DOCKETED

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Project Title:	Orange Grove Energy Project - Compliance
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Document Title:	Staff Analysis of the Petition to Amend
Description:	Replacement of like-kind components of the emission control system
Filer:	Joe Douglas
Organization:	California Energy Commission
Submitter Role:	Commission Staff
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DATE: June 9, 2016

TO: Interested Parties

FROM: Joseph Douglas, Compliance Project Manager

SUBJECT: Orange Grove Energy Power Project (08-AFC-4C)

Staff Analysis of the Proposed Petition to Amend to replace like-kind components of the emission control systems

On April 12, 2016, California Energy Commission (Energy Commission) staff docketed a petition to amend on behalf of Orange Grove Energy, L.P. requesting to modify the Final Decision for the Orange Grove Energy Power Project (OGEPP). The 96-megawatt facility was certified by the Energy Commission in its Decision on April 8, 2009, and began operation on June 17, 2010. The facility is located in the unincorporated area of Pala, in San Diego County, California.

The modifications proposed in the petition would change several Air Quality conditions of certification to allow OGEPP to restore worn parts of the emission control systems and to optimize the design of system components using like-kind part replacement where needed to improve resistance to wear and long-term reliability of the emission control systems, and to improve emission control performance. The amendment proposes to revise several Air Quality conditions of certification.

Energy Commission staff reviewed the petition, assessed the impacts of this proposal on environmental quality and on public health and safety, and proposes new conditions of certification and changes to existing Air Quality conditions of certification. With the implementation of the proposed changes, the facility would remain in compliance with applicable laws, ordinances, regulations, and standards and the proposed modifications would not result in significant adverse direct or cumulative impacts to the environment (Cal. Code Regs., tit. 20, § 1769).

The Energy Commission's webpage for this facility, http://www.energy.ca.gov/sitingcases/orangegrovepeaker/, has a link to the petition and the Staff Analysis on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option. The Energy Commission's Order regarding this petition will also be available from the same webpage.

This notice has been mailed to the Energy Commission's list of interested parties and property owners adjacent to the facility site. It has also been e-mailed to the facility listserv. The listserv is an automated Energy Commission e-mail system by which information about this facility is e-mailed to parties who have subscribed. To subscribe, go to the Energy Commission's webpage for this facility, cited above, scroll down the right side of the project's webpage to the box labeled "Subscribe," and provide the requested contact information.

Agencies and members of the public who wish to provide comments on the petition or Staff Analysis are asked to submit their comments by 5:00 p.m. on July 11, 2016. To use the Energy Commission's electronic commenting feature, go to the Energy Commission's webpage for this facility, cited above, click on the "Submit e-Comment" link, and follow the instructions in the on-line form. Be sure to include the facility name in your comments. Once submitted, the Energy Commission Dockets Unit reviews and approves your comments, and you will receive an e-mail with a link to them.

Written comments may also be mailed or hand delivered to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 08-AFC-4C
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with the Dockets Unit will become part of the public record of the proceeding.

If you have any questions, please contact Joseph Douglas, Compliance Project Manager, at (916) 653-4677, or by fax to (916) 654-3882, or via e-mail at: joseph.douglas@energy.ca.gov.

If you would like information on participating in the Energy Commission's amendment process, please contact the Public Adviser, Alana Mathews at (800) 822-6228 (toll-free in California), or via e-mail at publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at mediaoffice@energy.ca.gov.

Enclosure

Mail to list #7245
Orange Grove Listserv

ORANGE GROVE ENERGY POWER PROJECT (08-AFC-4C)
Petition to Amend the Commission Final Decision
EXECUTIVE SUMMARY

Joseph Douglas

INTRODUCTION

On April 12, 2016, Orange Grove Energy, L.P. filed a petition with the California Energy Commission (Energy Commission) requesting to modify the Commission Decision for the Orange Grove Energy Power Project (OGEPP).

Enclosed is Staff's Analysis of these proposed changes. The 96-megawatt facility was certified by the Energy Commission in its Decision on April 8, 2009, and began operation on June 17, 2010. The facility is located in the unincorporated area of Pala, in San Diego County, California.

The purpose of the Energy Commission's review process is to assess any impacts the proposed modifications would have on environmental quality and on public health and safety. The process includes an evaluation of the consistency of the proposed changes with the Decision, and if the project, as modified, will remain in compliance with applicable laws, ordinances, regulations, and standards (LORS) (Cal. Code Regs., tit. 20, § 1769).

DESCRIPTION OF PROPOSED MODIFICATIONS

The amendment would allow OGEPP to restore worn parts of the emission control systems and to optimize the design of system components using like-kind part replacement where needed to improve resistance to wear and long-term reliability of the emission control systems, and to improve emission control system efficiency. The amendment proposes to revise several Air Quality conditions of certification.

NECESSITY FOR THE PROPOSED MODIFICATIONS

Due to increasing use of renewable energy sources and other factors, the facility has experienced substantially more cycling (including starts, partial load operation, and shutdowns) than was anticipated during the original design and is showing wear as a result and is requesting Replacement of in-kind of worn parts of the facility's emissions control systems, with optimized designs of system components to improve resistance to wear and long-term reliability of the emission control systems. These improvements would also improve efficiency and reliability to the operation of the emissions control systems.

STAFF'S ASSESSMENT OF THE PROPOSED PROJECT CHANGES

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable (LORS). Staff's conclusions reached in each technical area are summarized in **Executive Summary Table 1**.

Executive Summary Table 1
Summary of Impacts to Each Technical Area

TECHNICAL AREAS REVIEWED	STAFF RESPONSE			New or Modified Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact or LORS noncompliance*	Process As Amendment	
Air Quality			X	X
Biological Resources		X		
Cultural Resources	X			
Efficiency /Reliability		X		
Facility Design		X		
Geological Resources	X			
Hazardous Materials Management		X		
Land Use	X			
Noise and Vibration		X		
Paleontological Resources	X			
Public Health and Safety		X		
Socioeconomics	X			
Soil and Water Resources	X			
Traffic and Transportation		X		
Transmission Line Safety & Nuisance	X			
Transmission System Engineering	X			
Visual Resources		X		
Waste Management		X		
Worker Safety and Fire Protection		X		

*There is no possibility that the modifications may have a significant effect on the environment and the modification will not result in a change or deletion of a condition adopted by the commission in the final decision or make changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards (LORS) (Cal. Code Regs., tit. 20, § 1769 (a)(2)).

Staff has determined that the technical or environmental areas of Cultural Resources, Geological Resources, Land Use, Paleontological Resources, Socioeconomics, Soil and Water Resources, Transmission Line Safety and Nuisance, and Transmission System Engineering are not affected by the proposed changes.

For the technical areas of Biological Resources, Efficiency/Reliability, Facility Design, Hazardous Materials Management, Noise and Vibration, Public Health and Safety, Traffic and Transportation, Visual Resources, Waste Management, and Worker Safety and Fire Protection, staff has determined that the modified project would continue to comply with applicable LORS and no changes to any conditions of certification are necessary to ensure impacts remain less than significant. Staff notes the following for these technical areas:

- **Biological Resources.** The proposed project modifications would occur wholly within the confines of the OGEPP site, no ground disturbance activities would occur, and any noise generated by the activities would be comparable to approved maintenance activities. As a result, no significant effects to biological resources would occur as a result of this project modification.

- **Efficiency/Reliability.** The replacement is due to premature degradation and wear, and therefore, it does not improve the power plant's thermal efficiency or operational reliability beyond the originally-intended levels in the Decision, but it improves them from what the plant can currently achieve.
- **Facility Design.** The replacement of the carbon monoxide (CO) catalyst and the ammonia injection grid, and the repairs to the CO and selective catalyst reduction (SCR) housings would not substantially change the facility design. No foundation construction would occur, and the replacement components would be similar to the original components.
- **Hazardous Materials Management**. With the implementation of existing Condition of Certification **HAZ-1** (a list of hazardous materials contained at the facility), the replacement of the CO catalyst, the ammonia injection grid and repairs to the CO and SCR housings would not cause a significant effect on power plant hazardous materials.
- **Noise and Vibration.** With the limited equipment anticipated to be used during this change out and limited scope of installation activities, noise levels would be no greater than what occurs periodically from maintenance work. Any noise generated during these activities would result in a less-than-significant impact with implementation of the existing Noise conditions of certification in the Decision. The replacement would have no effect on plant operational noise.
- **Public Health and Safety.** Installation of the new components would use only one or two pieces of construction equipment at any time and, therefore, would generate minor quantities of fuel burning emissions. The impact of construction would be limited, short-term and negligible. Emissions from diesel particulate matter would be no greater than what can occur from maintenance that would be needed periodically and performed under authorization of the Decision. Therefore, staff does not expect any impact for public health during construction.
- **Traffic and Transportation**. The proposed modification would require an average of 28 construction worker round trips and two truck deliveries per day over a period of approximately four weeks. This short term and low volume traffic generation would not have a significant impact on State Route 76 or Pala Norte Road. In compliance with Condition of Certification **TRANS-1**, the contractor will obtain oversize load permits as needed for equipment deliveries.
- **Visual Resources.** The proposed installation of like-kind replacement components on the emission control systems would not substantially alter existing views from sensitive viewing areas located offsite and, therefore, visual impacts would be insignificant. The proposed modifications would need to meet the requirements of Condition of Certification **VIS-1** (Surface Treatment of Project Structures and Buildings).
- **Waste Management.** The project owner would be required to comply with Condition of Certification **WASTE-5**, and submit the actual construction totals for construction waste generated from the maintenance work on the emission control systems at the OGEPP.

- **Worker Safety and Fire Protection**. With the implementation of existing conditions of certification, the replacement of the CO catalyst and the ammonia injection grid, and the repairs to the CO and SCR housings would not have a significant effect on the safety of power plant personnel.

For the technical area of Air Quality, staff has proposed new and revised conditions of certification to assure compliance with LORS and to reduce potential environmental impacts to a less than significant level. The details of the proposed condition changes can be found in the attached **AIR QUALITY STAFF ANALYSIS**.

CONCLUSIONS AND RECOMMENDATIONS

Staff concludes that with the adoption of the attached conditions of certification, the modified OGEPP would continue to comply with applicable federal, state, and San Diego Air Pollution Control District (District) air quality LORS. The proposed modifications would not result in significant air quality or greenhouse gas (GHG) related impacts.

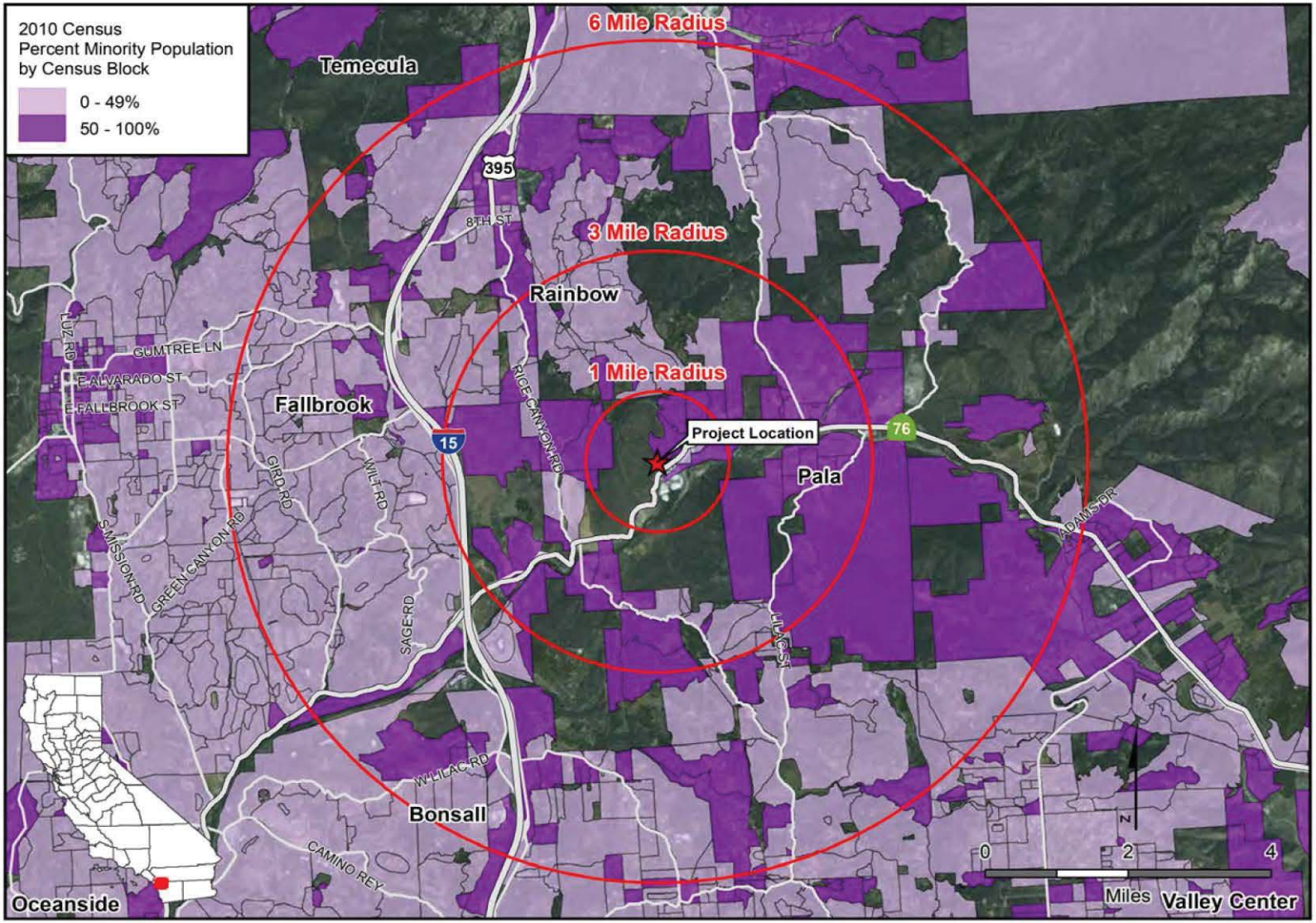
The replacement in-kind components would be designed to meet the emission limits specified in the conditions of certification. Even though the facility owner does not expect any adverse impact to air quality from startup, tuning, or operation following repair and installation work, the District added two new conditions to ensure compliance with permitted emission limits after the completion of the maintenance and repair work. Staff proposes to add these new conditions as **AQ-59** and **AQ-60**. The District also made some administrative changes to other conditions. In addition, staff found some inconsistencies between the Energy Commission approved conditions of certification and the District approved conditions. Staff proposes to revise the conditions of certification to ensure the current District requirements and the Decision agree.

The **Environmental Justice (EJ) Population Figure (Attached)** shows the presence of an EJ population within a six-mile radius of the OGEPP site based on race and ethnicity as defined in the Council on Environmental Quality's *Environmental Justice: Guidance Under the National Environmental Policy Act*.

With the proposed new and revised Air Quality conditions of certification, the facility would remain in compliance with applicable LORS and the proposed modifications would not result in significant adverse direct or cumulative impacts to the environment. Therefore, with the implementation of these conditions, impacts will continue to be reduced to less than significant for any population in the project's six-mile radius, including the EJ population represented in **Environmental Justice Population Figure**.

ENVIRONMENTAL JUSTICE POPULATION FIGURE

Orange Grove Energy Power Plant Project - Census 2010 Minority Population by Census Block



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: Census 2010 PL 94-171 Data

Hazardous Materials Management, Noise and Vibration, and Waste Management staff have determined that, with the project's continued compliance with existing conditions of certification, impacts would continue to be less than significant for any population in the project's six-mile radius, including the EJ population represented in **Environmental Justice Population Figure**.

Public Health, Traffic and Transportation, and Visual Resources staff have identified less than significant impacts. Therefore, impacts would be less than significant for any population in the project's six-mile radius, including the EJ population represented in **Environmental Justice Population Figure**.

Staff also concludes that the following required findings, mandated by Title 20, California Code of Regulations, section 1769 (a)(3), can be made, and staff recommends approval of the petition by the Energy Commission:

- The proposed modifications would not change the findings in the Energy Commission's Decision pursuant to Title 20, California Code of Regulations, section 1755;
- There would be no new or additional unmitigated, significant environmental impacts associated with the proposed modifications;
- The facility would remain in compliance with all applicable LORS.
- The proposed modifications would be beneficial to the project owner and the public because it would allow the project owner to optimize operations and maximize electricity output; and
- The proposed modifications are justified because there has been a substantial change in circumstances since the Energy Commission certification as the facility has experienced substantially more cycling than was anticipated during the original design because of the increasing use of renewable energy sources, and is showing wear as a result.

ORANGE GROVE ENERGY POWER PROJECT (08-AFC-4C)
Petition to Amend – Emissions Controls Reliability Improvements
AIR QUALITY STAFF ANALYSIS

Wenjun Qian, Ph.D., P.E.

SUMMARY OF CONCLUSIONS

With the adoption of the attached conditions of certification, the modified Orange Grove Energy Power Project (OGEPP) would continue to comply with applicable federal, state, and San Diego Air Pollution Control District (District) air quality laws, ordinances, regulations and standards (LORS). The proposed modifications would not result in significant air quality or Greenhouse Gas (GHG) related impacts.

INTRODUCTION

On April 12, 2016, Orange Grove Energy, L.P. filed a petition with the California Energy Commission (Energy Commission) requesting to conduct repair and maintenance work on the emission control systems at the OGEPP, which would include replacement in-kind of components, but with upgrades to improve reliability and efficiency.

On May 5, 2016, the District issued an Authority to Construct for the proposed repair and maintenance work. The District added two new conditions to ensure compliance with the permitted emission limits. The District also made some administrative changes to other conditions. In addition, staff found some inconsistencies between the Energy Commission approved conditions of certification and the District approved conditions. Staff proposes to revise the conditions of certification to provide consistency with the current District requirements.

SUMMARY OF THE DECISION

The OGEPP was certified by the Energy Commission on April 8, 2009, and began commercial operation on June 17, 2010. The Commission Decision (CEC 2009) concluded that the implementation of the conditions of certification would ensure that all air quality impacts would be mitigated below a significant level and that the OGEPP would conform with all LORS relating to air quality.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS) COMPLIANCE

The Commission Decision (CEC 2009) and the March 2012 Commission Order (to modify conditions of certification [CEC 2012]) concluded that the facility complied with all applicable federal, state, and District air quality LORS. Staff has not identified additional applicable LORS relative to the current amendment petition.

EMISSION CONTROL SYSTEM RELIABILITY IMPROVEMENTS

Due to increasing use of renewable energy sources and other factors, the facility has experienced substantially more cycling (including starts, partial load operation, and shutdowns) than was anticipated during the original design and is showing wear as a result. After five years of operation, portions of the casing elements of the selective catalytic reduction (SCR) and carbon monoxide catalyst (COC) emission control system are showing signs of premature aging, including surface rust and the need for several minor repairs. The facility owner's recent internal inspection of the SCR and COC emission control systems revealed loss of insulation resulting in the external hot-spots on casing elements. Degradation is being observed in both the carbon monoxide (CO) and oxides of nitrogen (NOx) removal efficiency.

Additionally, combustion turbine exhaust flow, cooling air, and ammonia flow distributions are inconsistent across the inlet to the reactor beds. Improvements to flow distribution would be implemented to improve efficiency and reliability to the operation of the emissions control systems. The facility owner proposes replacement in-kind of worn parts of the facility's emissions control systems, with optimized designs of system components to improve resistance to wear and long-term reliability of the emission control systems.

The facility owner expects the installation activities, including mobilization and demobilization, to occur over a period of approximately four weeks. The facility owner anticipates an average work crew of about 28 with one 50-ton crane and one 10,000-lb fork lift to complete the work. Installation would not require earthwork or ground disturbance. The facility owner does not expect any aspect of the work activities to result in impacts different from those from maintenance and repair that could occur under authorization of the existing Energy Commission Decision.

Upon completion of installation and repair work, startup, tuning, and optimization would take place on one unit at a time, for no longer than 12 hours per unit. The facility owner does not expect emissions during startup and initial tuning would exceed the emission limits specified in the conditions of certification. If situations occur that cannot be rectified in a timely manner, the facility owner would shut down the unit to minimize emissions.

The replacement in-kind components would be designed to meet the emission limits specified in the conditions of certification. Even though the facility owner does not expect any adverse impact to air quality from startup, tuning, or operation following repair and installation work, the District added two new conditions to ensure compliance with permitted emission limits after the completion of the maintenance and repair work. Staff proposes to add these new conditions as **AQ-59** and **AQ-60**.

Other changes in District conditions

In addition to the new conditions, the District also made some administrative changes to other conditions in the new ATC for the combustion turbines, most of which are minor administrative changes. In addition to the new ATC for the combustion turbines, staff also reviewed the current Permits to Operate (PTOs) for the black start engine and the fire pump engine. Staff found inconsistencies between the Energy Commission approved conditions of certification with the ATC and PTO conditions (see more details in the **INCONSISTENCIES IN PERMIT CONDITIONS** section). Staff proposes to revise the conditions of certification to provide consistency with current District requirements.

The ATC and PTOs are different documents. In order to match the District numbering system within one document, staff proposes to number conditions of certification for the combustion turbines as "**AQ-xx**", conditions of certification for the black start engine as "**AQ-BSExx**", and conditions of certification for the fire pump engine as "**AQ-FPxx**", where "**xx**" represents numbers starting from 1 for each type of equipment.

The relatively major modifications in the ATC for the combustion turbines are shown below as well as in **Air Quality Table 1**. The other minor administrative modifications are also shown in **Air Quality Table 1**.

In order to avoid reference to the wrong condition, the District now identifies ATC condition 26 as the Ammonia Hourly Monitoring Condition. Instead of referring to the specific condition number, the District ATC condition 48 now refers to the Ammonia Hourly Monitoring Condition so that changes in condition numbering will not affect the condition. Staff proposes to revise the corresponding Decision Conditions of Certification **AQ-24** and **AQ-47** accordingly. Staff also proposes to renumber **AQ-24** and **AQ-47** as **AQ-26** and **AQ-48** respectively and make other minor administrative changes to match ATC conditions 26 and 48.

The District reduced the emissions limits in ATC conditions 28 and 29 to ensure a 1 percent margin from the District's rule-based major source emissions thresholds to ensure that the facility is a minor source. Staff proposes to revise the corresponding Conditions of Certification **AQ-26** and **AQ-27** accordingly to improve enforceability. Staff also proposes to renumber **AQ-26** and **AQ-27** as **AQ-28** and **AQ-29** respectively and make other minor administrative changes to match ATC conditions 28 and 29.

The District added more details in ATC condition 35 to require the facility owner to submit a source test protocol for approval for any source test, or any Relative Accuracy Test Audit (RATA) and other required certification tests. The District also revised ATC condition 35 to require the source test protocol to not only comply with the requirements in ATC condition 35, but also any other applicable requirements of the permit. The District revised ATC condition 35 to require the alternative test methods to be approved by not only the District, but also by the U.S. Environmental Protection Agency (U.S. EPA). Staff proposes to revise the corresponding Condition of Certification **AQ-35** accordingly. Staff proposes to delete the obsolete reference to the initial source test in the verification for **AQ-35**. To be consistent with the new ATC condition 46, staff also proposes to change the timeline for submitting the source test protocol from 60 days to 30 days prior to the source test in the verification for **AQ-35**.

In ATC condition 41, the District changed the timeline for submitting the final written test report from 45 days to 30 days after the completion of a renewal source test or RATA performed by an independent contractor. Staff proposes to revise the corresponding Condition of Certification **AQ-40** accordingly and renumber it as **AQ-41**.

The District revised ATC condition 46 to provide more details of the applicable requirements for RATA and other certification tests and for consistency with ATC condition 40. Staff proposes to revise the corresponding Condition of Certification **AQ-45** accordingly and renumber it as **AQ-46**.

Inconsistencies in permit conditions

Staff also compared the Energy Commission approved conditions of certification with other ATC conditions for the combustion turbines and the PTO conditions for the emergency black start engine and the emergency fire pump engine.

Staff found the following inconsistencies between the Energy Commission approved conditions of certification and the District permit conditions. Staff proposes to revise the conditions of certification to provide consistency with current District requirements.

1) **Obsolete conditions of certification**

   Conditions of Certification **AQ-7** and **AQ-8** require the facility owner to submit an application for Title IV Operating Permit at least 24 months prior to commencement of operation and an application for Title V Operating Permit within 12 months after initial startup of the equipment. The applications for the Title IV and Title V operating permits were submitted according to the timelines specified in **AQ-7** and **AQ-8**. Staff believes that **AQ-7** and **AQ-8** are obsolete and should be deleted.

2) **District conditions not in Energy Commission Decision**

   The 40 CFR 60 Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) requirements were not included as conditions in the District's 2008 Final Determination of Compliance or 2009 Energy Commission Decision. The District later added three conditions (14, 15, and 16) addressing the 40 CFR 60 Subpart KKKK requirements when it issued the permit for the combustion turbines. Staff proposes to add these conditions as new Conditions of Certification **AQ-14**, **AQ-15**, and **AQ-16**.

   The District ATC condition 57 for the combustion turbines, PTO condition 14 for the black start engine, and PTO condition 18 for the fire pump engine specify that the District permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies. Staff proposes to add them as new Conditions of Certification **AQ-57**, **AQ-BSE14**, and **AQ-FP18** to improve enforceability.

The District ATC condition 58 for the combustion turbines, PTO condition 15 for the black start engine, and PTO condition 19 for the fire pump engine require the facility owner to comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act. Staff proposes to add them as new Conditions of Certification **AQ-58**, **AQ-BSE15**, and **AQ-FP19**.

For the black start engine, the District PTO includes three conditions (8, 9, and 10) addressing the 40 CFR 63 Subpart ZZZZ requirements regarding when the engine oil and filter need to be changed and when the air cleaner, hoses and belts need to be inspected. Staff proposes to add these conditions as new Conditions of Certification **AQ-BSE8**, **AQ-BSE9**, and **AQ-BSE10**. Similar conditions (11, 12, and 13) are included in the District PTO for the fire pump engine. Staff proposes to add these conditions as new Conditions of Certification **AQ-FP11**, **AQ-FP12**, and **AQ-FP13**.

For the fire pump engine, the District PTO condition 4 requires operation and maintenance to be consistent with safety and good air pollution control practices for minimizing emissions. District PTO condition 5 requires the owner to minimize the idling time during startup and the startup time. Staff proposes to add these conditions as new Conditions of Certification **AQ-FP4** and **AQ-FP5**.

District PTO condition 17 for the fire pump engine requires the project owner to submit a semiannual compliance report. Staff proposes to add it as a new Condition of Certification **AQ-FP17**.

3) Other inconsistencies in conditions

Staff also found other inconsistencies in the conditions of certification and District permit conditions, most of which are minor. Staff proposes to renumber and revise the conditions of certification to match the District permit conditions. **Air Quality Table 1** shows the mapping of the Energy Commission conditions of certification and District condition numbering with staff proposed modifications and justification. Some of the relatively major modifications are also shown below:

Condition of Certification **AQ-17** includes language referring to the initial source test, which is obsolete. Staff proposes to delete this language, renumber **AQ-17** as **AQ-19**, and make other minor administrative changes to match ATC condition 19 for the combustion turbines.

ATC condition 20 requires that compliance with the volatile organic compounds (VOC) emission limit to be demonstrated continuously based on Continuous Emission Monitoring System (CEMS) data and source testing. The corresponding Condition of Certification **AQ-18** only requires compliance demonstration based on source testing. Staff proposes to revise **AQ-18** by adding the CEMS data requirement, renumber it as **AQ-20**, and make other minor administrative changes to match ATC condition 20.

ATC condition 25 requires the concentration of the particulate matter to be standardized to 12 percent of carbon dioxide (CO_2). Staff proposes to revise the corresponding Condition of Certification **AQ-23** accordingly, renumber it as **AQ-25**, and make other minor administrative changes to match ATC condition 25.

ATC condition 27 excludes water vapor from the visible emissions to compare with the 20 percent opacity limit. Staff proposes to revise the corresponding Condition of Certification **AQ-25** accordingly, renumber it as **AQ-27**, and make other administrative changes to match ATC condition 27.

Condition of Certification **AQ-31** requires a trained operator to operate the ammonia injection control system if a breakdown occurs in the ammonia injection control system. ATC condition 33 provides options to either shut down the unit or to have a trained operator to operate the system. Staff proposes to revise **AQ-31** accordingly, renumber it as **AQ-33**, and make other administrative changes to match ATC condition 33.

ATC condition 34 requires the facility owner to maintain records of ammonia deliveries in addition to records of ammonia solution concentration. Staff proposes to add the requirement of maintaining records of ammonia deliveries in the corresponding Condition of Certification **AQ-32** and renumber it as **AQ-34** to match ATC condition 34.

Condition of Certification **AQ-36** requires reporting the ammonia injection rate in pounds per hour (lbs/hour), while the corresponding ATC condition 36 requires reporting in gallons per hour (gal/hour). Staff proposes to change the unit to gal/hour and make other minor administrative changes in Condition of Certification **AQ-36** to match ATC condition 36.

Condition of Certification **AQ-41** requires source tests to demonstrate compliance with NOx, CO, VOC, PM and ammonia emission standards. The corresponding ATC condition 42 does not include source test requirement for PM. The District only requires the PM source test for natural-gas-fueled equipment at the initial startup (as required by ATC condition 24), not during subsequent routine source tests. Staff proposes to delete the source test requirement for PM in Condition of Certification **AQ-41** and renumber it as **AQ-42**.

Condition of Certification **AQ-51** refers to District Rule 19.2 for the CEMS maintenance, operation, and reporting requirements. The corresponding ATC condition 52 refers to federal requirements from various sections of Code of Federal Regulations (CFR). The CFR sections cover broader aspects of requirements for the CEMS than the District Rule 19.2. Staff proposes to revise **AQ-51** and renumber it as **AQ-52** to match ATC condition 52.

The District ATC condition 56 for the turbines requires records to be maintained on site for five years. The Commission Decision approved the same condition (**AQ-76**), but it was included as the last condition which is in the section for the emergency fire pump engine. However, **AQ-76** is supposed to be applicable to the turbines, instead of the fire pump engine. And the Commission Decision approved another condition (**AQ-75**) requiring the project owner to maintain records for the fire pump engine. Staff proposes to move the Condition of Certification **AQ-76** up and renumber it as **AQ-56** so that it will be shown as a condition for the turbines. Staff also proposes to change “these conditions” to “this written permit” to match ATC language.

For the black start engine, Condition of Certification **AQ-55** requires the project owner to provide any necessary safety equipment, with the exception of personal protective equipment requiring individual fitting and specialized training, for source testing and inspection upon request of the District. The District deleted the exception language in the corresponding condition 1 of the District PTO for the black start engine. Staff proposes to revise **AQ-55** accordingly and renumber it as **AQ-BSE1**. Similarly, staff proposes to revise **AQ-65** for the fire pump engine and renumber it as **AQ-FP1**.

Condition of Certification **AQ-60** limits daily and annual non-emergency operation (testing and maintenance) hours for the black start engine. The corresponding District PTO condition 6 added the clarification that the engine should be operated exclusively during emergencies or for testing and maintenance. The District PTO condition 6 also clarifies that the emergency use of the engine is not limited. Staff proposes to revise **AQ-60** accordingly and renumber it as **AQ-BSE6**. For the fire pump engine, staff also proposes to add the clarification that the fire pump engine should be operated exclusively during emergencies or for testing and maintenance in the approved Condition of Certification **AQ-66**, revise the applicable rules and regulations, and renumber it as **AQ-FP3**. Staff noticed that the District PTO condition 3 for the fire pump engine refers to 40 CFR “60” Subpart ZZZZ, which should be corrected to 40 CFR “63” Subpart ZZZZ and the District agrees with the correction.

Condition of Certification **AQ-63** requires the owner to maintain an operating log of the black start engine, which should include records of periodic maintenance including the dates maintenance, calibration or replacement were performed. In the corresponding PTO condition 12, the end of the sentence becomes “the dates maintenance was performed”, which is now consistent with the Rule 69.4.1 language. Staff proposes to revise **AQ-63** accordingly, make other minor editorial changes to match PTO condition 12, and renumber the condition as **AQ-BSE12**.

For the fire pump engine, the District PTO condition 16 requires the project owner to maintain all records for at least five years from their date of creation, while the corresponding Condition of Certification **AQ-75** requires 36 months. District PTO condition 16 also requires the records to be maintained onsite for a minimum of three years, while **AQ-75** requires only 24 months. The District also deleted the requirement for the project owner to make the records available to the District upon request in PTO condition 16. Such requirement has been included in specific PTO conditions, such as conditions 9 (new **AQ-FP9**) and 14 (new **AQ-FP14**). Staff proposes to revise **AQ-75** according to the current District recordkeeping requirements for the fire pump engine and renumber it as **AQ-FP16**.

In addition to the above changes, staff also proposes to delete Condition of Certification **GHG-1**, which requires GHG reporting to the Energy Commission. The GHG reporting is already required under the California Air Resources Board's mandatory reporting requirements under the California Global Warming Solutions Act of 2006 (AB 32) which was implemented in late 2008, thus **GHG-1** is obsolete and can be deleted.

Air Quality Table 1
Mapping of Energy Commission and District Condition Numbering with Proposed Modifications and Justification

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-SC1 through **AQ-SC11**	Not applicable	**AQ-SC1** through **AQ-SC11**	No change
None	Not applicable	**GHG-1**	Delete. The GHG reporting is already required under the California Air Resources Board's mandatory reporting requirements under AB 32 which was implemented in late 2008, thus **GHG-1** is obsolete and can be deleted.
AQ-1	1	**AQ-1**	No change
AQ-2	2	**AQ-2**	No change
AQ-3	3	**AQ-3**	Revise. The sequence of the wording in Condition of Certification **AQ-3** is different from that in ATC condition 3. Staff proposes to revise **AQ-3** to match ATC condition 3.
AQ-4	4	**AQ-4**	Revise. Staff proposes to change "necessary" to "required" to match ATC condition 4.
AQ-5	5	**AQ-5**	No change
AQ-6	6	**AQ-6**	Revise. Condition of Certification **AQ-6** requires the project owner to maintain quarterly records of sulfur content "on site", while ATC condition 6 does not specify where the records should be kept. Staff proposes to revise **AQ-6** accordingly, remove the redundant wording in the sulfur content unit and correct the unit for the higher and lower heating values to match ATC condition 6.
AQ-7	7	**AQ-9**	Renumber and Revise. Staff proposes to renumber Condition of Certification **AQ-9** as **AQ-7** and add "the" before "applicable provisions" to match ATC condition 7.

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-8	8	**AQ-10**	Renumber and Revise. Staff proposes to renumber Condition of Certification **AQ-10** as **AQ-8** and revise the PTO numbering format from “SDAPCD…” to “APCD…” to match ATC condition 8.
AQ-9	9	**AQ-11**	Renumber and Revise. Staff proposes to add a hyphen, which was left out inadvertently, in "**AQSC11**" in the verification of this condition so that it refers to the correct condition **AQ-SC11**.
AQ-10	10	**AQ-12**	Renumber
AQ-11	11	**AQ-33**	Renumber
AQ-12	12	**AQ-13**	Renumber
AQ-13	13	**AQ-14**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-14** as **AQ-13**, delete a comma, and add a hyphen to match ATC condition 13.
AQ-14	14	None	New. The District ATC includes three conditions (14, 15, and 16) addressing 40 CFR 60 Subpart KKKK requirements, which are not in the Energy Commission Decision. Staff proposes to add these conditions as new Conditions of Certification **AQ-14**, **AQ-15**, and **AQ-16**.
AQ-15	15	None	
AQ-16	16	None	
AQ-17	17	**AQ-15**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-15** as **AQ-17**, delete a comma, and add a hyphen to match ATC condition 17.
AQ-18	18	**AQ-16**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-16** as **AQ-18**, change oxides of “Nitrogen” to oxides of “nitrogen”, and change “a” clock hour period to “each” clock hour period to match ATC condition 18. Staff proposes to add a hyphen, which was left out inadvertently, in "**AQSC11**" in the verification of this condition so that it refers to the correct condition **AQ-SC11**.
AQ-19	19	**AQ-17**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-17** as **AQ-19**, delete the obsolete language referring to the initial source test, and make other minor administrative changes to match ATC condition 19.
AQ-20	20	**AQ-18**	Renumber and revise. Staff proposes to revise **AQ-18** by adding compliance demonstration with CEMS data, renumber it as **AQ-20**, and make other minor administrative changes to match ATC condition 20.
AQ-21	21	**AQ-19**	Renumber and revise. Staff proposes to renumber Conditions of Certification **AQ-19**, **AQ-20**, and **AQ-21** as **AQ-21**, **AQ-22**, and **AQ-23** respectively. Staff proposes to change “turbine” to “unit exhaust stack” to match ATC and clarify that the emissions limits apply to the emissions coming out of the exhaust stacks. Staff also proposes to make other minor administrative changes to match ATC conditions 21, 22, and 23.
AQ-22	22	**AQ-20**	
AQ-23	23	**AQ-21**	
AQ-24	24	**AQ-22**	Renumber

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-25	25	**AQ-23**	Renumber and revise. ATC condition 25 requires the concentration of the particulate matter to be standardized to 12 percent of carbon dioxide (CO_2). Staff proposes to revise the corresponding Condition of Certification **AQ-23** accordingly, renumber it as **AQ-25**, and make other minor administrative changes to match ATC condition 25.
AQ-26	26	**AQ-24**	Renumber and revise. In order to avoid reference to the wrong condition, the District now identifies ATC condition 26 as the Ammonia Hourly Monitoring Condition. Staff proposes to revise the corresponding Condition of Certification **AQ-24** accordingly, renumber it as **AQ-26**, and make other minor administrative changes to match ATC condition 26.
AQ-27	27	**AQ-25**	Renumber and revise. ATC condition 27 excludes water vapor from the visible emissions to compare with the 20 percent opacity limit. Staff proposes to revise the corresponding Condition of Certification **AQ-25** accordingly, renumber it as **AQ-27**, and make other administrative changes to match ATC condition 27.
AQ-28	28	**AQ-26**	Renumber and revise. The District reduced the emissions limits in ATC conditions 28 and 29 to make a 1 percent margin from the major source emissions thresholds to ensure that the facility is a minor source. Staff proposes to revise the corresponding Conditions of Certification **AQ-26** and **AQ-27** accordingly to improve enforceability. Staff also proposes to renumber **AQ-26** and **AQ-27** as **AQ-28** and **AQ-29** respectively and make other minor administrative changes to match ATC conditions 28 and 29.
AQ-29	29	**AQ-27**	
AQ-30	30	**AQ-28**	Renumber
AQ-31	31	**AQ-29**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-29** as **AQ-31**, add “system” after “SCR” and delete “the” before “oxidation catalyst control system” to match ATC condition 31.
AQ-32	32	**AQ-30**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-30** as **AQ-32** and capitalize the “d” in “district” to match ATC condition 32.
AQ-33	33	**AQ-31**	Renumber and revise. Condition of Certification **AQ-31** requires a trained operator to operate the ammonia injection control system if a breakdown occurs in the ammonia injection control system. ATC condition 33 provides options to either shut down the unit or to have a trained operator to operate the system. Staff proposes to revise **AQ-31** accordingly, renumber it as **AQ-33**, and make other administrative changes to match ATC condition 33.
AQ-34	34	**AQ-32**	Renumber and revise. Staff proposes to add the requirement of maintaining records of ammonia deliveries in Condition of Certification **AQ-32** and renumber it as **AQ-34** to match ATC condition 34.

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-35	35	**AQ-35**	Revise. Staff proposes to add more detailed requirements for the source test protocol in Condition of Certification **AQ-35** to match ATC condition 35. Staff proposes to delete the obsolete reference to the initial source test in the verification for **AQ-35**. To be consistent with the new ATC condition 46, staff also proposes to change the timeline for submitting the source test protocol from 60 days to 30 days prior to the source test in the verification for **AQ-35**.
AQ-36	36	**AQ-36**	Revise. Staff proposes to change the ammonia injection rate unit from lbs/hour to gal/hour and make other minor administrative changes in Condition of Certification **AQ-36** to match ATC condition 36.
AQ-37	37	**AQ-34**	Renumber
AQ-38	38	**AQ-37**	Renumber
AQ-39	39	**AQ-38**	Renumber
AQ-40	40	**AQ-39**	Renumber
AQ-41	41	**AQ-40**	Renumber and revise. In ATC condition 41, the District changed the timeline for submitting the final written test report from 45 days to 30 days after the completion of a renewal source test or RATA performed by an independent contractor. Staff proposes to revise the corresponding Condition of Certification **AQ-40** accordingly and renumber it as **AQ-41**.
AQ-42	42	**AQ-41**	Renumber and revise. Staff proposes to delete the source test requirement for PM in Condition of Certification **AQ-41** and renumber it as **AQ-42** to match ATC condition 42.
AQ-43	43	**AQ-42**	Renumber
AQ-44	44	**AQ-43**	Renumber
AQ-45	45	**AQ-44**	Renumber
AQ-46	46	**AQ-45**	Renumber and revise. The District revised ATC condition 46 to provide more details of the applicable requirements for RATA and other certification tests and for consistency with ATC condition 40. Staff proposes to revise the corresponding Condition of Certification **AQ-45** accordingly and renumber it as **AQ-46**.
AQ-47	47	**AQ-46**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-46** as **AQ-47** and make the multiple requirements in the condition as a numbered list to match ATC condition 47.
AQ-48	48	**AQ-47**	Renumber and revise. Instead of referring to the specific condition number, the District ATC condition 48 now refers to the Ammonia Hourly Monitoring Condition (current ATC condition 26) so that changes in condition numbering will not affect the condition. Staff proposes to revise the corresponding Condition of Certification **AQ-47** accordingly, renumber it as **AQ-48**, and make other minor administrative changes to match ATC condition 48.
AQ-49	49	**AQ-48**	Renumber

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-50	50	**AQ-49**	Renumber
AQ-51	51	**AQ-50**	Renumber and revise. Staff proposes to spell out the "H&S Code" as "CA Health and Safety Code", capitalize the first letters of "compliance division" in Condition of Certification **AQ-50**, and renumber the condition as **AQ-51** to match ATC condition 51.
AQ-52	52	**AQ-51**	Renumber and revise. Staff proposes to replace District Rule 19.2 with various CFR sections regarding the CEMS maintenance, operation, and reporting requirements in **AQ-51** and renumber it as **AQ-52** to match ATC condition 52.
AQ-53	53	**AQ-52**	Renumber and revise. Staff proposes to add hyphens in between "12 calendar month" and a comma after "period" in Condition of Certification **AQ-52** and renumber it as **AQ-53** to match ATC condition 53.
AQ-54	54	**AQ-53**	Renumber and revise. Staff proposes to delete "the" before "CEMS software", add "the" before "measurement" in Condition of Certification **AQ-53** and renumber it as **AQ-54** to match ATC condition 54.
AQ-55	55	**AQ-54**	Renumber and revise. Staff proposes to make "flow" and "meters" as one word in Condition of Certification **AQ-54** and renumber the condition as **AQ-55** to match ATC condition 55. Staff proposes to add a hyphen, which was left out inadvertently, in "**AQSC11**" in the verification of this condition so that it refers to the correct condition **AQ-SC11**.
AQ-56	56	**AQ-76**	Renumber and revise. Staff proposes to renumber Condition of Certification **AQ-76** as **AQ-56** so that it will be shown as a condition for the turbines, instead of the fire pump engine. Staff also proposes to change "these conditions" to "this written permit" to match ATC language.
AQ-57	57	None	New. The District ATC condition 57 specifies that the District permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies. Staff proposes to add it as a new Condition of Certification **AQ-57** to improve understanding and enforceability.
AQ-58	58	None	New. The District ATC condition 58 requires the facility owner to comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act. Staff proposes to add it as a new Condition of Certification **AQ-58**.
AQ-59	59	None	New. The District added this condition to ensure compliance with permitted emission limits after completion of the maintenance and repair work. Staff proposes to add this condition as new **AQ-59**.
AQ-60	60	None	New. The District added this condition to ensure compliance with permitted emission limits after completion of the maintenance and repair work. Staff proposes to add this condition as new **AQ-60**.

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-BSE1	Black start engine - 1	**AQ-55**	Renumber and revise. Staff proposes to delete the exception language in Condition of Certification **AQ-55** to match PTO condition 1 and renumber the condition as **AQ-BSE1**.
AQ-BSE2	Black start engine - 2	**AQ-56**	Renumber and revise. To match the PTO condition 2, staff proposes to add "of" between "100 cubic feet" and "dry gaseous fuel", change "standards conditions" to "standard conditions", and uncapitalize "Reformulated Gasoline" in **AQ-56** and renumber the condition as **AQ-BSE2**.
AQ-BSE3	Black start engine - 3	**AQ-57**	Renumber
AQ-BSE4	Black start engine - 4	**AQ-58**	Renumber and revise. To match the PTO condition 4, staff proposes to delete a redundant word "described" in **AQ-58** and renumber the condition as **AQ-BSE4**.
AQ-BSE5	Black start engine - 5	**AQ-59**	Renumber
AQ-BSE6	Black start engine - 6	**AQ-60**	Renumber and revise. Staff proposes to add the clarification language that the engine should be operated exclusively during emergencies or for testing and maintenance and the emergency use of the engine is not limited in **AQ-60** to match PTO condition 6 and renumber it as **AQ-BSE6**.
AQ-BSE7	Black start engine - 7	**AQ-61**	Renumber and revise. Staff proposes to add 40 CFR 63 Subpart ZZZZ as another applicable regulation in **AQ-61** to match the PTO condition 7 and renumber the condition as **AQ-BSE7**.
AQ-BSE8	Black start engine - 8	None	New. District PTO conditions 8, 9, and 10 address the 40 CFR 63 Subpart ZZZZ requirements regarding when the engine oil and filter need to be changed and when the air cleaner, hoses and belts need to be inspected. Staff proposes to add these conditions as new Conditions of Certification **AQ-BSE8**, **AQ-BSE9**, and **AQ-BSE10**.
AQ-BSE9	Black start engine - 9	None	
AQ-BSE10	Black start engine - 10	None	
AQ-BSE11	Black start engine - 11	**AQ-62**	Renumber and revise. Staff proposes to add "upon request" after the requirement of making records available to the District and make other minor editorial changes in Condition of Certification **AQ-62** to match PTO condition 11. Staff proposes to renumber the condition as **AQ-BSE11**.
AQ-BSE12	Black start engine - 12	**AQ-63**	Renumber and revise. Staff proposes to revise the operating log requirement in **AQ-63**, make other minor editorial changes to match PTO condition 12, and renumber the condition as **AQ-BSE12**.
AQ-BSE13	Black start engine - 13	**AQ-64**	Renumber and revise. Condition of Certification **AQ-64** requires the project owner to keep all operational and maintenance logs. The District PTO condition 13 also requires the project owner to keep the fuel logs. Staff proposes to revise **AQ-64** accordingly and renumber the condition as **AQ-BSE13**.

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-BSE14	Black start engine - 14	None	New. The District PTO condition 14 specifies that the District permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies. Staff proposes to add it as a new Condition of Certification **AQ-BSE14** to improve understanding and enforceability.
AQ-BSE15	Black start engine - 15	None	New. The District PTO condition 15 requires the facility owner to comply with all applicable requirements of the Air Toxics “Hot Spots” Information and Assessment Act. Staff proposes to add it as a new Condition of Certification **AQ-BSE15**.
AQ-FP1	Fire pump engine - 1	**AQ-65**	Renumber and revise. Staff proposes to delete the exception language in **AQ-65** to match PTO condition 1 and renumber it as **AQ-FP1**.
AQ-FP2	Fire pump engine - 2	**AQ-67**	Renumber
AQ-FP3	Fire pump engine - 3	**AQ-66**	Renumber and revise. Staff proposes to add the clarification that the fire pump engine should be operated exclusively during emergencies or for testing and maintenance in **AQ-66**, revise the applicable rules and regulations, and renumber it as **AQ-FP3**. Staff noticed that the District PTO condition 3 refers to 40 CFR “60” Subpart ZZZZ, which should be corrected to 40 CFR “63” Subpart ZZZZ and the District agrees with the correction.
AQ-FP4	Fire pump engine - 4	None	New. District PTO condition 4 requires operation and maintenance to be consistent with safety and good air pollution control practices for minimizing emissions. Staff proposes to add it as a new Condition of Certification **AQ-FP4**.
AQ-FP5	Fire pump engine - 5	None	New. District PTO condition 5 requires the owner to minimize the idling time during startup and the startup time. Staff proposes to add it as a new Condition of Certification **AQ-FP5**.
AQ-FP6	Fire pump engine - 6	**AQ-68**	Renumber
AQ-FP7	Fire pump engine - 7	**AQ-69**	Renumber and revise. Staff proposes to add "a" before "public nuisance" in Condition of Certification **AQ-69** to match PTO condition 7 and renumber it as **AQ-FP7**.
AQ-FP8	Fire pump engine - 8	**AQ-70**	Renumber and revise. Staff proposes to add "AM" after "7:30", delete "ATCM reportable" from the applicable rules (because 17 CCR 93115 includes the ATCM reporting requirements), and make other minor editorial changes in **AQ-70** to match PTO condition 8 and renumber it as **AQ-FP8**.
AQ-FP9	Fire pump engine - 9	**AQ-71**	Renumber and revise. Staff proposes to change "operating" to "operation", "on site" to "onsite" in **AQ-71** to match PTO condition 9 and renumber it as **AQ-FP9**.
AQ-FP10	Fire pump engine - 10	**AQ-72**	Renumber and revise. Staff proposes to add "of this engine" after "owner or operator" and make other minor editorial changes in **AQ-72** to match PTO condition 10 and renumber it as **AQ-FP10**.

Proposed Energy Commission COCs Numbering	District ATC/PTO Numbering	Current Energy Commission COCs Numbering	Staff Proposed Modifications and Justification
AQ-FP11	Fire pump engine - 11	None	New. District PTO conditions 11, 12, and 13 address the 40 CFR 63 Subpart ZZZZ requirements regarding when the engine oil and filter need to be changed and when the air cleaner, hoses and belts need to be inspected. Staff proposes to add these conditions as new Conditions of Certification **AQ-FP11**, **AQ-FP12**, and **AQ-FP13**.
AQ-FP12	Fire pump engine - 12	None	
AQ-FP13	Fire pump engine - 13	None	
AQ-FP14	Fire pump engine - 14	**AQ-73**	Renumber and revise. Staff proposes to add 17 CCR 93115 as another applicable regulation and make other minor editorial changes in **AQ-73** to match PTO condition 14 and renumber it as **AQ-FP14**.
AQ-FP15	Fire pump engine - 15	**AQ-74**	Renumber and revise. Staff proposes to change "equipment" to "engine" and make other minor editorial changes in **AQ-74** to match PTO condition 15 and renumber it as **AQ-FP15**.
AQ-FP16	Fire pump engine - 16	**AQ-75**	Renumber and revise. Staff proposes to revise **AQ-75** according to the current District recordkeeping requirements for the fire pump engine and renumber the condition as **AQ-FP16**.
AQ-FP17	Fire pump engine - 17	None	New. District PTO condition 17 for the fire pump engine requires the project owner to submit a semiannual compliance report. Staff proposes to add it as a new Condition of Certification **AQ-FP17**.
AQ-FP18	Fire pump engine - 18	None	New. District PTO condition 18 specifies that the District permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies. Staff proposes to add it as a new Condition of Certification **AQ-FP18** to improve understanding and enforceability.
AQ-FP19	Fire pump engine - 19	None	New. District PTO condition 19 requires the facility owner to comply with all applicable requirements of the Air Toxics “Hot Spots” Information and Assessment Act. Staff proposes to add it as a new Condition of Certification **AQ-FP19**.
None	None	**AQ-7**	Delete. The application for the Title IV Operating Permit was submitted according to the timeline specified in Condition of Certification **AQ-7**. Staff believes that **AQ-7** is obsolete and should be deleted.
None	None	**AQ-8**	Delete. The application for the Title V Operating Permit was submitted according to the timeline specified in Condition of Certification **AQ-8**. Staff believes that **AQ-8** is obsolete and should be deleted.

CONCLUSIONS AND RECOMMENDATIONS

The proposed facility modifications would not affect the facility's ability to continue to comply with applicable federal, state, and District LORS. The proposed modifications would not result in significant air quality or GHG related impacts, provided that the following conditions of certification are included. There are no air quality environmental justice issues related to this amendment request and no minority or low-income populations would be significantly or adversely impacted. Staff recommends that the revised conditions of certification be approved as shown below.

PROPOSED CONDITIONS OF CERTIFICATION

For completeness, all Air Quality conditions of certification are shown, both those that need changes and those that do not change. Staff proposes renumbering and consolidation of the conditions of certification as appropriate to match the numbering system used by the District. The conditions of certification listed below are based upon staff-proposed numbering. These changes in the conditions of certification match the current District permit requirements. ~~Strikethrough~~ is used to indicate deleted language and **underline and bold** is used for new language. Appendix 1 includes a clean version of the finalized conditions of certification if they are approved.

CONDITIONS OF CERTIFICATION

AQ-SC1 Air Quality Construction Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with conditions **AQ-SC3, AQ-SC4**, and **AQ-SC5** for the entire project site and linear facility construction. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. The AQCMM shall not be terminated without written consent of the Compliance Project Manager (CPM).

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval, the name, resume, qualifications, and contact information for the on-site AQCMM and all AQCMM Delegates. The AQCMM and all Delegates must be approved by the CPM before the start of ground disturbance.

AQ-SC2 Air Quality Construction Mitigation Plan (AQCMP): The project owner shall provide an AQCMP, for approval, which details the steps that will be taken and the reporting requirements necessary to ensure compliance with conditions **AQ-SC3**, **AQ-SC4**, and **AQ-SC5**.

Verification: At least 60 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. The AQCMP must be approved by the CPM before the start of ground disturbance.

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report (MCR) that demonstrates compliance with the following mitigation measures for the purposes of preventing all fugitive dust plumes from leaving the project site and linear facility routes. Any deviation from the following mitigation measures shall require prior CPM notification and approval:

1. All unpaved roads and disturbed areas in the project and lay down construction sites shall be watered as frequently as necessary to comply with the dust mitigation objectives of **AQ-SC4**. The frequency of watering may be reduced or eliminated during periods of precipitation.

2. No vehicle shall exceed 10 miles per hour on unpaved areas within the project and lay down construction sites.

3. The construction site entrances shall be posted with visible speed limit signs.

4. All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned and free of dirt prior to entering paved roadways.

5. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

6. All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.

7. All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.

8. Construction areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.

9. All paved roads within the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.

10. During any construction periods where Pala Del Norte Road is routinely used for vehicles existing the construction site, Pala Del Norte Road between the site exit and SR 76 shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt from the construction site is visible on the road. Until the south project driveway is surfaced with crushed rock and the driveway concrete access apron has been constructed pursuant to design drawings C150 and C802 in Appendix 2-A of the Application for Certification, during any construction periods where the south project driveway is routinely used for vehicles exiting the construction site, the westbound lane of SR 76 between the south project driveway and Pala Del Norte Road shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt from the construction site is visible on the road. CEC will waive this requirement for sweeping of SR 76 if Caltrans will not allow the applicant to operate sweeping equipment on the highway (*e.g.,* due to safety concerns). Shaker plates to reduce track out will be added to the exit from the site to SR 76 and, if needed, on the exit to Pala Del Norte Road.

11. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds.

12. All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions shall be provided with a cover or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least two feet of freeboard.

13. Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.

14. Disturbed areas will be re-vegetated as soon as practical.

The fugitive dust requirements listed in this condition may be replaced with as stringent or more stringent methods as required by SDAPCD Rule 55 if that rule becomes effective prior to the completion of the project's construction activities.

Verification: The project owner shall include in the MCR 1) a summary of all actions taken to maintain compliance with this condition, 2) copies of any complaints filed with the air district in relation to project construction, and 3) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this Condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC4 Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported 1) off the project site or 2) 200 feet beyond the centerline of the construction of linear facilities, or 3) within 100 feet upwind of any regularly occupied structures not owned by the project owner indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.

Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression if Step 1 specified above fails to result in adequate mitigation within 30 minutes of the original determination.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails to result in effective mitigation within one hour of the original determination. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shut-down source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, provided that the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

Verification: The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified.

AQ-SC5 Diesel-Fueled Engines Control: The AQCMM shall submit to the CPM, in the MCR, a construction mitigation report that demonstrates compliance with the following mitigation measures for the purposes of controlling diesel construction-related emissions. Any deviation from the following mitigation measures shall require prior CPM notification and approval.

A. All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.

B. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.

C. All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in Title 13, California Code of Regulations, section 2423(b)(1). The following exceptions for specific construction equipment items may be made on a case-by-case basis.

   1. Equipment with non-Tier 2 engines that have tailpipe retrofit controls that reduce exhaust emissions of NOx and PM to no more than Tier 2 levels.

   2. Tier 1 equipment will be allowed on a case-by-case basis only when the project owner has documented that no Tier 2 equipment or emissions equivalent retrofit equipment is available for a particular equipment type that must be used to complete the project's construction. This shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.

D. All heavy earthmoving equipment and heavy duty construction-related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

E. All diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.

F. Construction equipment will employ electric motors when feasible.

Verification: The project owner shall include in the MCR (1) a summary of all actions taken to maintain compliance with this condition, (2) copies of all diesel fuel purchase records, (3) a list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained, and (4) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC6 The project owner shall provide emission reduction mitigation to offset the project's NOx, PM10, SOx, and VOC emission increases at a ratio of 1:1. These emission reductions are based on the following maximum annual emissions for the facility (tons/yr).

Emission Reduction Credits/Pollutant	**Tons/yr**
NOx	6.86
PM10	3.76
SOx	0.40
VOC	1.70
Total Tons	12.72

Emission reductions can be provided in any one of the following methods in the following order of preference of their use:

1. The project owner can fund emission reductions through the Carl Moyer Fund in the amount of $16,000/ton, or final 2008 ARB Carl Moyer Program Guideline cost effectiveness cap value, for the total ton quantity listed in the above table, minus any tons offset using the other two listed methods, with an additional 20% administration fee to fund the SDAPCD and/or other responsible local agencies with jurisdiction within 25 miles of the project site to be used to find and fund local emission reduction projects to the extent feasible. Emission reduction projects funding by this method will be weighted for evaluation and selection, within the funding guideline value of $16,000/ton of reduction, based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site. Emission reduction project cost will not be a consideration for selection as long as the emission reduction project is within the proposed or approved 2008, or other year as applicable, Carl Moyer funding guideline value,

2. The project owner can fund other existing public agency regulated stationary or mobile source emission reduction programs or create a project specific fund to be administered through the SDAPCD or other local agency, which would provide surplus emission reductions. This funding shall include appropriate administrative fees as determined by the administering agency to obtain local emission reductions to the extent feasible. The project owner shall be responsible for demonstrating that the amount of such funding meets the emission reduction requirements of this condition. Emission reduction projects funding by this method will be weighted for evaluation and selection based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site.

3. ERC certificates from emission reductions occurring in the San Diego Air Basin can be used to offset each pollutant on a 1:1 offset ratio basis only if local emission reduction projects are clearly demonstrated to be unavailable using methods 1 or 2 to meet the total emission reduction burden required by this condition. ERCs can be used on an interpollutant basis for SOx for PM10, NOx for VOC, and VOC for NOx, where the project owner will provide a letter from the SDAPCD that indicates the District's allowed interpollutant offset ratio, or PM10 for SOx ERCs can be used on a 1:1 basis.

Carl Moyer or other emission reduction funding shall be provided to the responsible agencies prior to the initiation of on-site construction activities. The project owner shall work with the appropriate agencies to target emission reduction projects in the project area to the extent feasible. Emission reduction project selection information will be provided to the CPM for review and comment. Unused administrative fees shall be used for additional emission reduction program funding. ERC certificates, if used, will be surrendered prior to first turbine fire.

Verification: The project owner shall submit to the CPM confirmation that the appropriate quantity of Carl Moyer Project or other emission reduction program funding and/or ERCs have been provided prior to initiation of on-site construction activities for emission reduction program funding and at least 30 days prior turbine first fire for ERCs. The project owner shall provide emission reduction project selection information to the CPM for review and comment at least 15 days prior to committing funds to each selected emission reduction project. The project owner shall provide confirmation that the level of emission reduction program funding will meet the emission reduction requirements of this condition.

AQ-SC7 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 U.S. EPA, and any revised permit issued by the District or U.S. 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.

AQ-SC8 The project owner shall procure the latest model year water delivery trucks, or trucks retrofit with new model year engines, that meet California on-road vehicle emission standards; and the water delivery trucks shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

Verification: The project owner shall submit to the CPM information on the procured water delivery trucks that show compliance with this condition within 15 days of procuring the trucks. The project owner shall submit truck maintenance records for the year in the fourth quarter Quarterly Operation Reports (**AQ-SC11**) that show compliance with the maintenance provision of this condition.

AQ-SC9 The chiller cooling tower shall have a mist eliminator with a manufacturer guaranteed mist reduction rate of 0.001 percent or less of the water recirculation rate.

Verification: The project owner shall provide the CPM a copy of the manufacturer guarantee for the mist eliminator 30 days prior to installation of the chiller.

AQ-SC10 The chiller cooling tower water shall be tested for total dissolved solids and that data shall be used to determine and report the particulate matter emissions from the chiller cooling tower. The cooling tower water shall be tested at least once annually during the anticipated summer operation peak period (July through September).

Verification: The project owner shall provide the water quality test results and the chiller cooling tower emissions estimates to the CPM as part of the fourth quarter's quarterly operational report (AQ-SC11).

AQ-SC11 The project owner shall submit to the CPM Quarterly Operation Reports, following the end of each calendar quarter that include operational and emissions information as necessary to demonstrate compliance with the conditions of certification herein. The Quarterly Operation Report will specifically note or highlight incidences of noncompliance.

Verification: The project owner shall submit the Quarterly Operation Reports to the CPM and to the District, if requested, no later than 30 days following the end of each calendar quarter.

~~**GHG-1** Until the California Global Warming Solutions Act of 2006 (AB 32) is implemented, the project owner shall either participate in a GHG registry approved by the CPM, or report on a annual basis to the CPM the quantity of greenhouse gases (GHG) emitted as a direct result of facility electricity production.~~

~~The project owner shall maintain a record of fuels types and carbon content used on-site for the purpose of power production. These fuels shall include but are not limited to each fuel type burned: (1) in combustion turbines, (2) HRSGs (if applicable) or auxiliary boiler (if applicable), (4) internal combustion engines, (4) flares, (5) for the purpose of startup, shutdown, operation or emission controls, and/or (6) vehicles and equipment used to prepare fuel or maintain generation components.~~

~~The project owner may perform annual source tests of CO_2 and CH_4 emissions from the exhaust stacks while firing the facility's primary fuel, using the following test methods or other test methods as approved by the CPM. The project owner shall produce fuel-based emission factors in units of lbs CO_2 equivalent per MMBtu of fuel burned from the annual source tests. If a secondary fuel is approved for the facility, the project owner may also perform these source tests while firing the secondary fuel.~~

~~Pollutant~~	~~Test Method~~
~~CO_2~~	~~EPA Method 3A~~
~~CH_4~~	~~EPA Method 18 (VOC measured as CH_4)~~

~~As an alternative to performing annual source tests, the project owner may use the Intergovernmental Panel on Climate Change (IPCC) Methodologies for Estimating Greenhouse Gas Emissions (MEGGE). If MEGGE is chosen, the project owner shall calculate the CO_2, CH_4 and N_2O emissions using the appropriate fuel-based carbon content coefficient (for CO_2) and the appropriate fuel-based emission factors (for CH_4 and N_2O).~~

~~The project owner shall convert the N_2O and CH_4 emissions into CO_2 equivalent emissions using the current IPCC Global Warming Potentials (GWP). The project owner shall maintain a record of all SF_6 that is used for replenishing on-site transformers. At the end of each reporting period, the project owner shall total the mass of SF_6 used and convert that to a CO_2 equivalent emission using the IPCC GWP for SF_6. The project owner shall maintain a record of all PFCs and HFCs that are used for replenishing on-site refrigeration and chillers directly related to electricity production. At the end of each reporting period, the project owner shall total the mass of PFCs and HFCs used and convert that to a CO_2 equivalent emission using the IPCC GWP.~~

~~On an annual basis, the project owner shall report the CO_2 and CO_2 equivalent emissions from the described emissions of CO_2, N_2O, CH_4, SF_6, PFCs, and HFCs.~~

~~**Verification**: The project annual greenhouse gas emissions shall be reported, as a CO2 equivalent, by the project owner to a climate action registry approved by the CPM, or to the CPM as part of the fourth Quarterly or the annual Air Quality Report, until such time that GHG reporting requirements are adopted and in force for the project as part of the California Global Warming Solutions Act of 2006.~~

DISTRICT ~~FINAL DETERMINATION OF COMPLIANCE~~ AUTHORITY TO CONSTRUCT AND PERMIT TO OPERATE CONDITIONS ~~(SDAPCD 2008E)~~

~~985708~~

Equipment Description—Permit to Operate No. APCD2011-PTO-000889: One natural ~~G~~gas simple cycle combustion ~~T~~turbine ~~Engine G~~generator ~~#1~~: Make General Electric, Model LM-6000 PC SPRINT, **nominal output** 49.8 MW ~~capacity~~, ~~468.8 MMBtu/hr heat input, natural gas fired, simple cycle,~~ with water injection~~;~~, a selective catalytic reduction (SCR) ~~system including an automatic~~ **unit with** ammonia injection control system~~;~~, an oxidation catalyst~~;~~, ~~a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O_2; a~~ data acquisition ~~and handling~~ system (DAHS)~~;~~ and ~~remote data collection node (RDCN)~~ **continuous emission monitoring system (CEMS)**.

~~985711~~

Equipment Description—Permit to Operate No. APCD2011-PTO-000890: One natural ~~G~~**g**as **simple cycle combustion** ~~T~~**t**urbine ~~Engine G~~**g**enerator ~~#2~~: **Make** General Electric, Model LM-6000 PC SPRINT, **nominal output** 49.8 MW ~~capacity~~, ~~468.8 MMBtu/hr heat input, natural gas fired, simple cycle,~~ with water injection~~;~~**,** a selective catalytic reduction (SCR) ~~system including an automatic~~ **unit with** ammonia injection control system~~;~~**,** an oxidation catalyst~~;~~**,** ~~a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O_2; a~~ data acquisition ~~and handling~~ system (DAHS)~~;~~ and ~~remote data collection node (RDCN)~~ **continuous emission monitoring system (CEMS)**.

~~GENERAL CONDITIONS~~

AQ-1 This equipment shall be properly maintained and kept in good operating condition at all times.

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

AQ-2 The project owner shall operate the project in accordance with all data and specifications submitted with the application.

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

AQ-3 ~~The project owner shall provide~~ **a**~~A~~ccess, facilities, utilities~~,~~ and any necessary safety equipment for source testing and inspection **shall be provided** upon request of the Air Pollution Control District.

Verification: The project owner shall provide facilities, utilities, and safety equipment for source testing and inspections upon request of the District, ARB, and the Energy Commission.

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

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.

AQ-5 The exhaust stacks for the combustion turbines shall be at least 80 feet in height above site base elevation.

Verification: The project owner shall submit to the CPM for review the exhaust stack specification at least 60 days before the installation of the stack.

AQ-6 The units shall be fired on Public Utility Commission (PUC) quality natural gas only. The project owner shall maintain~~, on site,~~ quarterly records of sulfur content (grains~~ of sulfur compounds per~~ /100 dscf) and ~~the~~ higher and lower heating values (Btu/**d**scf) of the natural gas~~;~~ and provide such records to **the** District personnel upon request.

Verification: The project owner shall submit the quarterly fuel sulfur content values in the in the Quarterly Operation Reports (**AQ-SC11**) and make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

~~**AQ-7** Pursuant to 40 CFR 72.30(b)(2)(ii) of the Federal Acid Rain Program, the project owner shall submit an application for a Title IV Operating Permit at least 24 months prior to commencement of operation.~~

~~**Verification**: The project owner shall submit to the CPM copies of the acid rain permit application prior to initiating project construction.~~

~~**AQ-8** The project owner 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.~~

~~**Verification**: The project owner shall submit to the CPM copies of the Title V operating permit application within five working days of its submittal by the project owner to the District.~~

AQ-7~~9~~ The project owner shall comply with all **the** applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO_2 allowances.

Verification: The project owner shall submit to the CPM and District the CTG annual operating data and SO_2 allowance information demonstrating compliance with all applicable provisions of 40 CFR 73 as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-8~~10~~ The total combined operating hours for the combustion turbines of Permit No. ~~SD~~APCD2011-PTO-000889 and ~~SD~~APCD2011-PTO-000890 shall not exceed 6,400 hours per calendar year.

Verification: The project owner shall submit to the CPM and District the CTG annual operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (**AQ-SC11**).

AQ-9~~11~~ The project owner shall comply with the applicable requirements in 40 CFR Parts 60, 72, 73, and 75.

Verification: The project owner shall submit to the CPM and District the CTG annual operating data demonstrating compliance with all applicable provisions of 40 CFR Parts 60, 72, 73, and 75 as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-10~~12~~ 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.

Verification: The project owner shall provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), due in the quarter after the each year's source test report is completed. The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol at least 60 days prior to the operation the CEMS.

AQ-11~~33~~ For the purposes of this license, startup conditions shall be defined as the period of time that begins when fuel flows to the turbine and shall continue for no longer than 30 consecutive minutes. Shutdown conditions shall be defined as the 15 minute period preceding the moment at which fuel flow ceases. 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.

Verification: The project owner shall submit to the CPM the CTG start-up and shut-down event duration data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-12~~13~~ For each emission limit expressed as pounds per hour or parts per million based on a clock-hour averaging period, compliance shall be based on continuous emission data collected at least once every 15 minutes.

Verification: CEMS data summaries shall be submitted to the CPM as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-13~~14~~ During startup conditions, the emissions from each turbine shall not exceed the following emission limits as determined by the continuous emission monitoring system (CEMs)~~,~~ and/or District-approved emission testing. Compliance with each limit shall be based on the startup period.

Pollutant	**Limit, lbs/event**
Oxides of Nitrogen (NOx), calculated as NO_2	13.25
Carbon Monoxide (CO)	12.05
Volatile Organic Compounds (VOC)	1.95

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-14 Emissions of nitrogen oxides from each unit exhaust stack shall not exceed 25 parts per million by volume, dry basis (ppmvd) at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh) (4 hour average pursuant to 40 CFR § 60.4380(b)). This limit applies at all times including periods of startup and shutdown.

Verification: The project owner shall submit to the CPM demonstrating compliance with this condition as part of the Quarterly Operation Reports (AQ-SC11).

AQ-15 Excess emissions shall be as defined in 40 CFR Subpart KKKK § 60.4380. An excess emission is any unit operating period, including periods of startup and shutdown, in which the 4-hour or 30-day rolling average NOx emission rate exceeds the applicable emission limit in 40 CFR 60 Subpart KKKK, Appendix Table 1.

Verification: The project owner shall demonstrate compliance with this condition as part of the excess emissions reports (AQ-16).

AQ-16 For each affected unit required to continuously monitor parameters or emissions the project owner must submit to the District reports of excess emissions and monitor downtime, in accordance with § 60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. Reports submitted pursuant to this requirement shall be postmarked no later than the 30th day following the end of the 6-month reporting period. 6-month reporting periods comprise January 1 through June 30, and July 1 through December 31.

Verification: The project owner shall submit to the CPM demonstrating compliance with this condition. Reports submitted pursuant to this requirement shall be postmarked no later than the 30th day following the end of the 6-month reporting period.

AQ-17~~15~~ During shutdown conditions, the emissions from each turbine shall not exceed the following emission limits as determined by the continuous emission monitoring system (CEMs)~~,~~ and/or District-approved emission testing. Compliance with each limit shall be based on the shutdown period.

Pollutant	Limit, lbs/event
Oxides of Nitrogen (NOx), calculated as NO_2	2.68
Carbon Monoxide (CO)	4.43
Volatile Organic Compounds (VOC)	0.73

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC11**).

AQ-18~~16~~ The emissions concentration of oxides of ~~N~~**n**itrogen (NOx) from the unit exhaust stack, calculated as nitrogen dioxide (NO_2), shall not exceed 2.5 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen and averaged over ~~a~~ **each** clock hour period. Compliance with this limit shall be demonstrated continuously based on the CEMs data and based on source testing calculated as the average of three subtests. This limit shall not apply during startup and shutdown conditions as defined herein.

Verification: The project owner shall provide the source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), due in the quarter after the source test report is completed. The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-19~~17~~ The emissions concentration of carbon monoxide (CO) from the unit exhaust stack shall not exceed 6.0 parts per million **by** volume on a dry basis (ppmvd) corrected to15 percent oxygen and averaged over ~~one a~~ **each** 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 startup and shutdown conditions as defined her**e**in.

Verification: The project owner shall provide the source test data to demonstrate compliance with this condition as part of the Quarterly Operation Report (**AQ-SC11**), due in the quarter after the source test report is completed. The project owner shall provide emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-20~~18~~ The volatile organic compounds (VOC) emission concentration from the unit exhaust stack, calculated as methane, measured in the exhaust stack, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen and averaged over each clock-hour period. Compliance with this limit shall be demonstrated continuously based on **the CEMs data and 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 startup and shutdown ~~periods~~ conditions as defined her**e**in.

Verification: The project owner shall provide the source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), due in the quarter after the source test report is completed.

AQ-21~~19~~ The emissions from each ~~turbine~~ **unit exhaust stack** shall not exceed the following emission limits, except during startup and shutdown conditions, as determined by the continuous emission monitoring system (CEMs)~~,~~ and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a clock-hour averaging period.

Pollutant	**Limit, lbs/hour**
Oxides of Nitrogen (NOx), calculated as NO_2	4.3
Carbon Monoxide (CO)	6.1
Volatile Organic Compounds (VOC)	1.3

Verification: The project owner shall submit to the CPM the CTG operating and/or source test data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-22~~20~~ The emissions from each ~~turbine~~ **unit exhaust stack** shall not exceed the following emission limits, as determined by the continuous emission monitoring system (CEMs)~~,~~ and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a calendar day averaging period.

Pollutant	**Limit, lbs/day**
Oxides of Nitrogen (NOx), calculated as NO_2	141.2
Carbon Monoxide (CO)	182.2
Volatile Organic Compounds (VOC)	36.5

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**).

AQ-23~~21~~ The emissions from each ~~turbine~~ **unit exhaust stack** shall not exceed the following emission limits, as determined by the continuous emission monitoring system (CEMs)~~,~~ and/or District-approved emission testing, calculated as the average of three subtests. Compliance with each limit shall be based on a ~~hour~~ rolling 12-calendar-month averaging period, updating once each calendar month. Records demonstrating compliance with these limits shall be available for inspection 30 days after the end of each calendar quarter.

Pollutant	**Limit, tons/year**
Oxides of Nitrogen (NOx), calculated as NO_2	8.6
Carbon Monoxide (CO)	11.3
Volatile Organic Compounds (VOC)	2.3

Verification: The project owner shall submit to the CPM the CTG operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (**AQ-SC11**).

AQ-24~~22~~ Emissions of particulate matter 10 microns or less (PM10) from the unit exhaust stack shall not exceed 3.0 lbs per hour. Compliance with this limit shall be demonstrated based upon initial source testing calculated as the average of three subtests. The total PM and condensable PM measured using EPA Method 5 and 202 will be assumed to be PM10.

Verification: The project owner shall provide the source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), due in the quarter after the source test report is completed.

AQ-25~~23~~ The discharge of **total** particulate matter from the **unit** exhaust stack of ~~each~~ **the** combustion turbine shall not exceed 0.10 grains per dry standard cubic foot **standardized to 12 percent CO_2**. The District may require periodic testing to verify compliance with this standard.

Verification: The project owner shall provide the source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), due in the quarter after the source test report is completed.

AQ-26~~24~~ **Ammonia Hourly Monitoring Condition.** Ammonia emissions from each turbine shall not exceed 5 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen, averaged over ~~a~~ **each** clock**-**hour period. This limit shall not apply during startup and shutdown ~~periods~~ conditions. Compliance with this limit shall be demonstrated through source testing calculated as the average of three subtests and utilizing one of the following procedures:

1) Calculate ammonia emissions using the following equation:
   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**, and**

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

2) Calculate ammonia emissions using the following equation:
   NH_3 = (((a/b)*1,000,000)-1.2c)*d
   Where:

   a = ammonia injection rate (lbs/hour) / (0.04478 lbs NH3/cft NH3),

   b = exhaust flow rate at 15% oxygen / (scft/hour)**,**

   c = change in measured NOx concentration (ppmvd @ 15% oxygen) across the catalyst**, and**

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

Verification: The project owner shall provide the estimated daily ammonia concentration and daily ammonia emissions based on the procedures given in this condition and provide the annual source test data to demonstrate compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC11**), where the source test data is due in the quarter after the source test report is completed.

AQ-27~~25~~ Visible emissions**, including emissions** from the lube oil vents and the exhaust stack of the unit shall not exceed 20 percent opacity**, excluding water vapor,** for more than three (3) minutes in any period of 60 consecutive minutes. (Rule 50)

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

AQ-28~~26~~ 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. Records demonstrating compliance with these limits shall be available for inspection 30 days after the end of each calendar quarter.

~~1~~**i**. Oxides of Nitrogen (NOx): ~~50~~ **49.5** tons/year

~~2~~**ii**. Carbon Monoxide (CO): ~~100~~ **99** tons/year

~~3~~**iii**. Volatile Organic Compounds (VOC): ~~50~~ **49.5** tons/year

~~4~~**iv**. Oxides of Sulfur (SOx): ~~100~~ **99** tons/year

~~5~~**v**. Particulate Matter (PM10): ~~100~~ **99** tons/year

Verification: The project owner shall submit to the CPM and District the facility annual operating and emissions data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports **(AQ-SC11)**.

AQ-29~~27~~ The emissions of any single federal Hazardous Air Pollutant (HAP) shall not ~~equal or~~ exceed ~~10~~ **9.9** tons, and the aggregate emissions of all federal HAPs shall not equal or exceed ~~25~~ **24.75** 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 project owner shall apply to amend this 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. Records demonstrating compliance with these limits shall be available for inspection 30 days after the end of each calendar quarter.

Verification: The project owner shall submit to the CPM and District the facility annual operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports **(AQ-SC11)**.

~~AMMONIA – SCR~~

AQ-30~~28~~ 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.

Verification: The project owner shall provide a protocol as required in the condition for the installation, calibration, and testing for the SCR system continuous monitors at least 60 days prior to SCR system use. The project owner shall submit to the CPM and District the SCR system operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC11).**

AQ-31~~29~~ Except during startup and shutdown conditions, the water injection system, the SCR **system** and ~~the~~ oxidation catalyst control system, including the ammonia injection system serving the turbine, shall be in full operation at all times when the turbine is in operation.

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

AQ-32~~30~~ 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 ~~d~~**D**istrict personnel upon request.

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

AQ-33~~31~~ In the event of a breakdown in ~~the~~ **an automatic** ammonia injection control system, **the unit shall be shut down or** a trained operator shall operate the **ammonia injection control** system manually and the breakdown shall be reported to the District Compliance Division pursuant to Rule 98(~~b~~**B**)(1) and 98(~~e~~**E**).

Verification: The project owner shall notify the District regarding any ammonia injection control system breakdown as required in this condition and shall document all such communications in each Quarterly Operation Report (**AQ-SC11**).

AQ-34~~32~~ The concentration of ammonia solution used in the ammonia injection system shall be less than 20 percent ammonia by weight. Records of **ammonia deliveries and** ammonia solution concentration shall be maintained on site and made available to District personnel upon request.

Verification: The project owner shall maintain on site and provide on request of the CPM or District the ammonia delivery records that demonstrate compliance with this condition.

~~TESTING~~

AQ-35 The permittee shall submit a source test protocol to the District for approval **for any source test to determine compliance with the emission standards of this permit or any Relative Accuracy Test Audit (RATA) and other required certification tests for the CEMs**. The source test protocol shall comply with the following requirements **and any other applicable requirements of this permit**:

A. Measurements of NOx, CO, and O_2 emissions shall be conducted in accordance with U.S. Environmental Protection Agency (U.S. EPA) methods 7E, 10, and 3A, respectively, and District Source Test, method 100, or alternative methods approved by the District **and U.S. EPA**;

B. Measurement of VOC emissions shall be conducted in accordance with U.S. EPA Methods 25A and/or 18, or alternative methods approved by the District **and U.S. EPA**;

C. Measurements of PM10 emissions shall be conducted in accordance with U.S. EPA Methods 5 and 201A or 202, or alternative methods approved by the District **and U.S. 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;

E. Source testing shall be performed at the normal 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.

F. Measurements of opacity shall be conducted in accordance with U.S. EPA Method 9 or an alternative method approved by the District **and U.S. EPA**.

G. Measurement of fuel flow shall be conducted in accordance with an approved test protocol.

Verification: The project owner shall submit to the CPM for review and the District for approval the ~~initial~~ source test protocol in compliance with requirements of this condition at least ~~60~~ **30** days prior to the ~~initial~~ source test.

AQ-36 Each turbine shall be equipped with continuous monitors to measure or calculate, and record, the following operational characteristics of each unit:

~~1~~**i**. Hours of operation (hours),

~~2~~**ii**. Natural gas flow rate (scfh),

~~3~~**iii**. Heat input rate (MMBtu /hr),

~~4~~**iv**. Exhaust gas temperature (ºF), ~~and~~

~~5~~**v**. Power output (gross MW).

~~6~~**vi**. Water (for NOx control) injection rate (gal/hour) if equipped with water injection.

~~7~~**vii**. SCR inlet temperature (°F)

~~8~~**viii**. Ammonia injection rate (~~lbs~~**gal**/hour)

Verification: The project owner shall submit to the CPM for review and the District for approval a parametric monitoring protocol in compliance with this condition at least 60 days prior to the initial startup.

AQ-37~~34~~ A CEMS protocol is a document approved in writing by the SDAPCD M&TS division that describes the Quality Assurance and Quality Control procedures for monitoring, calculating and recording stack emissions from the unit.

Verification: The project owner shall maintain a copy of the CEMS protocol on site and provide it for inspection on request of the CPM or District.

AQ-38~~37~~ The project owner 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 project owner shall make the site available for inspection of the turbine operation monitors and monitor maintenance records by representatives of the District, ARB, and the Energy Commission.

Verification: The project owner shall submit to the CPM for review and the District for approval a turbine operation monitoring protocol in compliance with this condition at least 60 days prior to the initial startup.

AQ-39~~38~~ 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.

Verification: The project owner shall submit to the CPM for review and District for approval a stack test port and platform plan at least 60 days before the installation of the stack ports and platform.

AQ-40~~39~~ 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.

Verification: The project owner shall submit to the CPM for review and District for approval, if necessary based on the condition requirements, a source test protocol at least 30 days prior to the source test.

AQ-41~~40~~ Within ~~45~~ **30** days after completion of ~~the~~ **a renewal** source test or RATA **performed by an independent contractor**, a final**, written** test report shall be submitted to the District for review and approval.

Verification: The project owner will submit all RATA or source test reports to the CPM for review and the District for approval within ~~45~~ **30** days of the completion of those tests.

AQ-42~~41~~ These units shall be source tested to demonstrate compliance with the NOx, CO, VOC, ~~PM~~ and ammonia emission standards of this license**,** using District approved methods. The source test and the NOx 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.

Verification: The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within ~~45~~ **30** days of testing.

~~CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)~~

AQ-43~~42~~ The project owner shall comply with the continuous emission monitoring requirements of 40 CFR Part 75.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS monitoring protocol at least 60 days prior to the operation the CEMS.

AQ-44~~43~~ At least 60 days prior to the operation of the CEMs, the project owner shall submit a CEMs operating protocol to the District for written approval. The project owner shall make the site available for inspection of the CEMs and CEMs maintenance records by representatives of the District, ARB, and the Energy Commission.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol at least 60 days prior to the operation the CEMS.

AQ-45~~44~~ 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.

Verification: The project owner shall submit to the CPM for review and the District for approval a monitoring plan in compliance with this condition at least 45 days prior to the RATA test.

AQ-46~~45~~ 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~~ **and B and 40 CFR §60.4405 and on the CO CEMS in accordance with applicable provisions of 40 CFR Part 60 Appendix B and F**. At least ~~60~~ **30** days prior to the test date, the project owner shall submit a test protocol to the District for written approval. Additionally, the District shall be notified a minimum of 21 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.

Verification: The project owner shall submit to the CPM for review and the District for approval the RATA certification test protocol at least ~~60~~ **30** days prior to the RATA test and shall submit to the CPM for review and the District for approval a copy of the written test report within 30 days after test completion The project owner shall also notify the CPM and District of the RATA test date at least 21 days prior to conducting the RATA and other certification tests.

AQ-47~~46~~ The oxides of nitrogen (NOx) and oxygen (O_2) CEMS shall be certified and maintained in accordance with applicable Federal Regulations including the requirements of**:**

a. Sections 75.10 and 75.12 of Title 40~~,~~ Code of Federal Regulations Part 75 (40 CFR 75)~~,~~**;**

b. ~~t~~**T**he performance specifications of Appendix A of 40 CFR 75~~,~~**;**

c. ~~t~~**T**he quality assurance procedures of Appendix B of 40 CFR 75**;** ~~and~~

d. ~~t~~**T**he 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.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol as required by **AQ-44~~43~~**. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-48~~47~~ 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_2) in the exhaust gas (%);

B. Average concentration of oxides of nitrogen (NOx) for each clock-hour period, in parts per million (ppmv) corrected to 15% oxygen;

C. Average concentration of carbon monoxide (CO) for each clock-hour period, in parts per million (ppmv) corrected to 15% oxygen;

D. Average~~d~~ concentration of volatile organic compound (VOC) for each clock-hour period, in parts per million (ppmv) corrected to 15% oxygen, based on the CO/VOC surrogate relationship;

E. Clock hour mass emissions of oxides of nitrogen (NOx), in lbs/hour;

F. Clock hour mass emissions of carbon monoxide (CO), in lbs/hour;

G. Clock hour mass emissions of volatile organic compound (VOC) in lbs/hour, based on the CO/VOC surrogate relationship;

H. Calendar day mass emissions of oxides of nitrogen (NOx) in lb**s**/day;

I. Calendar day mass emissions of carbon monoxide (CO) in lb**s**/day;

J. Calendar day mass emissions of volatile organic compound**s** (VOC) in lb**s**/day;

K. Rolling 12-calendar month mass emissions of oxides of nitrogen (NOx), in tons**;**

L. Rolling 12-calendar month mass emissions of carbon monoxide (CO), in tons**;**

M. Rolling 12-calendar month mass emission**s** of volatile organic compound (VOC)**,** in tons;

N. Natural gas flow rate to turbine in hscf/hr;

O. Average concentration of ammonia slip emission for each clock-hour period, in parts per million by volume (ppmv) corrected to 15 percent oxygen, calculated in accordance with **the Ammonia Hourly Monitoring** Condition ~~2~~4.

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol as required by **AQ-44~~43~~**. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-49~~48~~ 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.

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

AQ-50~~49~~ 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.

Verification: The project owner shall provide the District with all emission calculations required by this condition and shall provide notation of when such calculations are used in place of CEMS data as part of the Quarterly Operation Report (**AQ-SC11**).

AQ-51~~50~~ Any violation of any emission standard as indicated by the CEMS shall be reported to the District's ~~c~~**C**ompliance ~~d~~**D**ivision within 96 hours after such occurrence**.** (~~H&S~~ **CA Health and Safety** Code)~~.~~

Verification: The project owner shall notify the District regarding any emission standard violation as required in this condition and shall document all such occurrences in each Quarterly Operation Report (**AQ-SC11**).

AQ-52~~51~~ The CEMS shall be maintained and operated, and reports submitted, in accordance with ~~the~~ **applicable federal** requirements ~~of rule 19.2 Sections (d), (e), (f) (1), (f) (2), (f) (3), (f) (4) and (f) (5),~~ **including Appendices B and F of 40 CFR Part 60, Appendices A and B of 40 CFR Part 75, 40 CFR Parts 75.10 and 75.12,** and a CEMS ~~p~~**P**rotocol approved by the District.

Verification: The project owner shall submit to the District the CEMS reports as required in this condition and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-53~~52~~ 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 (hscf) in each clock hour, calendar month and 12**-**calendar**-**month period**,** hours of daily operation and total cumulative hours of operation during each calendar year.

Verification: The operating log or DAHS operating records will be provided as part of the Quarterly Operation Report (**AQ-SC11**). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-54~~53~~ The District shall be notified at least two weeks prior to any changes made in ~~the~~ CEMS software that affect **the** measurement, calculation or correction of data displayed and/or recorded by the CEMS.

Verification: The project owner shall submit to the CPM for review and the District for approval any revision to the CEMS/DAHS software, as required by this condition, to be approved in advance at least two weeks before any planned changes are made.

AQ-55~~54~~ Fuel flow-meters 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 flow-meters shall meet the applicable quality assurance requirements of 40 CFR part 75, Appendix D, and Section 2.1.6.

Verification: The project owner shall submit to the CPM the natural gas usage data from the fuel flow meters as part of the Quarterly Operation Report (**AQ-SC11**).

AQ-56~~76~~ All records required by ~~these conditions~~ **this written permit** shall be maintained on site for a minimum of five years and made available to the District upon request.

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

AQ-57 The Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.

Verification: None required.

AQ-58 The project owner shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

Verification: The project owner shall certify compliance with this condition as part of the fourth quarter's Quarterly Operation Report (AQ-SC11) and shall make the site and data available for inspection by representatives of the District, ARB, and the Energy Commission.

AQ-59 Notwithstanding any other condition of this permit, for each turbine, not later than 60 calendar days after completion of the repair and maintenance of the emission control system as described in Application No. APCD2016-APP-004406, a source test and Relative Accuracy Test Audit (RATA) and applicable certification tests shall be conducted on the CEMS of each turbine to demonstrate compliance with the NOx, CO, VOC, and ammonia emission standards of this permit and applicable relative accuracy requirements and certifications for the NOx and CO CEMS using District approved methods. The source test shall be conducted in accordance with a protocol complying with all the applicable requirements for source test protocols as specified in this permit.

Verification: The project owner shall submit to the CPM for review and the District for approval the source test, RATA, and applicable certification test protocol at least 30 days prior to the tests and shall submit to the CPM for review and the District for approval a copy of the written test report within 30 days after test completion. The project owner shall also notify the CPM and District of the test date at least 21 days prior to conducting the RATA and other certification tests.

AQ-60 **Unless a later date is approved in writing by the District, not later than 30 calendar days prior to the start of the repair and maintenance project the project owner shall submit to the District the final selection of the catalyst manufacturers and design parameters and details of the selective catalytic reduction (SCR) and oxidation catalyst emission control systems for the combustion turbines. Unless the District approves an alternative, the submittal shall include at a minimum the type of catalyst; active catalyst material; catalyst volume per turbine; and control efficiency of the SCR for NOx and the control efficiency of the oxidation catalyst for VOCs and CO at temperatures between 100 ºF and 1000 ºF at a space velocity corresponding to 100% load. Such information may be submitted to the District as trade secret and confidential pursuant to District Rules 175 and 176.**

Verification: **Unless a later date is approved in writing by the District, not later than 30 calendar days prior to the start of the repair and maintenance project the project owner shall submit to the CPM and the District the final selection of the catalyst manufacturers and design parameters and details of the SCR and oxidation catalyst emission control systems for the combustion turbines.**

EMERGENCY BLACK START ENGINE: ~~GAS~~ 965 BRAKE HORSEPOWER (BHP), CUMMINS ENGINE, MODEL GTA38-G2, S/N X25328866, NATURAL GAS FUELED ~~BLACK START ENGINE~~, EQUIPPED WITH MIRATECH CATALYTIC CONVERTER, MODEL RHS-4228-14-ECI, S/N RHS-1336 AND MIRATECH AIR TO FUEL RATIO CONTROLLER MODEL MEC-R~~, DRIVING A 625 KILOWATT (KW) GENERATOR~~.

AQ-BSE1~~55~~ ~~Project owner shall provide a~~**A**ccess, facilities, utilities and any necessary safety equipment~~, with the exception of personal protective equipment requiring individual fitting and specialized training,~~ for source testing and inspection **shall be provided** upon request of the **Air Pollution Control** District.

Verification: The project owner shall provide facilities, utilities, and safety equipment for source testing and inspections upon request of the District, ARB, and the Energy Commission.

AQ-BSE2~~56~~ Gaseous fuel engines shall use only gaseous fuel which contains no more than 10 grains of sulfur compounds, calculated as hydrogen sulfide, per 100 cubic feet **of** dry gaseous fuel at standard~~s~~ conditions. Gaseous fuels include natural gas, propane, liquefied petroleum gas (LPG), butane. Gasoline engines shall use only California ~~R~~**r**eformulated ~~G~~**g**asoline. (Rule 62).

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

AQ-BSE3~~57~~ Visible emissions including crank case smoke shall comply with Rule 50. (Rule 50)

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

AQ-BSE4~~58~~ At no time shall the subject equipment ~~described~~ cause or contribute to a public nuisance. (Rule 51)

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

AQ-BSE5~~59~~ A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operating hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within 10 calendar days. The written notification shall include the following information:

A. Old meter's hour reading.

B. Replacement meter's manufacturer name, model, and serial number if available and current hour reading on replacement meter.

C. Copy of receipt of new meter or of installation work order. A copy of the meter replacement notification shall be maintained on site and made available to the Air Pollution Control District upon request. (Rule 69.4.1.)

Verification: The project owner shall provide notification to the District as required by this condition and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-BSE6~~60~~ The engine **shall be operated exclusively during emergencies or for testing and maintenance. Engine** operation shall not exceed 0.5 hour~~s~~ per day and 52 hours per calendar year for non-emergency purposes (testing and maintenance). **Emergency use is not limited.** (NSR, Rule 69.4.1**, 40 CFR 63 Subpart ZZZZ**)

Verification: The project owner shall submit to the CPM the black-start engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC11**).

AQ-BSE7~~61~~ The owner or operator shall conduct periodic maintenance of this engine and any add-on control equipment, as applicable, as recommended by the engine and control equipment manufacturer or as specified by any other maintenance procedure approved in writing by the District. The periodic maintenance shall be conducted at least once each calendar year. (Rule 69.4.1**, 40 CFR 63 Subpart ZZZZ**)

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

AQ-BSE8 The owner or operator shall change engine oil and filter every 500 hours of operation or annually, whichever comes first; or test the oil in accordance with 40 CFR § 63.6625(i). (40 CFR 63 Subpart ZZZZ)

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

AQ-BSE9 The owner or operator shall inspect the air cleaner of a compression ignition engine or inspect spark plugs of a spark ignition engine, every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ)

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

AQ-BSE10 The owner or operator shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ)

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

AQ-BSE11~~62~~ The owner or operator of ~~the~~ **this** engine shall keep the following records:

- applicable fuel certification~~;~~
- manual of recommended maintenance provided by the manufacturer~~, or~~
- other maintenance procedure as approved in writing, in advance, by the District~~.~~

These records shall be kept on-site for at least the same period of time as the engine to which the records apply is located at the site. These records shall be made available to the District **upon request**. (Rule 69.4.1)

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

AQ-BSE12~~63~~ The owner or operator of this engine shall maintain an operating log containing, at a minimum, the following:

- dates and times of engine operation~~,~~ indicating whether the operation was for non-~~-~~emergency purposes or during an emergency situation and the nature of the emergency, if available (these records are not required if the total engine operation~~s~~ for any purpose, including emergency situation, do not exceed 52 hours in a calendar year)~~;~~
- total cumulative hours of operation per calendar year, based on actual readings of engine hour ~~meter~~ or fuel meter~~;~~
- records of periodic maintenance including ~~the~~ dates maintenance~~, calibration or replacement were~~ **was** performed.

(Rule 69.4.1)

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

AQ-BSE13~~64~~ Fuel, ~~A~~all operational and maintenance logs required by this permit shall be kept for a minimum of three years~~,~~ unless otherwise indicated by the conditions of this permit, and these records shall be made available to the District upon request. (Rule 69.4.1)

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

AQ-BSE14 The Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.

Verification: None required.

AQ-BSE15 The project owner shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

Verification: The project owner shall certify compliance with this condition as part of the fourth quarter's Quarterly Operation Report (AQ-SC11) and shall make the site and data available for inspection by representatives of the District, ARB, and the Energy Commission.

EMERGENCY FIRE PUMP ENGINE: 373 BHP CUMMINS, MODEL CFP11E-F10, BASED ON CUMMINS DIESEL ~~FUELED EMERGENCY FIRE PUMP~~ ENGINE MODEL QSM11, S/N 35229758, MODEL YEAR 2008, EPA TIER 2 CERTIFIED OF ENGINE FAMILY NUMBER 4CEXL0661AAD.

AQ-FP1~~65~~ ~~Project owner shall provide a~~**A**ccess, facilities, utilities and any necessary safety equipment~~, with the exception of personal protective equipment requiring individual fitting and specialized training,~~ for source testing and inspection **shall be provided** upon request of the **Air Pollution Control** District.

Verification: The project owner shall provide facilities, utilities, and safety equipment for source testing and inspections upon request of the District, ARB, and the Energy Commission.

AQ-FP2~~67~~ The engine shall only use ARB Diesel Fuel. (Rule 69.4.1, 17 CCR ~~§~~93115)

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

AQ-FP3~~66~~ The engine shall be operated exclusively during emergencies or for testing and maintenance. Engine operation for maintenance and testing purposes shall not exceed 0.5 hour per day and 50 hours per calendar year. (NSR**;**~~) (~~17 CCR ~~§~~93115**;**~~) (ATCM reportable~~ **40 CFR 63 Subpart ZZZZ**)

Verification: The project owner shall submit to the CPM the fire pump engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (**AQ-SC11**).

AQ-FP4 The engine and any associated air pollution control equipment and monitoring equipment shall be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions (40CFR Subpart ZZZZ §63.6605(b)).

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

AQ-FP5 The owner or operator shall minimize engine operating time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. (40CFR Subpart ZZZZ §63.6625(h))

Verification: The project owner shall submit to the CPM the fire pump engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC11).

AQ-FP6~~68~~ Visible emissions including crankcase smoke shall comply with Air Pollution Control District Rule 50. (Rule 50)

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

AQ-FP7~~69~~ The equipment described above shall not cause or contribute to **a** public nuisance. (Rule 51)

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

AQ-FP8~~70~~ This engine shall not operate for non-emergency use during the following periods, as applicable:

A. Whenever there is any school sponsored activity, if engine is located on school grounds, or

B. Between 7:30 **AM** and 3:30 PM on days when school is in session, if the engine is located within 500 feet of, but not on school grounds.

This condition shall not apply to an engine located at or near any school grounds that also serve as the student**s**'~~s~~ place of residence**.** (17 CCR ~~§~~93115) ~~(ATCM reportable).~~

Verification: The project owner shall submit to the CPM the engine operating data demonstrating compliance with this condition on request and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-FP9~~71~~ A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operati**on**~~ng~~ hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within 10 calendar days. The written notification shall include the following information:

A. Old meter's hour reading.

B. Replacement meter's manufacturer name, model, and serial number if available and current hour reading on replacement meter.

C. Copy of receipt of new meter or of installation work order. A copy of the meter replacement notification shall be maintained on-site and made available to the Air Pollution Control District upon request.

(Rule 69.4.1**,** ~~) (~~17 CCR ~~§~~93115)

Verification: The project owner shall provide notification to the District as required by this condition and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-FP10~~72~~ The owner or operator **of this engine** shall conduct periodic maintenance of ~~this~~ **the** engine and add-on control equipment, if any, as recommended by the engine and control equipment manufacturers or as specified by the engine servicing company's maintenance procedure**s**. The periodic maintenance shall be conducted at least once each calendar year. (Rule 69.4.1)

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

AQ-FP11 The owner or operator shall change engine oil and filter every 500 hours of operation or annually, whichever comes first; or test the oil in accordance with 40 CFR § 63.6625(i). (40 CFR 63 Subpart ZZZZ § 63.6603(a) and Table 2d(4)(b))

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

AQ-FP12 The owner or operator shall inspect the air cleaner of a compression ignition engine or inspect spark plugs of a spark ignition engine, every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ § 63.6603(a) and Table 2d(4)(b))

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

AQ-FP13 The owner or operator shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (40 CFR 63 Subpart ZZZZ)

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

AQ-FP14~~73~~ The owner or operator of the engine shall maintain the following records on site for at least the same period of time as the engine to which the records apply is located at the site:

A. Documentation shall be maintained identifying the fuel as ARB diesel;

B. Manual of recommended maintenance provided by the manufacturer, or maintenance procedures specified by the engine servicing company; and

C. Records of annual engine maintenance~~,~~ including ~~the~~ date the maintenance was performed.

These records shall be made available to the Air Pollution Control District upon request. (Rule 69.4.1) **(17 CCR 93115)**

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

AQ-FP15~~74~~ The owner or operator of this ~~equipment~~ **engine** shall maintain a monthly operating log containing, at a minimum, the following:

A. Dates and times of engine operation~~,~~**;** ~~indicating~~ whether the operation was for maintenance and testing purposes or emergency use; and~~,~~ the nature of the emergency, if known;

B. Hours of operation for all uses other than those specified above and identification of the nature of that use.

(Rule 69.4.1~~) (~~**,** 17 CCR ~~§~~93115)

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

AQ-FP16~~75~~ **The project owner shall maintain all records** ~~All operational and maintenance logs~~ required by this permit **including any calibration, maintenance, and other supporting information and copies of all reports required by this permit for at least five years** ~~shall be kept a minimum of 36 months~~ from their date of creation ~~unless otherwise indicated by the conditions of this permit~~. ~~The~~ **Such** records shall be maintained onsite for a minimum of ~~24 months~~ **three years** ~~from their date of creation~~. ~~Records for the last 24 months of operation shall be made available to the Air Pollution Control District upon request. Records for operation for the last 25 to 36 months shall be made available to the Air Pollution Control District within 5 working days of request.~~

[Rule 1421; Rule 69.4.1; 17 CCR 93115; 40 CFR 63 Subpart ZZZZ]

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

AQ-FP17 The owner or operator shall submit a semiannual compliance report to the District by the end of the month following each reporting period. Reporting periods are January 1 through June 30 and July 1 through December 31. The semiannual compliance report shall contain:

a. Company name and address,

b. Statement by a responsible official (with name, title, and signature) certifying the accuracy of the report content,

c. Date of report and dates of reporting period,

d. The number, duration, and a brief description for each type of deviation which occurred during the reporting period and a description of actions taken to minimize emission and corrective actions taken,

e. If there are no deviations from requirements, a statement that there were no deviations

f. If there are deviations during the reporting period, you must include the following information:

1. Date and time that each malfunction started and stopped,

2. A summary of total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during the reporting period

(40CFR 63 Subpart ZZZZ §63.6650(b)(1))

Verification: The project owner shall submit the semiannual compliance reports to the CPM and to the District by the end of the month following each reporting period.

AQ-FP18 The Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.

Verification: None required.

AQ-FP19 The project owner shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

Verification: The project owner shall certify compliance with this condition as part of the fourth quarter's Quarterly Operation Report (AQ-SC11) and shall make the site and data available for inspection by representatives of the District, ARB, and the Energy Commission.

REFERENCES

CEC 2009 – California Energy Commission, Final Commission Decision, Orange Grove Project (08-AFC-4), April 2009.

CEC 2012 – California Energy Commission, Order Approving Petition to Amend the Orange Grove Energy Project, March 2012.