

**CALIFORNIA ENERGY COMMISSION**1516 NINTH STREET  
SACRAMENTO, CA 95814-5512**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

<b>DOCKET</b>	
00-AFC-1C	
<b>DATE</b>	DEC 05 2007
<b>RECD.</b>	DEC 11 2007

<b>In the Matter of:</b>	)	<b>Docket No. 00-AFC-1C</b>
<b>GATEWAY GENERATING</b>	)	<b>Order No. 07-1205-9 -</b>
<b>STATION</b>	)	
<b>PACIFIC GAS and ELECTRIC</b>	)	<b>ORDER TO AMEND THE ENERGY</b>
<b>COMPANY (PG&amp;E)</b>	)	<b>COMMISSION DECISION TO ALLOW</b>
	)	<b>USE OF ANHYDROUS AMMONIA AS</b>
	)	<b>THE REFRIGERANT IN THE INLET AIR</b>
	)	<b>CHILLER</b>

On November 8, 2007, Pacific Gas and Electric Company (PG&E) filed a petition with the California Energy Commission requesting to amend the Energy Commission Certification to change to anhydrous ammonia as the refrigerant in the inlet air chiller for the Gateway Generating Station Project. The 530-megawatt project was certified by the Energy Commission on May 30, 2001, and construction is approximately 33 percent complete. The facility is located east of the city of Antioch, in Contra Costa County.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and has determined that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations. Staff recommends approval of the PG&E petition to amend the Energy Commission certificate to allow use of anhydrous ammonia as the refrigerant in the inlet air chiller for the Gateway Generating Station.

**COMMISSION FINDINGS**

As mandated by Title 20, section 1769(a)(3) of the California Code of Regulations, the Energy Commission may only approve project modifications if specific findings are met. Following staff's review of the proposed amendment, Energy Commission staff recommends approval based on the following findings:

- A. There will be no new or additional unmitigated significant environmental impacts associated with the proposed changes.
- B. Adherence to the proposed revisions to Conditions of Certification HAZ-1, HAZ-4, and HAZ-6 will ensure the facility's compliance with all applicable LORS.
- C. The facility design changes will be beneficial to the project owner by raising some efficiencies.
- D. There has been a substantial change in circumstances since the Energy Commission certification and the change is based on information that was not available to the parties prior to Energy Commission Certification justifying the changes to the inlet air chiller. PG&E replaced Mirant as the project owner and restarted construction. The design and build phase of construction identified the need for improvement.

## CONCLUSION AND ORDER

The California Energy Commission hereby adopts staff's recommendations and approves the following changes to the Gateway Generating Station Certification. Deleted text from the Certification is shown in ~~striketrough~~ and added text is underlined.

(No changes to HAZ-1 are proposed to the condition language, but because PG&E is proposing to add anhydrous ammonia to the list of acceptable hazardous materials allowed onsite, and this list is referenced by the condition as Appendix C, a revised Hazardous Materials table is attached.)

**HAZ-1** The project owner shall not use any hazardous material at the CCPP Unit 8 in any quantity or strength not listed in Appendix C, below, unless approved in advance by the CPM.

**Verification:** The project owner shall provide to the Compliance Project Manager (CPM), in the Annual Compliance Report, a list of all hazardous materials contained at the facility.

**HAZ-4** The aqueous ammonia storage facility and the anhydrous ammonia inlet chiller system shall be designed to either the ASME Pressure Vessel Code and ANSI K61.6 or to API 620. In either case, ~~these storage tank facilities~~ shall be protected by a secondary containment basins capable of holding 150% of the storage volume plus the volume associated with 24 hours of rain assuming the 25-year storm.

**Verification:** At least sixty days prior to delivery of aqueous ammonia to the storage tanks or anhydrous ammonia inlet chiller system, the project owner shall submit final design drawings and specifications for ~~these ammonia storage tank systems~~ and secondary containment basins to the CPM for review and approval.


**HAZ-6** The project owner shall direct all vendors delivering ~~aqueous~~ ammonia to the site to use only tanker truck transport vehicles which meet or exceed the specifications of DOT Code MC-307.

**Verification:** At least thirty (30) days prior to receipt of ~~aqueous~~ ammonia on site, the project owner shall submit to the CPM for review and approval letters from the supply vendors indicating the specifications of the transport vehicles to be used in the delivery of ~~aqueous~~ ammonia to the site.

IT IS SO ORDERED.

Date: December 5, 2007

STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

  
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JACKALYNE PFANNENSTIEL, Chairman

HAZ-1 Appendix C

Table 8.12-4

Hazardous Materials to be added at CGPP Gateway Generating Station During Operational Phase

Material	CAS Number	Location	Hazardous Characteristics	Maximum Quantity On-Site	Regulatory Thresholds (lbs)			
					Cal-ARP	Federal RQ	Federal TPQ	Federal TQ
Aqueous Ammonia (29%)	7664-41-7	Selective Catalytic Reduction	Corrosive	285,000 lb	500	100	500	20,000
<b>Anhydrous Ammonia</b>	<b>7664-41-7</b>	<b>Inlet Chiller System</b>	<b>Corrosive</b>	<b>35,000 lb</b>	<b>500</b>	<b>100</b>	<b>500</b>	<b>20,000</b>
Sulfuric Acid	7664-93-9	Water Treatment System Cooling Tower	Corrosive	6,000 gal	1,000	1,000	1,000	-
Sodium Hypochlorite	7681-52-9	Water Treatment System	Corrosive, Toxic	6,110 gal	-	-	-	-
Sodium Hydroxide	1310-73-2	Water Treatment System	Corrosive	6,000 gal	-	-	-	-
Sodium Bisulfite	7631-90-5	Water Treatment		110 gal	-	-	-	-
Scale Inhibitor		Water Treatment		110 gal	-	-	-	-
Corrosion Inhibitor (nitrite or molybdate)		Closed loop cooling water		55 gal (2000-2250 ppm)	-	-	-	-
Trisodium Phosphate	7601-54-9	Heat Recovery Steam Generator	Toxic	1,000 lb	-	-	-	-
Dispersant		Cooling Tower		4700 <sup>g</sup> -gal	-	-	-	-
Sodium Hydroxide	1310-73-2	Water Treatment System	Corrosive	6,000 gal	-	-	-	-