CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

October 17, 2008

DOCKET
06-AFC-9C
DATE OCT 17 2008
RECD. OCT 29 2008

Andrea Grenier
Grenier & Associates
1420 East Roseville Parkway, Suite 140-377
Roseville, California 95661

Dear Ms. Grenier:

DATA REQUESTS 1 to 17 FOR THE COLUSA GENERATING STATION (06-AFC-9C)

California Energy Commission staff is asking for the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the proposed modifications, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the proposed modifications will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests is being made in the technical areas of air quality and soil and water. Written responses to the enclosed data requests are due to the Energy Commission staff on or before November 17, 2008, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please notify me within 20 days of receipt of this notice.

If you have any questions, please call me at (916) 651-2072, or email me at drundqui@energy.state.ca.us.

Sincerely,

Dale Rundquist
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, California 95814

Enclosure

COLUSA GENERATING STATION
(06-AFC-9C)
AMENDMENT DATA REQUESTS

Technical Area: Air Quality
Author: William Walters

Annual Emission Calculations and Offsets

BACKGROUND

The requested annual emission revisions to Condition of Certification **AQ-26** for NOx, SOx, CO and VOC, while close, do not match the emissions totals shown in the Appendix 3.1-1 emission calculations. Additionally, the revisions in the hourly emissions are not reflected in the requested changes to the Conditions of Certification. Staff needs this discrepancy corrected.

DATA REQUEST

1. Please either correct the requested annual emission revisions in Condition of Certification **AQ-26** or correct the emission calculations provided in Appendix 3.1-1, and describe how these corrections were made, so that there is no discrepancies in the two provided annual emission values.

2. Please confirm numerically that the project's obtained emission reduction credits will cover any and all annual emission increases from the facility-wide annual emission limits currently allowed in **AQ-26** (annual VOC emissions are shown to have a minor increase in Appendix 3.1-1).

3. Please identify why the changes to the NOx, SOx, CO, and VOC hourly emissions, as identified in Table 3.1-1, and daily emissions were not shown in the requested change to Condition of Certification **AQ-25**, and if that was an error of omission please provide a correction to the request change in this condition.

BACKGROUND

Amendment 1 indicates a significant reduction in PM10 emissions from the gas turbines, an action originally recommended by staff early during the siting process of the project. However, while the hourly, daily, and annual emissions are shown to drop substantially in Appendix 3.1-1, the annual reductions are not described in Section 3.1 and are not identified as a requested change to Condition of Certification **AQ-26** or the emission offset conditions **AQ-SC7** and **AQ-27**.

Staff expects that if there is ever to be a request to reduce the PM10 offsets due to the turbine PM10 emission reduction, that action would be handled with this amendment request, so a request to change the offset package should be made now based on this identified emission reduction, or not at all. Staff needs additional information regarding the reduction in the annual PM10 emissions and the ultimate ramifications to the conditions of certification.

DATA REQUEST

4. Please identify why the significant annual emissions reduction for PM10, as identified in Appendix 3.1-1, were not carried forward in Section 3.1 or in the requested revision to the conditions of certification provided in Appendix 4 of the amendment request.

5. Please identify if the PM10 offset requirement of **AQ-SC7** and **AQ-27** will be requested to be amended due to the significant gas turbine PM10 emission reductions that are requested as part of this amendment, and if so please:

   a) Provide requested revisions to the conditions of certification; and

   b) Identify the specific emission reduction credits (ERCs), shown in the Appendix to **AQ-SC7**, that are now proposed to be used to offset the PM10 emissions (Staff's preference is to use the stationary source ERCs first, and the agricultural burn cessation credits second).

Major Equipment Removal Questions

BACKGROUND

The amendment request removes several pieces of operating equipment (auxiliary boiler, emergency generator engine, and fire pump engine) formerly considered necessary for safe and efficient site operation. Staff needs additional description to show that this equipment can be removed without causing significant air quality impacts.

DATA REQUEST

6. The use of the auxiliary boiler was originally described as necessary to limit start-up emissions for the facility, so staff is concerned that removal of the auxiliary boiler could increase the maximum hourly emissions or maximum duration and total emissions of the gas turbine start-ups. Please provide additional description, of PG&E's operating experience with 7F turbines, that supports the contention that the auxiliary boiler is not necessary and that its removal would not cause an increase in start-up emissions or durations.

7. Please provide more information regarding the potential for simultaneous outages for the two redundant 230-kV transmission lines and the 12-kV distribution line, such as the catastrophic power outage that occurred over the northeastern United States in 2003.

8. The emergency engine was originally described in the project's AFC as required during extended utility outages for the safe shutdown of the CTGs, HRSGs and STG. In the event of a catastrophic outage please identify how safe shutdown of these units and shutdown emissions would be ensured.

COLUSA GENERATING STATION
(06-AFC-9C)
AMENDMENT DATA REQUESTS

New Equipment - Emission Control Technology

BACKGROUND

The amendment requests the addition of two new polluting equipment items, the Wet Surface Air Condenser (WSAC) and the natural gas water bath heater, but does not provide any information about emission controls for either item. Staff needs additional information about the emission controls proposed for these new equipment items.

DATA REQUEST

9. Please describe the emission controls proposed for the WSAC.

10. Please describe the emission controls proposed for the water bath heater.

New Equipment – Emission Calculations

BACKGROUND

The emission calculations presented in Appendix 3.1-1 of the amendment request for the new equipment items do not provide enough information to determine the basis of the hourly emissions determined for the WSAC or the water bath heater. Staff needs additional information regarding the emission assumptions for these two new equipment items.

DATA REQUEST

11. Please provide the basis and calculations for the hourly PM10 emissions from the WSAC as identified in Appendix 3.1-1, including the water spray rate, assumed mist fraction (with reference source), and the local water quality data used to determine the operating total dissolved solids (TDS) level.

12. Please provide the emission concentration basis used to determine the hourly emissions from the water gas heater as identified in Appendix 3.1-1, including any relevant burner based emission factors/emission concentration limits.

Laws, Ordinances, Regulations and Standards

BACKGROUND

The amendment request does not fully describe the LORS applicable to the amendment request and compliance with the LORS. Staff needs additional information to fully analyze the requested changes to the facility.

DATA REQUEST

13. Please identify the LORS that are applicable to the WSAC and the water bath heater, such as Colusa County Air Pollution Control District (CCAPCD) permitting requirements, and describe compliance with those LORS.

COLUSA GENERATING STATION
(06-AFC-9C)
AMENDMENT DATA REQUESTS

Air Quality Permits

BACKGROUND

This facility requires both CCAPCD and U.S. EPA air quality permits. The amendment request provides no information regarding the impact of the requested changes to these permits. This is particularly critical for the CCAPCD permit because the requested revisions to the conditions of certification impact CCAPCD permit conditions. Staff needs additional information regarding the actions taken to modify these permits.

DATA REQUEST

14. Please identify the steps taken to modify the CCAPCD air quality permit.

15. Please identify the steps taken to modify the U.S. EPA air quality permit.

COLUSA GENERATING STATION
(06-AFC-9C)
AMENDMENT DATA REQUESTS

Technical Area: Soil and Water

Author: Richard Latteri

BACKGROUND

PG&E proposes to add a wet surface air cooler (WSAC) that would provide greater cooling capability for the steam turbine lubricating oil and a natural gas water bath heating system. In the petition, PG&E estimates that operation of the WSAC system will have an annual water consumption of 21-AF. The additional consumption of 21-AF to the expected annual CGS consumption of 130-AF brings the revised CGS annual water consumption to 151-AF.

PG&E's water supply agreement with the Glenn-Colusa Irrigation District provides for a maximum annual delivery of 180-AF for CGS operation, which is the maximum annual water consumption per Condition of Certification **SOIL & WATER-7**. The annual consumption of 21-AF seems to be reasonable but PG&E provides no supporting text or tables supporting this consumption.

PG&E has provided a revised water balance diagram as Figure 2-4 that includes the WSAC system but did not provide a water balance table that identifies the flow rates corresponding to the processes shown on Figure 2-4. Additionally, the natural gas water bath heating system is not shown on the water balance diagram and its flow rate and annual water consumption are not identified.

DATA REQUEST

16. Please provide:

    a) a discussion of the average and maximum water consumption for the WSAC and the natural gas water bath heating systems that includes a table showing the average and maximum flow rates in gallons per minute and corresponding annual consumption in acre-feet; and

    b) a water balance diagram(s) that shows the flow distribution to the WSAC and the natural gas water bath heating systems and a table that identifies the flow rates for the processes shown on the diagram(s).

BACKGROUND

Condition of Certification **SOIL & WATER-10** prohibits surface or subsurface disposal of process wastewater and requires a narrative of the redundant or backup wastewater disposal method to be implemented during periods of ZLD system shutdown or maintenance. The water balance diagram, Figure 2-4 in PG&E's petition, includes a backup wastewater discharge cell shown with dashed lines. Staff assumes this is an emergency backup system, but no descriptive text or disposal process was included in the amendment petition.

DATA REQUEST

17. Please provide a description of the emergency wastewater discharge system, including its proposed location on the CGS site, and its potential impacts to soil and water resources.