



California Regional Water Quality Control Board Lahontan Region



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Arnold Schwarzenegger
Governor

SEP 25 2008

TO ALL CONCERNED PERSONS AND AGENCIES:

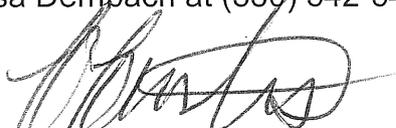
DRAFT AMENDED CLEANUP AND ABATEMENT ORDER FOR THE PACIFIC GAS AND ELECTRIC COMPANY (PG&E), HINKLEY, SAN BERNARDINO COUNTY

Enclosed is a draft amended cleanup and abatement order (CAO) to PG&E establishing background concentrations of hexavalent and total chromium in groundwater. These background concentrations will be considered in evaluating plume containment and in evaluating final cleanup strategies. The draft CAO establishes maximum background concentrations for hexavalent chromium and total chromium of 3.09 micrograms per liter and 3.23 micrograms per liter, respectively. The draft CAO also establishes average background concentrations for hexavalent chromium and total chromium of 1.19 micrograms per liter and 1.52 micrograms per liter, respectively.

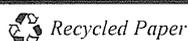
The maximum background chromium concentrations are the calculated 95th percent upper tolerance limits taken from the February 2007 document, *Groundwater Background Study Report, Hinkley Compressor Station*. This document is available for review at the County Library in Barstow and the Water Board's Victorville office, located at 14440 Civic Drive, Suite 200. On the Internet, the document can be viewed at <https://geotracker.waterboards.ca.gov>, using the case identification number SL0607111288. A staff report on the background study is available on the Water Board's Internet site at http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml.

Water Board staff requests that you review the enclosed document and provide us with your written comments no later than **October 10, 2008**. Following consideration of comments on the draft amended CAO, Water Board staff will prepare a proposed CAO for the Water Board's consideration at its meeting set for November 12 and 13, 2008 in Barstow.

If you have any questions or wish to discuss the draft amended CAO, you may contact Lisa Dernbach at (530) 542-5424 or me at (530) 542-5460.


Chuck Curtis, Manager
Cleanup and Enforcement Division

California Environmental Protection Agency



cc: PG&E Hinkley, Public Mailing List

Enclosure: Draft Amended Cleanup and Abatement Order No. R6V-2008-0002A1

LSD/clhT: PG&E Hinkley Draft CAO cover letter 9-08
[File Under: WDID 6B360303001]

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002A1

WDID NO. 6B369107001

**REQUIRING PACIFIC GAS AND ELECTRIC COMPANY
TO CLEAN UP AND ABATE WASTE DISCHARGES OF
TOTAL AND HEXAVALENT CHROMIUM TO THE
GROUNDWATERS OF THE MOJAVE HYDROLOGIC UNIT**

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Water Board), finds:

1. The Pacific Gas and Electric Company owns and operates the Hinkley Compressor Station (hereafter the "Facility") located southeast of the community of Hinkley in San Bernardino County. For the purposes of this Order, the Pacific Gas and Electric Company is referred to as the "Discharger."
2. On August 6, 2008, the Water Board issued Cleanup and Abatement Order (CAO) No. R6V-2008-0002 (attached) to the Discharger to cleanup and abate the effects of waste discharges and threatened discharges containing hexavalent chromium and total chromium to waters of the State. The CAO required the Discharger to take additional corrective actions to contain chromium migrating with groundwater, to continue to implement groundwater remediation in the source area and central plume area, and to develop and implement a final cleanup strategy. The Order also modified the monitoring and reporting program for permitted projects.
3. Amended CAO No. 6-87-160A2, issued in 1998, established the cleanup level for hexavalent chromium in groundwater at the laboratory method reporting limit that was in effect at the time of 10 micrograms per liter ($\mu\text{g/L}$). The method reporting limits for hexavalent chromium and total chromium are now 0.2 $\mu\text{g/L}$ and 1 $\mu\text{g/L}$, respectively.
4. Sampling in the Hinkley Valley indicates that hexavalent and total chromium occur naturally in groundwater at variable concentrations, according to the February 27, 2007, document, *Groundwater Background Chromium Study Report, Hinkley Compressor Station* (Study). The Study, submitted by the Discharger, presents the results of one year of water sampling from wells located outside the boundaries of the chromium plume. The mean concentrations detected in background are 1.19 $\mu\text{g/L}$ for hexavalent chromium and 1.52 $\mu\text{g/L}$ for total chromium. The work plan for the Study recommended that maximum likely background concentrations should be expressed as the 95% upper tolerance limits. The 95% upper tolerance limit is the value that is estimated to include 95 percent of the

population with a 95 percent confidence level. The 95% upper tolerance limits are 3.09 µg/L for hexavalent chromium and 3.23 µg/L for total chromium.

The Study added the laboratory analysis methods' accuracy limits to the 95% upper tolerance limits to recommend background threshold values of 3.55 µg/L for hexavalent chromium and 4.04 µg/L for total chromium in groundwater. In an August 2008 staff report, Water Board staff recommended the 95% upper threshold limits, rather than the Study's recommended background threshold values, as the maximum background concentrations that should be considered when evaluating the chromium plume. Staff's recommendation is based on the independent, expert peer reviewers' comments on the draft Study work plan, which were incorporated into the final Study work plan. The peer reviewers recommended using the 95% upper tolerance limit of the background study sample results as the maximum likely background chromium concentrations. Staff's review of literature on setting background concentrations has not identified a single case where laboratory method accuracy limits were added to the maximum likely concentrations derived through statistical analysis, such as the 95% upper tolerance limit method.

5. On September 11, 2008, Water Board staff hosted a meeting in Hinkley to inform the public of the status of chromium cleanup in groundwater and of the contents of the 2007 *Background Chromium Study*. Public comments and concerns about the Study were considered by Water Board staff.
6. At the November 12-13, 2008 meeting, the Water Board considered the 2007 *Background Chromium Study* and comments and recommendations by interested persons and staff.
7. The 1995 *Water Quality Control Plan for the Lahontan Region* (Basin Plan) establishes Water Quality Objectives (WQOs) for the protection of beneficial uses. WQOs include the following Maximum Contaminant Level (MCL) established by the California Department of Health Services as a safe level to protect public drinking water supplies.

Total chromium	50 µg/L
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8. On August 15, 2008, the Discharger submitted to the Water Board a document titled, *Second Quarter 2008 Monitoring Report, Source Area In-situ Remediation Project* (Report). Groundwater monitoring data in the Report shows that concentrations of total chromium were reported up to 7,400 µg/L and hexavalent chromium were reported up 7,050 µg/L in the source area at well SA-MW-05D.
9. The concentrations of total chromium and hexavalent chromium detected in groundwater at and downgradient of the Facility exceed WQOs for groundwater specified in the Basin Plan. The concentrations adversely affect the groundwater in the Mojave Hydrologic Unit for its municipal and domestic supply beneficial uses. The

levels of waste chromium in groundwater, therefore, constitute a pollution of hazardous waste as defined in Water Code section 13050, subdivision (l).

10. The discharge of chromium to the groundwaters of the Mojave Hydrologic Unit, as described in Finding No. 8 above, violates a prohibition contained in the Basin Plan. Specifically, the discharge violates the following discharge prohibition:

“The discharge of waste...as defined in Section 13050(d) of the California Water Code which would violate the water quality objectives of this plan, or otherwise adversely affect the beneficial uses of water designated by this plan, is prohibited.”

11. Chromium in groundwater in and downgradient of the source area at the compressor station continues to adversely affect groundwater quality. This Amended Cleanup and Abatement Order establishes background chromium concentrations to be considered when defining plume boundaries and final cleanup actions. Technical reports are necessary to verify corrective action implementation, cleanup of water quality, and progress towards restoring the beneficial uses of the aquifer.
12. This enforcement action is being taken by this regulatory agency to enforce the provisions of the California Water Code, and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000 et seq.) in accordance with California Code of Regulations, title 14, section 15321.

IT IS HEREBY ORDERED that, pursuant to the Water Code sections 13267 and 13304, the Discharger must clean up and abate the effects of the discharge and threatened discharge of chromium to waters of the State, and must comply with the provisions of this Order:

1. Cleanup and Abatement Order No. R6V-2008-0002 is amended to establish background chromium concentrations as follow:

Maximum background hexavalent chromium = 3.09 µg/L
Maximum background total chromium = 3.23 µg/L
Average background hexavalent chromium = 1.19 µg/L
Average background total chromium = 1.52 µg/L

These maximum background concentrations will be considered in evaluating plume containment. These average background concentrations will be considered in evaluating final cleanup strategies.

Failure to comply with the terms or conditions of this Order will result in additional enforcement action that may include the imposition of administrative civil liability pursuant to Water Code sections 13268 and 13350 or referral to the Attorney General of the State of California for such legal action as he may deem appropriate.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on November 12, 2008.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachment: Cleanup and Abatement Order No. R6V-2008-0002