

**STATE OF CALIFORNIA  
CALIFORNIA ENERGY COMMISSION**

**DOCKET**

**08-AFC-4C**

DATE \_\_\_\_\_

RECD SEP 16 2009

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Petition to Amend Decision  
Of Certification

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Docket No.  
08-AFC-4C

**PETITION TO MODIFY  
FOR THE ORANGE GROVE PROJECT**

September 9, 2009

In conformance with the requirements 1769(a) of the CEC's Siting Regulation (20 CCR 1769(a)) Orange Grove Energy, L.P., project owner, petitions the California Energy Commission (CEC) based on the following:

**DESCRIPTION OF THE MODIFICATION**

The Applicant is petitioning to modify Conditions of Certification AQ-15 through AQ-24, AQ-40, AQ-51, AQ-53, and AQ-56 that were included in the Final Commission Decision (FCD). These conditions were incorporated in the FCD verbatim from the Proposed Authority to Construct Conditions in the Final Determination of Compliance (FDOC) issued for the Orange Grove Project (Project) by the San Diego Air Pollution Control District (APCD) on December 4, 2008. Following the FCD, the APCD staff recommended changes to the Proposed Authority to Construct Conditions, and this petition is to make the Commission Conditions of Certification again match the APCD's Proposed Authority to Construct Conditions verbatim.

The proposed modifications to conditions are identified in Exhibit 1 with proposed changes shown. The APCD staff changes to the Proposed Authority to Construct Conditions were obtained by electronic mail on June 5, 2009. Relevant electronic mail correspondence between the APCD and the Applicant's project team has been included as Exhibit 2.

APCD staff's recommended changes to the Proposed Authority to Construct Conditions provide clarification on averaging periods and monitoring requirements for the continuous emission monitoring system (CEMs). These changes are administrative in nature and do not include alterations to any

emissions thresholds. Therefore, they will not affect any potential air quality impact associated with the Project as analyzed for the FCD.

#### **NECESSITY FOR THE MODIFICATION**

The conditions to be modified were taken verbatim from the Proposed Authority to Construct Conditions in the FDOC. Following the FCD, APCD staff recommended changes to the Proposed Authority to Construct Conditions, and this petition is to make the Commission Conditions of Certification again match the APCD conditions verbatim. The changes provide clarification on averaging periods and monitoring requirements for the continuous emission monitoring system (CEMs). Modification of the Commission's Conditions of Certification as petitioned will facilitate effective monitoring and documentation of compliance with both APCD and Commission air quality conditions and other applicable air quality LORS.

#### **INFORMATION NOT KNOWN AT THE TIME OF THE CERTIFICATION**

At the time of the Certification, the FDOC had been signed and approved for over four months, and the applicant was not aware of any impending revisions from the APCD.

#### **MODIFICATION SHOULD BE PERMITTED**

This modification should be permitted because it will facilitate effective environmental monitoring and reporting and will not result in any change in environmental impacts of the project compared to those already analyzed by the CEC.

#### **ANALYSIS OF THE IMPACTS THE MODIFICATION MAY HAVE ON THE ENVIRONMENT**

The proposed modification is administrative in nature and will not result in any physical change to the project or the impacts evaluated for the FCD. Therefore, there will be no adverse environmental impact.

#### **ANALYSIS OF THE IMPACT OF THE MODIFICATION ON THE FACILITY'S ABILITY TO COMPLY WITH APPLICABLE LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)**

The proposed modification will facilitate monitoring and reporting of the project's compliance with air quality LORS. The proposed modification will not adversely affect the Project's ability to comply with applicable LORS.

#### **DISCUSSION OF THE POTENTIAL EFFECT ON NEARBY PROPERTY OWNERS, THE PUBLIC AND PARTIES IN THE APPLICATION PROCEEDINGS.**

The proposed modification is administrative in nature and will not result in any physical change to the project or the impacts evaluated for the FCD. Therefore,

there will be no adverse effect on nearby property owners, the public, or parties in the application proceeding.

**STAFF APPROVED PROJECT MODIFICATION**

Orange Grove Energy requests staff approval of this modification because;

1. The implementation of the proposed modification will have no significant adverse impacts on the environment,
2. The modification will result in only minor changes to the Conditions of Certification outlined within the FCD,
3. The modification is administrative in nature and will not result in any physical change to the project or the impacts evaluated for the FCD.
4. The modification will facilitate effective environmental monitoring and reporting.
5. The project will comply with applicable LORS.



Signed: \_\_\_\_\_

Richard M. Jones  
Project Manager  
Orange Grove Energy, L.P.

Exhibits

Exhibit 1: Revised Authority to Construct Conditions as provided by the APCD in an Electronic Mail dated June 12, 2009

Exhibit 2: Electronic Mail Correspondence from APCD

**EXHIBIT 1**

**Revised Authority to Construct Conditions as provided by the APCD in  
an Electronic Mail dated June 12, 2009**

## **PROPOSED REVISION TO ORANGE GROVE ENERGY AUTHORITY TO CONSTRUCT CONDITIONS**

### **General Conditions**

1. This equipment shall be properly maintained and kept in good operating condition at all times.
2. The applicant shall operate the project in accordance with all data and specifications submitted with the application.
3. The applicant shall provide access, facilities, utilities, and any necessary safety equipment for source testing and inspection upon request of the Air Pollution Control District.
4. The applicant shall obtain any necessary District permits for all ancillary combustion equipment including emergency engines, prior to on-site delivery of the equipment.
5. The exhaust stacks for the combustion turbine shall be at least 80 feet in height above site base elevation.
6. The unit shall be fired on Public Utility Commission (PUC) quality natural gas. The permittee shall maintain, on site, quarterly records of the natural gas sulfur content (grains of sulfur compounds per 100 dscf of natural gas) and the higher and lower heating values (btu/scf) of the natural gas; and provide records to District personnel upon request.
7. 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 commencement of operation.
8. 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 after initial startup of this equipment.
9. The applicant shall comply with all applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO<sub>2</sub> allowances.
10. The total combined unit operating hours for the combustion turbines of Permit No. 985708 and 985711 shall not exceed 6,400 hours per calendar year. Unit operating hour is defined in 40CFR 72.2. (NSR)
11. The total combined operation of the combustion turbines under startup and shutdown conditions shall not exceed 400 hours per year.

12. The permittee shall comply with the applicable requirements in 40 CFR Parts 60, 72, 73, and 75.
13. Power output (net MW) from each turbine generator of Permit No. 985708 and 985711 to the grid shall not exceed 49.8 MW. (NSR)

Emission limits

14. For purposes of determining compliance based on source testing, the average of three subtests shall be used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein.
15. For each emission limit expressed as pounds per hour or parts per million based on a ~~one~~ clock-hour averaging period, compliance shall be based on ~~each rolling continuous one-hour period using~~ continuous emission data collected at least once every 15 minutes.
16. During startup, the emissions from each turbine shall not exceed the following emission limits as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing. Compliance with each limit shall be based on a ~~±~~ clock-hour averaging period.

<u>Pollutant</u>	<u>Limit, lbs/hour</u>
Oxides of Nitrogen (NOx), calculated as NO2	15.4
Carbon Monoxide (CO)	15.1
Volatile Organic Compounds (VOC)	2.6

17. During shutdown, the emissions from each turbine shall not exceed the following emission limits as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing. Compliance with each limit shall be based on a ~~±~~ clock-hour averaging period

<u>Pollutant</u>	<u>Limit, lbs/hour</u>
Oxides of Nitrogen (NOx), calculated as NO2	5.9
Carbon Monoxide (CO)	9
Volatile Organic Compounds (VOC)	1.7

18. During an hour when both a startup and a shutdown occur, the emissions from each turbine shall not exceed the following emission limits as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing. Compliance with each limit shall be based on a ~~±~~ clock-hour averaging period

<u>Pollutant</u>	<u>Limit, lbs/hour</u>
Oxides of Nitrogen (NOx), calculated as NO2	16.1
Carbon Monoxide (CO)	16.8
Volatile Organic Compounds (VOC)	2.8

19. The emissions concentration of oxides of Nitrogen (NO<sub>x</sub>), calculated as nitrogen dioxide (NO<sub>2</sub>), shall not exceed 2.5 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen and averaged over ~~one~~ a clock-hour period. Compliance with these limits shall be demonstrated continuously based on the CEMs data and at the time of the initial source test calculated as the average of three subtests. This limit shall not apply during the initial commissioning period or startup and shutdown periods as defined herein.
20. The emissions concentration of CO from the unit exhaust stack shall not exceed 6 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen and averaged over ~~one~~ a clock-hour period. Compliance with this limit shall be demonstrated at the time of the initial source test and continuously based on the CEMs data and based upon source testing calculated as the average of three subtests. This limit shall not apply during the initial commissioning period or startup and shutdown periods.
21. The VOC concentration, calculated as methane, measured in the exhaust stack, shall not exceed 2.0 ppmvd by volume corrected to 15% oxygen and averaged over each ~~one~~ clock-hour period. Compliance with this limit shall be demonstrated continuously based on source testing calculated as the average of three subtests. At the time of the initial compliance test, a District-approved CO/VOC surrogate relationship shall be established. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on annual source testing. This limit shall not apply during the commissioning period or during startup and shutdown conditions.
22. The emissions from each turbine shall not exceed the following emission limits, except during the initial commissioning period, startup and shutdown conditions, as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a ~~1~~ clock-hour averaging period.

<u>Pollutant</u>	<u>Limit, lbs/hour</u>
Oxides of Nitrogen (NO <sub>x</sub> ), calculated as NO <sub>2</sub>	4.3
Carbon Monoxide (CO)	6.1
Volatile Organic Compounds (VOC)	1.3

23. The emissions from each turbine shall not exceed the following emission limits, except during the initial commissioning period, as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a ~~1-hour~~ rolling 24-hour averaging period updated once each clock hour.

<u>Pollutant</u>	<u>Limit, lbs/day</u>
Oxides of Nitrogen (NO <sub>x</sub> ), calculated as NO <sub>2</sub>	141.2
Carbon Monoxide (CO)	182.2
Volatile Organic Compounds (VOC)	36.5

24. The emissions from each turbine shall not exceed the following emission limits, as determined by the continuous emission monitoring system (CEMs), continuous monitor and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a ~~1-hour~~ rolling 12-calendar month averaging period, updated once each calendar month.

<u>Pollutant</u>	<u>Limit, tons/year</u>
Oxides of Nitrogen (NOx), calculated as NO2	8.6
Carbon Monoxide (CO)	11.3
Volatile Organic Compounds (VOC)	2.3

25. Emissions of particulate matter 10 microns or less (PM10) shall not exceed 3.0 lbs per hour. Compliance with this limit shall be demonstrated based upon source testing calculated as the average of three subtests.

26. The discharge of particulate matter from the exhaust stack of each combustion turbine shall not exceed 0.10 grains per dry standard cubic foot. The District may require periodic testing to verify compliance with this standard.

27. Ammonia emissions from each turbine shall not exceed 5 parts per million volume on a dry basis (ppmvd) corrected to 15% oxygen. This limit shall not apply during the commissioning period or startup and shutdown periods. Compliance with this limit shall be demonstrated through source testing calculated as the average of three subtests and utilizing one of the following procedures:

- a. Calculate daily ammonia emissions using the following equation:

$$\text{NH}_3 = ((a - (b * c / 1,000,000)) * (1,000,000 / b)) * d$$

Where: a = ammonia injection rate (lbs/hour) / (17.0 lbs/lb-mole),

b = exhaust flow rate at 15% oxygen / (29 lbs/lb-mole)

c = change in measured NOx concentration (ppmvd @ 15% Oxygen)

across the catalyst,

d = ratio of measured ammonia slip to calculate ammonia slip as derived during compliance testing.

- b. Other calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% oxygen, as approved by the District.

28. When operating without SCR or oxidation catalyst during the initial commissioning period, the emission from each turbine shall not exceed 50 pounds per hour and the combined emissions from both turbines shall not exceed 65.4 pounds per hour of oxides of nitrogen (NOx), calculated as nitrogen dioxide and measured over each clock hour period. (Rule 20.3(d)(2)(i))

29. When operating without SCR or oxidation catalyst during the initial commissioning period, the emission from each turbine shall not exceed 43.9 pounds per hour and the combined emissions from both turbines shall not exceed 59 pounds per hour of carbon monoxide (CO), measured over each clock hour period. (Rule 23(d)(2)(i))

30. Visible emissions from the lube oil vents and the exhaust stack of the unit shall not exceed 20% opacity for more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)



31. Total aggregate emissions from all stationary emission units at this stationary source, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed the following limits in each rolling 12-calendar month period. The total aggregate emissions shall include emissions during all times that the equipment is operating, including but not limited to, emissions during periods of commissioning, startup, shutdown and tuning.
- |   |               |
|---|---------------|
| i. Oxides of Nitrogen (NO <sub>x</sub> ): | 50 tons/year  |
| ii. Carbon Monoxide (CO):                 | 100 tons/year |
| iii. Volatile Organic Compounds (VOC):    | 50 tons/year  |
| iv. Oxides of Sulfur (SO <sub>x</sub> ):  | 100 tons/year |
32. The emissions of any single federal Hazardous Air Pollutant (HAP) shall not equal or exceed 10 tons, and the aggregate emissions of all federal HAPs shall not equal or exceed 25 tons in any rolling 12-calendar month period. Compliance with these single and aggregate HAP limits shall be based on a methodology approved by the District for the purpose of calculating HAP emissions for this permit. If emissions exceed these limits, the permittee shall apply to amend permit to reflect applicable federal Maximum Achievable Control Technology (MACT) standards and requirements in accordance with applicable provisions (including timing requirements) of 40 CFR Part 63.

#### Ammonia - SCR

33. At least 90 days prior to the start of construction, the applicant shall submit to the District the final selection, design parameters and details of the selective catalytic reduction (SCR) and oxidation catalyst emission control systems. Such information may be submitted to the District as trade secret and confidential pursuant to District Rules 175 and 176.
34. Before operating an SCR system, continuous monitors shall be installed on each SCR system to monitor or calculate, and record the ammonia injection rate (lbs/hour) and the SCR catalyst temperature (°F). The monitors shall be installed, calibrated and maintained in accordance with a District approved protocol. This protocol, which shall include the calculation methodology, shall be submitted to the District for written approval at least 60 days prior to initial startup of the gas turbines with the SCR system. The monitors shall be in full operation at all times when the turbine is in operation.
35. Except during periods when the ammonia injection system is being tuned or one or more ammonia injection systems is in manual control (for compliance with applicable permits), the automatic ammonia injection system serving the SCR shall be in operation in accordance with manufacturer's specifications at all times when ammonia is being injected into the SCR. Manufacturer specifications shall be maintained on site and made available to district personnel upon request.

36. The concentration of ammonia solution used in the ammonia injection system shall be less than 20% ammonia by weight. Records of ammonia solution concentration shall be maintained on site and made available to district personnel upon request.

### Definitions

37. For the purposes of this Authority to Construct, startup conditions shall be defined as the time fuel flow begins until the time that the unit complies with the emission limits specified in this Authority to Construct but in no case exceeding 30 minutes per occurrence. Shutdown conditions shall be defined as the time preceding the moment at which fuel flow ceases and during which the unit does not comply with the emission limits specified in this Authority to Construct but in no cases exceeding 30 minutes per occurrence. The Data Acquisition and Recording System (DAS), as required by 40 CFR75, shall record these events. This condition may be modified by the District based on field performance of the equipment.
38. A CEMS protocol is a document approved in writing by the APCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.

### Testing

39. At least 60 days prior to initial startup of the gas turbines, the applicant shall submit a source test protocol to the District for approval. The source test protocol shall comply with the following requirements:
- a. Measurements of NO<sub>x</sub>, CO, and O<sub>2</sub> emissions shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and district Source Test, method 100, or alternative methods approved by the District and EPA;
  - b. Measurement of VOC emissions shall be conducted in accordance with EPA Methods 25A and/or 18, or alternative methods approved by the District and EPA;
  - c. Measurements of PM-10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA;
  - d. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District ST-1B or an alternative method approved by the District and EPA;
  - e. Source testing shall be performed at the most frequently used load level, as specified in 40 CFR part 75 Appendix A Section 6.52.1.d, provided it is not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the district that the unit cannot operate under these conditions . If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous level power level.

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- f. Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA
  - g. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.
40. Each turbine shall be equipped with continuous monitors to measure or calculate, and record, the following operational characteristics of each unit:
  - i. Hours of operation (hours),
  - ii. Natural gas flow rate (scfh),
  - iii. Heat input rate (MMBtu /hr),
  - iv. Exhaust gas flow rate (dscfm),
  - v. Exhaust gas temperature (°F), and
  - vi. Power output (gross MW).
  - vii. Water( for NOx control) injection rate (lbs/hour) if equipped with water injection.
  - viii. [SCR inlet temperature \(°F\)](#)
  - ix. [Ammonia injection rate \(lbs/hour\)](#)
41. At least 60 days prior to the initial startup of the gas turbines, the applicant shall submit a turbine operation monitoring protocol, which shall include relevant calculation methodologies to the District for written approval. The monitors shall be installed, calibrated, and maintained in accordance with the protocol. The monitors should be in full operation at all times when the turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the district upon request. The applicant shall make the site available for inspection of the turbine operation monitors and monitor maintenance records by representatives of the District, CARB, and the Energy Commissions.
42. The exhaust stacks for each turbine 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, Figure 2, and approved by the District.
43. If source testing will be performed by an independent contractor and witnessed by the District, a source test protocol shall be submitted to the District for written approval at least 30 days prior to source testing.
44. Within 45 days after completion of the source test or RATA, a final test report shall be submitted to the District for review and approval.
45. This turbine shall be source tested once each permit year (annual source test) to demonstrate compliance with the emission standards contained in this permit. For the purposes of this permit, a permit year is the 12-month period ending on the last day of the permit expiration month. It is the responsibility of the permittee to schedule the source test with the District. The source test shall be performed or witnessed by the District. Each annual source test shall be separated by at least 90 days. An annual CEMS RATA, where required, may be used to fulfill the annual source

testing requirement for NO<sub>x</sub> and CO. The source test and the NO<sub>x</sub> and CO RATA tests shall be conducted in accordance with the RATA frequency requirements of 40 CFR 75, Appendix B, Sections 2.3.1 and 2.3.3

### CEMS

46. The applicant shall comply with the continuous emission monitoring requirements of 40 CFR Part 75.
47. At least 60 days prior to the operation of the permanent CEMs, the applicant shall submit a CEMs operating protocol to the District for written approval. The applicant shall make the site available for inspection of the CEMs and CEMs maintenance records by representatives of the District, CARB, and the Energy Commission.
48. A monitoring plan in conformance with 40 CFR 75.53 shall be submitted to U.S EPA Region 9 and the District at least 45 days prior to the Relative Accuracy Test Audit test, as required in 40 CFR 75.62.
49. No later than 90 days after each unit commences commercial operation (defined for this condition as the instance when power is sold to the grid), a Relative Accuracy Test Audit (RATA) and other required certification tests shall be performed and completed on the CEMs in accordance with 40 CFR Part 75 Appendix A Specifications and Test Procedures. At least 60 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 30 days of completion of this test, a written test report shall be submitted to the District for approval.
50. The oxides of nitrogen (NO<sub>x</sub>) and oxygen (O<sub>2</sub>) CEMS shall be certified and maintained in accordance with applicable Federal Regulations including the requirements of Sections 75.10 and 75.12 of Title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75 and the CEMS protocol approved by the District. The carbon monoxide (CO) CEMS shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit, and the CEMS protocol approved by the District.
51. Continuous emission monitoring system (CEMS) shall be installed and properly maintained and calibrated to measure, calculate and record the following, in accordance with the District approved CEMS protocol:
  - a. Percent oxygen (O<sub>2</sub>) in the exhaust gas (%);
  - b. Average concentration of oxides of nitrogen (NO<sub>x</sub>) for each ~~continuous rolling~~ 1 clock-hour period, in parts per million (ppmv) corrected to 15% oxygen;

- c. Average concentration of carbon monoxide (CO) for each ~~continuous rolling 1~~ clock-hour period, in parts per million (ppmv) corrected to 15% oxygen;
  - d. Clock hour mass emissions of oxides of nitrogen (NOx), in lbs/hour;
  - e. Clock hour mass emissions of carbon monoxide (CO), in lbs/hour;
  - f. Annual calendar year mass emissions of oxides of nitrogen (NOX), in tons;
  - g. Annual calendar year mass emission of carbon monoxide (CO), in tons.
  - h. Natural gas flow rate to turbine in ~~kscf~~/hr.
52. The CEMS shall be in operation in accordance with the district approved CEMS monitoring protocol at all times when the turbine is in operation. A copy of the District approved CEMS monitoring protocol shall be maintained on site and made available to District personnel upon request.
53. When the CEMS is not recording data and the turbine is operating, hourly NOx emissions for the annual emission calculations shall be determined in accordance with 40 CFR 75 Subpart C. Additionally, hourly CO emissions for annual emission calculations shall be determined using CO emission factors to be determined from source test emission factors, recorded CEMS data, and fuel consumption data, in terms of pounds per hour of CO for the gas turbine. Emission calculations used to determine hourly emission rates shall be reviewed and approved by the District, in writing, before the hourly emission rates are incorporated into the CEMS emission data.
54. Any violation of any emission standard as indicated by the CEMS shall be reported to the district's compliance division within 96 hours after such occurrence. (H&S Code)
55. The CEMS shall be maintained and operated, and reports submitted, in accordance with the requirements of rule 19.2 Sections (d), (e), (f) (1), (f) (2), (f) (3), (f) (4) and (f) (5), and a CEMS protocol approved by the District.
56. An operating log or data acquisition and handling system (DAHS) records shall be maintained either on site or at a district-approved alternate location to record actual times and durations of all startups and shut-downs, quantity of fuel used (scf) in each clock hour, calendar month and 12 calendar month period and energy generated (MW-hr), (monthly and annually by calendar year), hours of daily operation and total cumulative hours of operation (monthly and annually by calendar year).
57. Except for changes that are specified in the initial approved NOx monitoring protocol or a subsequent revision to that protocol that is approved in advance, in writing by the District, the District shall be notified in writing at least thirty (30) days prior to any planned changes made in the CEMS /DAHS (including the programmable logic controller) software which affects the value of data displayed on the CEMS / DAHS monitors with respect to the parameters measured by their respective sensing devices or any planned changes to the software that controls the ammonia flow to the SCR. Unplanned or emergency changes shall be reported within 96 hours.

58. Fuel flowmeters with an accuracy of +/- 2% shall be maintained to measure the volumetric flow rate corrected for temperature and pressure. Correction factors and constants shall be maintained on site and made available to the district upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR part 75, Appendix D, and Section 2.1.6.

### Commissioning

59. Beginning at initial startup of each turbine, a Commissioning Period for each turbine shall commence. The Commissioning Period shall end after not more than 200 hours of gas turbine operation. During the Commissioning Period, only the emission limits specified in conditions 28 and 29 shall apply.
60. Within 200 hours of gas turbine operation, after initial startup of each turbine, the applicant shall install post-combustion air pollution control equipment to minimize emissions from this equipment. Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and, with the exception of periods during startup and shutdown, shall be in full operation at all times when the turbine is in stable operation.
61. 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, a minimum, the date 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. NO<sub>x</sub> and CO emissions shall be reported in both ppmv at 15 percent O<sub>2</sub> and lbs/hour. This report shall also detail any turbine or emission control equipment malfunction, upset, repairs, maintenance, modifications, or replacements affecting emissions of air contaminants that occurred during the Commissioning Period.
62. Only one combustion turbine shall be in commissioning mode at a time. Combustion turbine operation for commissioning shall only occur during the hours of 7:00 A.M. to 7:00 P.M.

### Additional General Conditions

All records required by this Authority to Construct shall be maintained on site for a minimum of five years and made available to the District upon request.

**EXHIBIT 2**  
**Electronic Mail Correspondence from APCD**


**Taylor, Joshua D.(Irvine,CA-US)**

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**Subject:** FW: email traffic copies with Camqui on FDOC revision

 **FW: Process with CEC to revise FCD to incorporate revised Air Conditions**

From: Murray, Doug (Windsor,CT-US) <[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)>  
To: Back, Elisha (Irvine,CA-US) <[EBack@trcsolutions.com](mailto:EBack@trcsolutions.com)>, Stenger, Joe (Irvine,CA-US) <[jstenger@trcsolutions.com](mailto:jstenger@trcsolutions.com)>, <[mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)>  
Date: 12 Jun 2009 - 1:34p.m.  
Viewed On: --

 Orange  
Grove  
Energy  
985708  
Revised  
Conditions  
to TRC 6-  
5-09.rtf -  
203k

E-

This attachment contains SDAPCD's suggested changes in WORD mark-up format. You indicated you would prepare a transmittal of this to Ron Yasny, correct? Pls. let me review the transmittal before you forward to CEC. Pls. copy Camqui on the final transmittal to Ron.

I think we are square on other SDAPCD submittals.

Thanks and have a good weekend.

doug m

From: Nguyen, Camqui [mailto:[Camqui.Nguyen@sdcounty.ca.gov](mailto:Camqui.Nguyen@sdcounty.ca.gov)]  
Sent: Friday, June 12, 2009 12:06 PM  
To: Murray, Doug (Windsor,CT-US)  
Cc: Back, Elisha (Irvine,CA-US); Stenger, Joe (Irvine,CA-US); [mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

I have not sent anything to Ron Yasny yet. The latest set of revised conditions is the version I sent to you on June 5. I am attaching them here again. Thanks,



Camqui

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From: Murray, Doug (Windsor,CT-US) [mailto:[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)]  
Sent: Friday, June 12, 2009 9:02 AM  
To: Nguyen, Camqui  
Cc: Back, Elisha (Irvine,CA-US); Stenger, Joe (Irvine,CA-US); [mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

Can you please provide us with the latest set of conditions you provided to Ron Yasny?

thanks,

doug m

From: Nguyen, Camqui [mailto:[Camqui.Nguyen@sdcounty.ca.gov](mailto:Camqui.Nguyen@sdcounty.ca.gov)]  
Sent: Friday, June 12, 2009 11:48 AM  
To: Murray, Doug (Windsor,CT-US)  
Cc: Back, Elisha (Irvine,CA-US); Stenger, Joe (Irvine,CA-US); [mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

Doug,

I did not know that OGE rather than SDAPCD needs to request the changes first. Please proceed the request with CEC then. Please keep us informed on the progress of the change and let us know if CEC needs any confirmation from us regarding the revised conditions. Thanks,

Camqui

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From: Murray, Doug (Windsor,CT-US) [mailto:[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)]  
Sent: Friday, June 12, 2009 6:02 AM  
To: Nguyen, Camqui  
Cc: Back, Elisha (Irvine,CA-US); Stenger, Joe (Irvine,CA-US); [mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

Camqui-

I think we are all set with the proposed changes as long as the conditions for the ancillary equipment are retained.

I understand that OGE (rather than SDAPCD) needs to request the changes to the conditions from CEC/Ron Yasny. Is this your understanding?

doug m

From: Nguyen, Camqui [mailto:[Camqui.Nguyen@sdcounty.ca.gov](mailto:Camqui.Nguyen@sdcounty.ca.gov)]  
Sent: Thursday, June 11, 2009 7:01 PM  
To: Murray, Doug (Windsor,CT-US)  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

Doug,

I plan to send the revised conditions to Ron Yasny tomorrow. I hope you do not have any further comments before I send them. If you do please let me know. Thanks,

Camqui

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From: Murray, Doug (Windsor,CT-US) [mailto:[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)]  
Sent: Monday, June 08, 2009 8:25 AM  
To: Nguyen, Camqui  
Cc: Eitelman, Steve (Windsor,CT-US); Brian Petermann; Back, Elisha (Irvine,CA-US); Allen Halling; James Langel; Jim Pomillo; Joe Bondank; Stenger, Joe (Irvine,CA-US); Jonathan Bader; Michael Blake; [mdubois@jpowerusa.com](mailto:mdubois@jpowerusa.com); [mjones@jpowerusa.com](mailto:mjones@jpowerusa.com); [ppower@segainc.com](mailto:ppower@segainc.com); [rambler@iccusa.us](mailto:rambler@iccusa.us); Ron Thomas; Taylor, Joshua D.(Irvine,CA-US); Tim Kerr  
Subject: RE: Process with CEC to revise FCD to incorporate revised Air Conditions

Camqui-

Consistency of the permit regarding emissions averaging, totals, and reporting periods makes design of the data acquisition and handling system (DAHS) more straightforward and less likely to contain any software bugs. Therefore, we are reviewing the proposed changes to the FDOC/FCD and want to confirm that the "rolling 12-calendar month period" referred to in Conditions 31 and 32 is defined the same way as Condition 24. That is, the rolling total 12-month emissions are updated once each calendar month, and not on a "sliding schedule" (e.g., daily updates).

Thank you for your attention.

Doug M

✉ **RE: Orange Grove Energy Revised Permit Condition**

From: Murray, Doug (Windsor,CT-US) <[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)>  
To: Nguyen, Camqui <[Camqui.Nguyen@sdcounty.ca.gov](mailto:Camqui.Nguyen@sdcounty.ca.gov)>, Stenger, Joe (Irvine,CA-US) <[jstenger@trcsolutions.com](mailto:jstenger@trcsolutions.com)>  
CC: Brian Petermann <[bpetermann@segainc.com](mailto:bpetermann@segainc.com)>, Back, Elisha (Irvine,CA-US) <[EBack@trcsolutions.com](mailto:EBack@trcsolutions.com)>, Mike Jones <[mjones@jpowerusa.com](mailto:mjones@jpowerusa.com)>  
Date: 02 Jun 2009 - 9:15a.m.  
Viewed On: --

Camqui-

I think we will have a few suggestions for clarification on the proposed FDOC changes. We are currently circulating a draft of the proposed modifications and will get back to you shortly.

thanks

doug m

From: Nguyen, Camqui [mailto:[Camqui.Nguyen@sdcounty.ca.gov](mailto:Camqui.Nguyen@sdcounty.ca.gov)]  
Sent: Monday, June 01, 2009 6:09 PM  
To: Murray, Doug (Windsor,CT-US); Stenger, Joe (Irvine,CA-US)  
Cc: Brian Petermann; Back, Elisha (Irvine,CA-US)  
Subject: RE: Orange Grove Energy Revised Permit Condition

Doug,

Thanks for your attention on this. I would appreciate to get your comments back this week to initiate the changes with CEC. CEC has said that if the changes are minor and administrative, perhaps CEC can issue a revised certification without a 30 day notice. Thanks,

Camqui

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From: Murray, Doug (Windsor,CT-US) [mailto:[DMurray@trcsolutions.com](mailto:DMurray@trcsolutions.com)]  
Sent: Thursday, May 28, 2009 8:19 AM  
To: Nguyen, Camqui; Stenger, Joe (Irvine,CA-US)  
Cc: Brian Petermann; Back, Elisha (Irvine,CA-US)  
Subject: RE: Orange Grove Energy Revised Permit Condition

Camqui-

Thank you for the opportunity to review the proposed changes. We are actively reviewing these changes and will provide comments shortly.

doug m

From: Nguyen, Camqui [mailto:[Camqui.Nguyen@sdcountry.ca.gov](mailto:Camqui.Nguyen@sdcountry.ca.gov)]  
Sent: Tuesday, May 26, 2009 6:59 PM  
To: Murray, Doug (Windsor,CT-US); Stenger, Joe (Irvine,CA-US)  
Cc: Brian Petermann  
Subject: Orange Grove Energy Revised Permit Condition

Doug,

We are making some minor changes to the permit conditions for the Orange Grove Energy peaker turbine project. It has to do mainly with averaging periods for emission limits and some additional data for the CEMS to monitor. Attached are the conditions with changes in double lined underline. Please review these changes and let me know if you have any comments before we send it to the CEC. Thank you,

Camqui

Douglas R. Murray, CCM  
Principal Consulting Meteorologist



Save a tree...please only print this e-mail and attachment if absolutely necessary.



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