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Agency Secretary
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Department of Toxic Substances Control

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Arnold Schwarzenegger
Governor

February 3, 2006

Ms. Yvonne Meeks
Portfolio Manager - Site Remediation
Pacific Gas and Electric Company
4325 South Higuera Street
San Luis Obispo, CA 93401

REQUIREMENT FOR REVISED GROUNDWATER FLOW MODEL REPORT, PACIFIC GAS AND ELECTRIC COMPANY, TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA, (EPA ID NO. CAT080011729)

Dear Ms. Meeks:

The California Department of Toxic Substances Control (DTSC) has determined that the Groundwater Model Update Report, dated July 29, 2005, is not ready for distribution to Consultative Workgroup (CWG) members for their review. DTSC informed Pacific Gas and Electric Company (PG&E) of our determination in discussions on October 18 and November 18, 2005. DTSC also discussed its decision regarding the July 29, 2005 report with CWG members during the December 2005 CWG meeting in Laughlin.

DTSC is requiring that PG&E submit a Revised Groundwater Model Update Report that meets the following conditions:

1. No later than February 28, 2006, PG&E shall provide a table of contents for the revised Groundwater Flow Model Update Report to DTSC for review and approval.
2. No later than March 31, 2006, PG&E shall provide a schedule for submitting each section of the revised Groundwater Flow Model Update Report to DTSC for approval. The schedule shall be developed such that the complete revised Groundwater Flow Model Update Report is submitted to DTSC no later than September 15, 2006. As previously discussed with PG&E, introductory sections of the report shall be written and presented to DTSC in parallel with model reconfiguration/recalibration (see Condition 5).
3. No later than April 17, 2006, PG&E shall prepare a network of interlaced fence diagrams that present the detailed lithologic data collected through March 31, 2006. These fence diagrams shall be included in appropriate sections of the Groundwater Flow Model Update Report and the Revised RCRA Facility Investigation and Remedial Investigation Report (RFI/RI Report). Data to be depicted on the fence

diagrams shall include: detailed stratigraphy; significant unit contacts and erosional surfaces; and chromium plume position (lateral, vertical).

4. The Revised Groundwater Flow Model Update Report shall:
 - a. Document the model objectives and limitations;
 - b. Document the current and projected future applications of the model;
 - c. Provide sufficient narrative to support the decisions that have been made to-date using the model;
 - d. Discuss how the model is set up, the original conditions, parameters used, and how the parameters have changed;
 - e. Describe how the model has changed based on stakeholder input;
 - f. Be written from the perspective that not all readers will have participated in the groundwater flow model discussions conducted to-date;
 - g. Include key figures in the report text and defer the other figures to an appendix;
 - h. Provide a more detailed discussion as to how the current plume configuration has been used to check the groundwater flow model (i.e., particle tracking). This discussion should be supported by a figure.
 - i. Include discussions of the storage, statistical evaluation of parameters, and sensitivity analysis.
 - j. Provide an explanation as to why certain hydrographs fit whereas other hydrographs do not, and discuss any implications for accuracy in projecting pumping rate requirements;
 - k. Explain why all high hydraulic conductivity zones are associated with production wells.

5. In preparing the Revised Groundwater Flow Model Update Report, PG&E shall complete the following reconfiguration and recalibration tasks:
 - a. Refine the model grid;
 - b. Redefine the hydrostratigraphic units and contacts;
 - c. Make the model layers match the hydrostratigraphic units;
 - d. Reconfigure the fluvial hydrostratigraphic units;
 - e. Refine the river parameters;
 - f. Redefine the parameters for Topock Marsh;
 - g. Redefine the local recharge to the west and south;
 - h. Incorporate the latest pumping data for Arizona;
 - i. Refine the hydraulic conductivity estimates;
 - j. Define the calibration targets; and
 - k. Recalibrate the model.

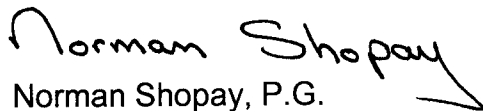
6. No later than March 31, 2006, PG&E shall prepare a three-dimensional block diagram that depicts the generalized conceptual hydrogeologic framework of the Topock Compressor Station and surrounding area and the conceptual model of chromium plume migration. The area of coverage for the block diagram shall be similar to the domain of the groundwater flow model. The diagram shall depict: the

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upper surface topography of significant stratigraphic units and contacts; the sediment wedge in Colorado River channel; position of river channel; surface topography; and water table. The software used to prepare the block diagram shall have the ability to: rotate view of diagram; zoom in and out of selected areas (e.g., focus on floodplain); view and print slices (plan view, cross-section); and make layers transparent. The overall objective of the diagram is to assist CWG members and the public with visualization of (1) the three-dimensional nature of the subsurface features and (2) the mechanisms and processes affecting chromium plume migration. DTSC acknowledges that PG&E presented an initial depiction of the generalized conceptual hydrogeologic framework during the December CWG meeting. PG&E shall present the initial block diagram depicting the conceptual model of chromium plume migration during the February 2006 CWG meeting.

If you have any questions, please contact me at (510) 540-3943.

Sincerely,



Norman Shopay, P.G.
Project Manager
Geology, Permitting and Corrective Action Branch

NTS/200A

cc: PG&E Topock Consultative Workgroup Members - Via e-mail