

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**DOCKET****99-AFC-5C**

DATE JUN 03 2009

RECD. JUN 10 2009

**In the Matter of:**

OTAY MESA GENERATING PROJECT ) **Docket No. 99-AFC-5C**  
 )  
 OTAY MESA ENERGY CENTER, ) **Order No. 09-603-2**  
 LLC ) **ORDER APPROVING** a Petition to Modify  
 ) Air Quality Conditions of Certification  
 )

On May 12, 2008, Otay Mesa Energy Center, LLC, the owner/operator of the Otay Mesa Generating Project, submitted a petition requesting to modify air quality conditions of certification *AQ-21 – AQ-23; AQ-83; AQ-36-AQ-40; AQ-42; AQ-59; AQ-60 and AQ-61*. The condition changes will 1) provide the project owner options for reducing their NOx emissions from 2 parts per million (ppm) to 1 ppm when Mobile Emission Reduction Credits (MERCs) expire. The modifications will also provide language clarification for compliance methods and consistency with Federal terminology.

The modifications were approved by the San Diego County Air Pollution Control District and a revised Final Determination of Compliance was issued on February 20, 2009. Staff is renumbering and reissuing all the air quality conditions of certification to ensure consistency in the numbering between the Energy Commission and the District's conditions, and to highlight those few conditions changed by this proposed amendment.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations and recommends approval of Otay Mesa Energy Center, LLC's petition to modify the Otay Mesa Generating Project and amend related Conditions of Certification.

**ENERGY COMMISSION FINDINGS**

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Energy Commission finds that:

- The petition meets all the filing criteria of Title 20, section 1769(a) of the California Code of Regulations concerning post-certification project modifications;
- The modification will not change the findings in the Energy Commission's Final Decision pursuant to Title 20, section 1755;

- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;
- The change will be beneficial to the project owner because it will provide options for reducing their NOx emissions from 2 ppm to 1 ppm when Mobile Emission Reduction Credits expire. and
- The change is based on information that was not available to the parties prior to Energy Commission certification. The project was sold to a new owner, who for various reasons could not complete the project for six years past the anticipated date, which resulted in Mobile Emission Reduction Credits expiring long before the twenty years assumed at the time of certification. A previous amendment had determined that the use of SCONOx, planned for in the original Decision to reduce emissions, was not feasible for this project.

### CONCLUSION AND ORDER

The California Energy Commission hereby adopts Staff's recommendations and approves the following changes to the Commission Decision for the Otay Mesa Generating Project. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

### CONDITIONS OF CERTIFICATION

#### ENERGY COMMISSION STAFF CONDITIONS

These conditions are not included in the District's Determination of Compliance.

For the purposes of these conditions, the following definitions apply:

(1) ACTIVE OPERATIONS shall mean any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/ demolition activities, or heavy- and light-duty vehicular movement.

(2) CHEMICAL STABILIZERS mean any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(3) CONSTRUCTION/DEMOLITION ACTIVITIES are any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(4) **DISTURBED SURFACE AREA** means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust.

(5) **DUST SUPPRESSANTS** are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(6) **EARTH-MOVING ACTIVITIES** shall include, but not be limited to, grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, or soil mulching.

(7) **FUGITIVE DUST** means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(8) **INACTIVE DISTURBED SURFACE AREA** means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of ten consecutive days.

(9) **STABILIZED SURFACE** means:

(A) any disturbed surface area or open storage pile which is resistant to wind-driven fugitive dust;

(B) any unpaved road surface in which any fugitive dust plume emanating from vehicular traffic does not exceed 20 percent opacity.

(10) **VISIBLE ROADWAY DUST** means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

**AQ-SC1.** ~~AQ-70~~ The project owner shall implement a CEC CPM approved fugitive Dust Control Plan.

Protocol: The plan shall include the following:

1. A description of each of the active operation(s) which may result in the generation of fugitive dust;
2. An identification of all sources of fugitive dust (e.g., earth-moving, storage piles, vehicular traffic, etc.
3. A description of the control measures to be applied to each of the sources of dust emissions identified above (including those required in AQ-SC2 and -SC3 below). The description must be sufficiently detailed to demonstrate that the applicable best available control measure(s) as

specified in Table 1 (attached) will be utilized and/or installed during all periods of active operations;

4. In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the required control measures for any of the sources identified, a justification statement must be provided to explain the reason(s) why the required control measures cannot be implemented.

**Verification:** Not later than sixty (60) days prior to the commencement of construction, the project owner shall submit the plan to the CEC CPM for review and approval. The project owner shall maintain daily records to document the specific actions taken pursuant to the plan and Table 1. A summary of the monthly activities shall be submitted to the CPM via the Monthly Compliance Report.

**AQ-SC2.** ~~AQ-71~~ During the construction phase of the project, the project owner shall:

1. Prevent or remove within one hour the track-out of bulk material onto public paved roadways as a result of their operations, or take at least one of the actions listed in Table 2 (attached) to prevent the track-out of bulk material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations;
2. Install and use a track-out control device to prevent the track-out of bulk material from areas containing soils requiring corrective to other areas within the project construction site and laydown area;
3. Minimize fugitive particulate emissions from vehicular traffic on paved roads and paved parking lots on the construction site by vacuum mechanical sweeping or water flushing of the road surface to remove buildup of loose material. The project owner shall inspect on a daily basis the conditions of the paved roads and parking lots to determine the need for mechanical sweeping or water flushing.

**Verification:** The project owner shall maintain a daily log during the construction phase of the project indicating: 1) the manner in which compliance with this condition or Table 2 is achieved, and 2) the date and time when the inspection of paved roads and parking lots occurs and the date and time(s) when the cleaning operation occurs. The logs shall be made available to the California Energy Commission CPM upon request.

**AQ-SC3.** ~~AQ-72~~ At any time when fugitive dust from OMGP project construction is visible in the atmosphere beyond the property line, the project owner will identify the source of the fugitive dust and implement one or more of the appropriate control measures specified in Table 3 (attached)

**Verification:** The project owner will maintain a daily log recording the dates and times that measures in Table 3 (attached) have been implemented and make them available to the CPM upon request.

**AQ-SC4.** ~~AQ-73~~ The project owner shall implement an approved Construction Equipment Plan. The Plan shall identify how the project owner will ensure that all heavy equipment, that includes, but is not limited to, bulldozers, backhoes, compactors, loaders, motor graders and trenchers, and cranes, dump trucks and other heavy duty construction related trucks, used on-site by construction contractors and subcontractors:

- a. are properly maintained;
- b. use low sulfur diesel fuel, 50 ppm sulfur or less;
- c. limit idling times; and
- d. meet federal emission standards for construction equipment.

**Verification:** Not later than sixty (60) days prior to the commencement of construction, the project owner shall submit the plan to the California Energy Commission CPM for review and approval. The project owner shall maintain records to document the specific actions taken pursuant to the plan. A summary of the monthly activities shall be submitted to the CPM via the Monthly Compliance Report.

**AQ-SC5.** ~~AQ-74~~ The project owner shall ensure that all heavy earthmoving equipment including, but not limited to, bulldozers, backhoes, compactors, loaders, motor graders and trenchers, and cranes, dump trucks and other heavy duty construction related trucks, have been properly maintained and the engines tuned to the engine manufacturer's specifications. The project owner shall also install oxidizing soot filters on all suitable construction equipment used either on the power plant construction site or associated linear construction sites. Where the oxidizing soot filter is determined to be unsuitable, the owner shall install and use an oxidizing catalyst. Additionally, the project owner shall employ high pressure fuel injection, timing retardation, and reduced idle time on all suitable construction equipment. Suitability is to be determined by an independent California Licensed Mechanical Engineer or a Qualified Environmental Professional who will stamp and submit for approval an initial and all subsequent Suitability Reports as necessary containing at a minimum the following:

Initial Suitability Report:

- The initial suitability report shall be submitted to the CPM for approval 60 days prior to the relevant equipment being used at the project site.
- A list of all fuel burning, construction related equipment used,
- a determination of the suitability of each piece of equipment to work appropriately with an oxidizing soot filter, or an oxidizing catalyst,
- if a piece of equipment is determined to be suitable, a statement by the equipment or catalyst manufacturers, the independent California Licensed Mechanical Engineer, or a Qualified Environmental

Professional that the oxidizing soot filter has been installed and is functioning properly,

- if a piece of equipment is determined to be unsuitable, an explanation by the equipment or catalyst manufacturers, the independent California Licensed Mechanical Engineer, or a Qualified Environmental Professional as to the cause of this determination, and
- a statement by the equipment or catalyst manufacturers, the California Licensed Mechanical Engineer, or a Qualified Environmental Professional as to the suitability of using high-pressure fuel injectors, timing retardation and/or reduced idle time on all construction equipment after the installation of either oxidizing soot filters or oxidizing catalysts.

#### Subsequent Suitability Reports

- If a piece of construction equipment is subsequently determined to be unsuitable for an oxidizing soot filter after such installation has occurred, the filter may be removed immediately. However notification must be sent to the CPM for approval containing an explanation for the change in suitability within 10 days.
- Changes in suitability are restricted to three explanations, which must be identified in any subsequent suitability report. Changes in suitability may not be based on the use of high-pressure fuel injectors, timing retardation and/or reduced idle time.
  1. The oxidizing soot filter is reducing normal availability of the construction equipment due to increased downtime, and/or power output due to increased back pressure by 20% or more.
  2. The oxidizing soot filter is causing or reasonably expected to cause significant damage to the construction equipment engine.
  3. The oxidizing soot filter is causing or reasonably expected to cause a significant risk to nearby workers or the public.

Changes in suitability may not be based on the use of high-pressure fuel injectors, timing retardation and/or reduced idle time.

**Verification:** The project owner shall submit to the CPM, via the Monthly Compliance Report, documentation, which demonstrates that the contractor's heavy earthmoving equipment is properly maintained and the engines are tuned to the manufacturer's specifications. The project owner shall maintain all records on the site for six months following the start of commercial operation. The project owner will submit to the CPM for approval, the initial suitability report stamped by an independent California Licensed Mechanical Engineer or a Qualified Environmental Professional, 60 days prior to breaking ground on the project site. The project owner will submit to the CPM for approval, subsequent suitability reports as required, stamped by an independent

California Licensed Mechanical Engineer or a Qualified Environmental Professional, no later than 10 working day following a change in the suitability status of any construction equipment.

**AQ-SC6.** ~~AQ-75~~ The owner/operator shall provide a mitigation fee, for potential PM10 and PM10 precursor impacts, to the District APCO to provide PM10 and PM10 precursor reductions throughout the District. The amount of the fee shall equal \$1.2 million escalated at a rate equal to the Consumer Price Index from October 31, 2003 until the payment is made. The payment shall be made no later than 14 months prior to "first fire" of either turbine, or October 31, 2006, whichever is first. The fees shall be provided to the District, who with guidance from CARB or the CEC, will allocate the funds to programs such as the Lower-Emission School Bus Retrofit Program, the Carl Moyer program, or some other program designed to reduce PM10 and PM10 precursor emission in the District.

The District shall preferentially make available the mitigation fee funds to the Sweetwater Union High, the San Ysidro Elementary, the South Bay Elementary, or the Chula Vista Elementary Districts for school bus retrofits. The preference shall be in the form of a first right of refusal given to the above districts for no more than 2 years from the date of the first fee payment by the project owner. Any mitigation fee funds not used by the above school districts or available after 2 years from the date of the first fee payment by the project owner shall be made available for other program-appropriate emission reductions through the District's program.

**Verification:** No later than 20 days after delivery of the mitigation payment to the District, the project owner/operator shall provide to the CEC CPM a letter (or copy thereof) from the District APCO indicating receipt of the payment.

**AQ-SC7.** ~~AQ-76~~ The owner/operator shall assign to the project all PM10, VOC and SOX emission reductions that occur intentionally or incidentally during the formation of the NOx MERC for the project. The PM10, VOC and SOX emission reductions are part of the PM10 and PM10 precursor mitigation for the project.

**Verification:** The owner/operator shall provide a letter assigning to the project, and for the life of the project, all PM10, VOC and SOX emission reductions that occur intentionally or incidentally during the formation of the project's NOx MERCs. The letter shall be provided to the CEC CPM with the surrender of the ERC and MERC certificates identified in Condition AQ-57.

**AQ-SC8.** ~~AQ-77~~ The emissions of particulate matter less than 10 microns (PM10) from the Wet Surface Air Cooler shall not exceed 0.1 lbs/hr, based on design

specifications limiting circulating water flow rates to no more than 5 million gallons per hour and warranties limiting drift to no more than 0.0006%.

**Verification:** The project owner shall provide copies of Wet Surface Air Cooler specifications and a vendor warranty of the drift efficiency to the CEC CPM 60 days prior to WSAC equipment delivery on-site.

**AQ-SC9.** ~~AQ-78~~ Compliance with the WSAC PM10 emission limit shall be determined by circulating water sample analysis by independent laboratory within 60 days of initial operation and quarterly thereafter.

**Verification:** The results and field data collected from cooling tower blowdown water samples analysis shall be submitted to the CPM and the District as part of the quarterly reports required in Condition AQ-64.

**AQ-SC10.** ~~AQ-79~~ The project owner shall submit to the CPM for review and approval any modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or EPA, and any revised permit issued by the District or EPA, for the project.

**Verification:** The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

## **DISTRICT OTAY MESA GENERATING FDOC CONDITIONS**

### **General Conditions**

**AQ-1.** Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

**Verification:** The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission.

**AQ-2.** This equipment shall be properly maintained and kept in good operating condition at all times.

**Verification:** The project owner shall make the site and records available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission.



**AQ-3.** The permittee shall provide access, facilities, utilities, and any necessary safety equipment for source testing and inspection upon request of the Air Pollution Control District.

**Verification:** The project owner shall make the site and records available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission.

**AQ-4.** The permittee shall obtain any necessary District permits for all ancillary combustion equipment, including emergency engines, prior to on-site delivery of the equipment.

**Verification:** The project owner shall provide copies of the design details of the ancillary equipment to be installed, including emergency engines to the CPM and the District at least 90 days prior to the delivery of the equipment to the project site.

#### **Construction (At Or Prior To Initial Firing) Conditions**

**AQ-5.** At least 90 days prior to on-site delivery of the equipment, the applicant shall submit to the District the final selection and design details of the gas turbines and associated equipment to be installed, including all proposed post-combustion control systems and the auxiliary boiler. Such information may be submitted to the District as Trade Secret and confidential pursuant to District Rules 175 and 176.

**Verification:** The project owner shall provide copies of design details of the gas turbines and associated equipment to be installed, including all proposed post-combustion control systems (SCONOx or SCR) to the CPM and the District at least 90 days prior to the start of rough grading.

**AQ-6.** The exhaust stacks for each turbine power station shall be at least 160 feet (48.8 meters) in height.

**Verification:** The project owner shall provide copies of the design details of the gas turbines and associated equipment to be installed, including all proposed post-combustion control systems (SCONOx and SCR) to the CPM and the District at least 90 days prior to the start of rough grading.

**AQ-7.** The exhaust stacks for each turbine power station shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with District Method 3A, Appendix Figure 2.

**Verification:** The project owner shall provide copies of the design details of the gas turbines and associated equipment to be installed, including all proposed post-

combustion control systems (SCONOx and SCR) to the CPM and the District at least 90 days prior to the start of rough grading.

**AQ-8.** This equipment shall be fired on natural gas only. The sulfur content of the natural gas used shall not exceed 0.75 grains per 100 standard cubic feet of natural gas. The applicant shall maintain quarterly records of fuel sulfur content (grains of sulfur compounds per 100 scf of natural gas) and higher heating value (Btu/scf) and shall make these records available to District personnel upon request. Specifications, including sulfur content and higher heating value, of all natural gas, other than Public Utility Commission (PUC)-regulated natural gas, shall be submitted to the District for written approval prior to use.

**Verification:** These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-9.** ~~AQ-10~~ Prior to initial firing of each turbine, a Continuous Emission Monitoring System (CEMS) shall be installed and calibrated to measure the concentrations of oxides of nitrogen (NOx), carbon monoxide (CO), and oxygen (O<sub>2</sub>) in the exhaust gas on a dry basis, corrected to 15% oxygen. Upon initial firing, the permanent CEMS system, which has been properly calibrated, shall be operational. At least 60 days prior to the operation of the permanent CEMS, the applicant shall submit an operating protocol to the District for written approval. The CEMS shall remain in full operation at all times when the turbine is in operation. The permanent CEMS shall be properly installed, certified, and in full operation prior to on-going operations.

**Verification:** The project owner shall provide copies of the operating protocol for the CEMS system to the District, for written approval, and to the CPM at least 60 days prior to operation of the CEMS system.

**AQ-10.** ~~AQ-11~~ At least 60 days prior to initial firing of the gas turbines, the applicant shall submit a protocol to the District, for written approval, that shows how the permanent CEMS will be able to meet all District monitoring requirements and measure NOx emissions at a level of 1.0 ppmv plus or minus 10%. In the event that CEMS or testing technology to measure NOx emissions at a level of 1.0 ppmv is not commercially available 60 days prior to initial startup, the applicant shall submit a report to the District regarding the status of the development of such technology. If the principal impediment to meeting the 10% relative accuracy requirement is the test method, the applicant shall propose an alternative measurement technique, for District and US EPA approval. If the CEMS installed by the applicant is unable to meet the 10% relative accuracy requirement, the applicant shall include in the annual relative accuracy report to the District, a reassessment for the commercial availability status for the

technology. If the technology for the CEMS to meet the required accuracy becomes commercially available, the applicant shall retrofit the CEMS with such technology within 1 year of becoming available.

**Verification:** The project owner shall provide copies of the operating protocol for the CEMS system or a CEMS development status to the District, for written approval, and the CPM at least 60 days prior to the initial startup. If the principal impediment to meeting the 10% relative accuracy requirement is the test method, the applicant shall propose an alternative measurement technique, for District and US EPA approval. If the CEMS installed by the applicant is unable to meet the 10% relative accuracy requirement, the applicant shall include in the annual relative accuracy report to the District, a reassessment for the commercial availability status for the technology. If the technology for the CEMS to meet the required accuracy becomes commercially available, the applicant shall retrofit the CEMS with such technology within 1 year of becoming available.

**AQ-11.** ~~AQ-12~~ At least 60 days prior to initial firing of the gas turbines, the applicant shall submit a protocol to the District for approval which shall specify a method for determining the CO/VOC surrogate relationship that shall be used to demonstrate compliance with all VOC emission limits.

**Verification:** The project owner shall provide copies of the operating protocol for the CO/VOC surrogate relationship used to demonstrate compliance with all VOC limits to the District, for written approval, and the CPM at least 60 days prior to the initial firing of the gas turbines.

**AQ-12.** ~~AQ-13~~ Prior to initial firing, each turbine shall be equipped with continuous monitors to measure or calculate and record the following operational characteristics of each unit:

- natural gas flow rate (scfh),
- heat input rate (MMBtu/hr),
- exhaust gas flow rate (dscfm),
- exhaust gas temperature (°F), and
- power output (gross MW).

The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include calculation methodology, shall be submitted to the District for written approval at least 60 days prior to initial firing of the gas turbines. The monitors shall be in full operation at all times when the turbine is in operation.

**Verification:** The project owner shall provide copies of the operating protocol, including the calculation methodology for the CEMS system or a CEMS development status to the District, for written approval, and the CPM at least 60 days prior to initial firing of the gas turbines.

**AQ-13.** ~~AQ-14~~ All CEMS shall be certified, calibrated, maintained, and operated for the monitoring of NO<sub>x</sub> and CO in accordance with applicable regulations including the requirements of Sections 60.7(c), 60.7(d), and 60.13 of Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Performance Standards of Appendix B of 40 CFR 60, Quality Assurance Procedures of Appendix F of 40 CFR 60 and 40 CFR 75, and a protocol approved in writing by the District.

**Verification:** These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-14.** ~~AQ-15~~ The District shall be notified in writing at least two (2) weeks prior to any proposed changes to be made in any Continuous Emission Monitor (CEM) software which affects the value of data displayed on the CEM monitors with respect to the parameters measured by their respective sensing devices.

**Verification:** The project owner shall provide notices of any proposed changes made to the CEM software, which affects the value of data displayed on the CEM monitors with respect to the parameters measured by their respective sensing devices, to the District and the CPM at least two (2) weeks prior to the changes.

**AQ-15.** ~~AQ-16~~ No later than 90 days after each unit commences commercial operation, a Relative Accuracy Test Audit (RATA) shall be performed on the permanent CEMS in accordance with 40 CFR Part 75 Appendix A Specifications and Test Procedures. At least 45 days prior to the test date, the applicant shall submit a test protocol to the District for written approval. Additionally, the District shall be notified a minimum of 45 days prior to the test so that observers may be present. Within 45 days of completion of this test, a written test report shall be submitted to the District for approval.

**Verification:** The project owner shall provide copies of the CEMS RATA test to the District and the CPM no later than 90 days after each unit commences commercial operation. The project owner shall provide notice of the CEMS RATA test date and provide a CEMS RATA test protocol to the District and the CPM at least 45 days prior to the tests. The project owner shall provide a written CEMS RATA test report to the District, for approval, and the CPM within 30 days of the test.

**AQ-16.** ~~AQ-17~~ The total aggregate annual emissions from all emission units at the stationary source shall not exceed 100 tons of oxides of nitrogen (NO<sub>x</sub>) and shall not exceed 316 tons of carbon monoxide (CO) for each consecutive 12-calendar month period. The NO<sub>x</sub> and CO emissions shall begin accruing at the initial firing of each turbine. Compliance with this limit shall be verified using the CEMS system on each gas turbine (Application Nos. 973880 and 973881) as well as EPA- or ARB-certified NO<sub>x</sub> emissions factors, testing results, or

other representative emissions information for all other combustion equipment, including the auxiliary boiler.

**Verification:** The project owner shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NO<sub>x</sub> and CO, in tons per year, from all equipment, excluding exempt equipment, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-17.** ~~AQ-80~~ The total aggregate emissions of volatile organic compounds (VOC) from all emission units at the stationary source shall not exceed 47.5 tons for each consecutive 12-calendar month period. The VOC emissions shall begin accruing at the initial firing of each piece of equipment. Compliance shall be verified using testing results, EPA- or ARB-certified VOC emissions factors, and/or other representative emissions information for all other combustion equipment, including the auxiliary boiler.

**Verification:** The project owner shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NO<sub>x</sub> and CO, in tons per year, from all equipment, excluding exempt equipment, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-18.** The applicant shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NO<sub>x</sub>, CO and VOC, in tons per year, from all equipment, including the auxiliary boiler, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and made available to District personnel upon request.

**Verification:** The project owner shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NO<sub>x</sub>, CO and VOC, in tons per year, from all equipment, excluding exempt equipment, at this stationary source for the previous 12-month period. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-19.** ~~AQ-81~~ To ensure compliance with District Rule 69.2 and except during any period of time for which a variance from Rule 69.2 has been granted by the Air Pollution Control District Hearing Board, the emissions of oxides of nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide, from the auxiliary boiler shall not exceed

30 parts per million by volume on a dry basis (ppmvd) calculated over a 1-hour averaging period and corrected to 3% oxygen and the emissions of carbon monoxide (CO) from the auxiliary boiler shall not exceed 400 parts per million by volume on a dry basis (ppmvd) calculated over a 1-hour averaging period and corrected to 3% oxygen.

**Verification:** The project owner shall maintain records of the NO<sub>x</sub> and CO emission concentrations from the auxiliary boiler for all operating conditions. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-20.** ~~AQ-19~~ To ensure compliance with District Rule 69.3.1 and except during any period of time for which a variance from Rule 69.3.1 has been granted by the Air Pollution Control District Hearing Board, when operating without any post-combustion air pollution control equipment, the emissions of oxides of nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide, from each turbine shall not exceed 19.8 parts per million by volume on a dry basis (ppmvd) calculated over a 1-hour averaging period and corrected to 15% oxygen, excluding startups and shutdowns as defined in District Rule 69.3.1.

**Verification:** The project owner shall maintain records of the NO<sub>x</sub> emission concentrations of each gas turbine when operating with post-combustion air pollution control equipment. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-21.** ~~AQ-20~~ To ensure compliance with District Rule 69.3.1 and except during any period of time for which a variance from Rule 69.3.1 has been granted by the Air Pollution Control District Hearing Board, when operating with post-combustion air pollution control equipment, emissions of oxides of nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide, from each turbine shall not exceed 11.8 parts per million by volume on a dry basis (ppmvd) calculated over a 1-hour averaging period and corrected to 15% oxygen, excluding startups and shutdowns as defined in District Rule 69.3.1.

**Verification:** The project owner shall maintain records of the NO<sub>x</sub> emission concentrations of each gas turbine when operating with post-combustion air pollution control equipment. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-22.** ~~AQ-21~~ The total emissions from both turbines combined shall not exceed 1133 pounds per hour of oxides of nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide and averaged over a ~~rolling continuous~~ 1-hour period. These emissions limits shall apply during startups and shutdowns.

**Verification:** The project owner shall maintain records of the NO<sub>x</sub> mass emissions of each gas turbine when operating without any post-combustion air pollution control equipment. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-23.** ~~AQ-22~~ When operating with post-combustion air pollution control equipment, the total emissions from both turbines combined shall not exceed 412 pounds per hour of oxides of nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide and averaged over a ~~rolling continuous~~ 1-hour period. Additionally, when operating with post-combustion air pollution control equipment, the total emissions when only one turbine is in operation shall not exceed 283 pounds per hour of NO<sub>x</sub>, calculated as nitrogen dioxide and averaged over a rolling continuous 1-hour period. These emissions limits shall apply during startups and shutdowns.

**Verification:** The project owner shall maintain records of the NO<sub>x</sub> mass emissions of each gas turbine when operating without any post-combustion air pollution control equipment. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-24.** ~~AQ-23~~ The total emissions from both turbines combined shall not exceed 2738 pounds per hour of carbon monoxide (CO), averaged over a ~~rolling continuous~~ 1-hour period. These limits shall apply during startups and shutdowns.

**Verification:** The project owner shall maintain records of the CO emission concentrations of each gas turbine when operating, including startup and shutdowns. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

### **Commissioning Period Conditions**

**AQ-25.** ~~AQ-24~~ Beginning at initial firing of each turbine, a "Commissioning Period" for each turbine shall commence. This Commissioning Period shall end 120 days after initial firing or immediately after written acceptance of clear custody and control of the equipment is turned over to the applicant, whichever comes first.



During this Commissioning Period, only the requirements specified in Condition Nos. AQ-9, 12, 16, 17, 18, 19, 20, 21, 22, 23, and 24 shall apply.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating during the commissioning period. These records shall be included in the Commissioning Period Progress Report required in AQ-24, and maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission.

**AQ-26.** ~~AQ-25~~ Within 30 operating days after initial firing of each turbine, the applicant shall install post-combustion air pollution control equipment to minimize emissions from this equipment. The applicant may request an extension, not to exceed an additional 30 days, in writing for District approval. This request shall include all technical reasons as to why the extension is needed. Such an extension will only be granted if the applicant can demonstrate that such extension:

- (a) is not the result of neglect or disregard of any air pollution control requirement;
- (b) is not intentional or the result of negligence, as defined in District Rule 98;
- (c) is not the result of improper maintenance;
- (d) will not cause a nuisance;
- (e) is not likely to create an immediate threat or hazard to public health or safety;
- (f) will not interfere with the attainment or maintenance of any National or California Ambient Air Quality Standard; and
- (g) good cause is shown for the extension.

Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and shall be in full operation at all times when the turbine is in operation. Note that any day in which fuel is burned in this equipment shall be considered an operating day.

**Verification:** The project owner shall install post-combustion air pollution control equipment to minimize emissions from this equipment within 30 days after the initial firing of the gas turbines, unless the project owner requests an extension, not to exceed an additional 30 days, in writing for District approval.

**AQ-27.** ~~AQ-26~~ Within 10 days after the end of the Commissioning Period for each turbine, the applicant shall submit a written progress report to the District. This report shall include, at a minimum, the date that the Commissioning Period ended, the periods of startup, the emissions of NO<sub>x</sub> and CO during startup, and the emissions of NO<sub>x</sub> and CO during steady state operation with and without power augmentation. Emissions shall be in both ppmv and lbs/hr. This report shall also detail any turbine or emission control equipment malfunction, upsets,



repairs, maintenance, modifications, or replacements affecting emissions of air contaminants that occurred during the Commissioning Period.

**Verification:** The project owner shall submit a Commissioning Period Progress Report for each gas turbine to the District and the CPM within 10 days after the end of each gas turbine commissioning period.

### **Conditions For On-Going Operations**

**AQ-28.** ~~AQ-35~~ For the purposes of this Determination of Compliance and Authority to Construct, the period described as "on-going" operation of the turbines shall commence immediately following the end of the Commissioning Period. Condition Nos. AQ-9, 12, 16, 17, 18, 19, 20, 21, 22 and 23 shall continue to apply during on-going operations.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-29.** ~~AQ-82~~ Continuous monitors shall be installed on each turbine to monitor or calculate and record the following:

- ammonia stack concentration (ppmvd, corrected to 15% oxygen), and
- ammonia injection rate (lbs/hr).

The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. This protocol, which shall include calculation methodology, shall be submitted to the District for written approval at least 60 days prior to initial firing of the gas turbines with the SCR system. The monitors shall be in full operation at all times when the turbine is in operation.

**Verification:** The project owner shall provide copies of the CEMS installation, calibration, and maintenance protocol, including the calculation methodology, to the District for written approval, and the CPM at least 60 days prior to initial firing of the gas turbines with the SCR system.

**AQ-30.** ~~AQ-83~~ The emissions of ammonia (slippage) from each gas turbine exhaust stack shall not exceed 10.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen and averaged over a ~~rolling continuous~~ 1-hour period.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the

Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-31.** ~~AQ-36~~ The emissions of oxides of nitrogen (NOx) from each turbine, calculated as nitrogen dioxide, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data for each unit and averaged over each ~~rolling continuous~~ 1-hour period, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through an initial source test and annual source testing thereafter. This limit shall not apply to the first fifteen 1-hour average NOx emissions measurements above 2.0 ppmvd corrected to 15% oxygen in any rolling 12-month period for each gas turbine provided the following requirements are met:

- a. This equipment operates under any one of the following:
  - A) Rapid combustion turbine load changes due to the following conditions:
  - B) Load changes initiated by the California Independent Systems Operator (ISO) or a successor entity when the plant is operating under Automatic Generation Control; or
  - C) Activation of a plant automatic safety or equipment protection system which rapidly decreases turbine load
    - ii) The first two 1-hour reporting periods following the initiation or shutdown of a system injection pump
    - iii) The first two 1-hour reporting periods following the initiation of HRSG duct burners
    - iv) Events as the result of technological limitation identified by the operator and approved in writing by the District.
- b. The 1-hour average NOx emissions above 2.0 ppmvd corrected to 15% oxygen did not occur as a result of operator neglect, improper operation or maintenance, or qualified breakdown under District Rule 98.
- c. The qualified operating conditions described in (a) above are recorded in the plant's operating log within 24 hours of the event, and in the CEMS by 5:00 pm the next business day following the qualified operating condition. The notations in the log and CEMS shall describe the data and time of entry into the log/CEMS and the plant operating conditions responsible for NOx emissions exceeding the 2.0 ppmvd 1-hour average limit.
- d. The 1-hour average NOx concentration for periods that result from a qualified operating condition does not exceed 25 ppmvd corrected to 15% oxygen.

All NOx emissions during these events shall be included in all calculations of hourly, daily, and annual mass emission rates as required by this FDOC.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition, including documentation of compliance of any NOx limit excursions that are allowed under this condition, shall be included in the quarterly reports required in Condition AQ-64.

**AQ-32.** ~~AQ-37~~ The emissions of carbon monoxide (CO) from each turbine shall not exceed 6.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with these limits shall be based on CEMS data for each unit and averaged over each ~~rolling~~ continuous 3-hour period, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through an initial emissions source test and at least annual source testing thereafter.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-33.** ~~AQ-38~~ The emissions of volatile organic compounds (VOC) from each turbine, calculated as methane, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CO CEMS data for each unit, averaged over each ~~rolling continuous~~ 1-hour period or portion thereof, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation, and the District approved CO/VOC surrogate relationship. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on an initial emissions source test and at least annual source testing thereafter.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-34.** ~~AQ-39~~ When operated without duct firing, the emissions from each turbine shall not exceed the following emission limits, except during startup conditions, as determined by the Continuous Emissions Monitoring System (CEMS) and

continuous monitors and/or District approved emission source testing. Compliance with the NOx and CO limits shall be based on a ~~rolling~~-continuous 3-hour averaging period and compliance with the VOC limit shall be based on a ~~rolling-continuous~~ 1-hour averaging period.

<u>Pollutant</u>	<u>Emission Limit, lbs/hr</u>
Oxides of Nitrogen, NOx (calculated as NO2)	13.14
Carbon Monoxide, CO	24.0
Volatile Organic Compounds, VOC	4.58

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating without power augmentation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-35.** ~~AQ-40~~ When operated with duct firing, the emissions from this equipment shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and continuous monitors and/or District approved emission source testing. Compliance with the NOx and CO limits shall be based on a ~~rolling~~-continuous 3-hour averaging period and compliance with the VOC limit shall be based on a ~~rolling~~ ~~continuous~~-1-hour averaging period.

<u>Pollutant</u>	<u>Emission Limit, lbs/hr</u>
Oxides of Nitrogen, NOx (calculated as NO2)	15.95
Carbon Monoxide, CO	29.13
Volatile Organic Compounds, VOC	5.56

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating with power augmentation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-36.** ~~AQ-41~~ Fuel consumption by the duct burners for both turbines shall not exceed 3,881,000 MMBtu (HHV) per rolling 12-month period. Each time one or both turbines are operated with duct firing, the CEMS shall record the dates and fuel consumption for each duct burner. The CEMS shall also record the total duct burner fuel usage for each rolling 12-month period (in MMBtu). The applicant shall maintain a log that contains, at a minimum, the dates and fuel usage when one or both turbines are operated with duct firing. These records shall be

maintained on site for a minimum of five years and made available to District personnel upon request.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating with power augmentation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-37.** ~~AQ-42~~ When operated under startup conditions, the emissions from each turbine shall not exceed the following emission limits, averaged over each ~~rolling continuous~~ 1-hour period, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and continuous monitors and/or District approved emission source testing:

<u>Pollutant</u>	<u>Emission Limit, lbs/hr</u>
Oxides of Nitrogen, NOx (calculated as NO2)	240.0
Carbon Monoxide, CO	2706
Volatile Organic Compounds, VOC	48.0

**AQ-38.** ~~AQ-43~~ When operated under startup or shutdown conditions, the emissions from each turbine shall not exceed the following emission limits, totaled per event, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and continuous monitors and/or District approved emission source testing:

<u>Pollutant (during startups)</u>	<u>Emission Limit, lbs/ event</u>
Oxides of Nitrogen, NOx (calculated as NO2)	480
Carbon Monoxide, CO	5412
Volatile Organic Compounds, VOC	96

<u>Pollutant (during shutdowns)</u>	<u>Emission Limit, lbs/ event</u>
Oxides of Nitrogen, NOx (calculated as NO2)	80
Carbon Monoxide, CO	902
Volatile Organic Compounds, VOC	16

**Verification:** The project owner shall maintain records of the duration startups and shutdowns of each gas turbine. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-39.** ~~AQ-44~~ Startup for each gas turbine shall be defined as the period beginning with the introduction of fuel to the equipment and ending when the CEMS records two consecutive data points in compliance with the emission concentration limits of Condition AQ-31 for the gas turbine, not to exceed 6.0 hours.

**Verification:** The project owner shall maintain records of the duration of all startups of each gas turbine. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-40.** ~~AQ-45~~ Shutdown for each gas turbine shall be defined as the period beginning when the CEMS records a single data point not in compliance with the emission concentration limits of Condition AQ-31 and ending with the termination of fuel flow to the gas turbine, not to exceed 1.0 hours.

**Verification:** The project owner shall maintain records of the duration of all shutdowns of each gas turbine. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-41.** ~~AQ-46~~ Both gas turbines shall not be operated simultaneously in startup mode. Additionally, the auxiliary boiler shall not be operated in startup mode simultaneously with either turbine.

**Verification:** The project owner shall maintain records of the duration of all startups of each gas turbine and auxiliary boiler. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-42.** ~~AQ-47~~ The applicant shall maintain a log of all startups and shutdowns for each turbine and the auxiliary boiler. The log shall contain, at a minimum, the dates and times of each startup or shutdown, and the duration of each startup or shutdown. This log shall be maintained on site for a minimum of five years and made available to District personnel upon request.

**Verification:** The project owner shall maintain records of all startups and shutdown of each gas turbine and the auxiliary boiler. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The

information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-43.** ~~AQ-48~~ The emissions of particulate matter less than 10 microns (PM<sub>10</sub>) shall not exceed 9.0 lbs/hr when operated without duct firing and shall not exceed 11.5 lbs/hr for each turbine when operated with duct firing. Compliance with this limit shall be based on an initial emissions source test and at least annual source testing thereafter.

**Verification:** The project owner shall provide copies of the initial compliance and annual source test reports to the District and the CEC CPM within 60 days after completion of the compliance or source tests.

**AQ-44.** ~~AQ-84~~ Fuel consumption by the auxiliary boiler shall not exceed 762,120 MMBtu (HHV) per rolling 12-month period. The CEMS shall record the total auxiliary boiler fuel usage for each rolling 12-month period (in MMBtu). The applicant shall maintain a log that contains, at a minimum, the dates, times and fuel consumption during each auxiliary boiler startup and shutdown and the total auxiliary boiler fuel consumption for each rolling 12-month period. These records shall be maintained on site for a minimum of five years and made available to District personnel upon request.

**Verification:** The project owner shall maintain records of the operation of the auxiliary boiler. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-45.** ~~AQ-85~~ Once final selection and design details of the auxiliary boiler have been submitted to the District, specific operating parameters defining auxiliary boiler startups and shutdowns shall be established.

**Verification:** At least 90 days prior to on-site delivery of equipment, the project owner shall provide copies of design details of the auxiliary boiler, including any proposed post combustion control systems to the CPM and the District.

**AQ-46.** ~~AQ-86~~ The emissions of oxides of nitrogen (NO<sub>x</sub>) from the auxiliary boiler, calculated as nitrogen dioxide, shall not exceed 9.0 parts per million by volume on a dry basis (ppmvd) corrected to 3% oxygen. Compliance with this limit shall be based on an initial emissions source test and annual source testing thereafter. This limit shall not apply during startups and shutdowns of the auxiliary boiler.

**Verification:** The project owner shall provide copies of the initial compliance and annual source test reports to the District and the CEC CPM within 60 days after completion of the compliance or source tests.



**AQ-47.** ~~AQ-87~~ The emissions of carbon monoxide (CO) from the auxiliary boiler shall not exceed 50 parts per million by volume on a dry basis (ppmvd) corrected to 3% oxygen. Compliance with this limit shall be based on an initial emissions source test and annual source testing thereafter. This limit shall not apply during startups and shutdowns of the auxiliary boiler.

**Verification:** The project owner shall provide copies of the initial compliance and annual source test reports to the District and the CEC CPM within 60 days after completion of the compliance or source tests.

**AQ-48.** ~~AQ-88~~ The emissions of volatile organic compounds (VOC) from the auxiliary boiler, calculated as methane, shall not exceed 10.0 parts per million by volume on a dry basis (ppmvd) corrected to 3% oxygen. Compliance with this limit shall be based on an initial emissions source test and annual source testing thereafter. This limit shall not apply during startups and shutdowns of the auxiliary boiler.

**Verification:** The project owner shall provide copies of the initial compliance and annual source test reports to the District and the CEC CPM within 60 days after completion of the compliance or source tests.

**AQ-49.** ~~AQ-89~~ Startup for the auxiliary boiler shall be defined as the period beginning with the introduction of fuel to the equipment and ending when the CEMS records two consecutive data points in compliance with the emission concentration limits of Conditions 46, 47 and 48, not to exceed 1 hour.

**Verification:** The project owner shall maintain records of the duration of startups of the auxiliary boiler. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-50.** ~~AQ-90~~ Shutdown for the auxiliary boiler shall be defined as the period beginning when the CEMS records two consecutive data points not in compliance with the emission concentration limits of Conditions 46, 47 and 48, and ending with the termination of fuel flow to the auxiliary boiler, not to exceed 1 hour.

**Verification:** The project owner shall maintain records of the duration of shutdowns of the auxiliary boiler. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-51.** ~~AQ-49~~ Within 30 days after completion of the Commissioning Period, an initial emissions source test shall be conducted on each turbine and on the auxiliary



boiler by an independent, Air Resources Board (ARB) approved tester at the applicant's expense to show compliance with all applicable emission limits. A source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the following requirements:

- a. Measurements of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and stack gas oxygen content shall be conducted in accordance with the San Diego Air Pollution Control District Method 100, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- b. Measurements of particulate matter less than 10 microns shall be conducted in accordance with the U.S. Environmental Protection Agency (EPA) Methods 201A and 202, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- c. Measurements of volatile organic compounds (VOC) shall be conducted in accordance with San Diego Air Pollution Control District Methods 18 and 25A, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- d. Source testing shall be performed at no less than 80% of the turbine rating without duct firing, at no less than 80% of the turbine rating with duct firing, and at no less than 80% of the auxiliary boiler rating. If the applicant demonstrates to the satisfaction of the District that the turbine cannot operate at these conditions, then source testing shall be performed at the highest achievable continuous power rating.
- e. The following additional operating characteristics shall also be measured or calculated and recorded:
  - natural gas flow rate (scfh),
  - fuel higher heating value (Btu/scf),
  - heat input rate (MMBtu/hr),
  - exhaust gas flow rate (dscfm),
  - exhaust gas temperature (°F),
  - power output (gross MW), if applicable.

**Verification:** This project owner provide copies of the annual source test reports to the District for review and written approval, and the CPM within 60 days after the completion of the initial compliance testing.

**AQ-52.** ~~AQ-50~~ Within 30 days after completion of the Commissioning Period, an initial emissions source test shall be conducted by an independent, ARB approved tester at the applicant's expense to determine the emissions of toxic air contaminants and federal hazardous air pollutants (HAPs). A source test protocol shall be submitted to the District for written approval at least 60 days

prior to source testing. The source test shall demonstrate compliance with the following limits (for each turbine):

<u>Pollutant</u>	<u>Emission Limit, lbs/hr</u>
Acetaldehyde	0.09
Acrolein	0.01
Benzene	0.03
Ethyl Benzene	0.07
Formaldehyde	0.29
Naphthalene	3.66E-3
Polyaromatic Hydrocarbons (PAHs, (excluding naphthalene)	3.4 E-4
Toluene	0.29
Xylene	0.14

**Verification:** This project owner provide copies of the annual source test reports to the District for review and written approval, and the CPM within 60 days after the completion of the initial compliance testing.

**AQ-53.** ~~AQ-51~~ Within 60 days after completion of the initial source tests, a final test report shall be submitted to the District for review and approval. The testing contractor shall include, as part of the test report, a certification that to the best of his knowledge the report is a true and accurate representation of the test conducted and the results.

**Verification:** This project owner provide copies of the annual source test reports to the District for review and written approval, and the CPM within 60 days after the completion of the initial compliance testing.

**AQ-54.** ~~AQ-52~~ The final test report for the initial source tests shall also include a method for establishing a VOC/HAP surrogate relationship. This relationship, in conjunction with the CO/VOC surrogate relationship, shall be used to show continued compliance with all HAPs emission limits.

**Verification:** The project owner provide copies of the final source test report with a method to establish a VOC/HAP surrogate relationship to the District, for review and written approval, and the CPM within 60 days after the completion of the initial compliance testing.

**AQ-55.** ~~AQ-53~~ This equipment shall be source tested on at least an annual basis to show continued compliance with all applicable emission limits, unless otherwise directed in writing by the District. If this testing will be performed by someone other than the District, a source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the following requirements:

- a. Measurements of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and stack gas oxygen content shall be conducted in accordance with the San Diego Air Pollution Control District Method 100, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- b. Measurements of particulate matter less than 10 microns shall be conducted in accordance with the U.S. Environmental Protection Agency (EPA) Methods 201A and 202, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- c. Measurements of volatile organic compounds (VOC) shall be conducted in accordance with San Diego Air Pollution Control District Methods 18 and 25A, or equivalent, as approved by the U.S. Environmental Protection Agency (EPA).
- d. Source testing shall be performed at no less than 80% of the turbine rating without duct firing, at no less than 80% of the turbine rating with duct firing, and at no less than 80% of the auxiliary boiler rating. If the applicant demonstrates to the satisfaction of the District that the turbine cannot operate at these conditions, then source testing shall be performed at the highest achievable continuous power rating.
- e. The following additional operating characteristics shall also be measured or calculated and recorded:
  - natural gas flow rate (scfh),
  - fuel higher heating value (Btu/scf),
  - heat input rate (MMBtu/hr),
  - exhaust gas flow rate (dscfm),
  - exhaust gas temperature (°F),
  - power output (gross MW), if applicable.

**Verification:** This project owner provide copies of the annual source test reports to the District for review and written approval, and the CPM within 60 days after the completion of the initial compliance testing.

**AQ-56.** AQ-54 The emissions of any single federal hazardous air pollutant, and the aggregate of all federal hazardous air pollutants, shall not equal or exceed 10 tons or 25 tons, respectively, in any continuous 12 calendar month period. If emissions exceed these limits, the permittee shall apply to amend these limits and conduct a case-by case Maximum Achievable Control Technology (MACT) analysis in accordance with applicable federal EPA regulations.

**Verification:** The project owner shall maintain records of the mass emissions of hazardous air pollutants of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by

representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**Emission Offset Conditions**

**AQ-57.** ~~AQ-55~~ Prior to the initial firing of this equipment, the project owner shall surrender to the District the Class A Emission Reduction Credits (ERCs) or Mobile Emission Reduction Credits (MERCs) specified in the table below. The amount should be equivalent to 120 tons per year of NOx to offset the maximum permitted NOx emissions from this facility.

**Project Emission Reduction Credits**

Offset source		NOx	VOC
ERCs	US Foam		30.2
	US Foam	1.3	
	National Offset	4.4	
	Alcoa	1.21	
	Napp Systems		17.05
	Solar Turbines		25
	Designz Unlimited		10.3
	American Fashion	0.7	
	City of San Diego	2.71	
MERCs	San Diego Harbor Excursion: diesel to diesel	29.96	
	Western Maritime: diesel to diesel conversion	8.37	
	WMI: diesel to natural gas engines	35.25	
<b>ERCs: NOX AND VOC</b>		<b>83.90</b>	<b>82.55</b>

**Verification:** The project owner shall provide copies of the ERC or MERC certificates shown in the table to the District and the CPM 30 days prior to the combustion of fuel in the gas turbines.

**AQ-58.** ~~AQ-56~~ Beginning with the start of the ongoing emission reduction monitoring period as defined in “Alternative Mobile Source Emission Reduction Program for Replacing Heavy and Medium Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels Under Rule 27 (c)(1)(vi)” as approved on September 8, 2000 (herein referred to as the Alternative MERC Program), the owner or operator shall, on or before the last day of the second calendar month following the end of each ongoing emission reduction monitoring year:

- (a) For each ongoing emission reduction monitoring year, based on the quarterly activity levels submitted by the mobile source owners and the applicable calculation method specified in the Alternative MERC Program, perform a calculation of the annual average and annual aggregate ongoing emission

reductions and the ongoing emission reduction deficit, if any, for the MERCs surrendered to offset the facility's emissions;

- (b) Provide an annual report to the District that summarizes the annual average ongoing emission reductions for each MERC, aggregate ongoing emission reductions, and the ongoing emission reduction deficit, if any, and provides supporting calculations and documentation; and
- (c) If the calculated annual ongoing emission reduction deficit is positive, notify the District, provide a compliance schedule to correct the ongoing emission reduction deficit, and correct the ongoing emission reduction deficit in accordance with Subsection (h)(4) of the Alternative MERC Program.

**Verification:** The project owner shall submit an annual MERC report to the District and the CPM on or before the last day of the second calendar month following the end of each ongoing emission reduction monitoring year.

**AQ-59.** ~~AQ-57~~ Beginning with the second calendar year following the calendar year that the facility commences operations, the owner or operator shall, on or before March 1 of each calendar year:

- (a) Based on information supplied by the mobile source owners for each MERC surrendered to the District, notify the District if the MERC fractional employment is less than 0.8;
- (b) Based on information supplied by the mobile source owners for each MERC surrendered to the District, notify the District if the MERC fractional employment in primary service is less than 0.8; and
- (c) If one or more MERCs fractional employment or fractional employment in primary service is less than 0.8, provide a compliance schedule to correct any MERC shortfall and correct any MERC shortfall in accordance with Subsection (j)(4) of the Alternative MERC Program.

**Verification:** The project owner shall submit a report on MERC monitoring to the District and the CPM on or before March 1 of each calendar year.

**AQ-60. Deleted** ~~The permittee may apply for the refund of any unneeded ERCs or MERCs, or portion thereof, surrendered to the District to provide offsets for the facility's NOx emissions. To obtain such a refund the permittee must demonstrate a lower emission rate than the emission rate on which the total offset amount was based and accept practicably enforceable permit conditions that reduce potential NOx emissions to that lower level and apply for the refund within 3 calendar years of the District's approval of the initial permit to operate. Any MERCs or portions thereof, shall be refunded only if the provisions of~~

~~Subsection (m) of the Alternative MERC Program are satisfied and shall have their lifetimes and lifetime beginning date adjusted in accordance with Subsection (f)(5) of the Alternative MERC Program.~~

**Verification:** ~~The project owner shall submit any request for a refund of any unneeded NOx ERCs or MERCs or portion thereof to the District and the CPM within three (3) calendar years of the District's approval of the initial permit to operate.~~

**AQ-61.** ~~AQ-59~~ **On or before the expiration date, if any, of a MERC surrendered to offset the NOx emissions from this facility, Twenty (20) years after the initial firing of the equipment, additional Class A emission reduction credits equivalent to the expiring MERC shall be surrendered to the District to offset project emissions unless project emissions are reduced such that** the emissions of oxides of nitrogen (NOx) shall not exceed 1.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data for each unit and averaged over each 3-hour period, excluding hours when the equipment is operated under any startup condition. Additionally, the total annual emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, shall not exceed 50 tons per rolling 12-month period. Compliance with this limit shall be verified using the CEMS system on each gas turbine (Application Nos. 973880 and 973881)

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine during commissioning, optimization, replacement and operation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

#### **ADDITIONAL GENERAL CONDITIONS**

**AQ-62.** ~~AQ-60~~ For each emission limit expressed as pounds per hour or parts per million based on a 1-hour averaging period, compliance shall be based on each ~~rolling continuous 1-~~**clock** hour period using data collected at least once every 15 minutes when compliance is based on continuous emissions monitoring data.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine during commissioning, startup/shutdown, and operation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. Quarterly reports shall be sent to the CEC CPM within 60 days after each calendar quarter.

**AQ-63.** ~~AQ-61~~ For each emission limit expressed as pounds per hour or parts per million based on a 3-hour averaging period, compliance shall be based on each

~~rolling~~ continuous 3-clock hour period, not including startup and shutdown periods, using data collected at least once every 15 minutes when compliance is based on continuous emissions monitoring data.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine during commissioning, startup/shutdown, and operation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. Quarterly reports shall be sent to the CEC CPM within 60 days after each calendar quarter.

**AQ-64.** ~~AQ-62~~ All records required by this Authority to Construct shall be maintained on site for a minimum of five years and made available to District personnel upon request. In addition, quarterly reports of information recorded by these conditions, as specified, shall be sent to the CPM.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine during commissioning, optimization, replacement and operation. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. Quarterly reports shall be sent to the CEC CPM within 60 days after each calendar quarter.

**AQ-65.** ~~AQ-63~~ Pursuant to 40 CFR 72.30(b)(2)(ii) of the Federal Acid Rain Program, the applicant shall submit an application for a Title IV Operating Permit at least 24 months prior to the initial startup of this equipment.

**Verification:** The project owner shall submit an application for a Title IV Operating Permit to the District, and provide a copy of the application to the CPM, at least 24 months prior to the initial startup.

**AQ-66.** ~~AQ-64~~ The applicant shall comply with the continuous emission monitoring requirements of 40 CFR Part 75.

**Verification:** The project owner shall maintain records of the mass emissions and concentrations of each gas turbine when operating. These records shall be maintained on site for a minimum of five years and shall be available for inspection by representatives of the District, California Air Resources Board (CARB) and the Commission. The information gathered in this condition shall be included in the quarterly reports required in Condition AQ-64.

**AQ-67.** ~~AQ-65~~ The applicant shall submit an application to the District for a Federal (Title V) Operating Permit, in accordance with District Regulation XIV within 12 months of initial startup of this equipment.

**Verification:** The project owner shall submit an application for a Title V Operating Permit to the District, and provide a copy of the application to the CPM, within 12 months prior to the initial startup.

**TABLE 1  
BEST AVAILABLE FUGITIVE DUST CONTROL MEASURES**

<b>FUGITIVE DUST SOURCE CATEGORY</b>	<b>CONTROL ACTIONS</b>
Earth-moving (except construction cutting and filling areas, and mining operations)	<p>Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the CEC CPM. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
Earth-moving: Construction fill areas:	<p>Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the CEC CPM. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the CEC CPM, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>
Earth-moving: Construction cut areas and mining operations:	<p>Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.</p>
Disturbed surface areas (except completed grading areas)	<p>Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.</p>
Disturbed surface areas: Completed grading areas	<p>Apply chemical stabilizers within five working days of grading completion; OR</p> <p>Take actions (3a) or (3c) specified for inactive disturbed surface areas.</p>
Inactive disturbed surface areas	<p>Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR</p> <p>Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR</p>



FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	Water all roads used for any vehicular traffic at least once per every two hours of active operations; OR Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	Apply chemical stabilizers; OR Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR Install temporary coverings; OR Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
ALL CATEGORIES	Any other control measures approved by the CEC CPM as equivalent to the methods specified in Table 1 may be used.

**TABLE 2  
TRACK-OUT CONTROL OPTIONS**

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the CEC CPM as equivalent to the methods specified in Table 2 may be used.

**TABLE 3  
CONTROL MEASURES FOR WIND CONDITIONS EXCEEDING 25 MPH**

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	Cease all active operations; OR Apply water to soil not more than 15 minutes prior to moving such soil.

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Disturbed surface areas	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR Apply chemical stabilizers prior to wind event; OR Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR Take the actions specified in Table 1, Item (3c); OR Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	Apply chemical stabilizers prior to wind event; OR Apply water twice [once] per hour during active operation; OR Stop all vehicular traffic.
Open storage piles	Apply water twice [once] per hour; OR Install temporary coverings.
Paved road track-out	Cover all haul vehicles; OR Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

**IT IS SO ORDERED.**

Date: \_\_\_\_\_

STATE OF CALIFORNIA  
 ENERGY RESOURCES CONSERVATION  
 AND DEVELOPMENT COMMISSION



\_\_\_\_\_  
 KAREN DOUGLAS  
 Chair