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Agency Secretary  
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## Department of Toxic Substances Control

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700 Heinz Avenue, Suite 100  
Berkeley, California 94710-2721



Arnold Schwarzenegger  
Governor

January 13, 2006

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

### **REQUIREMENT FOR CHROMIUM ISOTOPE STUDY, PACIFIC GAS AND ELECTRIC COMPANY, TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA (EPA ID NO. CAT080011729)**

Dear Ms. Meeks:

The Department of Toxic Substances Control (DTSC) is requiring that Pacific Gas and Electric Company (PG&E) prepare a workplan and conduct a chromium isotope study in the vicinity of the PG&E Topock Compressor Station. DTSC anticipates that the results of the study will provide an additional tool that can be used to assist with distinguishing naturally-occurring chromium from chromium releases associated with the PG&E Topock Compressor Station. The ability to make this distinction will facilitate delineation of the extent of the chromium plume originating from the Topock Compressor Station. Chromium plume delineation is required to support selection of the final remedy in the Corrective Measures Study being conducted under the Corrective Action Consent Agreement (CACA) dated February 1996. If the study is conclusive for the Topock Compressor Station area, PG&E will have an additional tool that will enable it to delineate the extent of the chromium plume originating from historical PG&E waste disposal practices.

PG&E shall prepare and submit a workplan and schedule for the chromium isotope study. Based on previous discussions, DTSC anticipates that PG&E will evaluate the chromium isotopes as two sample sets. The first sample set should include samples from wells known to be within the PG&E chromium plume and wells in the immediate vicinity of the PG&E Topock Compressor Station that are thought to represent background water quality. The chromium isotope characteristics of the second sample set should only be analyzed and evaluated if the first sample set indicates that the technique will be effective. The Workplan and schedule shall be submitted to DTSC no later than February 20, 2006. In addition to the Workplan and schedule, PG&E shall submit documentation of the qualifications of the subcontractor selected to perform the specialized techniques that will be required by the study (i.e., chromium isotope analyses, chromium ion separation).

Although the isotope study is not specifically specified as "Work To Be Performed" in Paragraph IV of the Corrective Action Consent Agreement, DTSC does see the proposed study to be in direct support of Paragraph IV.B.2 as part of the RCRA Facility Investigation and Paragraph IV.C.1 to determine the background standards for cleanup levels. Note that as part of the RFI Workplan, PG&E must detail the methodology to identify and characterize all sources of contamination; define the nature, degree and extent of contamination; define rate of movement and direction of contamination flow; characterize the potential pathways of contaminant migration; and support development of alternatives from which a corrective measure will be selected by the DTSC.

DTSC recognizes that the current background study will yield numeric information regarding the general concentration of chromium in the vicinity of the PG&E Topock Compressor Station. The background study, however, will contain uncertainty in separating the naturally-occurring hexavalent chromium from the anthropogenic hexavalent chromium. As you know, both Arizona Department of Environmental Quality (ADEQ) and the Metropolitan Water District have questioned DTSC on the evaluation of the extent of PG&E's chromium contamination. ADEQ has suggested that the chromium may have impacted Arizona's beneficial drinking water. Although DTSC understands that ADEQ is conducting a separate study, DTSC, as the lead agency, must also be satisfied of the extent of PG&E's contamination. DTSC views the isotope study to be a valuable and viable science to evaluate the extent of PG&E's contamination. This study, in conjunction with the background study, will likely yield multiple lines of evidence in defining the nature and extent of the anthropogenic released hexavalent chromium from that of naturally-occurring chromium. DTSC believes the results of both studies to be necessary information prior to final remedy selection.

DTSC is in receipt of the PG&E request (via a November 28, 2005 e-mail from CH2M Hill) for a copy of the chromium isotope study and its application in the DTSC decision-making process for formulating groundwater clean-up at the Aerochem facility near El Mirage, California. The chromium isotope study was conducted by the U.S. Geological Survey (USGS). DTSC is not able to provide the study results to PG&E prior to publication of the USGS results (still pending as of January 11, 2006). The decision-making process and its use in formulating groundwater clean-up strategies for the Aerochem facility is still on-going. However, DTSC intends to use the Aerochem chromium isotope data in the same manner as will be used for the PG&E Topock facility. The chromium isotope data will be used in conjunction with hexavalent chromium concentration data (from the site and surrounding area) and hydrogeologic conditions to determine the extent of impact from the facility.

Finally, DTSC would like to remind PG&E that under the scope of work for a RCRA Facility Investigation in Attachment 4 of the Consent Agreement, DTSC reserved the

Ms. Yvonne Meeks  
January 13, 2006  
Page 3 of 3

right to "require [PG&E] to conduct additional studies beyond what is discussed in the SOWs in order to meet the objectives of the RFI. The owner/operator or respondent will furnish all personnel, materials and services necessary to conduct the additional tasks." Nevertheless, DTSC is sensitive to the cost that PG&E will incur with every study proposed. DTSC is considerate of the potential liabilities to the PG&E rate payers and will try to reduce cost where applicable.

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/181B

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