



California Regional Water Quality Control Board, Lahontan Region
February 2008

Pacific Gas & Electric Company, Hinkley Chromium Groundwater Cleanup

SITE ACTIVITIES UPDATE

Ensuring that Pacific Gas and Electric Company (PG&E) contains and cleans up chromium contamination from its Hinkley Compressor Station has been a continuing effort of the Lahontan Regional Water Quality Control Board (Water Board). Contaminated soils at the site have been excavated and removed, and several projects have been implemented to stop migration of affected groundwater and to begin cleanup of the hexavalent chromium in groundwater. This fact sheet reports on the current status of active cleanup projects and describes a proposed permit that would regulate implementation of additional cleanup and plume control projects.

Site Cleanup Summary

As a result of the Water Board's orders for containment and cleanup, migration of the chromium plume has been stopped, and chromium concentrations in groundwater are being reduced in the northern part of the plume as a result of remediation efforts. Also, pilot studies at the site have shown that in-situ (in the ground) cleanup operations are successful in reducing hexavalent chromium and total chromium concentrations in groundwater to safe levels. Full-scale implementation of in-situ cleanup has begun in the central area of the plume and will begin in the spring at the source area near PG&E's Compressor Station.

Continued operation of the plume containment and in-situ cleanup projects will provide information on how best to expand those efforts to achieve final cleanup. The Water Board will be requiring PG&E to assess the best ways to clean up the plume and the time to meet the cleanup goals. Implementation of the final cleanup plan will follow that assessment.

Proposed General Permit

PG&E has submitted an application to the Water Board for a General Permit for site-wide plume containment and remediation activities. The Water Board will consider the permit at its April 9/10, 2008 meeting. A General Permit is an efficient tool to regulate certain cleanup actions at the Hinkley site because (1) it provides thorough, verifiable regulation and monitoring of discharges and (2) cleanup actions can be implemented quickly. Cleanup and plume containment activities that would be permitted include pumping groundwater with re-injection into the plume, pumping groundwater and treating aboveground prior to re-injection, pumping and dosing with a reductant prior to re-

injection, and in-situ treatment. The proposed General Permit would require PG&E to file a formal request to be covered under the General Permit. The request would include a detailed description of the activity that PG&E proposes. The public would be informed of these requests. It is determined that the proposed project is adequately regulated by the permit, the Water Board's Executive Officer could allow the project to proceed subject to the conditions of the permit.

Current Cleanup Activities

During 2007, PG&E installed three projects that are designed to clean up the chromium contamination in groundwater and prevent further migration. The Water Board requires PG&E to submit reports describing the project implementation details and results of groundwater monitoring quarterly (once every three months).

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Desert View Dairy Optimization Project

Since 2004, groundwater containing hexavalent chromium has been pumped from wells at the Desert View Dairy property and applied to fields for growing grass and alfalfa using a belowground drip irrigation system. In the process, hexavalent chromium is converted to trivalent chromium, which binds to soil particles.

In November 2007, the Water Board amended the Dairy's permit to allow pumped groundwater from off of the Dairy to be disposed of at the Dairy. Groundwater containing hexavalent chromium from wells located south of Santa Fe Avenue and near Mountain View Road will be applied to fields at the Dairy. This is intended to prevent the north-west migration of the chromium plume and abate impacts to properties in that region. Using the Dairy for treatment of this pumped groundwater eliminates the need to activate the formerly proposed Ranch Land Treatment Unit.

Source Area In-situ Project

PG&E has installed wells and other necessary equipment for full-scale in-situ chromium treatment at the source area on the Compressor Station property, located south of Community Boulevard. In the spring of 2008, PG&E will start injections of food-grade reagents, such as lactate, vegetable oil, whey, and ethanol, to groundwater that results in the conversion of hexavalent chromium to trivalent chromium. In addition to reducing hexavalent chromium levels in groundwater, this process reduces the total chromium levels in groundwater because trivalent chromium precipitates out of groundwater and binds to soil particles. Waste discharge requirements adopted by the Water Board require PG&E to monitor the effects of this project and submit reports to verify the project achieves the desired results and doesn't create negative effects.

Central Area In-situ Project

Since November 2007, PG&E has been operating the Central Area in-situ remediation project, located at the intersection of Fairview and Frontier Roads. This full-scale project in the central area of the chromium plume involves injections into groundwater similar to the source area project that will reduce chromium levels in groundwater.

History

The PG&E Hinkley Compressor Station compresses natural gas before transporting it through pipelines to central and northern California. The compressor station began operations in 1952. Between 1952 and 1966, PG&E used hexavalent chromium as an anti-corrosion agent in the cooling tower water. From 1952 to 1964, untreated wastewater from the cooling towers was discharged into unlined ponds at the compressor station. Some of the wastewater in the unlined ponds percolated to the groundwater. Beginning in 1964, the wastewater was treated prior to discharge to the unlined ponds while alternative corrosion inhibitors were evaluated. In 1966, phosphate replaced hexavalent chromium as the anti-corrosion agent in the cooling tower water. Lined evaporation ponds were constructed in 1972. Nevertheless, hexavalent chromium from the former wastewater ponds has affected the groundwater north of the compressor station in an area approximately two miles long and nearly one mile wide.

PUBLIC INFORMATION REPOSITORY

Documents related to the PG&E Hinkley Chromium Cleanup Project are available at the following locations:

Lahontan Regional Water Quality Control Board

Victorville Office
14440 Civic Drive, Suite 200
Victorville, CA 92392
Open Monday - Friday 8:00 a.m. - 5:00 p.m.

Phone: (760) 241-6583
Fax: (760) 241-7308

Barstow Branch

San Bernardino County Library
304 East Buena Vista
Barstow, CA 92311
(760) 256-4850

The Water Board's Internet web site at

www.waterboards.ca.gov/lahontan allows the public to review the schedule of upcoming Board meetings, agenda items, adopted minutes and Board orders. Information related to PG&E can be viewed by clicking "PG&E Hinkley Chromium Cleanup" in the "Quick Links" in the right column on the Home page or can be accessed directly through the following web address:
www.waterboards.ca.gov/lahontan/pge_hinkley.html.

Library Hours:

Monday: 12 noon - 8 p.m.
Tuesday: 10 a.m. - 6 p.m.
Wednesday: 12 noon - 8 p.m.
Thursday: 10 a.m. - 6 p.m.
Friday: 10 a.m. - 6 p.m.
Saturday: 9 a.m. - 5 p.m.
Sunday: Closed

PUBLIC INFORMATION MEETING

Tuesday, February 26, 2008, 7:00 – 9:00 PM

Hinkley Elementary School

Water Board staff will host a meeting to present information about current and new projects planned at the site. **The meeting will also be an opportunity to review the tasks and timeline that the Water Board expects PG&E to follow to generate the information that the Water Board will use to specify final cleanup actions.** The meeting will be informal and will include a series of poster presentations. Water Board staff will be available to provide information and answer questions. A Spanish language interpreter will be available at the meeting. The public is encouraged to attend the meeting to learn about current projects and the plan to clean up the chromium contamination.

The public meeting will provide information about a General Site-wide Remediation Permit to be considered by the Water Board at its April 9-10, 2008 meeting. The permit would allow PG&E to use various treatment and plume control methods to clean up chromium contamination and ensure that the plume doesn't spread.

AVISO DE UNA REUNION INFORMATIVA

Martes, 26 de Febrero, 7:00 – 9:00 PM

Escuela Primaria Hinkley

Personal de la Mesa Directiva del Agua tendrá una reunión para presentar información sobre proyectos actuales y nuevos planificados para el sitio. La reunión será informal e incluirá una serie de presentaciones estáticas. El personal de la Mesa Directiva del Agua estará disponible para proporcionar información y para contestar sus preguntas. Intérpretes de español estarán disponibles en esta reunión.

Se anima al público asistir a la reunión para conocer los proyectos actuales y previstos y también para expresar sus comentarios. Si usted tiene alguna pregunta sobre la reunión, por favor llame a Chuck Curtis al (530) 542-5460 o CCurtis@waterboards.ca.gov.

COMMENT AND MAILING LIST FORM FOR INFORMATION ABOUT FUTURE ACTIVITIES AT PG&E'S HINKLEY CHROMIUM CLEANUP

If you would like to be added to the distribution list for mail related to the site, or to submit questions or comments, please either fill out this form, call the Water Board at (760) 241-6583, or send an email to CCurtis@waterboards.ca.gov. If filling out the form below, mail to Chuck Curtis, Lahontan Water Board, 14440 Civic Drive, Suite 200, Victorville, CA 92392.

Name: _____

Address: _____

City/State/Zip: _____

Affiliation (if any): _____

Email address
(to receive information by email): _____

Comments/Questions: _____

Water Board mailings are solely for the purpose of keeping persons informed of activities. Mailing lists are not routinely released to outside parties. However, they are considered public records, and, if requested, may be subject to release.