California Regional Water Quality Control Board
Lahontan Region

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Arnold Schwarzenegger
Governor

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TO ALL INTERESTED PERSONS AND AGENCIES:

REQUEST FOR PUBLIC COMMENTS ON FINAL SITE CLEANUP AT THE PG&E COMPRESSOR STATION, 35863 FAIRVIEW ROAD, HINKLEY, SAN BERNARDINO COUNTY

The Water Board is considering accepting a cleanup proposal for the PG&E (Pacific Gas and Electric Company) property in Hinkley at the above-listed address. Site investigations have identified groundwater contaminated with hexavalent chromium. PG&E has prepared a Feasibility Study that evaluates technologies capable of remediating hexavalent chromium in groundwater to adopted background levels. The document proposes to implement a final cleanup action involving in-situ remediation and groundwater extraction and land treatment to reduce the threat to the environment and public health.

According to Water Code section 13307.5, the Water Board must request comments from persons living in the area where cleanup activities are proposed to occur before taking final action on a cleanup proposal. Enclosed with this letter is a Fact Sheet containing information on hexavalent chromium concentrations detected in groundwater and proposed final remedial actions for the contamination from the PG&E Compressor Station. Until **January 10, 2011**, I will take public comments concerning clean up at this site. Please direct all comments to me at the above-listed address.

The text-only version of the Feasibility Study is posted on the Water Board's website at: www.waterboards.ca.gov/lahontan. If you would like a CD copy of the entire Feasibility Study, please contact Lisa Dernbach of this office at (530) 542-5424 or ldernbach@waterboards.ca.gov.

Also during the month of December 2010, the Water Board is accepting input and comments for the scope of the evaluation of environmental effects associated with the construction and implementation of the proposed final groundwater activities. A Notice

of Preparation of an Environmental Impact Report was posted and sent to interested persons in late November. Comments related to this environmental review process must be submitted to the Water Board by December 31, 2010.

LAURI KEMPER P.E.
ASSISTANT EXECUTIVE OFFICER

Enclosure: Fact Sheet

cc: PG&E Hinkley Mailing List

LSD/adw/U: Cleanup and Enforcment/ Specialists/ PG&E Hinkley
PG&E Clean Up Public Notice 12-8-10 lsd

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

FACT SHEET

Este documento también está disponible en español del sitio web de la Junta de Agua Lahontan en http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml o poniéndose en contacto con Christina Velásquez en (760) 241-6583. Por perguntas técnicas, por favor comuníquese con Lisa Dernbach al (530) 542-5424.

LOCATION:	35863 Fairview Road, Hinkley, San Bernardino County (nearest cross street: Community Boulevard)
OWNER NAME:	Pacific Gas and Electric Company
PROJECT NAME:	Feasibility Study
SLIC CASE NO.:	6B369107001
CONTAMINANTS OF CONCERN:	Hexavalent chromium (Cr6)
CURRENT LAND USE:	Natural Gas Compressor Station
PRIOR LAND USE:	None
DISCHARGE HISTORY:	The discharge history began in 1952 when cooling tower water containing hexavalent chromium was discharged to four unlined, evaporation ponds. The discharge continued until 1965 when hexavalent chromium was replaced with a phosphate-based inhibitor. Lined ponds were installed in 1966 and the former unlined ponds were excavated. The estimate percolation rate of the discharge to reach groundwater at 80 feet below ground surface was about 7 years.

INVESTIGATION RESULTS:

Multiple site investigations were conducted between December 1987 to present.

Hexavalent chromium is currently detected beneath the compressor station property at up to 9,030 micrograms per liter (µg/l). There is no drinking water standard or adopted public health goal for hexavalent chromium. In addition, total chromium is detected on site up to 7,760 µg/l, significantly exceeding the California drinking water standard of 50 µg/l. Chromium concentrations exceeding 5,000 µg/l put contamination in a hazardous waste category.

Site investigations reveal an unconfined upper aquifer and a confined lower aquifer. The upper aquifer consists of 80 feet of unsaturated sediments and about 70 feet of saturated sediments. A 40-foot thick blue clay lies between the upper aquifer and lower aquifer. The saturated lower aquifer starts at about 190 feet below ground surface and is composed of about 60 feet of sediments. Below the lower aquifer is granitic bedrock. At the Compressor Station, chromium concentrations reside solely in the upper aquifer.

The chromium plume extends in groundwater to approximately 2.8 miles north of the Compressor Station. At its widest point, located in areas north of Highway 58, the plume is 1.3 miles. Where the blue clay pinches out near the northwestern plume boundary, in the vicinity of Santa Fe Avenue, the lower aquifer disappears, forming one aquifer. In the northernmost extent of the plume area, there continues to be two aquifers which are thinner because the underground bedrock is closer to the ground surface. Chromium concentrations in groundwater decrease with distance away from the Compressor Station.

Known receptors within one-half mile of the chromium plume boundary include domestic wells, irrigation wells, agricultural wells, small community supply wells, and elementary school wells.

RECEIVING WATERS: Groundwaters of the Lower Mojave River Hydrologic Unit

ADJACENT AFFECTED PROPERTIES: Properties along Community Boulevard, Summerset Road, Fairview Road, Mountain View Road, Tamarack Road, Frontier Road, California Highway 58, Acacia Road, Alcudia Road, and Thompson Road

CLEANUP PROPOSAL: The September 2010 document, *Feasibility Study* (Study), evaluates technologies capable of remediating hexavalent chromium in groundwater to achieve clean up to adopted background levels (1.2 µg/l average Cr6 and 3.1 µg/l maximum Cr6). Five alternatives were evaluated in detail within the Study. The alternatives include "no action" which allows natural attenuation processes, such as dilution and dispersion, to reduce chromium concentrations in groundwater. Another alternative proposes plume containment using groundwater extraction and agricultural land treatment within the plume. Yet another alternative discusses plume-wide in-situ (below ground) remediation using multiple treatment lines. In addition, one alternative proposes a combination of the prior two alternatives. A final alternative involves physical removal of chromium from extracted groundwater in an aboveground treatment facility. This latter alternative is the only one proposing complete removal of chromium from the environment. In contrast, the first four alternatives leave chromium mass in the groundwater or in soil in levels that are not toxic.

PG&E recommends Alternative 4 for final site clean up. This alternative proposes to continue operating the in-situ technologies already in place in the Source Area, Central Area, and South Central Re-injection Area and add additional treatment locations out to the 50 µg/l total chromium plume boundary with the goal of achieving a maximum chromium concentration of 50 µg/l hexavalent chromium within this boundary. Pilot tests conducted over the past four years demonstrate the ability of in-situ remediation to achieve clean up of hexavalent and total chromium to concentrations of less than 1 µg/l. In addition to

groundwater extraction and land treatment currently being conducted at the Desert View Dairy, Alternative 4 proposes a new agricultural land treatment unit to the north for the purposes of plume containment. Upon reaching the maximum concentration of 50 µg/l total chromium throughout the plume area, Alternative 4 proposes to cease in-situ treatment and continue with agricultural land treatment units to contain plume migration. Natural attenuation processes are anticipated to reduce the remaining chromium concentrations to the average background level of 1.2 µg/l Cr6, with no concentration being greater than the maximum background level of 3.1 µg/l Cr6.

Project construction and operation will be completed under County permits. The estimated cleanup time for Alternative 4 to achieve the 50 µg/l total chromium drinking water standard throughout the entire plume area is 6 years. The estimated cleanup time to reach average background of 1.2 µg/l Cr6 is 220 years.

This remedial action was selected by PG&E over other remedial technologies because it appears it would be effective for remediation, its costs are less than costs for other alternatives, and would prevent significant public exposure to chromium.