



DOCKET

08-AFC-7C

DATE Nov. 11 2011

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November 11, 2011

James Harader
Senior Air Quality Engineer
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto, CA 95356-8718

**Subject GWF Tracy Power Plant Permit Modification Request
Permit Numbers: N-4597-1-6, N4597-2-6,**

Dear Mr. Harader:

GWF Energy LLC (GWF) is submitting this modification request for the Tracy Combined Cycle Power Plant (Tracy) to address several changes resulting from the completion of final design engineering. As discussed recently in a phone conversation with Jerry Salamy, CH2MHill, on behalf of GWF Energy LLC, GWF is requesting the following changes to the subject referenced permits.

- The proposed project change includes the addition of inlet air foggers to the turbines. The fogging system will assist GWF in achieving the desired plant output of 337 MWs by reducing the inlet air temperature, which reduces the energy needed to compress the inlet air in the combustion turbine compressor section.

Changes to Combined Cycle Generating Systems 1 and 2 - Permit Numbers N-4597-1- 5 and N4597-2-6

Increase Plant Efficiency

An increase in the net plant electrical generation from 314 to 337 MWs can be achieved due to an increased efficiency of the combustion turbine generators (CTGs). The proposed modification consists of the inclusion of inlet foggers into the CTGs. The inlet air fogging system consists of a high pressure (2,000 psi) pumping system, injection manifold, and nozzles that inject up to 8.1 gallons per minute (per turbine) of high quality boiler make-up water into the combustion turbine inlet duct downstream of the filtration/evaporative cooling system, and upstream of the turbine compressor section. The fogging system will assist GWF in achieving the desired plant output of 337 MWs by reducing the inlet air temperature, which reduces the energy needed to compress the inlet air in the combustion turbine compressor section. The reduction in compression energy translates into additional energy available for transmission to the electrical grid. Figures 1 and 2 present revised water balances for the peak and annual average use. As shown on Figure 1, the maximum water consumption condition shows an influent water use of 127 gallons per minute as compared to the maximum water consumption of 156 gallons per minute included in the CEC final

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Decision.¹ The reduction in water use is a reduction in the wet surface air cooler (WSAC) water consumption of approximately 36 gallons per minute resulting from the final design.² The annual average water balance, Figure 2, shows the same reduction in WSAC water use of 2.5 gallons per minute is greater than the expected fogging system water use of 2 gallons per minute (for both turbines). Therefore, no change in the annual water use is expected or requested.

This modification will not require the use of any additional land, nor are any changes to the water treatment system anticipated for the supply of demineralized water. The increase in the duct burner firing rate is not expected to increase the hourly, daily, or annual air emissions, therefore no changes in those operating conditions are being requested (see Section 3.2).

Details of the complete proposed change with appropriate supporting information is attached. GWF appreciates the District's consideration of this matter and if you have any questions, please call me at 925-431-1440.

Respectfully,



Mark Kehoe
Director, Environmental and Safety

**Attachment 1 - Request for Approval of Minor Project Modifications
for the GWF Tracy Combined Cycle Power Plant (08-AFC-07C)**

cc: Eric Veerkamp/CEC CPM
Doug Wheeler/GWF
Jerry Salamy/CH2M HILL

¹ Source for the maximum water use in the Final Decision was the AFC, Figure 2.1-5A.

² During the preparation of the AFC, the WSAC was expected to use 119 gallons per minute of water and the WSAC selected during final design is expected to use 83 gallons per minute of water on the same conditions.

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Certification of Compliance Statement

Pursuant to SJVAPCD (District) Rule 2201 Section 4.1.5.2, *Compliance by Other Owned, Operated or Controlled Sources*, GWF Power Systems, Inc. on behalf of GWF Energy LLC, I hereby certify that all GWF facilities in the State of California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. This certification shall speak as to the date of its execution.



November 11, 2011

Mark Kehoe

Date