GWF Henrietta Combined Cycle Amendment

Soils and Water Resources Data Response Clarifications

The following clarifications are responses to comments provided by Mark Lindley on February 19, 2009 and discussion held between the CEC and GWF on March 3, 2009.

Data Response 24

GWF has created an Equivalent Annual Cost (EAC) estimate as suggested by the CEC comparing the cost of utilizing secondary treated water from the Lemoore Naval Air Station Sewage Treatment Plant as the primary water source for GWF Henrietta versus the proposed use of State Water Project and Central Valley Project water rights. The analysis is attached as Attachment DR3.2-24.

Siemens Water Technologies Corporation provided engineering guidance and capital cost estimates for the equipment required to treat the recycled water and the resultant waste streams. The Turlock Irrigation District was contacted for operational and maintenance costs for recycled water treatment and use. These values were scaled to account for differences in system sizing, operational conditions, and water source quality.

The EAC analysis estimates the use of recycled water for GWF Henrietta would cost approximately $13.32 per MWh. The proposed water source is estimated to cost approximately $2.60 per MWh. The difference of $10.72 per MWh shows that the use of recycled water at GWF Henrietta is economically infeasible.

GWF also analyzed the severe drought scenario where the facility would only be granted 15% of the water allocated to the project. Under this scenario GWF would purchase land with the associated water rights to make up the water shortfall of 31.4 acre-ft. GWF assumed the water purchased with the land would also be subject to a 15% allocation, so the required land would total approximately 81.7 acres. The total cost to exercise that option is $694,056. The capital cost of the land was spread over 9 years and the equivalent cost per MWh was estimated to be $0.26. Under this scenario the total cost per MWh of the proposed water source increases to $2.86. The difference of $10.46 per MWh demonstrates that the use of recycled water at GWF Henrietta is economically infeasible when compared to the proposed water source with severe allocation restrictions imposed.

Data Response 29

The contributing watershed has been highlighted in Attachment DR3.2-29. All areas within the permanent fence shall drain to the new stormwater retention basin.

Areas outside of the permanent fence shall be routed away from the site and will not discharge to the stormwater retention basin. Runoff from the construction parking and laydown areas shall be handled under the Construction SWPPP.

The storm water retention basin in service at GWF Henrietta is exempt from the Industrial Activities Storm Water General Permit requirements because of criteria 4 under **Types of Discharges Not Covered By This General Permit:** Facilities Which Do Not Discharge Storm Water To Waters of the United States: 4b. Facilities That Do Not Discharge Storm Water To Surface Waters or Separate Storm Sewers: … "storm water that disposed of to evaporation ponds, percolation ponds, or combined sewer systems are not required to obtain a storm water permit."

As a Best Management Practices, GWF Henrietta will maintain a Storm Water Pollution Prevention Plan that will identify pollution prevention controls and monitoring activities of storm water discharges. The levels of oil and grease, pH, TSS and metals that have been reported from the current monitoring activities are insignificant and below any threshold limits that would be required by an NPDES permit were this facility subject to waste discharge orders for surface water discharges.

Data Response 30

Based on the scaled drawing in Attachment DR3.2-29 it was estimated that the shaded area totaled approximately 409,940 square ft. The stormwater retention basin was sized for a drainage area of 431,244 square ft. The 10 yr – 10 day storm runoff of 4 inches across the site was calculated to total 142,310 cubic feet as shown in Attachment DR3.2-30. The stormwater retention basin volume was sized to contain this volume with 1 foot of freeboard. The final design volume of the basin is 222,278 cubic feet. As a final step, the storm water retention basin was verified to be able to contain the 100 yr-10 day storm runoff event.

With respect to the vector management, the retention basin at Hanford has been in active use for nearly 20 years and the retention basin at Henrietta has been in operation for nearly 5 years without a single incident related to vector management. Based on this extensive history of operation over a range of conditions, there is no evidence to suggest that vector management is a significant concern. The potential for occurrence of a vector management issue is extremely low and can be adequately addressed (in the unlikely event of occurrence) through means other than designing the retention basin's capacity to drain within three to five days. Options could include application of an

approved vector control agent to the surface of the pond or if necessary, removal of standing water for discharge to an approved offsite facility using a properly licensed hauler. Since neither of these actions has been necessary at GWF's operations in the area, GWF does not anticipate the need for them in the future.