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May 7, 2009

<b>DOCKET</b>	
<b>00-AFC-1C</b>	
DATE	<u>MAY 07 2009</u>
RECD.	<u>MAY 08 2009</u>

Mr. Ron Yasny  
California Energy Commission  
1516 Ninth Street, MS-2000  
Sacramento, CA 95814

Reference: PG&E Gateway Generating Station (00-AFC-01C)

Subject: Petition to Amend Various Air Quality Conditions of Certification

Dear Mr. Yasny:

Attached please find a petition to make minor conforming amendments to several of the air quality conditions of certification in the license for PG&E's Gateway Generating Station. As we have discussed, the purpose of these amendments is to make the air quality conditions of certification consistent with the BAAQMD Authority to Construct and the Gateway Generating Station project as built.

If you have any questions regarding this petition to amend, please do not hesitate to call me or Steve Royall of PG&E at (925) 522-7805.

Sincerely,

Nancy Matthews

attachment

cc: Steve Royall, PG&E  
Angel Espiritu, PG&E  
Linus Farias, PG&E



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attachment

cc: Steve Royall, PG&E  
Angel Espiritu, PG&E  
Linus Farias, PG&E

---

# **Petition to Amend Air Quality Conditions in the Gateway Generating Station Final Decision**

Submitted to the  
**California Energy Commission**

May 7, 2009

Submitted by  
**Pacific Gas and Electric Company**



With Technical Assistance By



1801 J Street  
Sacramento, CA 95811

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# 1.0 Introduction

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## 1.1 Background

Gateway Generating Station is a nominal 530 MW combined cycle power plant located on Wilbur Avenue in the City of Antioch. The project, originally developed by Mirant Delta LLC as Contra Costa Power Plant Unit #8 (CC8), was certified on May 30, 2001. Subsequently, Pacific Gas & Electric Company (PG&E) acquired the project through an Asset Transfer Agreement and renamed it Gateway Generating Station (GGS). Mirant began construction in late 2001, but suspended all site activities in 2002. PG&E restarted construction following CEC approval in early 2007.

In December 2006, PG&E submitted to the CEC Amendment #3, which proposed several changes to the project design, including redesign of the cooling system to eliminate wet cooling and elimination of steam power augmentation. Amendment #3 was approved by the CEC on August 1, 2007. Because of the need to get the cooling system-related project changes approved quickly, Amendment #3 did not include other project modifications that required changes to the Authority to Construct (ATC) issued by the Bay Area Air Quality Management District (BAAQMD or District) for the project. At the time PG&E took over the GGS project, a meeting was held with the District staff to discuss PG&E's plans for the project. At that time, the District staff was informed of the following: (1) Amendment #3, which did not include air quality permit-related changes, had been filed with the CEC; and (2) an application would be filed in mid- to late 2007 that would address proposed changes to the ATC conditions and to the CEC's air quality-related conditions of certification.

PG&E filed the application for amendments to the ATC with the BAAQMD in December 2007, requesting changes to conditions relating to commissioning and startups. The application also addressed design changes involving exempt equipment and added a new emergency Diesel fire pump engine. A petition for conforming amendments to the air quality conditions of the facility license was filed with the CEC in January 2008. However, before the District issued an amended ATC, GGS completed commissioning in compliance with the existing conditions, so no revisions were needed for commissioning-related conditions. Further, based on data collected during several warm and hot startups and two complete cold startups during and immediately after the commissioning period, PG&E determined that the original startup conditions were acceptable. As a result, PG&E withdrew its applications to the BAAQMD and the CEC for amendments to the GGS air quality conditions on February 13, 2009.

However, there remain several inconsistencies between the facility as originally permitted and the GGS as constructed. PG&E has already submitted a separate application to the District to permit the emergency Diesel fire pump engine. On April 14, 2009, PG&E requested concurrence from the District that several of the units are exempt from the requirement to obtain permits, and requested several administrative amendments consistent with the changes set forth in this petition.

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MAY 2009 AMENDMENT

With this petition, PG&E is requesting amendments to the air quality conditions in the CEC license to make the license consistent with the facility as constructed and with the BAAQMD permit. The amendments fall into three main categories:

- Revise conditions to reflect the substitution of the dry cooling system for the wet cooling system;
- Revise conditions related to the auxiliary equipment; and
- Make minor cleanup amendments for consistency with the District permit.

This petition to amend the project contains the information required pursuant to Section 1769 (Post Certification Amendments and Changes) of the CEC Siting Regulations. The revisions are summarized below.

## 1.2 Description of Proposed Amendment

After careful evaluation and a comprehensive review of the project design, PG&E determined that several changes to the original CC8 project description were necessary. Several changes to the air quality conditions of the CEC license, which constituted the final GGS project design, were proposed for CEC approval in an amendment filed in January 2008. As discussed above, the January 2008 petition was withdrawn in February 2009 because most of the more substantive changes were no longer needed. However, there are several discrepancies between the project as built, the BAAQMD Authority to Construct, and the CEC license. PG&E has filed the necessary documents with the BAAQMD to resolve those discrepancies. The purpose of this petition is to make conforming changes to the CEC license.

The major changes are summarized below; more detail on all of the specific project changes is provided in Section 2.1 of this Amendment.

- Revise the facility PM<sub>10</sub> emission limits to reflect elimination of the wet cooling tower.
- Replace the permitted natural gas-fired preheater with a smaller dewpoint heater and increase allowable daily hours of operation.
- Replace a motor driven fire water pump with a 300 kW Diesel fire pump at the facility.
- Revise references to “Contra Costa Unit 8” and “CC8” to reflect the current project name.
- Delete references to power augmentation.
- Make other minor conforming changes for consistency.

The remainder of this Petition to Amend the GGS License presents a detailed project description (Section 2), environmental analysis of the proposed project changes (Section 3), proposed modifications to the Conditions of Certification (Section 4), potential effects on the public (Section 5), a list of property owners potentially impacted by the proposed changes (Section 6), and potential effects on the property owners (Section 7).

## 1.3 Necessity of Proposed Changes

Sections 1769 (a) (1) (A), (B), and (C) of the CEC Siting Regulations require a discussion of the necessity for the proposed revisions to the GGS project and an indication of whether the revisions are based on information known by the petitioner during the certification proceeding. The necessity for each revision is addressed in Section 2. Because PG&E did not assume ownership of the project until after the project was approved by the CEC, PG&E was not able to revise the project during the certification process.

## 1.4 Summary of Environmental Impacts

Section 1769 (a) (1) (E) of the CEC Siting Regulations requires that an analysis be conducted to address the impacts proposed revisions may have on the environment and proposed measures to mitigate significant adverse impacts. Section 1769 (a) (1) (F) requires a discussion of the impact of proposed revisions on the facility's ability to comply with applicable laws, ordinances, regulations, and standards (LORS). Section 3.0 discusses the potential impacts of the proposed changes on the environment, as well as the proposed revisions' consistency with LORS.

## 1.5 Consistency of Changes with License

Section 1769 (a) (1) (D) of the CEC Siting Regulations requires a discussion of the consistency of each proposed project revision with the assumptions, rationale, findings, or other bases of the final decision and determination regarding whether the revision is based on new information that changes or undermines the basis of the final decision. Also required is an explanation of why the changes should be permitted. None of the proposed revisions undermines the assumptions, rationale, findings, or other basis of the Commission Decision for the project. The revisions consist of beneficial changes to the project that increase reliability and reduce environmental impacts.

## 2.0 Description of Project Changes

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Consistent with the California Energy Commission Siting Regulations Section 1769(a) (1) (A), this section includes a complete description of each of the proposed project modifications as well as the necessity for the changes.

### 2.1 Proposed Project Changes

Following PG&E's acquisition of the Gateway project, it was determined that several significant project design features associated with the District- and CEC-approved CC8 project required modifications. The changes that did not require modifications to the BAAQMD ATC were addressed in Amendment #3 (approved by the Commission on August 1, 2007). However, PG&E also needs to make the following changes to conditions related to air quality, which are consistent with PG&E's April 14, 2009 request to the BAAQMD:

- Revise conditions to reflect the substitution of the dry cooling system for the wet cooling system;
- Revise conditions related to the auxiliary equipment; and
- Make minor cleanup amendments for consistency with the District permit.

These changes are discussed in greater detail below.

#### 2.1.1 Revise Cooling System-Related Conditions

**Revise conditions related to the wet cooling system.** The original CC8 project was licensed with a wet cooling tower. The PM<sub>10</sub> emissions from the wet cooling tower were included in the annual facility-wide PM<sub>10</sub> emissions limit. The CEC license was amended in August 2007 to replace the wet cooling tower with a dry cooling system (Order No. 07-0801-2). Although references to the wet cooling tower were deleted and replaced with conditions relating to the wet surface-air cooler that is part of the dry cooling system, the annual facility-wide PM<sub>10</sub> emissions limits were not reduced to reflect the elimination of the PM<sub>10</sub> emissions attributable to the cooling tower. This proposed change reduces the annual PM<sub>10</sub> emissions from the facility from 112.2 tpy to 105.0 tpy in condition AQ-24, and reduces the required offsets in conditions AQ-39 and AQ-40.<sup>1</sup>

#### 2.1.2 Revise Conditions Related to the Auxiliary Units

**Substitute a smaller gas dewpoint heater for the originally permitted fuel gas heater.** The license includes a natural gas-fired fuel gas preheater rated at 12 MMBtu/hr. The license includes a condition limiting the heater to 16 hours per day of operation. PG&E substituted a smaller dewpoint heater rated at approximately 6.5 MMBtu/hr (HHV). Because the heat input rating of the dewpoint heater is less than 10 MMBtu/hr and the unit is fueled exclusively with natural gas, it is exempt from permitting under BAAQMD Rule 2, Section

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<sup>1</sup> PM<sub>10</sub> offsets were provided in the form of SO<sub>2</sub> ERCs at a ratio of 3:1, so the quantity of SO<sub>x</sub> ERCs required is reduced from 337 tons to 315 tons.



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2-1-114.1.2.<sup>2</sup> PG&E has requested written concurrence from the District staff that the dewpoint heater is exempt from the requirement to obtain a permit, and has asked the District to eliminate the permit condition related to the fuel gas heater.

The District amended condition 47 in 2002 to limit daily heat input, rather than daily hours of operation (see District letter attached), for the fuel gas heater in the original ATC.<sup>3</sup> However, this change was not submitted to the CEC by the previous project owners so the conforming change was not made to the CEC license and the license still limits operation of the fuel gas heater to 16 hours per day. PG&E may need to operate the dewpoint heater up to 24 hours per day under extreme cold-weather conditions. In this amendment, we propose to change AQ-47 from a limit on daily operating hours to a limit on daily heat input, consistent with the change that was made to the air permit in 2002. However, since the heat input rating of the dewpoint heater is only 6.5 MMBtu/hr, the daily limit for AQ-47 will be  $6.5 \text{ MMBtu/hr} * 24 \text{ hrs/day} = 156 \text{ MMBtu/day}$ , lower than the 192 MMBtu/day limit that is equivalent to the operational limit in the current license. The change in size and type of fuel gas heater also affects conditions AQ-5 and AQ-24.

**Replace the motor driven fire water pump with a 300 kW Diesel fire pump.** The original project design called for an electric motor-driven fire water pump. However, PG&E was required by the fire marshal to install a Diesel fire pump engine. A permit application was filed with the District for this engine in December 2007; when the larger amendment application was withdrawn in January 2009, a second application for the Diesel fire pump engine was filed in March 2009. Copies of these applications were provided to the CEC. As part of this amendment, PG&E is requesting that the CEC add the new Diesel fire pump engine to the GGS license. Standard BAAQMD conditions for a Diesel fire pump engine are included as proposed new conditions of certification AQ-48 through AQ-51.

### 2.1.3 Minor Cleanup Amendments

**Correct the name of the project owner/operator.** The conditions of certification refer to the project as "Contra Costa Unit 8" and "CC8." These references should be corrected to reflect the current name of the project, Gateway Generation Station or GGS. This change affects numerous conditions.

**Delete references in the conditions of certification to steam injection power augmentation.** Although power augmentation was eliminated from the project as part of CEC Order No. 07-0801-2 (August 2007), several of the permit conditions still include references to power augmentation. GGS is requesting that these references be eliminated as part of these amendments. This change affects conditions AQ-20, AQ-26, and AQ-30.

**Allow the optional monitoring of O<sub>2</sub> as diluent instead of CO<sub>2</sub>.** This change was made by the BAAQMD in May 2002 but the change was not submitted to the CEC by the previous project owners. PG&E is requesting the conforming change to AQ-6 of the CEC license.

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<sup>2</sup> Rule 2, Section 2-1-114 exempts sources listed in the subsection, "provided that the source does not require permitting pursuant to Section 2-1-319." Section 2-1-319 requires permitting of sources with emissions in excess of 5 tpy. Annual emissions from the dewpoint heater will also be well below 5 tpy.

<sup>3</sup> The original condition limited the 12 MMBtu/hr unit to 16 hrs/day of operation; the District amended condition 47 to express this restriction as a limit on daily heat input ( $12 \text{ MMBtu/hr} * 16 \text{ hrs/day} = 192 \text{ MMBtu/day}$ ) instead of a limit on daily operating hours.

## 2.2 Necessity of Proposed Change

Sections 1769 (a)(1)(B) and 1769(a)(1)(C) of the CEC Siting Regulations require a discussion of the necessity for the proposed changes to the project and whether the proposed modifications are based on information that was known by the petitioner during the certification proceeding. During the licensing period, the changes to the project design proposed in this amendment were not known. Specifically, the plant was designed and permitted by a different owner/operator as part of a larger, base load power plant. PG&E reevaluated the potential operations of the plant based on its current and future system needs and as a stand-alone facility. The proposed changes described in this amendment will allow PG&E to minimize future permitting and economic uncertainty, increase the operational reliability of the Gateway facility, and ensure that the conditions of certification accurately reflect the project as constructed.

## 3.0 Environmental Analysis of the Project Changes

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The changes to the conditions of certification for the GGS project proposed in this amendment will increase long-term operational reliability of the facility while allowing the project to be operated in compliance with its conditions. PG&E has also filed an application with the BAAQMD to change corresponding conditions of the ATC.

The following disciplines will not be affected by the changes in this amendment and are not addressed:

- Land Use
- Worker Health and Safety
- Noise
- Socioeconomics
- Soils and Water
- Traffic and Transportation
- Waste Management
- Geologic Hazards and Resources
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Hazardous Materials Management
- Water Resources
- Visual Resources

Disciplines that have the potential for environmental effects, different from those addressed in the Commission Decision (dated May 2001) and subsequent amendments, are analyzed below.

### 3.1 Air Quality

The potential changes to the project will affect only the air quality analysis used to support the Commission Decision for the project. Because the proposed changes generally reduce emissions below the levels evaluated for the original project, the proposed amendments will not change the conclusion that the project will not result in any significant, unmitigated air quality impacts. PG&E is not proposing to increase any of the existing daily or annual air emissions limits for any pollutant. The request to the BAAQMD for a determination of exemption and conforming amendments is included as Attachment B to this petition.

### 3.2 Public Health

The only change to the project that has the potential to affect public health is the addition of the Diesel fire pump engine.

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A revised screening health risk assessment, which reflects potential public health impacts of the fire pump engine, was submitted with the January 2008 request for amendment, and is incorporated herein by reference. The screening health risk assessment submitted in January 2008 demonstrated that potential cancer risks from the fire pump engine were just under 1 in one million, well below the 10 in one million level considered to pose a significant risk.

### **3.3 Cumulative Impacts**

The cumulative impacts study area associated with the proposed changes includes the geographic area within a 6-mile radius of GGS and the Contra Costa power plant. No new significant cumulative impacts are expected from the proposed changes, because the proposed changes are mostly administrative in nature. Some of the proposed changes will reduce allowable emissions from the project. Emissions from the new fire pump engine are very low and impacts from the engine are very localized. These changes will not alter the assumptions or conclusions made in the Commission Decision for the CC8 project.

### **3.4 LORS**

The proposed revisions will not change the discussion presented in 00-AFC-1. These changes will not alter the assumptions or conclusions made in the Commission Decision and in fact will enhance the project's ability to comply with its conditions of certification.

## 4.0 Proposed Modification to the Conditions of Certification

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Consistent with the requirements of CEC Siting Regulations Section 1769 (a)(1)(A), this section includes proposed modifications to the project's Conditions of Certification that need to be reviewed and approved by the CEC concurrent with the CEC review of this amendment. Attachment C contains the proposed revisions to the Air Quality Conditions of Certification for the GGS project. These proposed revisions reflect the changes specified in Section 2 of this amendment.

## 5.0 Potential Effects on the Public

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Consistent with the CEC Siting Regulations Section 1769(a)(1)(G), this section discusses the proposed project modifications' effects on the public.

The proposed changes at the project site will have no noticeable effects on the public. The proposed modifications will not increase annual air emissions. There are no significant public health impacts from the proposed changes. Visual and noise impacts will be negligible and will remain characteristic of the surrounding industrial land uses. The proposed changes will not affect the public.

## 6.0 List of Property Owners

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Consistent with the CEC Siting Regulations Section 1769(a)(1)(H), the property owners affected by the proposed modifications are listed in Attachment D.

## 7.0 Potential Effects on Property Owners

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Consistent with the CEC Siting Regulation Section 1769(a)(1)(I), this section addresses potential effects of the proposed changes on nearby property owners, the public, and parties in the application proceedings.

The proposed changes in the conditions of certification will have no noticeable effects on the nearby property owners.



## Attachment A

Letter from BAAQMD Approving Changes to Condition 47



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

May 7, 2002

Tom Bertolini  
Pittsburg Power Plant  
P.O. Box 192  
Pittsburg, CA 94565

Dear Mr. Bertolini:

This is to confirm that I have revised Permit Condition 18138, Part 6 and 47, for Contra Cost Unit 8. Condition 6 now allows either a carbon dioxide or an oxygen monitor. Condition 47 has been changed from a 16 hr/day and 12 MMBtu/hr limit to a limit of 192 MMBtu/day.

A copy of the revised Condition 18138 is enclosed.

Sincerely,

A handwritten signature in black ink that reads "F. R. Wocasek".

Dick Wocasek, P.E.  
Air Quality Engineer

FRW:frw

cc: Bob Nishimura

## Attachment B

Letter to BAAQMD Requesting Confirmation of Exemption from  
Permit Requirements



**Pacific Gas and  
Electric Company®**

*Mailing Address:*  
Pacific Gas & Electric Company  
Gateway Generating Station  
3225 Wilbur Ave.  
Antioch, CA 94509  
(925) 522-7801

April 14, 2009

Brian Bateman  
Director, Permit Services  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Subject: PG&E Gateway Generating Station, Application No. 20385  
Request for Determination of Additional Exemptions and Associated  
Administrative Amendments to Permit Conditions

Dear Mr. Bateman:

Pacific Gas and Electric Company (PG&E) is submitting this request for determination of additional exemptions and associated administrative amendments to permit conditions as a supplement to our March 20, 2009 request for determination of exemption for the oil-water separator at our Gateway Generating Station (GGS). We believe that there are several additional pieces of equipment that qualify for exemption under BAAQMD regulations. We are requesting that these units, which are currently permitted under Authority to Construct (ATC) Condition #18138, be removed from the ATC. We are also requesting approval of associated administrative amendments to remove permit conditions related to these exempt units. Finally, we agree that this request will extend the District's 35-working-day limit for taking action on an application, per Rule 2-1-408.

A determination of exemption is being requested for the following units:

- S-45 Natural Gas-fired Fuel Preheater (Exempt per Regulation 2-1-114); and
- Dry Cooling System (Exempt per Regulation 2-1-103) to replace S-46 Cell Cooling Tower.

The justification for the exemptions and more detail regarding the proposed administrative amendments are provided in the following sections.

#### Natural Gas-Fired Fuel Preheater

The original ATC included a natural gas-fired fuel gas preheater rated at 12 MMBtu/hr. The ATC includes a condition limiting daily heat input to the fuel gas preheater to 192 MMBtu/day, effectively restricting the heater to 16 hours per day of operation. PG&E substituted a smaller dewpoint heater rated at approximately 6.5 MMBtu/hr

(HHV). Specifications for the dewpoint heater are shown in Table 1. Emissions from the replacement heater are shown in Table 2 to be well below 5 tons per year. Because the heat input rating of the dewpoint heater is less than 10 MMBtu/hr and the unit is fueled exclusively with natural gas, it is exempt from permitting under BAAQMD Rule 2, Section 2-1-114.1.2.<sup>1</sup>

We are requesting the District's concurrence that the dewpoint heater is exempt from permit requirements. We also request that the District delete Condition 47 from the ATC and remove the reference to the Fuel Gas Preheater (S-45) from Condition 24.

<b>Table 1</b>	
<b>Specifications for Natural Gas-Fired Dewpoint Heater</b>	
Fuel Gas Flow, MMBtu/hr (HHV)	6.5
Fuel Gas Flow, scfh	6418
Exhaust Flow Rate, acfm	1964
Stack Gas Temperature, deg F	300
Stack Diameter, inches	7.981
<b>Emission Rates</b>	
NOx, ppmvd @ 3% O <sub>2</sub> <sup>a</sup>	50
CO, ppmvd @ 3% O <sub>2</sub> <sup>a</sup>	40
POC, ppmvd @ 3% O <sub>2</sub> <sup>a</sup>	5.5
PM <sub>10</sub> , lb/MMBtu (HHV) <sup>a</sup>	0.0074
SO <sub>2</sub> , lb/MMscf <sup>b</sup>	2.86
Notes:	
a. Manufacturer specification at rated heater capacity.	
b. Calculated from sulfur content of natural gas (<1 gr/100 scf).	

### Dry Cooling System

The ATC for the project includes S-46, a 10-cell wet cooling tower. PG&E has eliminated wet cooling from the project design and is using an air-cooled condenser (ACC) system instead. Components of the wet cooling system that will no longer be required and have therefore been eliminated from the original project design include the water supply pipeline, wet cooling tower, surface condenser, associated convenience systems, and the cooling tower chemical treatment system. New components to support

<sup>1</sup> Rule 2, Section 2-1-114 exempts sources listed in the subsection, "provided that the source does not require permitting pursuant to Section 2-1-319." Section 2-1-319 requires permitting of sources with emissions in excess of 5 tpy. As shown in Table 2, annual emissions from the dewpoint heater will also be well below 5 tpy.

the ACC system include a condensate polishing system, a new water supply source, and a wastewater discharge source. There are no air emissions associated with the ACC system.

Pollutant	ppmvd @ 3% O <sub>2</sub> <sup>a</sup>	lb/MMBtu (HHV) <sup>a</sup>	lb/hr <sup>b</sup>	tpy <sup>c</sup>
NO <sub>x</sub>	50	0.060	0.39	1.7
SO <sub>2</sub> <sup>d</sup>	--	0.0028 <sup>d</sup>	0.018	0.08
CO	40	0.029	0.19	0.84
POC	5.5	0.0045	0.029	0.13
PM <sub>10</sub>	--	0.0074	0.048	0.21

Notes:

- a. Performance from manufacturer at rated load.
- b. Manufacturer's not-to-exceed emission rate.
- c. Based on 8,760 hours per year of operation.
- d. SO<sub>2</sub> emissions in lb/MMscf, based on natural gas sulfur content of 1 gr/100 scf.

The project as permitted incorporated evaporative cooling on the combustion turbine air inlets; however, due to the change in the project's water supply, PG&E eliminated this option and replaced the evaporative cooling system with an electric chiller system. There are no air emissions associated with the electric chiller system, and the indirect effect of the electric chiller system on emissions from the combined cycle units is already reflected in the heat input limits and emission limits for the combined cycle units.

In addition to the changes in the cooling water system, PG&E reviewed the water demand of the combustion turbine's steam power augmentation (PAG) systems. As a result of this review, PG&E determined that the water demand and economic implications did not warrant implementing PAG on the combustion turbines. Finally, PG&E determined that a small fin-fan heat exchanger in combination with a small wet surface air cooled (WSAC) heat exchanger system would be used to provide the necessary heat rejection capacity for auxiliary plant systems. The fin-fan system is similar to the ACC system. The WSAC system is a hybrid between a wet cooling tower and fin-fan heat exchanger, and uses water sprayed over the heat transfer bundles to increase the cooling capacity of the system.

Based on the conservatively high assumption that the WSAC system operates 8,760 hours per day, emissions from the WSAC are less than 1 lb/hr and 1 tpy as shown in Table 3. In the WSAC process, the warm process water is cooled in a closed-loop tube bundle so the process water being cooled never comes in contact with the outside air. Therefore, the WSAC is exempt from permitting under BAAQMD Rule 2, Section 2-1-128.4 ("Water cooling towers and water cooling ponds not used for evaporative cooling

of process water, or not used for evaporative cooling of water from barometric jets or from barometric condensers”).<sup>2</sup>

<b>Table 3 Calculation of Emissions from the Wet Surface-Air Cooler</b>	
<b>Typical Worst-Case Design Parameters</b>	
Water Flow Rate, 10E6 lbm/hr	2.59
Water Flow Rate, gal/min	5,180
Drift Rate, %	0.0030
Drift, lbm water/hr	77.67
<b>PM<sub>10</sub> Emissions based on TDS Level</b>	
TDS level, ppm (based on 5 COC)	2500
PM <sub>10</sub> , lb/hr	0.19
PM <sub>10</sub> , lb/day	4.7
PM <sub>10</sub> , tpy	0.85

We are requesting the District’s concurrence that the dry cooling system is an exempt source and the deletion of Conditions 45 and 46 from the ATC. We also request that the District (1) remove the reference to the Cooling Tower (S-46) in Condition 24; (2) reduce the annual PM<sub>10</sub> emissions limit from 112.2 tons per year to 105.0 tons per year in Conditions 24, 39, and 40; and (3) refund the equivalent of 7.2 tons per year of PM<sub>10</sub> ERCs that are no longer required as a result of eliminating the wet cooling tower and its emissions from the facility annual total.<sup>3</sup>

#### Additional Administrative Amendments

We are also requesting two additional administrative changes to the ATC. First, please revise references to “Contra Costa Unit #8” and “CC8” to reflect the current project name, “Gateway Generating Station” and “GGS,” throughout the permit. Second, please eliminate the references to “steam injection power augmentation mode” in Conditions 20 and 30. No power augmentation has been included in the as-built project.

<sup>2</sup> Rule 2, Section 2-1-128 exempts sources listed in the subsection, “provided that the source does not require permitting pursuant to Section 2-1-319.” Section 2-1-319 requires permitting of sources with emissions in excess of 5 tpy.

<sup>3</sup> PM<sub>10</sub> offsets were provided in the form of SO<sub>2</sub> ERCs at a ratio of 3:1. The SO<sub>2</sub> ERCs were from Banking Certificates #693 (Gaylord Container, Antioch), #694 (PG&E, Martinez) and #695 (Hudson ICS, San Leandro).

Thank you very much for your consideration of these requests. Please do not hesitate to contact me or Nancy Matthews of Sierra Research if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "S Royall".

Steve Royall  
Plant Manager

cc: Angel Espiritu, PG&E  
Linus Farias, PG&E  
Teresa DeBono, PG&E  
Nancy Matthews, Sierra Research  
Ron Yasny, CEC Compliance Project Manager



## Attachment C

Proposed Changes to the Commission Decision:  
Air Quality Conditions of Certification

**Proposed Revisions to Conditions of Certification**  
**Gateway Generating Station**

Pacific Gas & Electric Company is proposing the following changes to the air quality conditions of certification for the Gateway Generating Station. Proposed new language is shown in underline and deletions are shown in ~~strikeout~~.

- AQC-1** During construction of this facility, the following fugitive emission control measures shall be implemented at the plant site:
- a. Suspend all land clearing, grading, earth moving, or excavation activities when winds (including instantaneous gusts) exceed 20 miles per hour.
  - b. Apply water to active construction sites and unpaved roads as frequently as necessary to control fugitive dust. The frequency of watering can be reduced or eliminated during periods of precipitation.
  - c. Apply sufficient water or dust suppressants to all material excavated, stockpiled, or graded to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard.
  - d. Apply a non-toxic solid stabilizer to all inactive construction areas (previously graded areas which remain inactive for 96 hours).
  - e. No on-site vehicle shall exceed a speed of 150 miles per hour on unpaved roads or areas.
  - f. All trucks hauling dirt, sand, soil, or other loose material will be watered or covered and will maintain at least two feet of freeboard to prevent a public nuisance.
  - g. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
  - h. At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when visible soil materials are carried onto adjacent public or private paved roads.
  - i. Re-establish ground cover on the construction site through seeding and watering as soon as possible, but no later than final occupancy.
  - j. Implement all dust control measures in a timely and effective manner during all phases of project development and construction.
  - k. Place sandbags adjacent to roadways to prevent run off to public roadways.
  - l. Install wind breaks at the windward sides of construction areas prior to the soil being disturbed. The wind breaks shall remain in place until the soil is stabilized or permanently covered.
  - m. Provide gravel ramps of at least 20 feet in length at the tire washing/cleaning station.
  - n. Gravel or treat all unpaved exits from the construction site to prevent track-out to public roadways.
  - o. Ensure that all construction vehicles enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.
  - p. Sweep all paved roads within the construction site at least twice daily (or less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.

**Verification:** The project owner shall maintain a daily log of water truck activities, including record of the frequency of public road cleaning. These logs and records shall be available for inspection by the CPM during the construction period. The project owner shall identify in the monthly construction reports, the area(s) that the project owner shall cover or treat with dust suppressants. The project owner shall make the construction site available to the District and the City of Antioch inspection staff and the CPM for inspection and monitoring.

**AQC-2** The project owner shall employ the following measures to mitigate, to the extent practical, construction-related emission impacts from off-road, Diesel-fired construction equipment. These measures include the use of oxidizing soot filters, oxidizing catalysts, Diesel fuel certified to CARB low sulfur fuel standards (sulfur content less than 15 ppm) and Diesel engines that are either equipped with high pressure fuel injection, employ fuel injection timing retardation or are certified to EPA Tier 2 off-road equipment emission standards. Additionally, the project owner shall restrict idle time, to the extent practical, to no more than 5 minutes.

The use of each mitigation measure is to be determined by an Air Quality Construction Mitigation Manager (AQCMM). The AQCMM is to be approved by the CPM prior to the submission of any reports. The AQCMM will determine the mitigation measures to be used within the following framework.

#### **Construction Mitigation Framework**

1. No measure or combination of measures shall be allowed to significantly delay the project construction or construction of related linear facilities.
2. No measure or combination of measures shall be allowed to cause significant damage to the construction equipment or cause a significant risk to on site workers or the public.
3. Engines certified to Tier 2 off-road equipment emission standards and CARB certified low sulfur Diesel fuel may be used in lieu of oxidizing soot filter and oxidizing catalyst.

The AQCMM will, in consultation with the California Air Resources Board (CARB), submit the following reports to the CPM for approval:

Construction Mitigation Plan

Reports of Change and Mitigation Implementation

Emergency Termination of Mitigation Reports (as necessary)

#### **Construction Mitigation Plan**

The Construction Mitigation Plan shall be submitted to the CPM for approval and will include:

1. A list of all Diesel fuel burning, off-road stationary or portable construction related equipment to be used either on the project construction site or the construction sites of the related linear facilities.
2. All construction Diesel engines, which have a rating of 100 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless certified by the on-site AQCMM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that item of equipment shall be equipped with a Tier 1 engine. In the event a Tier 1 item of equipment is not available for any

off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed Diesel particulate filter (soot filter), unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons:

- a) There is no available soot filter that can be installed and operated in a safe and effective manner; or
  - b) The construction equipment is intended to be on-site for ten (10) days or less.
  - c) The CPM may grant relief from this requirement if the AQCMM can demonstrate that they have made a good faith effort to comply with this requirement and that compliance is not possible.
3. All heavy earthmoving equipment and heavy-duty construction related trucks with engines meeting the requirements of (2) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
  4. All Diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.
  5. The sulfur content of all Diesel fuel to be burned in any equipment used at the construction site shall be ultra-low sulfur Diesel, which contains no more than 15 ppm sulfur.

#### **Report of Change and Mitigation Implementation**

The AQCMM shall submit a Report of Change and Mitigation Implementation for approval to the CPM following the initiation of construction activities, which contains at a minimum the cause of any deviation from the Construction Mitigation Plan, and verification of the Construction Mitigation Plan measures that were implemented. Verification includes, but shall not be limited to, the following:

1. EPA or CARB engine certifications for item 2 of the Construction Mitigation Plan.
2. A copy of the contract agreement requiring subcontractors to comply with the elements under item 2 of the Construction Mitigation Plan.
3. Confirmation of the installation of either oxidizing catalysts or oxidizing soot filters as identified in items 2 and 3 of the Construction Mitigation Plan or the cause preventing the identified installations.
4. A copy of the contract agreement requiring subcontractors to comply with the elements under item 4 of the Construction Mitigation Plan.
5. A copy of receipts of purchase of Diesel fuel indicating the sulfur content as identified in item 5 of the Construction Mitigation Plan.

#### **Emergency Termination of Mitigation Report**

If a specific mitigation measure is determined to be detrimental to a piece of construction equipment or is determined to be causing significant delays in the construction schedule of the project or the associated linear facilities, the mitigation measure may be eliminated or terminated immediately. However notification must be sent to the CPM for approval containing an explanation for the cause of the termination. All such causes are restricted to one of the following justifications and must be identified in any Emergency Termination of Mitigation Report:

1. The measure is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or power output due to an excessive increase in back pressure.
2. The measure is causing or reasonably expected to cause significant damage to the construction equipment engine.

3. The measure is causing or reasonably expected to cause a significant risk to nearby workers or the public.
4. Any other seriously detrimental cause which has approval by the CPM prior to the change being implemented.

**Verification:** The project owner shall submit the qualifications of the AQCMM and the Construction Mitigation Plan to the CPM for approval. The project owner shall submit the Report of Change and Mitigation Implementation to the CPM for approval no later than 10 working days following the use of the specific construction equipment on either the project site or the associated linear facilities. The project owner shall submit any Emergency Termination of Mitigation Reports to the CPM for approval, as required, no later than 10 working days following the termination of any identified mitigation measure. The CPM will monitor the approval of all reports submitted by the project owner in consultation with CARB, limiting the review time for any one report to no more than 20 working days.

**Definitions:**

- 1-hour period: Any continuous 60-minute period beginning on the hour.
- Calendar Day: Any continuous 24-hour period beginning at 12:00 AM or 0000 hours.
- Year: Any consecutive twelve-month period of time
- Heat Input: All heat inputs refer to the heat input at the higher heating value fuel, in Btu/scf.
- Rolling 3-hour period: Any three-hour period that begins on the hour and does not include start-up or shutdown periods.
- Firing Hours: Period of time during which fuel is flowing to a unit, measured in fifteen-minute increments.
- MM Btu: million British thermal units
- Gas Turbine Start-up Mode: The lesser of the first 256 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of conditions 207(b) and 207(d).
- Gas Turbine Shutdown Mode: The lesser of the 30 minute period immediately prior to the termination of fuel flow to the Gas Turbine or the period of time from non-compliance with any requirement listed in Conditions 207(a) through 207(d) until termination of fuel flow to the Gas Turbine.
- Specified PAHs: The polycyclic aromatic hydrocarbons listed below shall be considered to Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds.
- Benzo[a]anthracene
  - Benzo[b]fluoranthene
  - Benzo[k]fluoranthene

Benzo[a]pyrene  
Dibenzo[a,h]anthracene  
Indeno[1,2,3-cd]pyrene

**Corrected Concentration:** The concentration of any pollutant (generally NO<sub>x</sub>, CO, or NH<sub>3</sub>) corrected to a standard stack gas oxygen concentration. For emission point P-11 (combined exhaust of S-41 Gas Turbine and S-42 HRSG duct burners) and emission point P-12 (combined exhaust of S-43 Gas Turbine and S-44 HRSG duct burners) the standard stack gas oxygen concentration is 15% O<sub>2</sub> by volume on a dry basis.

**Commissioning Activities:** All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the GGG ~~CCPP Unit#8~~ construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems.

**Commissioning Period:** The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has completed performance testing, and is available for commercial operation, and has initiated sales to the power exchange.

**Precursor Organic Compounds (POCs):** Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate

**CEC CPM:** California Energy Commission Compliance Program Manager

**~~CCPP Unit#8:~~** ~~Contra Costa Power Plant Unit 8~~

**GGG:** Gateway Generating Station

### **Conditions for the Commissioning Period**

**AQ-1** The owner/operator of the ~~CCPP Unit 8 (CCPP Unit 8)~~ GGG shall minimize emissions of carbon monoxide and nitrogen oxides from S-41 and S-43 Gas Turbines and S-42 and S-44 Heat Recovery Steam Generators (HRSGs) to the maximum extent possible during the commissioning period. Conditions AQ-1 through 12 shall only apply during the commissioning period as defined above. Unless otherwise indicated, Conditions AQ-13 through 47 shall apply after the commissioning period has ended.

**Verification:** The owner/operator shall submit a monthly compliance report to the California Energy Commission (CEC) Compliance Project Manager (CPM). In this report the owner/operator shall indicate how this condition is being implemented.

**AQ-2** At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, the S-41 & S-43 Gas Turbine combustors and S-42 & S-44 Heat Recovery Steam Generator duct

burners shall be tuned to minimize the emissions of carbon monoxide and nitrogen oxides.

**Verification:** See verification in Condition AQ-1.

**AQ-3** At the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturers and the construction contractor, the A-11 and A-13 SCR Systems and A-12 and A-14 CO Oxidation Catalyst Systems shall be installed, adjusted, and operated to minimize the emissions of carbon monoxide and nitrogen oxides from S-41 & S-43 Gas Turbines and S-42 & S-44 Heat Recovery Steam Generators.

**Verification:** See verification in Condition AQ-1.

**AQ-4** Coincident with the as designed operation of A-11 & A-13 SCR Systems, pursuant to Conditions AQ-3, 10, 11, and 12, the Gas Turbines (S-41 & S-43) and the HRSGs (S-42 & S-44) shall comply with the NOx and CO emission limitations specified in conditions 20(a) through 20(d).

**Verification:** See verification in Condition AQ-1.

**AQ-5** At least four weeks prior to first firing of S-41 or S-43 Gas Turbines, the owner/operator of the ~~CCPP Unit 8~~ GGS shall submit a plan to the District Permit Services Division and the CEC CPM describing the procedures to be followed during the commissioning of the gas turbines, and HRSGs. ~~and gas fired preheater.~~ The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the Dry-Low-NOx combustors, the installation and operation of the SCR systems and oxidation catalysts, the installation, calibration, and testing of the CO and NOx continuous emission monitors, and any activities requiring the firing of the Gas Turbines (S-41 & S-43) and HRSGs (S-42 & S-44) without abatement by their respective SCR and CO Catalyst Systems.

**Verification:** See verification in Condition AQ-1.

**AQ-6** During the commissioning period, the owner/operator of the ~~CCPP Unit 8~~ GGS shall demonstrate compliance with Conditions AQ-8 through 11 through the use of properly operated and maintained continuous emission monitors and data recorders for the following parameters:

1. firing hours for each gas turbine and each HRSG
2. fuel flow rates to each train
3. stack gas nitrogen oxide emission concentrations at P-11 and P-12
4. stack gas carbon monoxide emission concentrations P-11 and P-12
5. stack gas carbon dioxide or oxygen concentrations P-11 and P-12.

The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for the Gas Turbines (S-41 & S-43) and HRSGs (S-42 & S-44). The owner/operator shall use District-approved methods to calculate heat input rates,

NOx mass emission rates, carbon monoxide mass emission rates, and NOx and CO emission concentrations, summarized for each clock hour and each calendar day. All records shall be retained on site for at least 5 years from the date of entry and made available to District personnel upon request.

**Verification:** See verification in Condition AQ-1.

**AQ-7** The District-approved continuous emission monitors specified in condition AQ-6 shall be installed, calibrated, and operational prior to first firing of the Gas Turbines (S-41 & S-43) and Heat Recovery Steam Generators (S-42 & S-44). After first firing of the turbines, the detection range of these continuous emission monitors shall be adjusted as necessary to accurately measure the resulting range of CO and NOx emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval.

**Verification:** See verification in Condition AQ-1.

**AQ-8** The total number of firing hours of S-41 Gas Turbine and S-42 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-11 SCR System and/or A-12 Oxidation Catalyst System shall not exceed 500 hours during the commissioning period. Such operation of S-41 Gas Turbine and S-42 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR or Oxidation Catalyst Systems fully operational. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 500 firing hours without abatement shall expire.

**Verification:** See verification in Condition AQ-1.

**AQ-9** The total number of firing hours of S-43 Gas Turbine and S-44 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-13 SCR System and/or A-14 Oxidation Catalyst System shall not exceed 500 hours during the commissioning period. Such operation of S-43 Gas Turbine and S-44 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR or Oxidation Catalyst Systems fully operational. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 500 firing hours without abatement shall expire.

**Verification:** See verification in Condition AQ-1.

**AQ-10** The total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM10, and sulfur dioxide that are emitted by the Gas Turbines (S-41 & S-43) and Heat Recovery Steam Generators (S-42 & S-44) during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in condition AQ-24.

**Verification:** See verification in Condition AQ-1.

**AQ-11** Combined pollutant mass emissions from the Gas Turbines (S-41 & S-43) and Heat Recovery Steam Generators (S-42 & S-44) shall not exceed the following



limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-41 & S-43).

NOx (as NO <sub>2</sub> )	8,400 pounds/calendar day; 400 pounds/hour
CO	13,000 pounds/calendar day; 584 pounds/hour
POC(as CH <sub>4</sub> )	535 pounds/calendar day
PM <sub>10</sub>	624 pounds/calendar day
SO <sub>2</sub>	297 pounds/calendar day

**Verification:** See verification in Condition AQ-1.

**AQ-12** Prior to the end of the Commissioning Period, the Owner/Operator shall conduct a District and CEC approved source test using external continuous emission monitors to determine compliance with Condition AQ-21. The source test shall determine NOx, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods.

**Verification:** Twenty working days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC Compliance Program Manager (CPM) a detailed source test plan designed to satisfy the requirements of this condition. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The Owner/Operator shall incorporate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CEC CPM within 30 days of the source testing date.

**Conditions for the Gas Turbines (S-41 & S-43) and the Heat Recovery Steam Generators (HRSGs; S-42 & S-44)**

**AQ-13** The Gas Turbines (S-41 and S-43) and HRSG Duct Burners (S-42 and S-44) shall be fired exclusively on natural gas. (BACT for SO<sub>2</sub> and PM<sub>10</sub>)

**Verification:** The project owner shall maintain, on a monthly basis, a laboratory analysis showing the sulfur content of natural gas being burned at the facility. The monthly sulfur analysis shall be incorporated into the quarterly compliance reports as required in Condition AQ-14 and its verification.

**AQ-14** The combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-41 & S-42 and S-43 & S-44) shall not exceed 2,227 MM Btu per hour, averaged over any rolling 3-hour period. (PSD for NOx)

**Verification:** The project owner shall prepare quarterly reports for the preceding calendar quarter by January 30, April 30, July 30, and October 30, and an annual compliance report. These reports shall incorporate all information required and specified in Condition AQ-20 and its verification. The reports shall be submitted to the District and the CEC CPM.

**AQ-15** The combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-41 & S-42 and S-43 & S-44) shall not exceed 49,950 MM Btu per calendar day. (PSD for PM10)

**Verification:** See verification in Condition AQ-14.

**AQ-16** The combined cumulative heat input rate for the Gas Turbines (S-41 & S-43) and the HRSGs (S-42 & S-44) shall not exceed 34,900,000 MM Btu per year. (Offsets)

**Verification:** See verification in Condition AQ-14.

**AQ-17** The HRSG duct burners (S-42 and S-44) shall not be fired unless its associated Gas Turbine (S-41 and S-43, respectively) is in operation. (BACT for NOx)

**Verification:** As part of the Compliance Reports, the owner/operator shall include information on the date, time, and duration of any violation of this permit condition.

**AQ-18** Except as provided in Condition AQ-8, S-41 Gas Turbine and S-42 HRSG shall be abated by the properly operated and properly maintained A-11 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-11 catalyst bed has reached minimum operating temperature. (BACT for NOx)

**Verification:** As part of the Compliance Reports, the owner/operator shall provide information on any major problem in the operation of the Oxidizing Catalyst and Selective Catalytic Reduction Systems for the Gas Turbines and HRSGs. The information shall include, at a minimum, the date and description of the problem and the steps taken to resolve the problem.

**AQ-19** Except as provided in Condition AQ-9, S-43 Gas Turbine and S-44 HRSG shall be abated by the properly operated and properly maintained A-13 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-13 catalyst bed has reached minimum operating temperature. (BACT for NOx)

**Verification:** See verification in Condition AQ-18.

**AQ-20** The Gas Turbines (S-41 & S-43) and HRSGs (S-42 & S-44) shall comply with requirements (a) through (h) under all operating scenarios, including duct burner firing mode ~~and steam injection power augmentation mode~~. Requirements (a) through (h) do not apply during a gas turbine start-up or shutdown. (BACT, PSD, and Toxic Risk Management Policy)

- a. Nitrogen oxide mass emissions (calculated in accordance with District approved methods as NO<sub>2</sub>) at P-11 (the combined exhaust point for the S-41 Gas Turbine and the S-42 HRSG after abatement by A-11 SCR System) shall not exceed 20 pounds per hour or 0.0090 lb./MM Btu (HHV) of natural gas fired. Nitrogen oxide mass emissions (calculated in accordance with District approved methods as NO<sub>2</sub>) at P-12 (the combined exhaust point for the S-43 Gas Turbine and the S-44 HRSG after abatement by A-13 SCR System) shall not exceed 20 pounds per hour or 0.0090 lb./MM Btu (HHV) of natural gas fired. (PSD for NOx)

- b. The nitrogen oxide emission concentration at emission points P-11 and P-12 each shall not exceed 2.5 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any 1-hour period. (BACT for NO<sub>x</sub>)
- c. Carbon monoxide mass emissions at P-11 and P-12 each shall not exceed 0.013 lb./MM Btu (HHV) of natural gas fired or 29.22 pounds per hour, averaged over any rolling 3-hour period. (PSD for CO)
- d. The carbon monoxide emission concentration at P-11 and P-12 each shall not exceed 6 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any rolling 3-hour period. (BACT for CO)
- e. Ammonia (NH<sub>3</sub>) emission concentrations at P-11 and P-12 each shall not exceed 5 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any rolling 3-hour period. This ammonia emission concentration shall be verified by the continuous recording of the ammonia injection rate to A-11 and A-13 SCR Systems. The correlation between the gas turbine and HRSG heat input rates, A-11 and A-13 SCR System ammonia injection rates, and corresponding ammonia emission concentration at emission points P-11 and P-12 shall be determined in accordance with permit condition #29. (TRMP for NH<sub>3</sub>)
- f. Precursor organic compound (POC) mass emissions (as CH<sub>4</sub>) at P-11 and P-12 each shall not exceed 5.6 pounds per hour or 0.0025 lb./MM Btu of natural gas fired. (BACT)
- g. Sulfur dioxide (SO<sub>2</sub>) mass emissions at P-11 and P-12 each shall not exceed 6.18 pounds per hour or 0.0028 lb./MM Btu of natural gas fired. (BACT)
- h. Particulate matter (PM<sub>10</sub>) mass emissions at P-11 and P-12 each shall not exceed 11 pounds per hour or 0.00588 lb./MM Btu of natural gas fired when the HRSG duct burners are not in operation. Particulate matter (PM<sub>10</sub>) mass emissions at P-11 and P-12 each shall not exceed 13 pounds per hour or 0.00584 lb./MM Btu of natural gas fired when the HRSG duct burners are in operation. (BACT)

**Verification:** The project owner shall submit to the District and CEC CPM, via the quarterly reports required by condition AQ-14, the following information. In addition, this information shall be maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.

- a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NO<sub>x</sub> emission rate and ammonia slip.
- b. Total plant operation time (hours), number of startups, hours in cold startup, hours in warm startup, hours in hot startup and hours in shutdown.
- c. Date and time of the beginning and end of each startup and shutdown period.
- d. Average plant operation schedule (hours per day, days per week, weeks per year).
- e. All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol.
- f. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and SO<sub>x</sub> (including calculation protocol).
- g. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by the District.
- h. A log of all excess emissions, including the information regarding malfunctions/breakdowns.
- i. Any permanent changes made in the plant process or production, which would affect air pollutant emissions, and indicate when changes were made.

- j. Any maintenance to any air pollutant control system (recorded on an as performed basis).

**AQ-21** The regulated air pollutant mass emission rates from each of the Gas Turbines (S-41 and S-43) during a start-up or a shutdown shall not exceed the limits established below. (PSD)

	Cold Start-Up (lb/event)	Hot Start-Up (lb/event)	Shutdown (lb/event)
Oxides of Nitrogen (as NO <sub>2</sub> )	452	189	59
Carbon Monoxide (CO)	990	291	73
Precursor Organic Compounds (as CH <sub>4</sub> )	109	26	6

**Verification:** See verification in Condition AQ-20.

**AQ-22** The Gas Turbines (S-41 and S-43) shall not be in start-up mode simultaneously. (PSD)

**Verification:** See verification in Condition AQ-20.

**AQ-23** Total combined emissions from the Gas Turbines and HRSGs (S-41, S-42, S-43, and S-44), including emissions generated during Gas Turbine start-ups and shutdowns shall not exceed the following limits during any calendar day:

- a. 1,994 pounds of NO<sub>x</sub> (as NO<sub>2</sub>) per day (CEQA)
- b. 3,602 pounds of CO per day (PSD)
- c. 468 pounds of POC (as CH<sub>4</sub>) per day (CEQA)
- d. 624 pounds of PM<sub>10</sub> per day (PSD)
- e. 297 pounds of SO<sub>2</sub> per day (BACT)

**Verification:** See verification in Condition AQ-20.

**AQ-24** Cumulative combined emissions from the Gas Turbines and HRSGs (S-41, S-42, S-43, and S-44) ~~and the Fuel Gas Preheater (S-45) and the Cooling Tower Diesel Fire Pump Engine (S-4648)~~, including emissions generated during gas turbine start-ups, and shutdowns shall not exceed the following limits during any consecutive twelve-month period:

- a. 174.3 tons of NO<sub>x</sub> (as NO<sub>2</sub>) per year (Offsets, PSD)
- b. 259.1 tons of CO per year (Cumulative Increase)
- c. 46.6 tons of POC (as CH<sub>4</sub>) per year (Offsets)
- d. ~~112.2~~101.7 tons of PM<sub>10</sub> per year (Offsets, PSD)
- e. 48.5 tons of SO<sub>2</sub> per year (Cumulative Increase)

**Verification:** See verification in Condition AQ-20.

**AQ-25** The maximum projected annual toxic air contaminant emissions (per condition 28) from the Gas Turbines and HRSGs combined (S-41, S-42, S-43, and S-44) shall not exceed the following limits:

- a. 4,102 pounds of formaldehyde per year
- b. 506 pounds of benzene per year
- c. 38 pounds of Specified polycyclic aromatic hydrocarbons (PAHs) per year
- d. 20,000 pounds of hexane per year (US-CAA, Section 112(g))

unless the following requirement is satisfied:

The owner/operator shall perform a health risk assessment using the emission rates determined by source test and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. This risk analysis shall be submitted to the District and the CEC CPM within 60 days of the source test date. The owner/operator may request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. If the owner/operator demonstrates to the satisfaction of the APCO that these revised emission limits will result in a cancer risk of not more than 1.0 in one million, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above. (TRMP)

**Verification:** Compliance with condition AQ-28 shall be deemed as compliance with this condition. In addition, approval by the District and the CEC CPM of the reports prepared for this condition will constitute a verification of compliance with this condition.

**AQ-26** The owner/operator shall demonstrate compliance with conditions AQ-14 through 17, 20(a) through 20(d), 21, 23(a), 23(b), 24(a), and 24(b) by using properly operated and maintained continuous monitors (during all hours of operation including equipment Start-up and Shutdown periods) for all of the following parameters:

- a. Firing Hours and Fuel Flow Rates for each of the following sources: S-41 & S-42 combined and S-43 & S-44 combined.
- b. Carbon Dioxide (CO<sub>2</sub>) or Oxygen (O<sub>2</sub>) concentrations, Nitrogen Oxides (NO<sub>x</sub>) concentrations, and Carbon Monoxide (CO) concentrations at each of the following exhaust points: P-11 and P-12.
- c. Ammonia injection rate at A-11 and A-13 SCR Systems
- d. ~~Steam injection rate at S-41 & S-43 Gas Turbine Combustors~~

The owner/operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the owner/operator shall calculate and record the total firing hours, the average hourly fuel flow rates, and average hourly pollutant emission concentrations.

The owner/operator shall use the parameters measured above and District-approved calculation methods to calculate the following parameters:

- e. Heat Input Rate for each of the following sources: S-41 & S-42 combined and S-43 & S-44 combined.
- f. Corrected NO<sub>x</sub> concentrations, NO<sub>x</sub> mass emissions (as NO<sub>2</sub>), corrected CO concentrations, and CO mass emissions at each of the following exhaust points: P-11 and P-12.

Applicable to emission points P-11 and P-12, the owner/operator shall record the parameters specified in conditions 26(e) and 26(f) at least once every 15 minutes (excluding normal calibration periods). As specified below, the owner/operator shall calculate and record the following data:

- g. Total Heat Input Rate for every clock hour and the average hourly Heat Input Rate for every rolling 3-hour period.
- h. On an hourly basis, the cumulative total Heat Input Rate for each calendar day for the following: each Gas Turbine and associated HRSG combined and all four sources (S-41, S-42, S-43, and S-44) combined.
- i. The average NOx mass emissions (as NO<sub>2</sub>), CO mass emissions, and corrected NOx and CO emission concentrations for every clock hour and for every rolling 3-hour period.
- j. On an hourly basis, the cumulative total NOx mass emissions (as NO<sub>2</sub>) and the cumulative total CO mass emissions, for each calendar day for the following: each Gas Turbine and associated HRSG combined, and all four sources (S-41, S-42, S-43, and S-44) combined.
- k. For each calendar day, the average hourly Heat Input Rates, Corrected NOx emission concentrations, NOx mass emissions (as NO<sub>2</sub>), corrected CO emission concentrations, and CO mass emissions for each Gas Turbine and associated HRSG combined.
- l. On a daily basis, the cumulative total NOx mass emissions (as NO<sub>2</sub>) and cumulative total CO mass emissions, for the previous consecutive twelve month period for all four sources (S-41, S-42, S-43, and S-44) combined.

(1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)

**Verification:** At least 60 days before the initial operation, the owner/operator shall submit to the CEC CPM a plan on how the measurements and recordings required by this condition will be performed.

**AQ-27** To demonstrate compliance with conditions AQ-20(f), 20(g), 20(h), 23(c) through 23(e), and 24(c) through 24(e), the owner/operator shall calculate and record on a daily basis, the Precursor Organic Compound (POC) mass emissions, Fine Particulate Matter (PM<sub>10</sub>) mass emissions (including condensable particulate matter), and Sulfur Dioxide (SO<sub>2</sub>) mass emissions from each power train. The owner/operator shall use the actual Heat Input Rates calculated pursuant to condition 26, actual Gas Turbine Start-up Times, actual Gas Turbine Shutdown Times, and CEC and District-approved emission factors to calculate these emissions. The calculated emissions shall be presented as follows:

- a. For each calendar day, POC, PM<sub>10</sub>, and SO<sub>2</sub> emissions shall be summarized for: each power train (Gas Turbine and its respective HRSG combined) and all four sources (S-41, S-42, S-43, and S-44) combined.
- b. On a daily basis, the 365 day rolling average cumulative total POC, PM<sub>10</sub>, and SO<sub>2</sub> mass emissions, for all four sources (S-41, S-42, S-43, and S-44) combined.

(Offsets, PSD, Cumulative Increase)

**Verification:** See verification in Condition AQ-20.

**AQ-28** To demonstrate compliance with Condition AQ-25, the owner/operator shall calculate and record on an annual basis the maximum projected annual emissions of Formaldehyde, Benzene, and Specified PAHs. Maximum projected annual emissions shall be calculated using the maximum Heat Input Rate of 34,900,000 MM Btu/year and the highest emission factor (pounds of pollutant per MM Btu of Heat Input) determined by any source test of the S-41 & S-43 Gas Turbines and/or S-42 & S-44 Heat Recovery Steam Generators. If this calculation method results in an unrealistic mass emission rate (the highest emission factor occurs at a low firing rate) the applicant may use an alternate calculation, subject to District approval. (TRMP)

**Verification:** See verification in Condition AQ-20.

**AQ-29** Within 60 days of start-up of the ~~CCPP Unit 8~~GGS, the owner/operator shall conduct a District-approved source test on exhaust point P-11 or P-12 to determine the corrected ammonia (NH<sub>3</sub>) emission concentration to determine compliance with condition AQ-20(e). The source test shall determine the correlation between the heat input rates of the gas turbine and associated HRSG, A-11 or A-13 SCR System ammonia injection rate, and the corresponding NH<sub>3</sub> emission concentration at emission point P-11 or P-12. The source test shall be conducted over the expected operating range of the turbine and HRSG (including, but not limited to, minimum, 70%, 85%, and 100% load) to establish the range of ammonia injection rates necessary to achieve NO<sub>x</sub> emission reductions while maintaining ammonia slip levels. Continuing compliance with condition AQ-20(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlation and continuous records of ammonia injection rate. (TRMP)

**Verification:** Source test results shall be submitted to the District and the CEC CPM within 60 days of conducting the tests.

**AQ-30** Within 60 days of start-up of the ~~CCPP Unit 8~~GGS and on an annual basis thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-11 and P-12 while each Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum load (~~including steam injection power augmentation mode~~) to determine compliance with Conditions AQ-20(a), (b), (c), (d), (f), (g), and (h), while each Gas Turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with Conditions AQ-20(c) and (d), and to verify the accuracy of the continuous emission monitors required in condition AQ-26. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO<sub>2</sub>), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and particulate matter (PM<sub>10</sub>) emissions including condensable particulate matter. (BACT, offsets)

**Verification:** Approval of the source test protocols, as required in condition AQ- 31, and the source test reports shall be deemed as verification for this condition. The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CEC CPM within 60 days of the date of the tests.

**AQ-31** The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section and the CEC CPM prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section and the CEC CPM in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s). As indicated above, the Owner/Operator shall measure the contribution of condensable PM (back half) to the total PM10 emissions. However, the Owner/Operator may propose alternative measuring techniques to measure condensable PM such as the use of a dilution tunnel or other appropriate method used to capture semi-volatile organic compounds. (BACT)

**Verification:** Source test results shall be submitted to the District and to the CEC CPM within 60 days of the date of the tests.

**AQ-32** Within 60 days of start-up of the ~~CCPP Unit 8~~GGS and on a biennial basis (once every two years) thereafter, the owner/operator shall conduct a District-approved source test on exhaust point P-11 or P-12 while the Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with Condition AQ-25. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to condition 28 for any of the compounds listed below are less than the BAAQMD Toxic Risk Management Policy trigger levels shown, then the owner/operator may discontinue future testing for that pollutant:

Benzene	≤	26.8 pounds/year
Formaldehyde	≤	132 pounds/year
Specified PAHs	≤	0.18 pounds/year (TRMP)

**Verification:** The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the owner/operator plans to conduct source testing as required by this condition. Source test results shall be submitted to the District and the CEC CPM within 60 days of conducting the test.

**AQ-33** The owner/operator of the ~~CCPP Unit 8~~GGS shall submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual. (Regulation 2-6-502)

**Verification:** See verification in Condition AQ-20.

**AQ-34** The owner/operator of the ~~CCPP Unit 8~~GGS shall maintain all records and reports on site for a minimum of 5 years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emission rates, monitor excesses, breakdowns, etc.), source test and analytical records, natural gas sulfur content analysis results, emission calculation records, records of plant upsets and related incidents. The owner/operator shall make all records and reports available to District and the CEC CPM staff upon request. (Regulation 2-6-501)

**Verification:** During site inspection, the owner/operator shall make all records and reports available to the District, ARB, EPA and CEC staffs.



**AQ-35** The owner/operator of the ~~CCPP Unit 8~~GGS shall notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Notwithstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the owner/operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition. (Regulation 2-1-403)

**Verification:** Submittal of these notifications as required by this condition is the verification of these permit conditions. In addition, as part of the Air Quality Reports of Condition AQ-20, the owner/operator shall include information on the dates when these violations occurred and when the owner/operator notified the District and the CEC CPM.

**AQ-36** The stack height of emission points P-11 and P-12 shall each be at least 195 feet above grade level at the stack base. (PSD, TRMP)

**Verification:** Thirty (30) days prior to start of construction, the project owner/operator shall provide the District and CEC CPM an "approved for construction" drawing showing the appropriate stack height and location of sampling ports and platforms. The project owner/operator shall make the site available to the District, EPA and CEC staff for inspection.

**AQ-37** The Owner/Operator of ~~CCPP Unit 8~~GGS shall provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall be subject to BAAQMD review and approval. (Regulation 1-501)

**Verification:** See verification of Condition AQ-36.

**AQ-38** Within 180 days of the issuance of the Authority to Construct for the ~~CCPP Unit 8~~GGS, the Owner/Operator shall contact the BAAQMD Technical Services Division regarding requirements for the continuous monitors, sampling ports, platforms, and source tests required by conditions AQ-26, 29, 30 and 32. All source testing and monitoring shall be conducted in accordance with the BAAQMD Manual of Procedures. (Regulation 1-501)

**Verification:** The project owner/operator shall notify the CEC CPM within 7 days of receiving the District's approval for the source testing and monitoring plan.

**AQ-39** Prior to the issuance of the BAAQMD Authority to Construct for the ~~CCPP Unit 8~~GGS, the Owner/Operator shall demonstrate that valid emission reduction credits in the amount of 200.5 tons/year of Nitrogen Oxides, 53.6 tons/year of Precursor Organic Compounds or equivalent (as defined by District Regulations 2-2-302.1 and 2-2-302.2), and ~~337~~315 tons of Sulfur Oxides are under their control through enforceable contracts, option to purchase agreements, or equivalent binding legal documents. (Offsets)

**Verification:** Prior to the issuance of an Authority to Construct, the Owner/Operator shall provide copies of all emission reduction credits certificates to the District and the CEC CPM.

**AQ-40** Prior to the start of construction of the ~~CCPP Unit 8~~GGGS, the Owner/Operator shall provide to the District valid emission reduction credit banking certificates in the amount of 200.5 tons/year of Nitrogen Oxides, 53.6 tons/year of Precursor Organic Compounds or equivalent as defined by District Regulations 2-2-302.1 and 2-2-302.2 and ~~337315~~ tons of Sulfur Oxides. (Offsets)

**Verification:** See verification of Condition AQ-39.

**AQ-41** Pursuant to BAAQMD Regulation 2, Rule 6, section 404.3, the owner/operator of the ~~CCPP Unit 8~~GGGS shall submit an application to the BAAQMD for a significant revision to the Major Facility Review Permit prior to commencing operation. (Regulation 2-6-404.3)

**Verification:** The owner/operator shall submit to the CEC CPM copies of the Federal (Title IV) Acid Rain and (Title V) Operating Permit within 30 days after they are issued by the District.

**AQ-42** Pursuant to 40 CFR Part 72.30(b)(2)(ii) of the Federal Acid Rain Program, the owner/operator of the ~~CCPP Unit 8~~GGGS shall not operate either of the gas turbines until either: 1) a Title IV Operating Permit has been issued; 2) 24 months after a Title IV Operating Permit Application has been submitted, whichever is earlier. (Regulation 2, Rule 7)

**Verification:** See verification of Condition AQ-41.

**AQ-43** The ~~CCPP Unit 8~~GGGS shall comply with the continuous emission monitoring requirements of 40 CFR Part 75. (Regulation 2, Rule 7)

**Verification:** At least 45 days prior to commencement of construction, the project owner/operator shall seek approval from the District for an emission monitoring plan.

**AQ-44** The owner/operator shall take monthly samples of the natural gas combusted at the ~~CCPP Unit 8~~GGGS. The samples shall be analyzed for sulfur content using District- approved laboratory methods or the owner/operator shall obtain certified analytical results from the gas supplier. The sulfur content test results shall be retained on site for a minimum of five years from the test date and shall be utilized to satisfy the requirements of 40 CFR Part 60, subpart GG. Sulfur content shall be no more than 1.0 grains/100 scf. (cumulative increase)

**Verification:** See verification of Condition AQ-19.

**AQ-45** The wet surface air cooler (WSAC) shall be properly installed and maintained to minimize drift losses. The WSAC shall be equipped with drift eliminators with a maximum guaranteed drift rate of 0.003%. The maximum total dissolved solids (TDS) measured at the base of the WSAC or at the point of return to the wastewater facility shall not be higher than 2,500 ppmw (mg/l). The owner/operator shall sample the water at least once in the month of July, once in the month of August and once in the month of September each year while the WSAC is in operation.

**Verification:** At least 30 days prior to commencement of WSAC construction, the project owner/operator shall provide to the District and CEC CPM a copy of the WSAC manufacturer's specifications demonstrating the 0.003 percent drift rate. The project

owner/operator shall submit the water sample test results with the Quarterly Emissions Report required by Condition of Certification AQ-14.

**AQ-46** The owner/operator shall perform a visual inspection of the wet surface air cooler (WSAC) drift eliminators at least once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to the initial operation of the WSAC the owner/operator shall have the WSAC vendor's field representative inspect the drift eliminators and certify that the installation was performed in a satisfactory manner. The owner operator shall verify that the PM10 emissions from the WSAC do not exceed 4.7 lbs/day based on the most recent total dissolved solids, measured in compliance with Condition of Certification AQ-45, and by the use of the following formula:

$$\text{PM10 (lb/day)} = 24 * \text{water flow rate (lbm/hour)} * \text{design drift rate (percent)} * \text{total dissolved solids (ppm)} / 10^8.$$

**Verification:** The project owner/operator shall keep records of all WSAC inspections and shall make them available for the CEC CPM upon request. The project owner/operator shall report the calculated PM10 emissions from the WSAC to the CPM in the Quarterly Emissions Report required in Condition of Certification AQ-14.

**AQ-47** The heat input to the ~~Fuel Gas Preheater~~ Dewpoint Heater (S-45) shall not be operated more than 16 hours in any day exceed 156 MMBtu/day.

**Verification:** See verification of Condition AQ-20.

### **Conditions for S-48 Emergency Fire Pump Engine**

**AQ-48** Operation of S-48 for reliability-related activities is limited to 50 hours per year. (Stationary Diesel Engine ATCM)

**Verification:** See verification in Condition AQ-14.

**AQ-49** The owner/operator shall operate engine S-48 only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating hours while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits are not limited. (Stationary Diesel Engine ATCM)

**Verification:** See verification in Condition AQ-14.

**AQ-50** The owner/operator shall operate engine S-48 only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained. (Stationary Diesel Engine ATCM)

**Verification:** See verification in Condition AQ-14.

**AQ-51** Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry. Log entries shall

be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. (Stationary Diesel Engine ATCM)

- a. Hours of operation of S-48 for reliability-related activities (maintenance and testing).
- b. Hours of operation of S-48 for emission testing to show compliance with emission limits.
- c. Hours of emergency operation of S-48.
- d. For each emergency, the nature of the emergency condition.
- e. Fuel usage for S-48.

**Verification:** See verification in Condition AQ-14.

## Attachment D

### List of Property Owners

051 031 014  
Southern Energy Delta Llc  
1350 Treat Blvd #500  
Walnut Creek CA 94597

037 020 012  
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037 040 007  
OXFOOT ASSOCIATES LLC  
24737 Arnold Dr  
Sonoma CA 95476

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San Francisco CA 94120

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CORPORATION  
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051 031 007  
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San Francisco CA 94120

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PACIFIC GAS & ELECTRIC CO  
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San Francisco CA 94177

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Martinez CA 94553

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Tony Cutino  
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Martinez CA 94553

051 032 006  
Tony Cutino  
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051 032 007  
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051 040 019  
Linda McDaniel  
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Antioch CA 94509

051 040 023  
Lloyd Q Fleming  
415 Fleming Ln  
Antioch CA 94509

051 040 035  
Wallace & Judith Gibson  
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El Sobrante CA 94820

051 040 041  
Michael R & Kimberly Wiley  
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051 040 063  
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Walnut Creek CA 94595

051 040 064  
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Fairfield CA 94534

051 040 065  
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051 040 066  
Mechanical Co Monterey  
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Oakland CA 94621

051 040 069  
Trailer Storage Antioch  
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American Canyon CA 94503

051 040 070  
Virginia H Fleming  
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Antioch CA 94509

051 040 071  
Trailer Storage Antioch  
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American Canyon CA 94503

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051 051 019  
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Stamm-Balocco Storage Llc  
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051 052 100  
City of Antioch  
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051 052 110  
Tony Cutino  
4030 St Marys St  
Martinez CA 94553

051 052 111  
Tony Cutino  
4030 St Marys St  
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Johnny W & Alice I Strawther  
1957 Santa Fe Ave  
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051 082 005  
James Jr & Marcilynn Kennard  
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