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## Lahontan Regional Water Quality Control Board

February 26, 2014

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### **CONDITIONAL ACCEPTANCE OF NORTHERN AREAS INVESTIGATION PROPOSAL, PACIFIC GAS AND ELECTRIC HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY (CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002-A4)**

This letter provides the Water Board's comments on and conditional acceptance of Pacific Gas and Electric's (PG&E) Northern Areas Investigation Proposal (Proposal), dated January 17, 2014, which was updated on February 25 with new maps that provide overlays of the plume map over the proposed sampling locations, and which removed the generalized groundwater flow arrows. The Proposal was submitted to comply with directives in Cleanup and Abatement Order (CAO) No. R6V-2008-0002-A4 to fully define the extent of the chromium plume in the upper groundwater aquifer.

#### **Summary of Proposal**

The Proposal identifies areas for additional chromium investigation in the north Hinkley Valley and the Harper Dry Lake Valley (also called Water Valley), based upon the Water Board's December 12, 2013 letter. Figure 2 in the Proposal shows six areas north of Thompson Road targeted for groundwater sampling. The Proposal states that monitoring wells may be installed as part of the investigation to better define chromium plume boundaries in groundwater. PG&E will attempt to contact private property owners to gain access to properties for conducting groundwater investigations. If requests for access to properties are denied or not responded to, and no reasonable alternate properties exist, PG&E may request assistance by the Water Board in gaining access to properties. To expedite investigation north of Grasshopper Road (also called May Road on maps) in the Harper Dry Lake Valley, the Proposal recommends collecting samples from active domestic wells instead of installing monitoring wells. Sampling of active domestic wells north of Grasshopper Road will be conducted during first and second quarters 2014, pending property owner approval.

The Proposal also states that during the proposed investigation, additional information will be collected as part of the United States Geological Survey (USGS) Background Study. For example, during drilling activities, samples of saturated and unsaturated sediment and rock will be collected, along with groundwater. All samples and collection will be coordinated with the USGS.

Lastly, the Proposal recommends installing reverse osmosis systems in residences with active domestic wells in the Harper Dry Lake Valley (as shown in Figure 1). This recommendation is being made for residents who are not eligible for PG&E's Whole House Replacement Program. After obtaining access and permission from resident owners, PG&E indicates that it can install reverse osmosis systems within four to six weeks.

## **Comments**

High levels of chromium have been reported in a new monitoring well in the Harper Dry Lake Valley. The Fourth Quarter 2013 Groundwater Monitoring Report shows that 125 ppb Cr6 was detected in MW-193S3 in October 2013 and 143 ppb Cr6 was detected in the re-sample collected in November 2013. Previously, up to 150 ppb Cr6 was detected in the same well during September 2013. MW-193S3 is located on Hinkley Road, approximately one-quarter mile north of the Roy Road intersection. The Fourth Quarter 2013 Monitoring Report states that these detections are anomalous.

The high detections of chromium in MW-193S3 are of concern to the Water Board. First, they underscore the need to further investigate the groundwater conditions to the east and west for defining the lateral boundaries of chromium in groundwater. This should be achieved by groundwater sampling proposed in Investigation Areas Nos. 2 and 3 in the Proposal. Thus, we encourage completing these investigations as soon as possible. And second, if high chromium levels begin migrating to locations north or northwest, in the downgradient groundwater flow direction, they would threaten seven domestic and agricultural water supply wells in the Sunset Road area (also called Halsted Road on maps). The proposed reverse osmosis systems will protect the water supply of the residences from further spread of elevated chromium concentrations, but prompt completion of the investigations is necessary to minimize the potential spread of elevated chromium concentrations in groundwater.

If high chromium detections in MW-193S3 are indeed anomalous, we would expect them to decrease with time and not migrate. However, if increasing chromium concentrations are detected in downgradient monitoring wells during future monitoring events, it may warrant localized and immediate remedial actions to protect receptors. For the time being, PG&E should continue quarterly sampling of all monitoring wells in the Harper Dry Lake Valley and to report to the Water Board increasing chromium detections as they become known.

## **Conditions of Acceptance**

The Water Board accepts the Proposal in its entirety provided PG&E adheres to the following conditions:

1. Install proposed monitoring wells wherever access has been granted by the property owner or by San Bernardino County on rights-of-way in proposed investigation areas south of Grasshopper Road.
2. When access to properties for chromium investigation is not provided by property owners, propose an alternate investigation area to the Water Board. If no alternate parcels are available, such as in Area 5, provide documentation of denial including for County right-of-way. Water Board staff is willing to provide assistance in gaining access to private properties where property owners have previously denied access and no reasonable alternative groundwater sampling locations exist.

3. Perform the sampling of all active domestic wells in the eastern area of the Harper Dry Lake Valley, as shown in Figure 1, in conformance with sampling and monitoring requirements in Cleanup and Abatement Orders R6V-2011-0005, amended, and R6V-2008-0002, amended, and subsequent investigative orders for chromium plume boundary delineation. Continue sampling active domestic wells each quarter after the proposed investigation is completed.
4. Within 60 calendar days of the date of this notice, provide a status report to the Water Board on the following items:
  - a. The progress for obtaining access to private properties north of Grasshopper Road to sample active domestic wells and install reverse osmosis systems. Cite the well numbers where access has been provided, if applicable, and when well sampling is planned.
  - b. The progress for obtaining access to private properties for the six investigation areas south of Grasshopper Road for installing monitoring wells. Cite the properties where access has been provided, if applicable, and where access is in progress, or has been denied.
  - c. When access to properties for chromium investigation is not provided by property owners or San Bernardino County for right-of-way, provide supporting documentation and an alternate investigation area, if feasible.
  - d. Map of proposed monitoring well locations. Follow the chromium plume map specification listed in CAO R6V-2008-0002-A4 and further clarified in our December 12, 2013 letter, including showing the extent of chromium plume boundaries drawn out to 3.1 ppb, 10 ppb, 50 ppb, and 1,000 ppb Cr6/CrT.
  - e. A schedule for installing and sampling monitoring wells.
5. Within 10 calendar days of receiving validated laboratory reports, submit information to the Water Board, identifying any increasing chromium detections in monitoring or domestic wells to the north or northwest of MW-193S3 during any sampling event or re-sampling event. Increasing concentrations is defined for the purposes of this letter as being 30 percent or greater compared to the previous quarter.
6. Starting with the first quarter 2014, when active domestic wells are sampled north of Grasshopper Road, the well location and sample results shall be included on chromium plume maps and chromium plume boundaries shall be drawn as dashed lines out to 3.1 ppb, 10 ppb, 50 ppb, and 1,000 ppb Cr6/CrT.

The Water Board eagerly anticipates PG&E commencing the proposed work. Thank you for your cooperation and we look forward to the results. If you have any questions about this letter, please contact Lisa Dernbach at either [ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov) or (530) 542-5424.

  
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