operator shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. These requirements are Federally Enforceable through this Title V Permit. [40 CFR Part 82, Subpart F]

21. If Owner/Operator performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), Owner/Operator shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. These requirements are Federally Enforceable through this Title V Permit. [40 CFR Part 82, Subpart B]

22. Notwithstanding the testing requirements contained elsewhere in this Title V Permit, any credible evidence may be used to establish compliance or violations, including but not limited to; reference test methods, engineering calculations, indirect estimates of emissions, CEMS data, and parametric monitoring data. Data need not be required to be collected in a Title V permit in order to be considered credible. [Section 113(a) of the Clean Air Act]

PART V OPERATIONAL FLEXIBILITY

A. ALTERNATIVE OPERATING SCENARIOS:

B. OFF PERMIT CHANGES:

I. Permittee may make a proposed change to equipment covered by this permit that is not expressly allowed or prohibited by this permit if:

- A. Permittee has applied for and obtained all permits and approvals required by MDAQMD Regulation II and Regulation XIII unless the equipment involved in the change is exempt from obtaining such permits and approvals pursuant to the provisions of Rule 219; and
1. The proposed change is not:
 - a. Subject to any requirements under Title IV of the Federal Clean Air Act; or *[See 1203(E)(1)(c)(i)d]*
 - b. A modification under Title I of the Federal Clean Air Act; or
 - c. A modification subject to Regulation XIII; and *[See 1203(E)(1)(c)(i) d]*
 - d. The change does not violate any Federal, State or Local requirement, including an applicable requirement; and *[See 1203(E)(1)(c)(i)c]*
 - e. The change does not result in the exceedance of the emissions allowable under this permit (whether expressed as an emissions rate or in terms of total emissions). *[See 1203(E)(1)(c)(i)e]*

II. Procedure for “Off Permit” Changes

- A. If a proposed “Off Permit Change” qualifies under Part V, Section (B)(I)(A)(1) above, permittee shall implement the change as follows:
1. Permittee shall apply for an Authority To Construct permit pursuant to the provisions of Regulation II. *[See 1203(E)(1)(c)(i)b]*
 2. In addition to the information required pursuant to the provisions of Regulation II and Regulation XIII such application shall include:
 - a. A notification that this application is also an application for an “Off Permit” Change pursuant to this condition; and *[See 1203(E)(1)(c)(i)b]*
 - b. A list of any new Applicable Requirements which would apply as a result of the change; and *[See 1203(E)(1)(c)(i)b.]*
 - c. A list of any existing Applicable Requirements, which would cease to apply as a result of the change. *[See 1203(E)(1)(c)(i)c]*
 3. Permittee shall forward a copy of the application and notification to USEPA upon submitting it to the District. *[See 1203(E)(1)(c)(i)a]*
- B. Permittee may make the proposed change upon receipt from the District of the Authority to Construct Permit or thirty (30) days after forwarding the copy of the notice and application to USEPA whichever occurs later. *[See 1203(E)(1)(c)(i)a and g]*
- C. Permittee shall attach a copy of the Authority to Construct Permit and any subsequent Permit to Operate, which evidences the Off Permit Change to this Title V permit. *[See 1203(E)(1)(c)(i)ff]*
- D. Permittee shall include each Off-Permit Change made during the term of the permit in any renewal application submitted pursuant to Rule 1202(B)(3)(b). *[See 1203(E)(1)(c)(i)ff]*

III. Other Requirements:

- A. The provisions of Rule 1205 – Modifications do not apply to an Off Permit Change made pursuant to this condition.
- B. The provisions of Rule 1203(G) – Permit Shield do not apply to an Off Permit Change made pursuant to this condition. [*See 40 CFR 70.4(b)(i)(B)*] [Rule 1203(E)(1)(c)]

PART VI TITLE IV ACID RAIN PERMIT

Issued to: Ivanpah Solar Electric Generating System
Operated by: Ivanpah Solar Electric Generating System
Facility's: Ivanpah 1, Ivanpah 2, Ivanpah 3
ORIS Code: 57074, 57073, 57075; Ivanpah 1, Ivanpah 2, Ivanpah 3, Respectively
SIC Code: 4911 – Electric Power Generation

ACID RAIN PERMIT CONTENTS

1. Statement of Basis
2. SO₂ allowances allocated under this permit and NO_x requirements for each affected unit.
3. The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the application.

1. STATEMENT OF BASIS:

Statutory and Regulatory Authorities: Pursuant MDAQMD Regulation 12, Program - Federal Operating Permits, a.k.a. Title V (Adopted 7/25/94, Amended 02/22/95, Additional Rules adopted 06/28/95, 7/31/95) and 02/05/96 FR 4217 (Interim Approval), in accordance with Rule 221 - *Federal Operating Permit Requirement*, 40 CFR 52.220(c)(216)(i)(A)(2) - 02/05/96 61 FR 4217 and Rule 1210 - *Acid Rain Provisions of Federal Operating Permits*, and Titles IV and V of the Clean Air Act of 1990, the Mojave Desert Air Quality Management District issues this permit.

Description(s): SO_x emissions shall be based on Low Mass Emissions (LME) procedures in 40 CFR 75.19. The owner/operator shall: hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deduction under 40 CFR 73.34(c)) no less than the total allowances required to be surrendered in the previous calendar year from the unit; and comply with the applicable Acid Rain emissions limitations for sulfur dioxide; because allowances are rounded to the nearest whole ton, and the emissions from each unit are less than 0.5 TPY, no allowances are surrendered;

NO_x emissions shall be calculated using LME procedures in accordance with 40 CFR 75.19. The owner/operator shall comply with the applicable Acid Rain emissions limitations for nitrogen oxides. The owner/operator shall comply with the requirements of the Phase II Acid Rain Permit upon the date of issuance of the initial Title V Permit.

2. SO₂ ALLOWANCES:

The facility is subject to the Acid Rain Program requirements of 40 CFR 72 et. seq. because each of the three auxiliary boilers is an affected unit as defined in 40 CFR 72.6(a)(3)(i).

METHOD	DESCRIPTION OR REFERENCE METHOD
Monitoring	The owner or operator and, to the extent applicable, the designated representative of a facility containing an affected unit shall comply with the monitoring requirements as set forth in 40 CFR 72.9(b) (incorporated herein by this reference) and 40 CFR 75 (incorporated herein by this reference).
Reporting	The owner or operator of a facility containing an affected unit shall comply with the requirements relating to reporting as set forth in 40 CFR 72.9(f).
Record Keeping	The owner or operator of a facility containing an affected unit shall comply with the requirements relating to recordkeeping as set forth in 40 CFR 72.9(f).
Test Methods	Not Applicable

3. STANDARD REQUIREMENTS:

1. Owner / Operator shall comply with *all listed compliance conditions contained within this Title IV Acid Rain Permit and associated Title V Permit.*
2. The *Statement of Basis* listed in this Acid Rain Permit complies with the elements set forth in 40 CFR 72.64. [Incorporated herein by this reference].
3. This Acid Rain Permit complies with the requirements set forth in 40 CFR 72.50. [incorporated herein by this reference].
4. Owner/Operator of Ivanpah Solar Electric Generating System shall comply with all applicable provisions of 40 CFR 72, Permits Regulation (Title IV) and their Title IV permit application as indicated in this combined, *Federal Operating Permit / Title IV Acid Rain Permit*, Part VIII. [40 CFR 72.84][40 CFR 72; Rule 1210]
5. Emissions from this source/facility shall not exceed any allowances that the source/facility lawfully holds under Title IV of the Act or its regulations. [40 CFR 70.6(a)(4)]
6. Where an applicable requirement of the Act is more stringent than an applicable requirement of Title IV regulations, both provisions shall be incorporated into the permit and be enforceable by the Administrator. [40 CFR 70.6(a)(1)(ii)]
7. Notwithstanding the testing requirements contained elsewhere in this combined Title IV / V Permit, any credible evidence may be used to establish compliance or violations, including but not limited to; refer-

ence test methods, engineering calculations, indirect estimates of emissions, and parametric monitoring data. Data need not be required to be collected in a Title V permit in order to be considered credible. [Section 113(a) of the Clean Air Act]

PART VII CONVENTIONS, ABBREVIATIONS, DEFINITIONS

A. The following referencing conventions are used in this Federal Operating Permit:

- 40CFR72, Permits Regulation (Acid Rain Program)
- 40CFR73, Sulfur Dioxide Allowance System
- 40CFR75, Continuous Emission Monitoring (CEM's Not Used at this facility)
- 40CFR75, Subpart D, Missing Data Substitution Procedures
- 40CFR75, Appendix B, Quality Assurance and Quality Control Procedures
- 40CFR75, Appendix C, Missing Data Estimating Procedures
- 40CFR75, Appendix D, Optional SO₂ Emissions Data Protocol
- 40CFR75, Appendix F, Conversion Procedures
- 40CFR75, Appendix G, Determination of CO₂ Emissions

B. Other conventions:

1. Unless otherwise noted, a “day” shall be considered a 24 hour period from midnight to midnight (i.e., calendar day).
2. The process unit identifications represent the District permit number designations. These numbers are not sequential. The use of District permit numbers provides continuity between the District and Federal Operating Permit systems.

C. Abbreviations used in this permit are as follows:

ACP	Alternative Control Plan
APCO	Air Pollution Control Officer
ASTM	American Society for Testing and Materials
ATCM	Air Toxics Control Measure
BACT	Best Available Control Technology
Bhp	Brake-horsepower
Btu	British thermal units
°C	Degrees Celsius
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CFR	Code of Federal Regulations
CLA	Common Logistics Area
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
cu-ft/hr	Cubic-feet per hour
District	Mojave Desert Air Quality Management District (formed July 1993)
DRP	Demand Response Program
Dscf	Dry standard cubic feet
EGR	Exhaust Gas Recirculation

EM	Engine Management
EO	Executive Order
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FGR	Flue Gas Recirculation
g/L	grams per liter
gal/hr	gallons per hour
genset	Generator & Engine Set
gm/bhp-hr	grams per horsepower-hour
hp	horsepower
hr	hour
ISC	Interruptible Service Contract
ISEGS	Ivanpah Solar Electric Generating System
Kw	Kilowatt
Km	Kilometers
Lb/hr	Pounds per hour
LRP	Load Reduction Program
MDAQMD	Mojave Desert Air Quality Management District (formed July 1993)
MMBtu/hr	Million British thermal units per hour
MMscf	Millions of standard cubic feet (MMscf)
MW	Mega Watts = 1-Million Watts
MVAC	Motor Vehicle Air Conditioner
NFPA	National Fire Protection Association
NOx	Nitrogen Oxides
NOx+NMHC	Nitrogen Oxides and Non-Methane Hydro-Carbons
NSPS	New Source Performance Standard
NSR	New Source Review
o/o	Owner/operator
PM ₁₀	Particulate matter less than 10 microns aerodynamic diameter
ppm	Parts per Million
psia	pounds per square inch absolute
psig	pounds per square inch gage
rpm	revolutions per minute
SIC	Standard Industrial Classification
SIP	State of California Implementation Plan
SO ₂	Sulfur dioxide
Tpy	tons per year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compounds

PART VIII SIP History and Status For Cited Rules

Agency	Rule #	Rule Title	Effective Area	Rule Book Version	SIP Version	Submit Date	USEPA Action	CFR	FR Date	FR Cite
SO	203	Permit to Operate	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
SB	203	Permit to Operate				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
MD	203	Permit to Operate		7/25/1977	G-73					
SO	204	Permit Conditions	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
SB	204	Permit Conditions				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
MD	204	Permit Conditions		7/25/1977	G-73					
SO	206	Posting of Permit To Operate	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
SB	206	Posting of Permit to Operate				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
MD	206	Posting of Permit to Operate		7/25/1977	G-73					
SO	207	Altering or Falsifying of Permit	RC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
RC	207	Altering or Falsifying of Permit			G-73	6/6/1977	App	40 CFR 52.220(c)(39)(iv)(B)	11/9/1978	43 FR 52237
MD	207	Altering or Falsifying of Permit		7/25/1977 via Res. 94-03	G-73					
SO	207	Altering or Falsifying of Permit	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
SB	207	Altering or Falsifying of Permit				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
MD	207	Altering or Falsifying of Permit		7/25/1977	G-73					
SO	209	Transfer and Voiding of Permit	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
SB	209	Transfer and Voiding of Permit				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
MD	209	Transfer and Voiding of Permit		7/25/1977	G-73					
SO	217	Provision for Sampling and Testing Facilities	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
						6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
SB	217	Provision for Sampling and Testing Facilities								
MD	217	Provision for Sampling and Testing Facilities		7/25/1977	G-73					

SO	219	{Title Unknown}				4/21/1976	App	40 CFR 52.220(c)(31)(vi)(C)	11/9/1978	43 FR 52237
						8/2/1976	App	40 CFR 52.220(c)(32)(iv)(C)		
RC	219					6/6/1977	App	40 CFR 52.220(c)(39)(iv)(B)	11/9/1978	43 FR 52237
SB	219	Equipment Not Requiring a Written Permit			G-73	6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	11/9/1978	43 FR 52237
		<u>Equipment Not Requiring a Written Permit Pursuant to Regulation II</u>								
SC	219					7/25/1979	U			
					SC Bef 10/81	10/23/1981	App	40 CFR 52.220(c)(103)(xviii)(A)	7/6/1982	47 FR 29231
						2/7/1989	NPRM		11/16/1990	55 FR 47894
						11/12/1992				
MD	219	Equipment Not Requiring a Written Permit				1/28/1992				
						1/24/1995				
						10/30/2001				
			MD	8/23/2010	(SIP Sub)	12/7/2010				
SC	221	<u>Plans</u>	RC			11/12/1985		40 CFR 52.220(c)(165)(i)(B)(1)	4/17/1987	52 FR 12522
				None	1/4/1985					
MD	221	Federal Operating Permit Requirement	MD		2/21/1994	3/31/1995	App	40 CFR 52.220(c)(216)(i)(A)(2)	2/5/1996	61 FR 4217
					2/28/2011	(SIP Sub)				
RC	301	<u>Permit Fees</u>	MD			6/6/1977	App	40 CFR 52.220(c)(39)(iv)(C)	9/8/1978	43 FR 40011
SC	301	<u>Permit Fees</u>				1/2/1979	U	40 CFR 52.220(c)(47)(i)(A)		
						4/23/1980	App	40 CFR 52.220(c)(69)(ii)	9/28/1981	46 FR 47451
						7/14/1981	U	40 CFR 52.220(c)(102)(iv)(A)	7/6/1982	47 FR 29231
						2/3/1983	App	40 CFR 52.220(c)(127)(vii)(C)	10/19/1984	49 FR 41028
						7/19/1983	App	40 CFR 52.220(c)(137)(vii)(B)	10/19/1984	49 FR 41028
						10/25/1991				
						1/11/1993				
						2/28/1994				
MD	301	Permit Fees		6/24/2012	Not SIP		Del	40 CFR 52.220(c)(39)(iv)(C)	1/18/2002	67 FR 2573

MD	312	Fees for Federal Operating Permits	MD	12/21/1994	Current					
SB	401	Visible Emissions	SBC			6/6/1977	App	40 CFR 52.220(c)(39)(ii)(C)	9/8/1978	43 FR 40011
MD	401	Visible Emissions		7/25/1977	G-73					
MD	402	Nuisance	MD	7/25/1977	Not SIP					
SO	403	Fugitive Dust	SBC			8/2/1976	App	40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	403	Fugitive Dust				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	9/8/1978	43 FR 40011
MD	403	Fugitive Dust		7/25/1977	G-73					
MD	403.2	Fugitive Dust Control for MDPA	MD	7/22/1996	(SIP Sub)	10/18/1996				
SO	404	Particulate Matter - Concentration	SBC			8/2/1976		40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	404	Particulate Matter - Concentration				N/A	D	40 CFR 52.227(b)(3)(i)	6/14/1978	43 FR 25684
MD	404	Particulate Matter - Concentration		7/25/1977	Current	11/4/1977	App	40 CFR 52.220(c)(42)(xiii)(A)	12/21/1978	43 FR 52489
SO	405	Solid Particulate Matter, Weight	SBC			8/2/1976	App	40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	405	Solid Particulate Matter, Weight				11/4/1977	App	40 CFR 52.220(c)(42)(xiii)(A)	12/21/1978	43 FR 52489
MD	405	Solid Particulate Matter, Weight		7/25/1977	Current					
SB	406	Specific Contaminants	SBC			11/4/1977	App	40 CFR 52.220(c)(42)(xiii)(A)	12/21/1978	43 FR 52489
MD	406	Specific Contaminants		2/20/1979	7/25/1977					
SO	407	Liquid and Gaseous Air Contaminants	SBC			8/2/1976	App	40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	407	Liquid and Gaseous Air Contaminants								
MD	407	Liquid and Gaseous Air Contaminants		7/25/1977	G-73	6/6/1977	App	40 CFR 52.220(c)(39)(ii)(C)	9/8/1978	43 FR 40011
SO	408	Circumvention	SBC			8/2/1976	App	40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	408	Circumvention				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(C)	9/8/1978	43 FR 40011
MD	408	Circumvention		7/25/1977	G-73					
SO	409	Combustion Contaminants	SBC			8/2/1976	App	40 CFR 52.220(c)(32)(iv)(A)	6/14/1978	43 FR 25684
SB	409	Combustion Contaminants				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(C)	9/8/1978	43 FR 40011
MD	409	Combustion Contaminants		7/25/1977	G-73					

SO	430	Breakdown Provisions	MD			2/10/1977		40 CFR 52.220(c)(37)(i)(B)	1/24/1978	43 FR 3275
						N/A	D	40 CFR 52.271(a)(28)(i)	1/24/1978	43 FR 2375
						6/6/1977		40 CFR 52.220(c)(39)(ii)(A)	1/24/1978	43 FR 3275
						N/A	D	40 CFR 52.271(a)(28)(i)	1/24/1978	43 FR 3275
RC	430	Breakdown Provisions				6/6/1977		40 CFR 52.220(c)(39)(iv)(A)	1/24/1978	43 FR 3275
						N/A	D	40 CFR 52.220(a)(22)(i)	1/24/1978	43 FR 2375
MD	430	Breakdown Provisions		12/24/1994	Not SIP	2/24/1995	D	40 CFR 52.271(d)(3)(i)	11/6/2003	68 FR 62738
SO	431	Sulfur Content of Fuels	SBC			2/10/1977		40 CFR 52.220(c)(37)(i)(B)		
SB	431	Sulfur Content of Fuels				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(B)	9/8/1978	43 FR 40011
MD	431	Sulfur Content of Fuels		7/25/1977	G-73					
RC	442	Usage of Solvents	MD			6/6/1977	App	40 CFR 52.220(c)(39)(iv)(C)	9/8/1978	43 FR 40011
SC	442	Usage of Solvents				12/17/1979	App	40 CFR 52.220(c)(59)(ii)(B)	9/28/1981	46 FR 47451
						5/20/1982	App	40 CFR 52.220(c)(125)(ii)(D)	11/16/1983	48 FR 52054
SB	442	Usage of Solvents				6/6/1977	App	40 CFR 52.220(c)(39)(ii)(C)	9/8/1978	43 FR 40011
MD	442	Usage of Solvents				5/23/1979	App	40 CFR 52.220(c)(51)(xii)(B)	6/9/1982	48 FR 52054
				2/27/2006	Current	5/8/2007	App	40 CFR 52.220(c)(347)(i)(C)(1)	9/17/2007	72 FR 52791
RC	444	Open Fires	MD			6/6/1977	App	40 CFR 52.220(c)(39)(iv)(C)	9/8/1978	43 FR 40011
SC	444	Open Fires				11/5/1981	App	40 CFR 52.220(c)(104)(ii)(A)	7/6/1982	47 FR 29231
SB	444	Open Fires				11/4/1977		40 CFR 52.220(c)(42)(xiii)(A)	12/21/1978	43 FR 59489
						N/A	D	40 CFR 52.220(b)(12)(i)	12/21/1978	43 FR 59489
						3/23/1988	??			
MD	444	Open Fires				3/3/1997	??			
				9/25/2006	Current	5/8/2007	App	40 CFR 52.220(c)(350)(B)(1)	10/31/2007	72 FR 61525
SO	461	Gasoline Transfer and Dispensing	SBC			4/21/1976	App	40 CFR 52.220(c)(31)(vi)(A)	7/26/1977	42 FR 37976
						11/10/1976		40 CFR 52.220(c)(35)(ii)	7/26/1977	42 FR 37976
SB	461	Gasoline Transfer and Dispensing				11/4/1977		40 CFR 52.220(c)(42)(xiii)(A)	12/21/1978	43 FR 59489
						12/15/1980	App	40 CFR 52.220(c)(85)(v)(A)	6/9/1982	47 FR 25013
MD	461	Gasoline Transfer and Dispensing		5/25/1994	Current	7/13/1994	App	40 CFR 52.220(c)(198)(i)(E)(1)	5/3/1995	60 FR 21702

MD	1104	Organic Solvent Degreasing Operations	MD			11/30/1994	App	40 CFR 52.220(c)(207)(i)(D)(2)	4/30/1996	61 FR 18962
				9/28/1994	Current					
SC	1113	Architectural Coatings	RC			7/13/1978		40 CFR 52.220(c)(45)(ii)(A)		
						5/28/1981		40 CFR 52.220(c)(92)(v)(B)(vi)(A)	7/6/1982	47 FR 29231
						11/3/1980		40 CFR 52.220(c)(96)(i)(A)	9/28/1981	46 FR 47451
						10/27/1983		40 CFR 52.220(c)(148)(vi)(B)	10/3/1984	49 FR 39057
						7/10/1984	App	40 CFR 52.220(c)(155)(iv)(A)	1/24/1985	50 FR 3339
						N/A	D	40 CFR 52.229(b)(2)(iii)	2/2/1989	54 FR 5236
						11/12/1985				
						3/23/1988				
						4/5/1991				
						5/13/1991				
						1/11/1993				
SB	1113	Architectural Coatings	SBC			5/23/1979	App	40 CFR 52.220(c)(51)(xii)(B)	6/9/1982	47 FR 25013
MD	1113	Architectural Coatings	SBC			1/11/1993				
MD	1113	Architectural Coatings	MD		2/24/2003	4/1/2003	LA/LD	40 CFR 52.220(c)(315)(i)(C)(1)	1/2/2004	69 FR 34
				4/23/2012	(SIP Sub)					
MD	1114	Wood Products Coating Operations	MD			3/31/1995	App	40 CFR 52.220(c)(216)(i)(A)(4)	4/30/1996	61 FR 18962
				11/25/1996	Current	3/3/1997	App	40 CFR 52.220(c)(244)(i)(C)	8/18/1998	63 FR 44132
SB	1115	Metal Parts & Products Coating Operations	MD			6/19/1992				
MD	1115	Metal Parts & Products Coating Operations				6/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(2)	12/23/1997	62 FR 67002
				4/22/1996	Current				2/23/1998	
MD	1200	General (Federal Operating Permit)	MD	2/28/2011						
MD	1201	Definitions (Federal Operating Permit)	MD	9/26/2005						
MD	1202	Applications	MD	9/26/2005						
MD	1203	Federal Operating Permits (Federal Operating Permit)	MD	9/26/2005						

MD	1205	Modifications of Federal Operating Permits (Federal Operating Permit)	MD	9/26/2005						
MD	1206	Reopening, Reissuance and Termination of Federal Operating Permits (Federal Operating Permit)	MD	9/26/2005						
MD	1207	Notice and Comment (Federal Operating Permit)	MD	9/26/2005						
MD	1208	Certification (Federal Operating Permit)	MD	9/26/2005						
MD	1209	Appeals (Federal Operating Permit)	MD	9/26/2005						
MD	1210	Acid Rain Provisions of Federal Operating Permits (Federal Operating Permit)	MD	9/26/2005						
MD	1211	Greenhouse Gas Provisions of Federal Operating Permits (Federal Operating Permit)	MD	2/28/2011						
MD	1300	General	MD	9/24/2001	3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)		
SC	1301	General	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
SB	1301	General				9/5/1980	CA	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
MD	1301	Definitions					U	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
								40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
					3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				9/24/2001	(SIP Sub)					
SC	1302	Definitions	MD			8/15/1980	CA	40 CFR 52.220(c)(70)(i)(A)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
SB	1302	Definitions				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
MD	1302	Procedure					U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
					3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				8/28/2006	(SIP Sub)					

SC	1303	Applicability and Analysis	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
						<u>11/21/1986</u>				
						<u>3/26/1990</u>				
						<u>1/28/1992</u>				
SB	1303	Applicability and Analysis				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1303	Requirements			3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				9/24/2001	(SIP Sub)					
SC	1304	Exemption from Regulation XIII	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
									6/4/1986	
									<u>11/21/1986</u>	
									<u>1/28/1992</u>	
SB	1304	Exemptions from Regulation XIII				9/8/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1304	Emissions Calculations			3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				9/24/2001	(SIP Sub)					
SC	1305	Special Permit Provisions	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
						7/10/1984	App	40 CFR 52.220(c)(155)(iv)(B)	1/29/1989	50 FR 3906
SB	1305	Special Permit Provisions				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.220(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1305	Emissions Offsets			3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				8/28/2006	(SIP Sub)					
SC	1306	Emission Calculations	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
								40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
						N/A	D	40 CFR 52.220(a)(2)(i)	1/21/1981	46 FR 5965
						<u>6/4/1986</u>				
						<u>11/21/1986</u>				
						<u>1/28/1992</u>				
SB	1306	Emissions Calculations				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)		47 FR 25013
								40 CFR 52.220(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1306	Electric Energy Generating Facilities			3/25/1996	7/23/1996	App	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
				9/24/2001	(SIP Sub)					

SC	1307	Emissions Offsets	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
						N/A	D	40 CFR 52.220(a)(3)(iii)	1/21/1981	46 FR 5965
								40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
						9/5/1980	CA	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
MD	1307	Rescinded 3/25/96		None	Not SIP	7/23/1996	Del			
SC	1308	Eligibility of Emissions Offsets	MD			8/15/1980	CA	40 CFR 52.220(c)(70)(i)(A)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
SB	1308	Eligibility of Emission Offsets					CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
						9/5/1980	U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1308	Rescinded 3/25/96		None	Not SIP	7/23/1996	Del	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
SC	1310	Analysis, Notice and Reporting	MD		Not SIP	4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
SB	1310	Analysis, Notice and Reporting				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1310	Rescinded 3/25/96				7/23/1996	Del	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
MD	1310	Federal Major Facilities and Federal Major Modifications		8/28/2006	(SIP Sub)					
SC	1311	Power Plants	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
SB	1311	Electric Energy Generating Facilities				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
MD	1311	Rescinded 3/25/96		None	Not SIP	7/23/1996	U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
							Del	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
SC	1313	Permits to Operate	MD			4/3/1980	CA	40 CFR 52.220(c)(68)(i)	1/21/1981	46 FR 5965
							CA	40 CFR 52.220(c)(87)(v)(A)	6/9/1982	47 FR 25013
SB	1313	Permits to Operate				9/5/1980	CA	40 CFR 52.220(c)(87)(iv)(A)	6/9/1982	47 FR 25013
							U	40 CFR 52.232(a)(13)(i)(A)	6/9/1982	47 FR 25013
MD	1313	rescinded 3/25/96		None	Not SIP	7/23/1996	Del	40 CFR 52.220(c)(239)(i)(A)(1)	11/13/1996	61 FR 58133
MD	1320	New Source Review for Toxic Air Contaminants	MD	8/28/2006	(SIP Sub)					