State Of California | The Resources Agency of California

Memorandum

Date: April 30, 2010
Telephone: (916) 654-4679

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07-AFC-5
DATE 04/30/10
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To: Commissioner Jeffrey Byron, Presiding Member
Commissioner James D. Boyd, Associate Member

From: California Energy Commission – John Kessler, Project Manager
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **ENERGY COMMISSION STAFF'S ERRATA TO THE FINAL STAFF ASSESSMENT ADDENDUM AIR QUALITY SECTION - IVANPAH SOLAR ELECTRIC GENERATING SYSTEM (07-AFC-5)**

Energy Commission staff is providing an Errata to the Air Quality section of the Final Staff Assessment to incorporate Revision C of the Final Determination of Compliance (FDOC) as issued by the Mojave Desert Air Quality Management District (MDAQMD) on April 15, 2010. The MDAQMD issued this revision to the FDOC primarily to reflect equipment changes associated with the applicant's Mitigated Ivanpah 3 proposal that includes elimination of one emergency generator and reduction in the size and usage of the Ivanpah 3 boiler to match those of Ivanpah 1 and 2. Revision C of the FDOC was not received until after staff had published its Final Staff Assessment Addendum on March 16, 2010, and thus it was necessary to file these changes separately.

Corrections included in this errata consist of revisions to the MDAQMD's Conditions of Certification as well as some minor corrections by Energy Commission staff to its March 16, 2010 Final Staff Assessment Addendum in the area of Air Quality, all presented in underline-strikeout form.

Docket (07-AFC-5)
Webworks
POS

PROOF OF SERVICE (REVISED 3/11/10) FILED WITH
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MS

ERRATA TO MARCH 16, 2010 FSA ADDENDUM IN AIR QUALITY

PROJECT CONSTRUCTION, PAGES 4-2 AND 4-3

The project scope changes in the Mitigated Ivanpah 3 proposal represent substantial reductions in project construction. The number of heliostats would be reduced by approximately 18% (from 213,500 to 173,500), the project "footprint" would be reduced by 12% (from 4,062 acres to 3,520 acres), the emergency generators would be reduced by 25% (four to three), the number of power towers reduced by from seven to three and the size of the Ivanpah 3 auxiliary boiler reduced by 50%. With the reduced construction scope, the project applicant plans to use a reduced work force.

Even though the project applicant plans to reduce the construction schedule from 48 months to ~~43~~ 40 months (approximately a ~~10%~~ 16% reduction), the proportionally larger scope reductions and the reduced work force would result in reduced short term and long term construction emissions for the Mitigated Ivanpah 3 project compared to the original ISEGS project. …

ADDENDUM AIR QUALITY TABLE 1, PAGE 4-5

Please change Source: ~~Sierra 2010a~~ BSE 2010

ASSESSMENT OF IMPACTS, PAGE 4-6, 3RD PARAGRAPH, 14TH LINE -

Change source from Sierra 2010B to Sierra 2010a as follows:

The Mitigated Ivanpah 3 proposal includes the reconfiguration of the Ivanpah 3 heliostat field, relocation of the northern boundary southward and relocation of the Ivanpah 3 power block southward. Based on the air quality modeling analysis for the Mitigated Ivanpah 3 configuration of the Ivanpah 3 sources, the location of the maximum 1-hour NO_2 impacts was along the southern fence line for the Ivanpah 3 heliostat field. Since the emissions rates for the Ivanpah 3 sources in the Mitigated Ivanpah 3 proposal are the same or lower, this increase in impacts was the result of the Ivanpah 3 sources moving southward closer to the southern fence line. As discussed above and as shown in Addendum Air Quality Tables 1 and 2, the incremental increases in the maximum 1-hour NO_2 impacts for the Mitigated Ivanpah 3 project along the southern fence line would not create new exceedances or contribute to existing exceedances of the NO_2 standards. However, as stated above, this analysis does not include the new federal 1-hour NO_2 standard. To assess the impacts of the relocation of the northern boundary of the Ivanpah 3 heliostat southward, the applicant provided plots of the maximum 1-hour NO_2 impacts for the area within the original northern fence line (Sierra 2010a~~b~~). …

CONCLUSIONS, PAGE 4-7, 6TH BULLET

- Staff recommends **AQ-SC10** to formalize the applicant's stipulation that "Heat input from natural gas will not exceed 5 percent of the heat input from the sun, on an annual basis", which also generally corresponds to the amount of operation included in the applicant's air dispersion modeling impact analysis.

STAFF CONDITIONS OF CERTIFICATION, PAGE 4-8

AQ-SC6 The project owner, when obtaining dedicated vehicles for mirror washing activities and other facility maintenance activities, shall only obtain new model year vehicles that meet California on-road vehicle emission standards for the model year when obtained.

Other vehicle/fuel types may be allowed assuming that the emission profile for those vehicles, including fugitive dust generation emissions, is comparable to the vehicles types identified in this condition.

Verification: At least 60 days prior to the start of commercial production, the project owner shall submit to the CPM a copy of the plan that identifies the size and type of the on-site vehicle and equipment fleet and the vehicle and equipment purchase orders and contracts and/or purchase schedule. The plan shall be updated every other year and submitted in the Annual Compliance Report (**COMPLIANCE-7**).

AQ-SC10 The ISEGS 1, ISEGS 2, and ISEGS 3 boilers shall not exceed a total annual natural gas fuel heat input that is more than 5 percent of the total annual heat input from the sun for ISEGS1, ISEGS2, and ISEGS 3, respectively.

Verification: Annual natural gas fuel heat input data and annual solar heat input data for the ISEGS 1, ISEGS 2, and ISEGS 3 units showing compliance with this condition shall be provided in the Annual Compliance Report (**COMPLIANCE-7**). The Annual Compliance Report shall include information separately for ISEGS 1, ISEGS 2, and ISEGS 3. The initial Annual Compliance Report shall include documentation of the methodology used to verify compliance with this condition. The documentation shall include a heat balance diagram, engineering analysis, assumptions and supporting data.

DISTRICT CONDITIONS OF CERTIFICATION, PAGE 4-14

District conditions **AQ-1** through **AQ-39** are CEQA-only required conditions. The District revised the permit conditions ~~is reviewing these conditions to identify changes necessary is reviewing these conditions to identify changes necessary is reviewing these conditions to identify changes necessary~~ to reflect the revised project scope presented in the Mitigated Ivanpah 3 proposal and issued Revision C ~~. The District will issue any changes as a revision~~ to the District's Final Determination of Compliance (FDOC) for the project on April 15, 2010. ~~After the District issues the FDOC revision, s~~Staff ~~will~~ revised the District ~~se~~ conditions to incorporate the Revision C changes.~~appropriate.~~

CONDITIONS APPLICABLE TO IVANPAH ~~1~~ 1, 2 & ~~3~~2 (THREE 3) BOILERS, MDAQMD APPLICATION NUMBERS/PERMIT NUMBERS; 00009311 (B010375), & 00009314 (B010376) & 00009320 (B010377)

Equipment Description:

Nebraska boilers, Model NSX-G-120, each equipped with Natcom Low-NOx Burners rated at a maximum heat input of 231.1 MMBTU/hr, and flue gas recirculation (FGR or EGR) operating at 13.9 percent excess air, fueled exclusively on utility grade natural gas. Equipment shall use no more than 225,000 cu-ft/hr of fuel and provide 220,000

lb/hr of steam. Each ~~Equipment~~ boiler is equipped with a stack~~s~~ that is~~are~~ 130 feet high and 40~~60~~ inches in diameter.

These conditions (AQ-1 through AQ-12) apply separately to each ~~both~~ boiler~~s~~ unless otherwise specified.

AQ-5 Not later than 180 days after initial startup, the operator shall perform an initial compliance test on this boiler in accordance with the District Compliance Test Procedural Manual. This test shall demonstrate that this equipment does not exceed the following emission maximums:

Pollutant	ppmvd	Lb/MMBtu	Lb/hr	
*NOx	9.0	0.011	2.5	(per USEPA Methods 19 and 20)
SOx	1.7	0.003	0.6	
*CO	25.0	0.018	4.2	(per USEPA Methods 10)
VOC	12.6	0.0054	1.2	(per USEPA Methods 25A and 18)
PM10	n/a	0.007	1.7	(per USEPA Methods 5 and 202 or CARB Method 5)

*corrected to 3% oxygen, on a dry basis, averaged over one hour
Opacity shall be conducted per Method 9; Flue gas flow rate shall be quantified in dscf per USEPA Methods 1 through 5

Verification: The project owner shall notify the District and the CPM within fifteen (15) working days before the execution of the compliance test required in this condition. The test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

AQ-6 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 manufacturer's specified tune-up procedure, by a qualified technician. Subsequent tests shall demonstrate that this equipment does not exceed the following emission maximums:

Pollutant	ppmvd	Lb/MMBTU	Lb/hr
*NOx	9.0	0.011	2.5 (Per USEPA Methods 19 and 20)
SO2	1.7	0.003	0.6
*CO	25.0	0.018	4.2 (Per USEPA Method 10)
VOC	12.6	0.0054	1.2 (Per USEPA Methods 25A and 18)
PM10	n/a	0.007	1.7 (Per USEPA Methods 5 and 202 or CARB Method 5)

*corrected to 3% oxygen, on a dry basis, averaged over one hour
Opacity shall be conducted per Method 9; Flue gas flow rate shall be quantified in dscf per USEPA Methods 1 through 5

Verification: The project owner shall notify the District and the CPM within fifteen (15) working days before the execution of the compliance test required in this condition. The test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

~~**AQ-6**~~**AQ-7** 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).

Verification: The project owner shall complete and submit to the CPM a compliance plan that provides a list of the 40 CFR 60 Subpart Db plans, tests, and recordkeeping requirements and their compliance schedule dates as applicable for the ISEGS Boilers 1, 2 and ~~2~~3 at least 30 days prior to first fire of the boilers or earlier as necessary for compliance with Subpart Db.

~~**AQ-7**~~ **AQ-8** Records of fuel supplier certifications of fuel sulfur content shall be maintained to demonstrate compliance with the sulfur dioxide and particulate matter emission limits.

Verification: Complying with Condition of Certification **AQ-3** shall be used to demonstrate compliance with this condition.

~~**AQ-8**~~ **AQ-9** The owner/operator shall continuously monitor and record fuel flow rate and flue gas oxygen level.

Verification: At least 120 days prior to construction of the boiler stacks, the project owner shall provide the District for approval, and the CPM for review, a detailed drawing and a plan on how the measurements and recordings, required by this condition, will be performed by the chosen monitoring system.

~~**AQ-9**~~ **AQ-10** 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 initial source tests as required by condition AQ-5, and annually pursuant to condition AQ-6. The plan shall include test results, operating parameters, analysis, conclusions and proposed NOx estimating relationship consistent with established emission chemistry and operational effects.

~~The owner/operator shall conduct an initial compliance test for NOx emissions within 180 days of startup. This initial compliance test shall be used to develop a relationship between fuel firing rate, flue gas oxygen, and flue gas NOx concentration. This relationship shall be used to determine compliance with NOx emission limits contained in these conditions.~~

Verification: This initial plan shall be submitted to the District for approval, and the CPM for review, within 360 days of the initial startup. 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.~~The project owner shall notify the District and the CPM within fifteen (15) working days before the execution of the compliance test required in this condition. The test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.~~

~~**AQ-10**~~**AQ-11** The owner/operator shall comply with all applicable recordkeeping and reporting requirements of NSPS Db.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-11**~~**AQ-12** This boiler shall not burn~~operate~~ more than 0.9 MMSCF of natural gas ~~hours~~ in any single day, and no more than 328 MMSCF~~1460 hours~~ in any calendar year.

a. These limits shall not apply during the facility commissioning period. The commissioning period shall begin the first time fuel is fired in the boiler. The commissioning period shall end when the facility achieves commercial operation, but no later than 180 days after first fire.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~*CONDITIONS APPLICABLE TO IVANPAH 3 BOILER, MDAQMD APPLICATION NUMBER; 00009320*~~

~~Equipment Description:~~

~~Babcock-Wilcox boiler, Model unknown, equipped with an unknown Low-NOx Burner rated at a maximum heat input of 462.2 MMBTU/hr, and flue gas recirculation (FGR or EGR) operating at 13.9 percent excess air, fueled exclusively on utility grade natural gas. Equipment shall use 450,000 cu-ft/hr of fuel and provide 440,000 lb/hr of steam. This boiler is equipped with a stack that is 130 feet high and 60 inches in diameter.~~

~~**AQ-12** 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.~~

Verification: ~~Any non-compliant operations shall be listed in the Annual Compliance Report (**COMPLIANCE-7**).~~

~~**AQ-13** 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.~~

Verification: ~~As part of the Annual Compliance Report, (**COMPLIANCE-7**) the project owner shall include information on the date, time, and duration of any violation of this permit condition.~~

~~**AQ-14** This boiler shall use only natural gas as fuel and shall be equipped with a meter measuring fuel consumption in standard cubic feet.~~

Verification: ~~As part of the Annual Compliance Report (**COMPLIANCE-7**), the project owner shall include proofs that only pipeline quality, or Public Utility Commission regulated natural gas are used for the boilers.~~

~~**AQ-15** The owner 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.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or Energy Commission staff.

AQ-16 Not later than 180 days after initial startup, the operator shall perform an initial compliance test on this boiler in accordance with the District Compliance Test Procedural Manual. This test shall demonstrate that this equipment does not exceed the following emission maximums:

Pollutant	ppmvd	Lb/MMBTU	Lb/hr	
*NOx	9.0	0.011	5	(per USEPA Methods 19 and 20)
SOx	1.7	0.003	1.3	
*CO	25.0	0.018	8.5	(per USEPA Methods 10)
VOC	12.6	0.0054	2.5	(per USEPA Methods 25A and 18)
PM10	n/a	0.007	3.4	(per USEPA Methods 5 and 202 or CARB Method 5)

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

Verification: The project owner shall notify the District and the CPM within fifteen (15) working days before the execution of the compliance test required in this condition. The test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

AQ-17 This boiler shall be operated in compliance with all applicable requirements of 40 CFR 60 Subpart Da - Standards of Performance for Industrial Steam Generating Units (NSPS Da).

Verification: The project owner shall complete and submit to the CPM a compliance plan that provides a list of the 40 CFR 60 Subpart Da plans, tests, and recordkeeping requirements and their compliance schedule dates as applicable for the ISEGS Boiler 3 at least 30 days prior to first fire of the boiler or earlier as necessary for compliance with Subpart Da.

AQ-18 Records of fuel supplier certifications of fuel sulfur content shall be maintained to demonstrate compliance with the sulfur dioxide and particulate matter emission limits.

Verification: Complying with Condition of Certification **AQ-14** shall be used to demonstrate compliance with this condition.

AQ-19 The owner/operator shall install, calibrate, maintain and operate a continuous emissions monitoring system (CEMS) to measure and record NOx emissions and oxygen concentration according to 40 CFR Part 60 specifications.

Verification: At least 120 days prior to construction of the boiler stacks, the project owner shall provide the District for approval and the CPM for review, a detailed drawing and a plan on how the measurements and recordings, required by this condition, will be performed by the chosen monitoring system.

~~**AQ-20** The owner/operator shall conduct an initial compliance test for NOx emissions by conducting the CEMS RATA test within 180 days of startup; and shall collect data from the CEMS at all times that fuel is combusted in the boiler.~~

Verification: ~~The project owner shall notify the District and the CPM within fifteen (15) working days before the execution of the compliance test required in this condition. The test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.~~

~~**AQ-21** The owner/operator shall comply with all applicable recordkeeping and reporting requirements of NSPS Da.~~

Verification: ~~During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.~~

~~**AQ-22** This boiler shall not operate more than 4 hours in any single day, and no more than 1460 hours in any calendar year.~~

~~a. These limits shall not apply during the facility commissioning period. The commissioning period shall begin the first time fuel is fired in the boiler. The commissioning period shall end when the facility achieves commercial operation, but no later than 180 days after first fire.~~

Verification: ~~During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.~~

CONDITIONS APPLICABLE TO IVANPAH I, II, AND III EMERGENCY FIRE PUMPS, MDAQMD APPLICATION NUMBERS/PERMIT NUMBERS; 00009312 (E010380), 00009315 (E010378), AND 00009319 (E010384)

Equipment Description:

Year of Manufacture 2010~~2008~~, Tier III~~II~~, One Clarke, Diesel fired internal combustion engine, Model No. JU6H-UF62, and Serial number tbd, After Cooled, Direct Injected, Turbo Charged, producing 240 bhp with 6 cylinders at 2,600 rpm (or equiv.) while consuming a maximum of 10 gal/hr. This equipment powers a pump.

These conditions (AQ-13 through AQ-22) apply separately to all three emergency fire pump engines unless otherwise specified.

~~**AQ-23**~~**AQ-13** This system shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, EPA or CEC staff.

~~**AQ-24**~~**AQ-14** These engines may operate in response to notification of impending rotating outage if the area utility has ordered rotating outages in the area

where the engines are located or expects to order such outages at a particular time, the engines are located in the area subject to the rotating outage, the engines are operated no more than 30 minutes prior to the forecasted outage, and the engines are shut down immediately after the utility advises that the outage is no longer imminent or in effect.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-25**~~**AQ-15** These engines may operate in response to fire suppression requirements and needs.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-26**~~**AQ-16** These units 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.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-27**~~**AQ-17** A non-resettable four-digit (9,999) hour timer shall be installed and maintained on these units to indicate elapsed engine operating time.

Verification: At least thirty (30) days prior to the installation of the engine, the project owner shall provide the District and the CPM the specification of the hour timer.

~~**AQ-28**~~**AQ-18** These units 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 50 hours per year for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 50 hour per year limit.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-29**~~**AQ-19** The hour limit of **AQ-18**~~**28**~~ can be exceeded when the emergency fire pump assemblies are driven directly by a stationary diesel fueled CI engine when 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," 2006 edition or the most current edition approved by the CARB Executive Officer. {Title 17 CCR 93115(c)16}

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-30**~~**AQ-20** The owner/operator shall maintain a operations log for these units current and on-site, either at the engine location or at a on-site location, for a minimum of two (2) years, and for another year where it can be made available to the District staff within 5 working days from the District's

request, 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. Calendar year operation in terms of fuel consumption (in gallons) and total hours; ~~and,~~

d. Fuel sulfur concentration (the owner/operator may use the supplier's certification of sulfur content if it is maintained as part of this log)~~.~~; and

e. Documentation of maintenance as per manufacturer's recommendations and good maintenance practices.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-31**~~**AQ-21** These fire protection units are subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern.

Verification: Not necessary.

AQ-22 This unit is subject to the requirements of the Federal New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII).

Verification: The project owner shall submit to the District and the CPM the engine specifications at least 30 days prior to purchasing the engines for review and approval demonstrating that the engines meet NSPS emission limit requirements at the time of engine purchase.

CONDITIONS APPLICABLE TO IVANPAH I, II, AND III EMERGENCY GENERATORS, MDAQMD APPLICATION NUMBERS/PERMIT NUMBERS; 00009313 (E010381), 00009316 (E010379), AND 00009317 (E010382)~~ AND 00009318 (E010383)~~

Equipment Description:

Year of Manufacture 2010~~2008~~, Tier II, One Caterpillar, Diesel fired internal combustion engine, Model No. 3516C-HD, and Serial No. tbd, After Cooled, Direct Injected, Turbo Charged, producing 3,750 bhp with 16 cylinders at 1,800 rpm (or equiv.) while consuming a maximum of 173 gal/hr. This equipment powers a Generator.

These conditions (AQ-23 through AQ-31) apply separately to all ~~four~~three emergency generator engines unless otherwise specified.

~~**AQ-32**~~**AQ-23** Engine may operate in response to notification of impending rotating outage if the area utility has ordered rotating outages in the area where

the engine is located or expects to order such outages at a particular time, the engine is located in the area subject to the rotating outage, the engine is operated no more than 30 minutes prior to the forecasted outage, and the engine is shut down immediately after the utility advises that the outage is no longer imminent or in effect.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-33**~~**AQ-24** 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.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-34**~~**AQ-25** This equipment shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-35**~~**AQ-26** A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

Verification: At least thirty (30) days prior to the installation of the engine, the project owner shall provide the District and the CPM the specification of the hour timer.

~~**AQ-36**~~**AQ-27** 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 50 hours per year, and no more than 0.5 hours per day for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 50 hour per year limit.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-37**~~**AQ-28** 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);

c. Calendar year operation in terms of fuel consumption (in gallons) and total hours; ~~and,~~

d. Fuel sulfur concentration (the owner/operator may use the supplier's certification of sulfur content if it is maintained as part of this log)~~.~~ and,

e. Documentation of maintenance as per manufacturer's recommendations and good maintenance practices.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

~~**AQ-38**~~**AQ-29** This genset is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern.

Verification: Not necessary.

~~**AQ-39**~~**AQ-30** 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.

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA or CEC staff.

AQ-31 This unit is subject to the requirements of the Federal New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII).

Verification: The project owner shall submit the engine specifications at least 30 days prior to purchasing the engines for review and approval demonstrating that the engines meet NSPS emission limit requirements at the time of engine purchase.

APPENDIX AIR-1 – GREENHOUSE GAS EMISSIONS PROJECT OPERATIONS, PAGE 4-24

The mitigation measures presented in the Mitigated Ivanpah 3 proposal that would reduce GHG emissions from operations are:

- Reduction in annual fuel usage in the auxiliary boilers resulting primarily from the 50% reduction in the capacity for the Ivanpah 3 auxiliary boiler,
- Elimination of one of the emergency generators for Ivanpah 3, and
- Elimination of approximately 40,000 heliostats (from 213,500 to 173,500) which reduce the vehicle miles travelled (VMT) for maintenance (i.e., mirror washing) and the associated tailpipe GHG emissions.

Updated GHG emissions from operations for the ISEGS Mitigated Ivanpah 3 project are shown in Addendum Greenhouse Gas Table 1.

Based on this updated estimate of GHG emissions, the ISEGS Mitigated Ivanpah 3 project, including stationary sources and onsite and offsite mobile sources, would be permitted, on an annual basis, to emit approximately ~~20,900~~ 25,359 metric tonnes of CO_2-equivalent (MTCO2E) per year if operated at its maximum permitted level.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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APPLICATION FOR CERTIFICATION
FOR THE *IVANPAH SOLAR ELECTRIC GENERATING SYSTEM*

DOCKET NO. 07-AFC-5
PROOF OF SERVICE
(Revised 3/11/10)

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DECLARATION OF SERVICE

I, Maria Santourdjian, declare that on April 30, 2010, I served and filed copies of the attached, Staff's Errata to the FSA Addendum Air Quality Section, dated April 30, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/ivanpah].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

__x__ sent electronically to all email addresses on the Proof of Service list;

__x__ by personal delivery;

__x__ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

__x__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Originally Signed by
Maria Santourdjian

*indicates change