

## Lahontan Regional Water Quality Control Board

May 2, 2013

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### **COMMENTS ON WORK PLAN FOR CHROMIUM PLUME INVESTIGATION, PG&E COMPRESSOR STATION, HINKLEY, SAN BERNARDINO COUNTY (CLEANUP AND ABATEMENT ORDER (CAO) NO. R6V-2008-0002A4)**

#### **INVESTIGATIVE ORDER NO. R6V-2013-0029**

Lahontan Water Board staff has reviewed the document "Work Plan to Address Provision I.A. of Cleanup and Abatement Order R6V-2008-0002A4" (Work Plan) for the PG&E Compressor Station in Hinkley. The Work Plan, prepared by Stantec, was submitted to comply with directive I.A in CAO R6V-2008-0002A4, requiring additional chromium plume delineation in the upper aquifer. In addition, following discussions with Water Board staff, PG&E submitted a March 15, 2013 Addendum proposing additional monitoring well locations in undefined plume areas in lieu of conducting monthly domestic well sampling.

The Work Plan and Addendum discuss installing and sampling 13 multi-depth monitoring wells in the northern plume area (north of Salinas Road) and 5 multi-depth monitoring wells in the eastern plume area, east of Dixie Road. Investigation results will be presented in a technical report due by the Order deadline of October 30, 2013.

This letter acknowledges PG&E's compliance with requirements of directive I.A of the Order.

#### **COMMENTS**

Water Board staff has the following comments, direction, and modifications concerning the Work Plan. This letter also contains a new Investigative Order requiring PG&E to submit additional technical information and modified chromium investigation report.

### **Monitoring Wells to Substitute for Monthly Domestic Well Sampling**

CAO R6V-2008-0002A4 requires PG&E to conduct monthly domestic well sampling in the undefined plume areas in the northern and eastern areas. The results of such sampling will be used to determine whether additional monitoring wells are needed to further define the plume in groundwater.

In the areas subject to this Order, PG&E's assessment shows there are only a few locations where domestic wells exist without a nearby monitoring well. Rather than implement the monthly domestic well program, PG&E proposes to install additional monitoring wells in those areas to use for defining the chromium plume. Since the domestic wells are currently being sampled quarterly under previous Water Board orders, Water Board staff has no objections to installing proposed new monitoring wells in the northern and eastern areas in lieu of monthly domestic well sampling.

The Water Board heard community concern about domestic wells in the north (well 09-01, 15-02, 15-16) that were not in the monthly sampling program. Water Board staff believe that two recently installed monitoring wells (MW-173 and MW-175) and two proposed monitoring wells (WMV-1 and 2), all located between the chromium plume boundary and the domestic wells, will be adequate for defining the plume boundary and potential threats to those domestic wells.

However, Water Board staff believes that not all of the new monitoring wells proposed in the northern and eastern plume areas cover all domestic wells where the chromium plume is undefined. Figures in PG&E's March 15 Addendum show some active domestic wells reside outside the chromium plume and the ¼-mile area of a monitoring well. Therefore, PG&E will need to implement monthly sampling of domestic wells in the following areas: well 11-02 (north) and wells 36-24 and 30E-12 (east), should these be active wells.

### **Northern Plume Definition**

While the Work Plan proposes additional monitoring locations to define the northern extent of the chromium plume in groundwater, no monitoring locations are proposed to define the eastern boundary of the northern plume. PG&E has stated in previous meetings that private property access and sensitive species habitat issues prevent the siting of monitoring wells to define the eastern chromium plume boundary south and north of Red Hill. Water Board staff acknowledge these issues and note that further plume definition will be required when one or both of these matters is resolved in the future. PG&E needs to submit information documenting actions taken to gain access to these properties or obtain permits by the state Department of Fish and Wildlife.

### **Eastern Plume Definition**

Even though Water Board staff accepts the five proposed monitoring well locations east of Dixie Road, a large gap in monitoring locations continues to exist west of Dixie Road. More than 3,000 feet separate MW-116 and MW-151 on Santa Fe Road. A new multi-depth monitoring well location is needed to reduce the gap in this area to less than 2,000 feet. This new monitoring well location shall be installed and sampled concurrent with the chromium investigations proposed in the Work Plan.

### **Western Plume Definition**

The Work Plan does not propose plume definition to the west. Water Board staff however believes that a monitoring well location is needed on Mulberry Road where six domestic wells (wells 28-08, 28-37, 28-38, 28-39, 28-45, 28-66) over the past five quarters have had at least one detection of chromium at or above the maximum background levels of 3.1 parts per billion (ppb) Cr(VI) and/or 3.2 ppb Cr(Total). PG&E has since bought out five of these properties and no longer samples the domestic wells. Meanwhile, the nearest monitoring well, MW-164S/D on Acacia Street, contains chromium concentrations less than the maximum background levels. Since chromium detected in MW-164S/D is not representative of the chromium seen in the removed domestic wells, a multi-depth monitoring location is needed on Mulberry Road. Therefore, PG&E is required to install a multi-depth monitoring well in the midst of the domestic wells locations on Mulberry Road where chromium concentrations were at or above the maximum background level.

Additionally, the Work Plan does not propose investigation where the Fourth Quarter 2012 Groundwater Monitoring Report shows a "finger" of the chromium plume extending west from Serra Road to MW-153S, towards Hinkley Road. While this plume area was not specifically mentioned in CAO R6V-2008-0002A4 because it was not known when the order was issued on January 8, 2013, the plume area was known at the time the Work Plan was submitted on February 22, 2013 and therefore cannot be ignored.

Chromium was detected in MW-153S above the maximum background concentration of 3.1 ppb Cr(VI) and 3.2 ppb Cr(Total) in fourth quarter 2012, but not in third quarter 2012, and was in second quarter 2012. Due to the inconsistent chromium detections seen in MW-153S, I am requiring that PG&E conduct further chromium investigation when there are two consecutive quarters of detections above the maximum background concentration for either Cr(VI) or Cr(Total). Thus, if chromium is detected above the maximum background concentration again in first quarter 2013, it would make two consecutive quarters, requiring that PG&E install additional multi-depth monitoring wells to define the western chromium plume boundary from MW-153S. This investigation shall be conducted concurrent with the chromium investigations proposed in the Work Plan. No further monitoring wells are needed north of the "finger" since the current seven monitoring well locations between the "finger" and Santa Fe Road should be adequate to monitor potential chromium migration and increasing concentrations.

## Reporting

The Work Plan does not propose changes to the reporting contents required in CAO R6V-2008-0002A4. The Water Board requires the following additional information be provided in the technical report due on October 30, 2013, to be consistent with prior Board orders.

1. Geologic cross-sections must be consistent in data depicted. For instance, if a well containing detected chromium concentration is shown in the cross section, then all wells within that same distance of the cross section line shall be depicted.
2. The report must describe all instances where proposed monitoring wells were not installed and/or sampled according to the Work Plan and Addendum. If denial was due to site access by a private party or to sensitive species habitat, evidence must be provided.

## Directives

Pursuant to section 13267 of the California Water Code, PG&E is directed to submit the following information in the technical report due on October 30, 2013 for delineating the lateral and vertical extent of chromium contamination in groundwater:

1. Results of monthly sampling (starting May 2013) for active domestic wells: 11-02 in the north and 36-24 and 30E-12 in the east. Subsequent sampling results shall be reported in groundwater monitoring and domestic well sampling reports, starting fourth quarter 2013.
2. Results of multi-depth monitoring well sampling between MW-116 and MW-151 on Santa Fe Road to reduce the 3,000-foot gap in this area to less than 2,000 feet.
3. Sampling results from a multi-depth monitoring well in the midst of the domestic wells locations on Mulberry Road where chromium concentrations were detected above the maximum background level since fourth quarter 2011.
4. If chromium is detected in MW-153S at or above the maximum background concentration for either Cr(VI) or Cr(Total) in first quarter 2013, submit sampling results from additional multi-depth monitoring wells to define the western chromium plume boundary from MW-153S.
5. Describe actions to gain access to lands in the northern plume area to define the eastern chromium boundary in groundwater. Provide a summary and chronology of actions for submitting a "take" application with the Department of Fish and Wildlife to gain access to sensitive species habitat.

6. Should access not be provided at any strategic proposed monitoring locations, PG&E is directed to provide such information to the Water Board within 10 working days of receiving a denial or within 30 days of sending a request and receiving no response.

### Enforcement

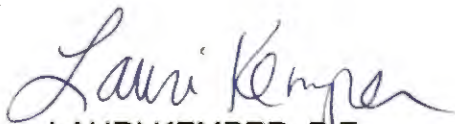
Technical reports required by this Investigation Order are necessary to investigate the water quality in the Hinkley basin during PG&E's ongoing cleanup of chromium pursuant to Cleanup and Abatement Order R6V-2008-0002 and amendments, based on Water Board's findings that:

- PG&E historically released waste water to ground containing hexavalent chromium,
- Releases have adversely affected groundwater at chromium concentrations exceeding drinking water standards and adopted background levels,
- Concentrations in groundwater include both hexavalent and total chromium,
- Additional investigations are needed to fully define the vertical and lateral extent of chromium in groundwater and the threat to domestic wells, and
- Technical reports are required to evaluate the potential threat to water quality.

The need for this investigation outweighs the burden on PG&E to produce the information for defining the manganese plume in groundwater will assist in evaluating potential threats to public health.

Pursuant to section 13268 of the Water Code, a violation of Water Code Section 13267 requirement may subject you to civil liability of up to \$1,000 per day for each day in which the violation occurs.

If you have any questions concerning this matter, please contact Lisa Dernbach at (530) 542-5424 or [ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov).



LAURI KEMPER, P.E.  
ASSISTANT EXECUTIVE OFFICER

Enclosure: 13267 Notice

cc: PG&E Lyris email and Technical Mailing List

**Fact Sheet – Requirements for Submitting Technical Reports  
Under Section 13267 of the California Water Code**

October 8, 2008

**What does it mean when the regional water board requires a technical report?**

Section 13267<sup>1</sup> of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

**This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?**

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

**Are there limits to what the regional water board can ask for?**

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

**What if I can provide the information, but not by the date specified?**

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

**Are there penalties if I don't comply?**

Depending on the situation, the regional water board can impose a fine of up to \$1,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

**What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?**

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of the Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

**Claim of Copyright or other Protection**

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

**If I have more questions, who do I ask?**

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

<sup>1</sup> All code sections referenced herein can be found by going to [www.leginfo.ca.gov](http://www.leginfo.ca.gov). Copies of the regulations cited are available from the Regional Board upon request.