

## DOCKETED

<b>Docket Number:</b>	00-AFC-14C
<b>Project Title:</b>	El Segundo Power Redevelopment Project Compliance
<b>TN #:</b>	206653
<b>Document Title:</b>	Project Owner's Proposed Final Wording of COC's
<b>Description:</b>	N/A
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<b>Submitter Role:</b>	Applicant Representative
<b>Submission Date:</b>	11/17/2015 10:18:25 AM
<b>Docketed Date:</b>	11/17/2015

**STATE OF CALIFORNIA**  
**Energy Resources Conservation**  
**and Development Commission**

**In the Matter of:**

**THE EL SEGUNDO ENERGY CENTER  
AMENDMENT**

**DOCKET NO. 00-AFC-14C**

**EL SEGUNDO ENERGY CENTER LLC'S  
PROJECT OWNER'S PROPOSED FINAL WORDING OF COC'S**

**COM-13: Incident-Reporting Requirements.** The project owner shall notify the CPM or Compliance Office Manager, by telephone and e-mail, within one (1) hour after it is safe and feasible, upon identification of any incident at the power plant or appurtenant facilities that results or could result in any of the following:

1. A reduction in the maximum output capability of a generating unit of at least ten (10) MW or 5 percent, whichever is greater, that lasts for fifteen (15) minutes or longer (or such values as trigger CAISO no prior notice outage reporting requirements under any subsequent modifications to CAISO Tariff 9.3.10.3.1);
2. Potential health impacts to the surrounding population or any release that could result in an off-site odor issue;
3. Notification to or response by any off-site emergency response, federal, state, or local agency regarding a fire, hazardous materials release, on-site injury, or any physical or cyber security incident;

The notice shall describe the circumstances, status, and expected duration of the incident. If warranted, as soon as it is safe and feasible, the project owner shall implement the safe shutdown of any non-critical equipment and removal of any hazardous materials and waste that pose a threat to public health and safety and to environmental quality (also, see specific conditions of certification for the technical areas of Hazardous Materials Management and Waste Management).

Within one (1) week of the incident, the project owner shall submit to the CPM a detailed incident report, which includes, the following information:

1. A brief description of the incident, including its date, time, and location;
2. A description of the cause of the incident, or likely causes if it is still under investigation;
3. The location of any off-site impacts;
4. Description of any resultant impacts;
5. A description of emergency response actions associated with the incident;

6. Identification of responding agencies;
7. Identification of emergency notifications made to federal, state, and/or local agencies;
8. Identification of any hazardous materials released and an estimate of the quantity released;
9. A description of any injuries, fatalities, or property damage that occurred as a result of the incident;
10. Fines or violations assessed or being processed by other agencies;
11. Name, phone number, and e-mail address of the appropriate facility contact person having knowledge of the event; and
12. Corrective actions to prevent a recurrence of the incident.

The project owner shall maintain all incident report records for the life of the project, including closure. After the submittal of the initial report for any incident, the project owner shall submit to the CPM copies of incident reports within 24 hours of a request.

**CONTINGENCY-2** Following permanent retirement of Unit 4, Project Owner shall conduct an annual Unit 3 and 4 Safety and Environmental Status Report (“SESR”) The SESR shall contain an assessment of whether some incremental dismantling, demolition, or removal can and should be conducted on Units 3 and 4 to preserve environmental integrity and safety at the site. The SESR shall, at a minimum, contain:

1. Assessment of the conditions of Units 3 and 4 and the ability to maintain compliance with the following environmental or safety laws:
  - a. Federal Clean Water Act
  - b. Porter-Cologne Water Quality Control Act
  - c. Federal Clean Air Act
  - d. California Clean Air Act
  - e. Resource Conservation and Recovery Act
  - f. Comprehensive Environmental Response, Compensation, and Liability Act
  - g. California Hazardous Waste Control Act
  - h. Federal Occupational Health and Safety Act
  - i. California Occupational Health and Safety Act
2. An update on the commercial status of ESPFM;
3. An evaluation of the potential or need to initiate the following priority activities:
  - a. Evacuation and removal of fluids such as oils, fuels and liquid chemical compounds
  - b. Abatement of hazardous materials such as lead and asbestos
  - c. Removal of insulation and other easily removed materials
  - d. Recycling of valuable metals and materials
  - e. Construction of a temporary control room for Units 5, 6, 7 and 8 to allow closure of the control room located on Units 3 and 4; and
4. A description of the proposed incremental activities resulting from the above assessments and evaluations including:
  - a. Schedules

b. Sequence of compliance filings and applications for other permits and approvals necessary to initiate the incremental activities.

The CPM shall review the SESR, and either accept it or comment and return the SESR to Project Owner to address comments. Project Owner shall address such comments and submit a revised SESR within 30 days of receiving a returned status report.

Once accepted, if the SESR recommends incremental action, then Project Owner shall initiate CEC compliance filings and obtain all other required permits outside of CEC jurisdiction that are necessary to conduct the incremental dismantling, demolition or removal.


If necessary to perform such incremental action, Project Owner shall propose a temporary control room to separate command, control, and instrumentation of Units 5, 6, 7, and 8 from the Unit 3 and 4 structure.

If increments of dismantling, demolition, and removal of Unit 3 and 4 equipment have reached a point where the structure of Unit 3 and 4 has been significantly altered, then Project Owner shall be required to consider and evaluate in the next SESR why complete above grade demolition of Unit 3 and 4 and related equipment shall not be completed.

Verification: On or before one (1) year after the final Energy Commission Decision is approved, if construction has not begun on the ESPFM, Project Owner shall submit its first annual SESR assessment. Project Owner shall continue to submit such reports on an annual basis from the date of first submittal until construction of the ESPFM has commenced.

November 17, 2015

Locke Lord LLP

By:   
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John A. McKinsey

Attorneys for El Segundo Energy Center LLC

## **Attachment: Revised Air Quality Errata**

November 17, 2015

**AQ-1** ~~Deleted [COC deleted in February 2005 Commission Decision CEC-800-2005-001-CMF]~~

**AQ-2** The operator shall install and maintain a flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH<sub>3</sub>) to the SCR in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The ammonia injection rate shall remain between 1 gallon per hour and 75 gallons per hour.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (**U.S. EPA**) and the California Energy Commission (**Energy** Commission). (Unit 5, 7)

**AQ-3** The operator shall install and maintain a temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The temperature shall remain between 400 degrees F and 750 degrees F. The catalyst temperature shall not exceed 750 degrees F during the startup period.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ~~California Air Resources Board (CARB), the United States Environmental Protection Agency (U.S. EPA) and the California Energy Commission~~ (**Energy** Commission). (Unit 5, 7)

**AQ-4** The operator shall install and maintain a pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The pressure drop across the catalyst shall remain between 1 inch of water column and 4 inches of water column. The pressure drop across the catalyst shall not exceed 4 inches of water column during the startup period.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ~~California Air Resources Board (CARB), the United States Environmental Protection Agency (U.S. EPA) and the California Energy Commission~~ (**Energy** Commission). (Unit 5, 7)

**AQ-5** The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutants to be Tested	Test Method	Averaging Time	Test Location
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NH <sub>3</sub> Emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of SCR serving this equipment
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The test shall be conducted and the results submitted to the District within 45 days after the test date. The District shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted annually. The NO<sub>x</sub> concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NO<sub>x</sub> emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 BACT concentration limit.

If the equipment is not operated in any given quarter, the operator may elect to defer the required testing to a quarter in which the equipment is operated.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of the District, EPA and CPM.

**Verification:** The project owner shall submit the proposed protocol for the source tests no later than 45 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 10 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. (Unit 5, 7)

**AQ-6** ~~[Deleted COC deleted in January 14, 2015 Commission Order # 15-0114-2]~~

**AQ-7** The operator shall conduct source test(s) for the pollutant(s) identified below on combined cycle turbine Units 5 and 7.

Pollutants to be Tested	Required Test Method(s)	Averaging Time	Test Location
SO <sub>x</sub> Emissions	<del>AQMD</del> District Method 307-91	N/A	Fuel Sample
VOC Emissions	District Method 25.3	1 hour	Outlet of SCR serving this equipment
PM <sub>10</sub> Emissions	District Method 5	4 hours	Outlet of SCR serving this equipment
PM <sub>2.5</sub> Emissions	EPA Method 201A and 202	District-approved averaging time	Outlet of SCR serving this equipment

The tests shall be conducted at least once every three years for SO<sub>x</sub>, PM<sub>2.5</sub> and PM<sub>10</sub>, and annually for VOC.

The test(s) shall be conducted to determine the oxygen levels in the exhaust. In addition, the test(s) shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in megawatts (MW).

The test(s) shall be conducted in accordance with District- approved test protocol. The protocol shall be submitted to the District and the CPM no later than 45 days before the proposed test date and shall be approved by the District and the CPM before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test(s) shall be conducted when this equipment is operating at 100 percent load.

The test(s) shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas-fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters is done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA method TO-12 (with preconcentration) and temperature of canisters when extracting samples for analysis is not below 70 deg. F. The use of this alternative method for VOC compliance determination does not mean that it is more accurate than District method 25.3, nor does it mean that it may be used in lieu of District method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of the District, EPA and CPM.

**Verification:** The project owner shall submit the proposed protocol for the source tests no later than 45 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 10 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. (Unit 5, 7)

**AQ-8** The operator shall provide to the District and CPM any source test report in accordance with the following specifications:

- Source test results shall be submitted to the District and CPM no later than 60 days after the source test was conducted.
- Emission data shall be expressed in terms of concentration (ppmvd), corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM



cubic feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

- All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).
- All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.
- Source test results shall also include the oxygen levels in the exhaust, the fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

**Verification:** See verifications for **AQ-5, -6, and -7. (Unit 5, 7)**

**AQ-9** ~~Deleted [COC deleted in June 2010 Commission Decision # CEC-800-2010-015]~~

**AQ-10** ~~Deleted [COC deleted in June 2010 Commission Decision # CEC-800-2010-015]~~

**AQ-11** The operator shall limit emissions from this equipment as follows:

Contaminant	Emissions Limit
PM10	Less than or equal to 6,935 LBS IN ANY 1 MONTH
VOC	Less than or equal to 4,930 LBS IN ANY 1 MONTH
SOx	Less than or equal to 1,065 LBS IN ANY 1 MONTH

The operator shall calculate the monthly emissions for VOC, PM10 and SOx using the equation below and the following emission factors: PM10 4.66 lbs/mmscf, VOC 2.93 lbs/mmscf, and SOx 0.71 lbs/mmscf.

Monthly Emissions, lb/month = X (E. F.)

Where X = monthly fuel use, mmscf/month and E. F = emission factor indicated above.

For the purposes of this condition, the limit(s) shall be based on the emissions from each individual combined cycle gas turbine Units No. 5 and No. 7.

**Verification:** The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-~~S~~8). **(Unit 5, 7)**

**AQ-12** The operator shall install and maintain a flow meter to accurately indicate the fuel usage for each of the turbines. The operator shall also install and maintain a device to continuously record the parameter being measured.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ~~California Air Resources Board (CARB), the United States Environmental Protection Agency (U.S. EPA) and the California Energy~~

**AQ-13** ~~Deleted~~ **COC deleted in June 2010 Commission Decision # CEC-800-2010-015]**

- AQ-14** The operator shall install and maintain a CEMS to measure CO concentration in ppmv. Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operated to measure CO concentration over a 15 minute averaging time period.

The CEMS shall convert the actual CO concentrations to mass emission rates (lbs/hr) using the equation below and record the hourly emission rates on a continuous basis:

$$\text{CO Emission Rate (lb/hr)} = K * C_{co} * F_d * (20.9 / (20.9\% - \%O_2 d))^* ((Q_g * HHV) / 1E6),$$

Where:

$K = 7.267E-8$  (lb/scf)/ppm

$C_{co}$  = Average of four consecutive 15-min average CO concentrations, ppm

$F_d$  = 8710 dscf/mmBtu natural gas

$\%O_2 d$  = Hourly average % by volume O<sub>2</sub>, dry basis, corresponding to  $C_{co}$

$Q_g$  = Fuel gas usage during the hour, scf/hr

HHV = Gross high heating value of fuel, Btu/scf

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ~~California Air Resources Board (CARB), the United States Environmental Protection Agency (U.S. EPA) and the California Energy Commission-~~(Energy Commission). (Unit 5, 7)

- AQ-15** The operator shall install and maintain a CEMS to measure NO<sub>x</sub> concentration in ppmv. Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and shall comply with the requirements of Rule 2012.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 5, 7)

- AQ-16** The 2.0 PPM NO<sub>x</sub> emission limit(s) shall not apply during startup and shutdown periods. Startup periods shall not exceed 60 minutes for each startup. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of start-ups and shutdowns shall be maintained and made available upon request from the District.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ~~California Air Resources Board (ARB)~~, **U.S.** EPA and the **Energy** Commission. (Unit 5, 7)

**AQ-17** The 2.0 PPM CO emission limit(s) shall not apply during startup and shutdown periods. Startup periods shall not exceed 60 minutes for each startup. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of start-ups and shutdowns shall be maintained and made available upon request from the District.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, **U.S.** EPA and the **Energy** Commission. (Unit 5, 7)

**AQ-18** ~~[Deleted]~~ **COC deleted in January 14, 2015 Commission Order # 15-0114-21**

**AQ-19** ~~[Deleted]~~ **COC deleted in January 14, 2015 Commission Order # 15-0114-21**

**AQ-20** The owner/operator shall comply at all times with the 2.0 ppm 1-hour BACT limit for NO<sub>x</sub>, except as defined in condition **AQ-16** and with the following additional restriction on startup.

NO<sub>x</sub> emissions shall not exceed 112 lbs total per startup per turbine. Each turbine shall be limited to 200 startups per year with each startup not to exceed 60 minutes in duration.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7)

**AQ-21** ~~Deleted~~ **[COC deleted in June 2010 Commission Decision # CEC-800-2010-015]**

**AQ-22** For the purpose of the following condition numbers, the phrase “continuously record” shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

Condition no. **AQ-2**

Condition no. **AQ-3**

**Verification:** See verifications for **AQ-2** and **3**. (Unit 5, 7)

**AQ-23** For the purpose of the condition number **AQ-4**, the phrase “continuously record” shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month. See condition **AQ-4**.

**Verification:** See verifications for **AQ-4**. (Unit 5, 7)

**AQ-24** The 2.0 PPMV NO<sub>x</sub> emission limit is averaged over 60 minutes at 15 percent oxygen, dry.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7)

**AQ-25** The 2.0 PPMV CO emission limit is averaged over 60 minutes at 15 percent oxygen, dry.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7)

**AQ-26** The 5 PPMV NH<sub>3</sub> emissions limit(s) are averaged over 60 minutes at 15 percent O<sub>2</sub>, dry. The operator shall calculate and continuously record the NH<sub>3</sub> slip concentration using the following:

$$\text{NH}_3 \text{ (ppmv)} = [a - b * c / 1\text{E}6] * 1\text{E}6 / b$$

Where:

a = NH<sub>3</sub> injection rate (lb/hr) / 17 (lb/lb-mol),

b = dry exhaust gas flow rate (scf/hr) / 385.3 (scf/lb-mol),

c = change in measured NO<sub>x</sub> across the SCR (ppmvd at 15% O<sub>2</sub>)

The owner/operator shall install and maintain a NO<sub>x</sub> analyzer to measure the SCR inlet NO<sub>x</sub> ppm accurate to within +/- 5 percent calibrated at least once every 12 months. The NO<sub>x</sub> analyzer shall be installed and operated within 90 days of initial startup. The owner/operator shall use the above described method or another alternative method approved by the District's Executive Officer. The above described ammonia slip calculation procedure shall not be used for compliance determination or emission information determination without corroborative data using a reference method approved by the District for the determination of ammonia.

**Verification:** The project owner shall include ammonia slip concentrations averaged on an hourly basis as part of the Quarterly Operational Report required in Condition of Certification **AQ-SC8**. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. The project owner shall submit all

calibration results performed to the CPM within 60 days of the calibration date. Exceedances of the ammonia limit shall be reported as prescribed herein. Chronic exceedances of the ammonia slip limit shall be identified by the project owner and confirmed by the CPM within 60 days of the fourth quarter Quarterly Operational Report (**AQ-SC8**) being submitted to the CPM. If a chronic exceedance is identified and confirmed, the project owner shall work in conjunction with the CPM to develop a reasonable compliance plan to investigate and redress the chronic exceedance of the ammonia slip limit within 60 days of the above confirmation. (Unit 5, 7)

**AQ-27** ~~[COC deleted in January 14, 2015 Commission Order # 15-0114-02]~~

**AQ-28** ~~Deleted [COC deleted in June 2010 Commission Decision # CEC-800-2010-015]~~

Conditions of Certification **AQ-29** through **AQ-31**, below, pertain to the following equipment:

Underground Aqueous Ammonia Storage Tank, TK-001, carbon steel, double walled with three transfer pumps and a PVR set at 50 PSIG, 20000 gallons capacity. (ID. No. D30)

**(Ammonia Storage Tank)**

**AQ-29** The operator shall install and maintain a pressure relief valve with a minimum pressure set at 50 psig.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the **Energy** Commission.

**(Ammonia Storage Tank)**

**AQ-30** The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, CARB, EPA and the **Energy** Commission.

**(Ammonia storage tank)**

**AQ-31** ~~[COC deleted in August 2012 Commission Order # 12-0808-4]~~

**AQ-32** The 2.0 PPM VOC emission limit(s) shall not apply during startup and shutdown periods. Startup periods shall not exceed 60 minutes for each startup. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of startups and shutdowns shall be maintained and made available upon request from the District.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain

records in a manner approved by the District to demonstrate compliance with this condition.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 5, 7)

**AQ-33** The 2.0 ppmv VOC emission limit is averaged over 60 minutes at 15 percent ~~02~~ O<sub>2</sub>, dry basis.

**Verification:** The project owner shall submit ~~CEMS records~~ source test results (see AQ-7) demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7)

**AQ-34** The project owner/operator shall not use natural gas containing H<sub>2</sub>S greater than 0.25 grains per 100 scf. This concentration limit is an annual average based on monthly samples of natural gas composition or gas supplier documentation. The gaseous fuel samples shall be tested using District Method 307-91 for total sulfur calculated as H<sub>2</sub>S.

**Verification:** The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7, 9, 11, 12, Aux Boiler)

**AQ-35** ~~[Deleted]~~ COC deleted in January 14, 2015 Commission Order # 15-0114-21

**AQ-36** The owner/operator shall keep records, in a manner approved by the District, for the following parameter or item:

Natural gas fuel use after CEMS certification.

**Verification:** The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operational Report required in **AQ-SC8**. (Unit 5, 7)

**AQ-37** The owner/operator shall limit PM emissions from this facility to less than 100 tons in any one year. For the purpose of this condition, the PM emission limit shall be applicable to particulate matter with an aerodynamic diameter of ~~less than~~ 2.5 microns or less.

The operator shall not operate any of the Gas Turbines No. 5, 7, 9, 11, 12, Boiler No. 4, or the Auxiliary Boiler unless it demonstrates compliance with this limit.

For purposes of demonstrating compliance with the 100 ton per year limit the operator shall determine the PM<sub>2.5</sub> emissions for each of the sources at the facility by calculating a 12-month rolling average using the following formula:

$$\text{PM}_{2.5} = (\text{FF1} \cdot \text{EF1} + \text{FF2} \cdot \text{EF2} + \text{FF3} \cdot \text{EF3} + \text{FF4} \cdot \text{EF4} + \text{FF5} \cdot \text{EF5} + \text{FF6} \cdot \text{EF6} + \text{FF7} \cdot \text{EF7}) / 2000$$

Where PM 2.5= PM 2. 5 emissions in tons per year



FF1 = Monthly fuel use for Gas Turbine Unit 5 in mmscf. EF1 = 4.66 lb/mmscf.

FF2 = Monthly fuel use for Gas Turbine Unit 7 in mmscf. EF2 = 4.66 lb/mmscf.

FF3 = Monthly fuel use for Gas Turbine Unit 9 in mmscf. EF3 = 4.51 lb/mmscf.

FF4 = Monthly fuel use for Gas Turbine Unit 11 in mmscf. EF4 = 9.98 lb/mmscf.

FF5 = Monthly fuel use for Gas Turbine Unit 12 in mmscf. EF5 = 9.98 lb/mmscf.

FF6 = Monthly fuel use for the Auxiliary Boiler in mmscf. EF6 = 6.80 lb/mmscf.

FF7 = Monthly fuel use for Boiler No. 4 in mmscf. EF7 = 5.15 lb/mmscf.

Any changes to these emission factors must be approved in advance by the District in writing and be based on unit specific source tests performed using District approved testing protocol.

The facility owner shall submit written reports of the monthly PM2.5 compliance demonstrations required by this condition. The report submittal shall be included with the semi-annual Title V report as required under Rule 3004(a)(4)(f). Records of the monthly PM2.5 compliance demonstration shall be maintained on site for at least five years and made available upon SCAQMD request.

~~The operator shall calculate the emissions using the calendar monthly fuel use data and the following emission factors: PM2.5: 4.66 lb/mmscf for Gas Turbines No. 5 and No. 7 and 5.15 lb/mmscf for Boiler No. 4.~~

For the purpose of this condition, any one year shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 **twelve** month period beginning on the first day of each calendar month.

**Verification:** The project owner shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQ-SC8. (Unit 4, 5, 7, 9, 11, 12, Aux Boiler)**

**AQ-38** For the purpose of determining compliance with District Rule 475, combustion contaminants emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

**Verification:** The project owner shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQ-SC8. (Unit 5, 7, 9, 11, 12)**

**AQ-39** The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all air quality mitigation measures stipulated in the final California Energy Commission decision for the 00-AFC-14C project.

**All the gas turbines (No. 5, 7, 9, 11, and 12), the duct burners, the selective catalytic reduction units, and the auxiliary boiler are subject to this condition.**

**Verification:** The project owner shall make the site available for inspection by representatives of the District, CARB, **U.S.** EPA and the **Energy** Commission. **(Unit 5, 7, 9, 11, 12, Aux Boiler)**

**AQ-40** **[Deleted COC deleted in January 14, 2015 Commission Order # 15-0114-2]**

**AQ-41** **This facility is subject to the applicable requirements of the following rules or regulation(s):**

**The facility shall submit a detailed retirement plan for the permanent shutdown of Boiler #4 (Device D13) describing in detail the steps and schedule that will be taken to render Boiler #4 permanently inoperable. The retirement plan shall be submitted to District within 60 days after the permits to construct for Gas Turbine Units 9, 11, and 12 are issued.**

**The retirement plan must be approved in writing by District. The facility owner shall not commence any construction of the ESPFM Project including Gas Turbine Units 9, 11, and 12, Steam Turbine Unit 10, SCR/CO Catalysts for Gas Turbines 9, 11, and 12, and the Auxiliary Boiler before the retirement plan is approved in writing by District. If District notified the facility owner that the plan is not approvable, the facility owner shall submit a revised plan addressing District's concerns within 30 days.**

**The facility owner shall provide District by December 31, 2015 with a notarized statement that Boiler #4 is permanently shut down and that any re-start or operation of the unit shall require new Permit to Construct and be subject to all requirements of nonattainment new source review and the prevention of significant deterioration program.**

**The facility owner shall notify District 30 days prior to the implementation of the approved retirement plan for permanent shut down of Boiler #4, or advise District as soon as practicable should the facility owner undertake permanent shutdown prior to December 31, 2015.**

**The facility owner shall cease operation of Boiler #4 within 90 calendar days for the first fire of Gas Turbine Unit 9 (Device D90), Unit 11 (Device D100), or Unit 12 (Device D106), whichever occurs first.**

**Verification:** **The project owner shall submit any correspondence with District within five working days of its submittal either by: 1) the project owner to District, or 2) District to the project owner. (Unit 4, 9, 10, 11, 12, Aux Boiler)**



**AQ-42 This facility is subject to the applicable requirements of the following rules or regulation(s):**

**For the circuit breakers serving Units 9, 10, 11 and 12 the facility shall install, operate, and maintain enclosed-pressure SF6 circuit breakers with a maximum annual leakage rate of 1.0 percent by weight. The circuit breakers shall be equipped with a 10 percent by weight leak detection system. The leak detection system shall be calibrated in accordance with manufacturer's specifications. The manufacturer's specifications and records of all calibrations shall be maintained on site.**

**The total CO2e emissions from the circuit breakers serving Units 9, 10, 11 and 12 shall not exceed 81 tons per calendar year.**

**Verification: The project owner shall maintain the manufacturer's specifications and records of all calibrations on site and make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9, 10, 11, 12)**

**AQ-43 The operator shall limit emissions from the combined cycle gas turbine No. 9 as follows:**

<b><u>CONTAMINANT</u></b>	<b><u>EMISSIONS LIMIT</u></b>
<b><u>CO</u></b>	<b><u>Less than or equal to 39,191 LBS IN ANY CALENDAR MONTH</u></b>
<b><u>VOC</u></b>	<b><u>Less than or equal to 7,546 LBS IN ANY CALENDAR MONTH</u></b>
<b><u>PM10</u></b>	<b><u>Less than or equal to 8,222 LBS IN ANY CALENDAR MONTH</u></b>
<b><u>SOx</u></b>	<b><u>Less than or equal to 1,199 LBS IN ANY CALENDAR MONTH</u></b>

**The above limits apply after the equipment has been fully commissioned.**

**The operator shall calculate the emission limits by using the calendar monthly fuel use data and the following emission factors: VOC: 2.92 lb/mmescf, PM10: 4.51 lb/mmescf, SOx: 0.71 lb/mmescf.**

**The operator shall calculate the emission limits for CO after the CO CEMS certification based upon readings from the District certified CEMS. In the event the CO CEMS is not operating or the emissions exceed the valid upper range of the analyzer, the emissions shall be calculated by using monthly fuel use data and the following factors: natural gas commissioning: 22.52 lb/mmescf, normal operation: 13.86 lb/mmescf.**

**Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8). (Unit 9)**

**AQ-44 The operator shall limit emissions from each individual gas turbine No. 11 and No. 12. as follows:**

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>CO</u>	<u>Less than or equal to 10,663 LBS IN ANY CALENDAR MONTH</u>
<u>VOC</u>	<u>Less than or equal to 1,203 LBS IN ANY CALENDAR MONTH</u>
<u>PM10</u>	<u>Less than or equal to 2,200 LBS IN ANY CALENDAR MONTH</u>
<u>SOx</u>	<u>Less than or equal to 153 LBS IN ANY CALENDAR MONTH</u>

**The above limits apply after the equipment has been fully commissioned.**  
**The above limits apply to each turbine individually.**

**The operator shall calculate the emission limits by using the calendar monthly fuel use data and the following emission factors: VOC: 2.66 lb/mmescf, PM10: 9.98 lb/mmescf, SOx: 0.71 lb/mmescf.**

**The operator shall calculate the emission limits for CO after the CO CEMS certification based upon readings from the District certified CEMS.**  
**In the event the CO CEMS is not operating or the emissions exceed the valid upper range of the analyzer, the emissions shall be calculated by using monthly fuel use data and the following factors: natural gas commissioning: 258.44 lb/mmescf, normal operation: 9.30 lb/mmescf.**

**Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8). (Unit 11, 12)**

**AQ-45 The operator shall limit emissions from the auxiliary boiler as follows:**

<u>CONTAMINANT</u>	<u>EMISSIONS LIMIT</u>
<u>CO</u>	<u>Less than or equal to 251 LBS IN ANY CALENDAR MONTH</u>
<u>VOC</u>	<u>Less than or equal to 19 LBS IN ANY CALENDAR MONTH</u>
<u>PM10</u>	<u>Less than or equal to 58 LBS IN ANY CALENDAR MONTH</u>
<u>SOx</u>	<u>Less than or equal to 5 LBS IN ANY CALENDAR MONTH</u>

**The above limits apply after the equipment has been fully commissioned.**

**The operator shall calculate the emission limits by using the calendar monthly fuel use data and the following emission factors: VOC: 1.44 lb/mmescf, CO: 22.66 lb/mmescf, PM10: 6.80 lb/mmescf, SOx: 0.71 lb/mmescf.**

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8).  
(Aux Boiler)

AQ-46 The 30.88 lbs/mmscf NOx emission limit(s) shall only apply during the turbine commissioning period to report RECLAIM emissions.

The combined cycle gas turbine No. 9 and the duct burner are subject to this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9)

AQ-47 The 9.42 lbs/mmscf NOx emission limit(s) shall only apply during the interim period after turbine commissioning to report RECLAIM emissions.

The combined cycle gas turbine No. 9 and the duct burner are subject to this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
(Unit 9)

AQ-48 The 96.58 lbs/mmscf NOx emission limit(s) shall only apply during the turbine commissioning period to report RECLAIM emissions.

Each individual gas turbine No. 11 and No. 12 is subject to this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
(Unit 11, 12)

AQ-49 The 16.16 lbs/mmscf NOx emission limit(s) shall only apply during the interim period after turbine commissioning to report RECLAIM emissions.

Each individual gas turbine No. 11 and No. 12 is subject to this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
(Unit 11, 12)

AQ-50 The 2.0 PPMV NOx emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, fast start-ups, traditional start-ups, and shutdown periods. The commissioning period shall not exceed 800 hours.

Following the commissioning period, a fast start-up shall not exceed 30 minutes. Following the commissioning period, a traditional start-up shall not exceed 60 minutes. Following the commissioning period, a shutdown shall not exceed 30 minutes. Following the commissioning

period, the gas turbine shall be limited to a maximum of 200 total start-ups per year, and a maximum of 50 traditional start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes for a fast start-up and 60 operating minutes for a traditional start-up.

An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, fast start-ups, traditional start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from combined cycle gas turbine No. 9 and the duct burner.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 9)

**AQ-51** The 2.0 PPMV CO emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, fast start-ups, traditional start-ups, and shutdown periods. The turbine commissioning period shall not exceed 800 hours.

Following the commissioning period, a fast start-up shall not exceed 30 minutes. Following the commissioning period, a traditional start-up shall not exceed 60 minutes. Following the commissioning period, a shutdown shall not exceed 30 minutes. Following the commissioning period, the gas turbine shall be limited to a maximum of 200 total start-ups per year, and a maximum of 50 traditional start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes for a fast start-up and 60 operating minutes for a traditional start-up.

An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, fast start-ups, traditional start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from combined cycle gas turbine No. 9 and the duct burner.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 9)

**AQ-52** The 2.0 PPMV VOC emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, fast start-ups, traditional start-ups, and shutdown periods. The commissioning period shall not exceed 800 hours.

Following the commissioning period, a fast start-up shall not exceed 30 minutes. Following the commissioning period, a traditional start-up shall not exceed 60 minutes. Following the commissioning period, a shutdown shall not exceed 30 minutes. Following the commissioning period, the gas turbine shall be limited to a maximum of 200 total start-ups per year, and a maximum of 50 traditional start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes for a fast start-up and 60 operating minutes for a traditional start-up.

An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, fast start-ups, traditional start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from combined cycle gas turbine No. 9 and the duct burner.

**Verification:** The project owner shall submit records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 9)

**AQ-53** The 2.5 PPMV NO<sub>x</sub> emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, start-

ups, and shutdown periods. The commissioning period shall not exceed 206 hours.

Following the commissioning period, a start-up shall not exceed 30 minutes. Following the commissioning period, a shutdown shall not exceed 20 minutes. Following the commissioning period, the gas turbine shall be limited to a maximum of 480 total start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes. An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from each individual gas turbine No. 11 and No. 12.

**Verification:** The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 11, 12)

**AQ-54** The 4.0 PPMV CO emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, start-ups, and shutdown periods. The commissioning period shall not exceed 206 hours.

Following the commissioning period, a start-up shall not exceed 30 minutes. Following the commissioning period, a shutdown shall not exceed 20 minutes. Following the commissioning period, the gas turbine shall be limited to a maximum of 480 total start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes. An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from each individual gas turbine No. 11 and No. 12.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 11, 12)

AQ-55 The 2.0 PPMV VOC emission limit(s) is averaged over 1 hour, dry basis at 15 percent oxygen. This limit shall not apply to commissioning, start-ups, and shutdown periods. The commissioning period shall not exceed 206 hours.

Following the commissioning period, a start-up shall not exceed 30 minutes. Following the commissioning period, a shutdown shall not exceed 20 minutes. Following the commissioning period, the gas turbine shall be limited to a maximum of 480 total start-ups per year.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes. An operating minute is defined as a minute when the turbine is burning fuel.

Written records of commissioning, start-ups, and shutdowns shall be maintained and made available upon request from the Executive Officer. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall be based on the emissions from each individual gas turbine No. 11 and No. 12.

Verification: The project owner shall submit records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 11, 12)

AQ-56 The 1,100 lbs/net MW-hr CO<sub>2</sub> emission limit(s) is averaged over 12 rolling months. This limit only applies if the capacity factor of the unit is 60 percent or greater on an annual basis. The combined cycle gas turbine No. 9 is subject to this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9)

AQ-57 The 5 ppmv NO<sub>x</sub> emission limit(s) is averaged over 1 hour, dry basis, at 3 percent oxygen.

This limit shall not apply to boiler commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 80 operating hours. Following the commissioning period, the limit shall



apply at all times when the SCR catalyst inlet temperature is in excess of 500 degrees F.

For the purpose of this condition, the limit(s) shall be based on the emissions from the auxiliary boiler.

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8).  
(Aux Boiler)

AQ-58 The 50 ppmv CO emission limit(s) is averaged over 1 hour, dry basis, at 3 percent oxygen.

This limit shall not apply to boiler commissioning, start-up, and shutdown periods, and when the boiler load is less than or equal to 20 percent. The commissioning period shall not exceed 80 operating hours. Following the commissioning period, a start up shall not exceed 120 minutes and a shutdown shall not exceed 60 minutes.

For the purpose of this condition, the limit(s) shall be based on the emissions from the auxiliary boiler.

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8).  
(Aux Boiler)

AQ-59 The 100 ppmv CO emission limit(s) is averaged over 1 hour, dry basis, at 3 percent oxygen.

This limit shall apply when the boiler load is greater than 10 percent and less than or equal to 20 percent. This limit shall not apply to boiler commissioning, start-up, and shutdown periods. The commissioning period shall not exceed 80 operating hours. Following the commissioning period, a start up shall not exceed 120 minutes and a shutdown shall not exceed 60 minutes.

For the purpose of this condition, the limit(s) shall be based on the emissions from the auxiliary boiler.

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (AQ-SC8).  
(Aux Boiler)

AQ-60 The operator shall limit the number of start-ups to no more than 62 in any one calendar month.

The number of traditional start-ups shall not exceed 15 per month.

The total number of start-ups shall not exceed 2 per day. The number of traditional start-ups shall not exceed 1 per day.

NOx emissions during a fast start-up shall not exceed 36 lbs. NOx emissions during a traditional start-up shall not exceed 62 lbs.



For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes for a fast start-up or 60 operating minutes for a traditional start-up.

An operating minute is defined as a minute when the turbine is burning fuel.

The requirements of this condition do not apply during the initial commissioning period.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall apply to the combined cycle gas turbine No. 9 and the duct burner.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Unit 9)**

AQ-61 The operator shall limit the number of start-ups to no more than 60 in any one calendar month.

The total number of start-ups shall not exceed 4 per day.

NOx emissions during a start-up shall not exceed 28 lbs.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 30 operating minutes. An operating minute is defined as a minute when the turbine is burning fuel.

The requirements of this condition do not apply during the initial commissioning period.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

For the purpose of this condition, the limit(s) shall apply to each individual gas turbine No. 11 and No. 12.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. (Unit 11,12)

**AQ-62 The operator shall limit the fuel usage of the auxiliary boiler to no more than 0.82 MM cubic feet per day.**

**Verification: The project owner shall submit the fuel use data demonstrating compliance with this condition as part of the Quarterly Operation Reports in AQ-SC8. (Aux Boiler)**

**AQ-63 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia to the SCR serving combined cycle turbine No. 9.**

**The operator shall also install and maintain a device to continuously record the parameter being measured.**

**The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.**

**The ammonia injection rate shall not exceed 139.8 lb/hr.**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9)**

**AQ-64 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor serving combined cycle turbine No. 9.**

**The operator shall also install and maintain a device to continuously record the parameter being measured.**

**The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.**

**The temperature shall remain between 300 degrees F and 650 degrees F.**

**The temperature limitations of this condition do not apply during turbine start-up and shutdown periods, and do not apply during the commissioning period.**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9)**

**AQ-65 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed serving combined cycle turbine No. 9 in inches of water column.**

**The operator shall also install and maintain a device to continuously record the parameter being measured.**

**The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.**

The pressure drop across the catalyst shall remain between 1 inch of water column and 4 inches of water column.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Unit 9)**

**AQ-66** The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia to the SCR serving each individual simple cycle gas turbine No. 11 and 12.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

The ammonia injection rate shall not exceed 67.8 lb/hr.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Unit 11, 12)**

**AQ-67** The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor serving each individual simple cycle gas turbine No. 11 and 12.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The temperature shall remain between 600 degrees F and 1,125 degrees F.

The temperature limitations of this condition do not apply during turbine start-up and shutdown periods, and do not apply during the commissioning period.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Unit 11, 12)**

**AQ-68** The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed serving each individual simple cycle gas turbine No. 11 and 12 in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

The pressure drop across the catalyst shall remain between 1 inch of water column and 12 inches of water column.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
**(Unit 11, 12)**

**AQ-69** The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia to the SCR serving the auxiliary boiler.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

The ammonia injection rate shall not exceed 5 lb/hr.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
**(Aux Boiler)**

**AQ-70** The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor serving the auxiliary boiler.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

The temperature shall remain between 500 degrees F and 750 degrees F.

The temperature limitations of this condition do not apply during boiler start-up and shutdown periods, and do not apply during the commissioning period.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
**(Aux Boiler)**

**AQ-71** The operator shall install and maintain a pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed serving the auxiliary boiler in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months.

The pressure drop across the catalyst shall remain between 1 inch of water column and 12 inches of water column.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Aux Boiler)**

AQ-72 The operator shall conduct source test(s) for the pollutant(s) identified below on combined cycle turbine No. 9 and duct burner, and each simple cycle gas turbine No. 11 and No. 12.

<u>Pollutant(s) to be tested</u>	<u>Required Test Method(s)</u>	<u>Averaging Time</u>	<u>Test Location</u>
<u>NOx Emissions</u>	<u>District Method 100.1</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>
<u>CO Emissions</u>	<u>District Method 100.1</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>
<u>SOx Emissions</u>	<u>District Laboratory Method 307-91</u>	<u>District- approved averaging time</u>	<u>Fuel Sample</u>
<u>VOC Emissions</u>	<u>District Method 25.3</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>
<u>PM10 Emissions</u>	<u>District Method 5.1</u>	<u>District- approved averaging time</u>	<u>Outlet of the SCR serving this equipment</u>
<u>PM2.5 Emissions</u>	<u>U.S. EPA Method 201A and 202</u>	<u>District- approved averaging time</u>	<u>Outlet of the SCR serving this equipment</u>
<u>NH3 Emissions</u>	<u>District Method 207.1 and 5.3 or U.S. EPA Method 17</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>

The test shall be conducted after District and CPM approval of the source test protocol, but no later than 180 days after initial start-up. The District and CPM shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), and the flue gas flow rate. The combined gas turbine and steam turbine generating output in MW shall also be recorded.

The test shall be conducted in accordance with a District and CPM approved source test protocol. The protocol shall be submitted to the District engineer and the CPM no later than 60 days before the proposed test date and shall be approved by District and CPM before the test commences.

The test protocol shall include the proposed operating conditions of the gas turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

For natural gas fired turbines only, an alternative to District Method 25.3 for the purpose of demonstrating compliance with BACT as determined by ARB and the District, may be the following:

a) Triplicate stack gas samples are extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of the Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon, and

c) Analysis of Summa canisters is per unmodified U.S. EPA Method TO-12 (with preconcentration) or the canister analysis portion of District Method 25.3 with a minimum detection limit of 0.3 ppmvC or less and reported to two significant figures, and d) The temperature of the Summa canisters when extracting samples for analysis is not to be below 70 degrees F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than unmodified District Method 25.3, nor does it mean that it may be used in lieu of District Method 25.3 without prior approval, except for the determination of compliance with the BACT level of 2.0 ppmv VOC calculated as carbon set by ARB for natural gas fired turbines. The test results must be reported with two significant digits.

The test shall be conducted when this equipment is operating at loads of 100 and 75 percent of maximum load for the NOx, CO, VOC, and ammonia tests. The PM10 and PM2.5 tests shall be conducted when this equipment is operating at 100 percent of maximum load.

For the purposes of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of District, U.S. EPA, ARB, and CPM.

Verification: The project owner shall submit the proposed protocol for the initial source tests no later than 60 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. The project owner shall notify the District and CPM no later

than 10 days prior to the proposed initial source test date and time. (Unit 9, 11, 12)

**AQ-73** The operator shall conduct source test(s) for the pollutant(s) identified below on combined cycle turbine No. 9 and duct burner, and each simple cycle gas turbine No. 11 and No. 12.

<u>Pollutant(s) to be tested</u>	<u>Required Test Method(s)</u>	<u>Averaging Time</u>	<u>Test Location</u>
<u>SOx Emissions</u>	<u>District Laboratory Method 307-91</u>	<u>District-approved averaging time</u>	<u>Fuel Sample</u>
<u>VOC Emissions</u>	<u>District Method 25.3</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>
<u>PM Emissions</u>	<u>District Method 5.1</u>	<u>District-approved averaging time</u>	<u>Outlet of the SCR serving this equipment</u>

The test shall be conducted at least once every three years.

The test shall be conducted and the results submitted to the District and CPM within 60 days after the test date. The District and CPM shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted when the gas turbine is operating at 100 percent of maximum load.

For natural gas fired turbines only, an alternative to District Method 25.3 for the purpose of demonstrating compliance with BACT as determined by ARB and the District, may be the following:

a) Triplicate stack gas samples are extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of the Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon, and

c) Analysis of Summa canisters is per unmodified U.S. EPA Method TO-12 (with preconcentration) or the canister analysis portion of District Method 25.3 with a minimum detection limit of 0.3 ppmvC or less and reported to two significant figures, and d) The temperature of the Summa canisters when extracting samples for analysis is not to be below 70 degrees F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than unmodified District Method

25.3, nor does it mean that it may be used in lieu of District Method 25.3 without prior approval, except for the determination of compliance with the BACT level of 2.0 ppmv VOC calculated as carbon set by ARB for natural gas fired turbines. The test results must be reported with two significant digits.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration and/or monthly emissions limit.

For the purposes of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of District, U.S. EPA, ARB, and CPM.

**Verification:** The project owner shall submit the proposed protocol for the initial source tests no later than 60 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. The project owner shall notify the District and CPM no later than 10 days prior to the proposed initial source test date and time. (Unit 9, 11, 12)

**AQ-74** The operator shall conduct source test(s) for the pollutant(s) identified below on combined cycle turbine No. 9 and duct burner, and each simple cycle gas turbine No. 11 and No. 12.

<u>Pollutant(s) to be tested</u>	<u>Required Test Method(s)</u>	<u>Averaging Time</u>	<u>Test Location</u>
<u>NH3 Emissions</u>	<u>District Method 207.1 and 5.3 or U.S. EPA Method 17</u>	<u>1 hour</u>	<u>Outlet of the SCR serving this equipment</u>

The test shall be conducted and the results submitted to the District and CPM within 60 days after the test date. The District and CPM shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx concentration, as determined by the certified CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable or not yet certified, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

**Verification:** The project owner shall submit the proposed protocol for the initial source tests no later than 60 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. The project owner shall notify the District and CPM no later than 10 days prior to the proposed initial source test date and time. (Unit 9, 11, 12)



**AQ-75 The operator shall conduct source test(s) for the pollutant(s) identified below on the auxiliary boiler.**

<b><u>Pollutant(s) to be tested</u></b>	<b><u>Required Test Method(s)</u></b>	<b><u>Averaging Time</u></b>	<b><u>Test Location</u></b>
<b><u>NOx Emissions</u></b>	<b><u>District Method 100.1</u></b>	<b><u>1 hour</u></b>	<b><u>Outlet of the SCR</u></b>
<b><u>CO Emissions</u></b>	<b><u>District Method 100.1</u></b>	<b><u>1 hour</u></b>	<b><u>Outlet of the SCR</u></b>
<b><u>PM10 Emissions</u></b>	<b><u>District Method 5.1</u></b>	<b><u>District-approved averaging time</u></b>	<b><u>Outlet of the SCR</u></b>

**The test shall be conducted after District and CPM approval of the source test protocol, but no later than 180 days after initial start-up. The District and CPM shall be notified of the date and time of the test at least 10 days prior to the test.**

**The test shall be conducted to determine compliance with the BACT emission limits. NOx and CO concentrations shall be corrected to 3 percent excess O<sub>2</sub>, dry. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, oxygen level in the flue gas.**

**The test shall be conducted in accordance with a District and CPM approved source test protocol. The protocol shall be submitted to the District engineer and CPM no later than 60 days before the proposed test date and shall be approved by the District and CPM before the test commences. The test protocol shall include the proposed operating conditions of the boiler during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.**

**The test shall be conducted when this equipment is operating at maximum, average, and minimum loads.**

**Minimum load shall be defined as between 10 and 20 percent to show compliance with the 100 ppmv CO limit.**

**Test results shall be submitted to District and CPM within 60 days of the completion of the tests.**

**Verification: The project owner shall submit the proposed protocol for the initial source tests no later than 60 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. The project owner shall notify the District and CPM no later than 10 days prior to the proposed initial source test date and time. (Aux Boiler)**

**AQ-76 The operator shall install and maintain a CEMS to measure the following parameters on combined cycle turbine No. 9 and duct burner, and each simple cycle gas turbine No. 11 and No. 12:**

**CO concentration in ppmv**

**Concentrations shall be corrected to 15 percent oxygen on a dry basis.**

**The CEMS shall be installed and operated to measure CO concentrations over a 15 minute averaging time period.**

**The CEMS shall be installed and operated no later than 90 days after initial start-up of the turbine, and in accordance with an approved District Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from District.**

**Within two weeks of the turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.**

**The CEMS will convert the actual CO concentrations to mass emission rates (lb/hr) using the equation below and record the hourly emission rates on a continuous basis.**

**CO Emission Rate, lb/hr =  $K \cdot C_{co} \cdot F_d [20.9 / (20.9\% - \%O_{2d})] [(Q_g \cdot HHV) / 1E6]$ , where**

**$K = 7.267E-8$  (lb/scf)/ppm**

**$C_{co}$  = Average of four consecutive 15 minute average CO concentrations, ppmv**

**$F_d = 8710$  dscf/MMBTU natural gas**

**$\%O_{2d}$  = Hourly average % by vol.  $O_2$  dry, corresponding to  $C_{co}$**

**$Q_g$  = Fuel gas usage during the hour, scf/hr**

**$HHV$  = Gross higher heating value of fuel, BTU/scf**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 9, 11, 12)**

**AQ-77 The operator shall install and maintain a CEMS to measure the following parameters on combined cycle turbine No. 9 and duct burner, and each simple cycle gas turbine No. 11 and No. 12:**

**NOx concentration in ppmv**

**Concentrations shall be corrected to 15 percent oxygen on a dry basis.**

**The CEMS shall be installed and operated no later than 90 days after initial start-up of the turbine, and in accordance with an approved District REG XX CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from District. Within two**

weeks of the initial start-up, the operator shall provide written notification to the District of the exact date of start-up.

Rule 2012 provisional RATA testing shall be completed and submitted to the District within 90 days of the conclusion of the turbine commissioning period. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3).

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
(Unit 9, 11, 12)

AQ-78 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.

Condition AQ-63

Verification: See verification for AQ-63.(Unit 9)

AQ-79 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that month.

Condition AQ-64

Condition AQ-65

Verification: See verifications for AQ-64 and AQ-65.(Unit 9)

AQ-80 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.

Condition AQ-66

Verification: See verification for AQ-66.(Unit 11, 12)

AQ-81 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that month.

Condition AQ-67

Condition AQ-68

Verification: See verifications for AQ-67 and AQ-68.(Unit 11, 12)

**AQ-82 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.**

**Condition AQ-69**

**Verification: See verification for AQ-69. (Aux Boiler)**

**AQ-83 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that month.**

**Condition AQ-70**

**Condition AQ-71**

**Verification: See verifications for AQ-70 and AQ-71. (Aux Boiler)**

**AQ-84 The operator shall operate and maintain the combined cycle turbine No. 9, the duct burner, and each simple cycle gas turbine No. 11 and No. 12 according to the following requirements:**

**The operator shall vent this equipment to the oxidation catalyst and SCR control system whenever the gas turbine is in operation after initial commissioning.**

**The operator shall provide the District and CPM with written notification of the initial start-up date.**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. The operator shall provide the District and CPM with written notification of the initial startup date 45 days before initial startup. (Unit 9, 11, 12)**

**AQ-85 The operator shall operate and maintain the combined cycle gas turbine No. 9 according to the following requirements:**

**The operator shall record the total net power generated in a calendar month in megawatt-hours.**

**The operator shall calculate and record greenhouse gas emissions of each calendar month using the following formula:**

$$\text{GHG} = 60.179 * \text{FF}$$

**Where, GHG is the greenhouse gas emissions in tons of CO<sub>2</sub>e and FF is the monthly fuel usage in millions standard cubic feet.**

**The operator shall calculate and record the GHG emissions in pounds per net megawatt-hours on the 12-month rolling average. The GHG**

emissions from this equipment shall not exceed 764,191 tons per year. The GHG emissions shall not exceed 968 lbs per net megawatt-hours.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition. The records shall be made available to the District upon request.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Unit 9)**

AQ-86 The operator shall locate and operate the selective catalytic reduction units for gas turbines No. 9, No. 11, No. 12, and the auxiliary boiler according to the following requirements:

The operator shall calculate and continuously record the NH<sub>3</sub> slip concentration using the following equation:

$$\text{NH}_3 \text{ (ppmvd)} = [a - b \cdot (c \cdot 1.2) / 1,000,000] \cdot 1,000,000 / b$$
, where

a = NH<sub>3</sub> injection rate (lb/hr)/17(lb/lb-mol), b = dry exhaust flow rate (scf/hr)/(385.5 scf/lb-mol), c = change in measured NO<sub>x</sub> across the SCR, ppmvd at 15 percent O<sub>2</sub>.

The operator shall install a NO<sub>x</sub> analyzer to measure the SCR inlet NO<sub>x</sub> ppm accurate to within +/- 5 percent calibrated at least once every 12 months. The operator shall use the method described above or another alternative method approved by the Executive Officer.

The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information determination without corroborative data using an approved reference method for the determination of ammonia. The ammonia slip calculation procedure shall be in-effect no later than 90 days after initial startup of the equipment.

Verification: The project owner shall include ammonia slip concentrations averaged on an hourly basis as part of the Quarterly Operation Report required in Condition of Certification AQ-SC8. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. Exceedances of the ammonia limit shall be reported as prescribed herein. Chronic exceedances of the ammonia slip limit shall be identified by the project owner and confirmed by the CPM within 60 days of the fourth quarter Quarterly Operation Report (AQ-SC8) being submitted to the CPM. If a chronic exceedance is identified and confirmed, the project owner shall work in conjunction with the CPM to develop a reasonable compliance plan to investigate and redress the chronic exceedance of the ammonia slip limit within 60 days of the above confirmation. (Unit 9, 11, 12, Aux Boiler)

**AQ-87 The operator shall operate and maintain each individual simple cycle gas turbine No. 11 and No. 12 according to the following requirements:**

**The operator shall record the total net power generated in a calendar month in megawatt-hours.**

**The operator shall calculate and record greenhouse gas emissions of each calendar month using the following formula:**

$$\text{GHG} = 60.179 * \text{FF}$$

**Where, GHG is the greenhouse gas emissions in tons of CO<sub>2</sub>e and FF is the monthly fuel usage in millions standard cubic feet.**

**The operator shall calculate and record the GHG emissions in pounds per net megawatt-hours on the 12-month rolling average. The GHG emissions from this equipment shall not exceed 141,093 tons per year. The GHG emissions shall not exceed 1,544 lbs per net megawatt-hours.**

**The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition. The records shall be made available to District and the CPM upon request.**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.**

**(Unit 11, 12)**

**AQ-88 The operator shall operate and maintain the auxiliary boiler according to the following requirements:**

**The operator shall vent this equipment to the CO oxidation catalyst and SCR control system whenever the auxiliary boiler is in operation.**

**The operator shall provide the District with written notification of the initial start-up date.**

**Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.**

**(Aux Boiler)**

**AQ-89 The operator shall comply with the following requirements for each individual simple cycle gas turbine No. 11 and No. 12:**

**This equipment shall not supply more than 42 percent of its potential electrical output or more than 211,186 MWh net electrical output to a utility distribution system on a 12 operating month rolling average and a 3 year rolling average basis.**

**The operator shall record and maintain written records of the amount of electricity supplied to the utility distribution system expressed as a percentage of the total potential electrical output of the turbine, and shall provide such records to the Executive Officer upon request.**

The operator shall record and maintain written records of the gross electrical output of the turbine supplied to the utility distribution system expressed in net MWh, and shall provide such records to the Executive Officer upon request.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. The project owner shall submit to the CPM data demonstrating compliance with this condition in each Quarterly Operation Report (see AQ-SC8). (Unit 11, 12)

AQ-90 The operator shall comply with the following requirements:

The total electrical output on a gross basis from combined cycle gas turbine Units No. 5, No. 7, No. 9, and their corresponding steam turbines, simple cycle gas turbines No. 11 and No. 12 shall not exceed 1,020 MW.

The gross electrical output shall be measured at the two generators serving each of the two Siemens SGT6-5000F combined cycle gas turbines, the two generators serving the GE 7FA combined cycle gas turbine, and the individual generators serving each of the two Trent 60 simple cycle gas turbines.

The monitoring equipment shall meet ANSI Standard No. C12 or equivalent, and have an accuracy of +/- 0.2 percent. The gross electrical output from the generators shall be recorded at the CEMS DAS over a 15 minute averaging time period.

The operator shall record and maintain written records of the maximum amount of electricity produced from this equipment and shall make such records available to the Executive Officer upon request.

The operator shall maintain records for a minimum of five years, in a manner approved by the District to demonstrate compliance with this condition.

Verification: The project owner shall maintain records for a minimum of five years and make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission. (Unit 5, 6, 7, 8, 9, 10, 11, 12)

AQ-91 The combined cycle gas turbine No. 9 shall not be operated unless the facility holds 131,919 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) of certification.

Verification: The project owner shall submit to the CPM copies of all RECLAIM (Unit 9)



reports filed with the District in each Quarterly Operation Report (see AQ-SC8).

**AQ-92** The simple cycle gas turbine No. 11 shall not be operated unless the facility holds 46,675 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) of certification.

**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operation Report (see AQ-SC8). (Unit 11)

**AQ-93** The simple cycle gas turbine No. 12 shall not be operated unless the facility holds 46,675 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) of certification.

**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operation Report (see AQ-SC8). (Unit 12)

**AQ-94** The auxiliary boiler shall not be operated unless the facility holds 564 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) of certification.

**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operation Report (see AQ-SC8). (Aux Boiler)

**AQ-95** The duct burner for the combined cycle gas turbine No. 9 shall not be operated unless the facility holds 16,307 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. RTCs held to satisfy this condition may be transferred only after one year from the initial start of operation. If the hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) of certification.



**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operation Report (see AQ-SC8).  
**(Unit 9)**

**AQ-96** The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM Cubic Feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

This condition shall apply to combined cycle gas turbine No. 9 and duct burner, simple cycle gas turbines No. 11 and No. 12, and the auxiliary boiler.

**Verification:** See verifications for AQ-72, AQ-73, AQ-74, and AQ-75. **(Unit 9, 11, 12, Aux Boiler)**

**AQ-97** The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Natural gas fuel use during the commissioning period.

This condition shall apply to combined cycle gas turbine No. 9 and duct burner, simple cycle gas turbines No. 11 and No. 12.

**Verification:** The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operation Report required in AQ-SC8. **(Unit 9, 11, 12)**

**AQ-98** Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines;  
or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
**(Facility)**

AQ-99 Acid Rain SO<sub>2</sub> Allowance Allocation for affected units are as follows:

<u>Device ID</u>	<u>Boiler ID</u>	<u>Contaminant</u>	<u>Tons in any year</u>
<u>13</u>	<u>Boiler No. 4</u>	<u>SO<sub>2</sub></u>	<u>363</u>

a). The allowance allocation(s) shall apply to calendar years 2010 and beyond.

b). The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40 CFR 73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in the conditions of certification (see 40 CFR 72.84).

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.  
**(Unit 4)**

AQ-100 Acid Rain SO<sub>2</sub> Allowance Allocation for retired units are as follows:

<u>Boiler ID</u>	<u>Contaminant</u>	<u>Tons in any year</u>
<u>Boiler No. 1</u>	<u>SO<sub>2</sub></u>	<u>357</u>
<u>Boiler No. 2</u>	<u>SO<sub>2</sub></u>	<u>62</u>
<u>Boiler No. 3</u>	<u>SO<sub>2</sub></u>	<u>171</u>

a). The allowance allocation(s) shall apply to calendar years 2010 and beyond.

b). The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40 CFR 73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO<sub>2</sub> allowance allocations identified in the conditions of certification (see 40 CFR 72.84).

c). A unit exempted under 40 CFR 72.8 shall not emit any sulfur dioxide starting on the date it is exempted.

d). The owners and operators of a unit exempted under 40 CFR 72.8 shall comply with monitoring requirements in accordance with part 75 and will be allocated allowances in accordance with 40 CFR 73.

e). A unit exempted under 40 CFR 73 shall not resume operation unless the designated representative of the source that includes the unit submits an Acid Rain permit application for the unit not less than 24 months prior to the later of January 1, 2000, or the date the unit is to resume operation. On the earlier of the date the written exemption expires or the date an Acid Rain permit application is submitted or is required to be submitted under this paragraph, the unit shall no longer be exempted and shall be subject to all requirements of 40 CFR 72.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Facility)**

AQ-101 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.

**(Facility)**

AQ-102 The 1,000 lbs/MW-hr CO<sub>2</sub> emission limit(s) is averaged over a 12 operating month rolling average. The limit shall only apply if this turbine supplies more than 1,462,920 MWh net electrical output to a utility distribution system on a 12 operating month rolling average and on 3 year rolling average basis.

For the purpose of this condition, the limit(s) shall be based on the emissions from combined cycle gas turbine No. 9 and the duct burner.

Verification: The project owner shall demonstrate compliance with 40 CFR 60 Subpart TTTT in each Quarterly Operation Report (see AQ-SC8). **(Unit 9)**

AQ-103 The 120 lbs/MMBTU CO<sub>2</sub> emission limit(s) is averaged over a 12 operating month rolling average. The limit shall only apply if this turbine supplies equal to or less than 1,462,920 MWh net electrical output to a utility distribution system on a 12 operating month rolling average and on 3 year rolling average basis.

For the purpose of this condition, the limit(s) shall be based on the emissions from combined cycle gas turbine No. 9 and the duct burner.

Verification: The project owner shall maintain fuel purchase records and demonstrate compliance with 40 CFR 60 Subpart TTTT in each Quarterly Operation Report (see AQ-SC8). **(Unit 9)**

**AQ-104 The 120 lbs/MMBTU CO<sub>2</sub> emission limit(s) is averaged over a 12 operating month rolling average.**

**For the purpose of this condition, the limit(s) shall be based on the emissions from each individual simple cycle gas turbine No. 11 and No. 12.**

**Verification: The project owner shall maintain fuel purchase records and demonstrate compliance with 40 CFR 60 Subpart TTTT in each Quarterly Operation Report (see AQ-SC8). (Unit 11, 12)**