

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

**MEETING OF MARCH 14-15, 2012  
BARSTOW**

**ITEM:** 9

**SUBJECT:** **PUBLIC HEARING – CONSIDERATION OF A SETTLEMENT AGREEMENT BETWEEN PACIFIC GAS AND ELECTRIC (PG&E) AND LAHONTAN WATER BOARD PROSECUTION TEAM IN THE MATTER OF AN ADMINISTRATIVE CIVIL LIABILITY FOR ALLEGED VIOLATIONS OF THE 2008 CLEANUP AND ABATEMENT ORDER AND CONSIDERATION OF ADOPTION OF AN AMENDED CLEANUP AND ABATEMENT ORDER IMPLEMENTING THE SETTLEMENT, SAN BERNARDINO COUNTY – WDID NO. 6B369107001**

**CHRONOLOGY:**

August 6, 2008	Cleanup and Abatement Order adopted
November 12, 2008	Cleanup and Abatement Order amended
April 7, 2009	Cleanup and Abatement Order amended

**ISSUE:** Should the Water Board affirm the settlement and adopt the proposed cleanup and abatement order?

**DISCUSSION:** In 2008 the Water Board issued Cleanup and Abatement Order No. R6V-2008-0002, as subsequently amended (CAO) (Enclosure 3). This CAO required, in part, that PG&E contain the chromium groundwater plume and established a methodology to evaluate if plume containment was being achieved.

The Water Board Prosecution Team alleges that PG&E violated the CAO beginning in November 2008. The Prosecution Team further alleges that PG&E has violated the CAO for 1,093 days. PG&E disputes these allegations.

In an attempt to resolve this dispute, the Prosecution Team and PG&E have proposed a Settlement (Enclosure 1) in which PG&E agreed to an administrative civil liability of \$3.6 million. One –half of the liability would be paid to the State and the other half would be used to implement a project to eliminate groundwater pumping at the Hinkley School. Current

pumping at the Hinkley School may contribute to chromium groundwater migration to the west. The project would replace the water source for the school with one originating from wells located a considerable distance away. The water quality in the replacement area would be required to meet all adopted drinking water standards.

The Settlement also includes a provision whereby the Water Board would amend the plume containment requirements in the existing CAO. The modification would acknowledge the current plume boundaries and time needed to complete the necessary evaluations and propose mitigations before PG&E can implement significant new plume containment measures in areas which are likely desert tortoise habitat. A proposed amendment to the CAO that is contemplated in the Settlement is included as Enclosure 2. If the Water Board accepts the Settlement it is also agreeing to adopt the amendment.

The Water Board Advisory Team has reviewed the Settlement and posed a number of clarifying questions to the Prosecution Team and PG&E. Additionally, the Settlement was circulated for public review and the Prosecution Team held a staff workshop in Hinkley to explain the Settlement and to accept comments. The Advisory Team questions and all public comments received along with responses will be circulated separately.

**RECOMMENDATIONS:** I will have a recommendation on this proposed Settlement including the proposed amendment to the CAO at the close of the hearing.

ENCLOSURE	Item	Bates Number
1	Settlement Agreement and Stipulation for Entry of Order in the Matter of Pacific Gas and Electric Company – Administrative civil Liability	9-5
2	Proposed Cleanup and Abatement Order amendment	9-43
3a	Cleanup and Abatement Order No. R6V-2008-0002	9-59
3b	Cleanup and Abatement Order No. R6V-2008-0002A1	9-71
3c	Cleanup and Abatement Order No. R6V-2008-0002A2	9-89

# **ENCLOSURE 1**

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

In the matter of:	)	
	)	
<b>Pacific Gas and Electric Company</b>	)	<b>Order No. R6V-2012-00XX (Proposed)</b>
	)	
<b>Administrative Civil Liability</b>	)	<b>Settlement Agreement and Stipulation for Entry of Order; Order (Proposed)</b>
	)	

**Section I: Introduction**

This Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order ("Settlement Agreement and Stipulation") is entered into by and between the California Regional Water Quality Control Board, Lahontan Region, Prosecution Staff ("Prosecution Staff") and Pacific Gas and Electric Company ("Settling Respondent") (collectively "Parties") and is presented to the California Regional Water Quality Control Board, Lahontan Region, ("Regional Water Board") for adoption as an Order, by settlement, pursuant to Government Code section 11415.60.

**Section II: Recitals**

1. The Settling Respondent is the owner and operator of a compressor station located at 35863 Fairview Road, approximately two miles southeast of the town of Hinkley, and a dozen miles west of Barstow in the Mojave Desert of San Bernardino County, California. The Compressor Station is used to compress natural gas for transportation through pipelines to central and northern California. Between 1952 and 1966, PG&E used hexavalent chromium, also known as chromium 6, to reduce corrosion in cooling tower water. The wastewater from the cooling towers was discharged to unlined ponds at the site. Some of the wastewater containing hexavalent chromium percolated to the groundwater and migrated, resulting in a plume of chromium-contaminated ground water.

2. The Regional Water Board adopted Cleanup and Abatement Order No. R6V-2008-0002 on August 6, 2008 which requires the Settling Respondent to clean up and abate the waste discharges of total and hexavalent chromium to the ground waters of the Mojave Hydrologic Unit (as identified in the Water Quality Control Plan for the Lahontan Region). Order Paragraph 3 of the Cleanup and Abatement Order, in summary, required the Settling Respondent to contain a) the hexavalent chromium plume to locations where hexavalent chromium was below the interim background level of 4 parts per billion (ppb), and b) the 50 ppb total chromium plume.

- a. The Settling Respondent was required to achieve containment of the hexavalent chromium plume in the ground water by December 31, 2008, using the Settling Respondent's *Boundary Control Monitoring Program and Updated Site-Wide Groundwater Monitoring Program* (submitted July 2, 2008 and prepared by Secor International) as described in Finding 16 in the Order.
- b. The Settling Respondent was required to achieve containment of the total chromium plume in the ground water by December 31, 2008, also based on the *Boundary Control Monitoring Program and Updated Site-Wide Groundwater Monitoring Program* as described in Finding 16 in the Order.

3. Cleanup and Abatement Order No. R6V-2008-0002 required the Settling Respondent to clean up and abate the chromium plume to background levels and set an interim amount of 4 ppb. Amendment Order No. R6V-2008-0002A1, effective November 12, 2008, lowered the background hexavalent chromium level to 3.1 ppb for the purposes of cleanup. For plume containment, the level remained at 4 ppb. Amendment Order No. R6V-2008-0002A2, effective April 7, 2009, allowed lateral migration of the eastern 4 ppb hexavalent chromium plume boundary during cleanup actions. This Settlement Agreement and Stipulation addresses the plume containment aspects of the Cleanup and Abatement Order, as amended, and not the cleanup portions.

4. In its First Quarterly 2009 Evaluation Monitoring Report, the Settling Respondent reported that hexavalent chromium control limits were exceeded in Monitoring Well 62-A beginning in November 2008. The results were verified in February and March, 2009. The report was submitted April 29, 2009. Subsequent quarterly reports indicated that Monitoring Well 62-A continued to exceed hexavalent chromium control limits (with the exception of one quarter) through the Fourth Quarterly 2011 Groundwater Monitoring Report, submitted January 30, 2012. Based on that information and other information received by the Regional Water Board staff, the Prosecution Team alleges that Settling Respondent was out of compliance for a total of 1,093 days. Settling Respondent disputes that allegation.

5. The Prosecution Team alleges that the Settling Respondent has violated Paragraph 3 of Cleanup and Abatement Order No. R6V-2008-0002 as amended by failing to contain the hexavalent and total chromium plumes by December 31, 2008 (hereby referred to as the "Alleged Violations"). The Regional Water Board may impose administrative civil liability up to \$5,000 a day for discharging waste to waters of the State in violation of a cleanup and abatement order issued by a Regional Water Board pursuant to California Water Code section 13350. Settling Respondent disputes that it has violated Cleanup and Abatement Order No. R6V-2008-0002 and disputes the Prosecution Team's description of the requirements in the Order as well as the Alleged Violations, including the calculation of the number of days of the Alleged Violations. By signing this Settlement Agreement and Stipulation, Settling Respondent is not admitting to any violations of Cleanup and Abatement Order No. R6V-2008-0002 nor any allegations by the Prosecution Team.

6. To resolve by consent and without further administrative proceedings the Alleged Violations of the California Water Code, the Parties have agreed to the settlement described herein. The Settling Respondent shall incur an administrative civil liability of \$3,600,000. Regional Water Board staff has incurred costs; however, as a participant in the Regional Water Board's Cost Recovery Program, the Settling Respondent has committed to reimbursing the State of California for these costs outside this Settlement Agreement and Stipulation. Payment of \$1,800,000 to the State Water Resources Control Board Waste Discharge Permit Fund is due no later than 30 days following the Regional Water Board executing this Order. As described in Paragraph 12 below, the remaining \$1,800,000 in administrative civil liability shall be suspended upon completion of a Supplemental Environmental Project ("SEP") titled the *Hinkley Community Benefit Project* for providing new permanent water supply at the Hinkley school as described in Paragraph 12. Additionally, the plume containment provisions in Order Paragraph 3 of the Cleanup and Abatement Order will be amended to reflect the following compliance provisions (as more fully described below in Paragraphs 9 and 10): at the Settling Respondent's own cost, the Settling Respondent is to a) achieve year-round hydraulic containment of chromium-affected groundwater south of Thompson Road (as more fully described in Paragraph 9 and Attachments C and D), and b) to take actions to reduce hexavalent chromium concentrations in the area generally north of Thompson Road (as more fully described in Paragraph 10 and Attachment E).

7. The Parties have engaged in settlement negotiations and agree to settle the Alleged Violations without administrative or civil litigation and by presenting this Settlement Agreement and Stipulation to the Regional Water Board for adoption as an Order pursuant to Government Code section 11415.60. The Prosecution Staff believes that the resolution of the Alleged Violations is fair and reasonable and fulfills its enforcement objectives, that no further action is warranted concerning the Alleged Violations except as provided in this Settlement Agreement and Stipulation, and that this Settlement Agreement and Stipulation is in the best interest of the public.

### **Section III: Stipulations**

The Parties stipulate to the following:

8. **Administrative Civil Liability:** The Settling Respondent hereby agrees to pay the administrative civil liability totaling \$3,600,000 as set forth in Paragraph 6 of Section II herein. Further, the Settling Respondent agrees that \$1,800,000 of this administrative civil liability shall be suspended pending completion of a SEP as set forth in Paragraph 6 of Section II herein and Attachment A attached hereto and incorporated by reference.

9. **Hydraulic Containment of Chromium-Affected Groundwater South of Thompson Road:** As part of its effort to prevent further migration of chromium-affected groundwater, Settling Respondent shall achieve and maintain hydraulic capture within the targeted areas shown on Figures 1 and 2 in Attachment C (incorporated herein by reference) by completing the following.

- a. Settling Respondent shall operate and maintain the groundwater extraction system that exists as of January 15, 2012, or its functional equivalent, such that hydraulic containment is maintained within the areas indicated on Figures 1 and 2 in Attachment C on a year-round basis. Separate Areas of Hydraulic Containment are established for the shallow zone of the Upper Aquifer and the deep zone of the Upper Aquifer. The Regional Water Board will determine hydraulic containment compliance by comparing hydraulic gradients or groundwater flow direction vectors calculated from groundwater elevation data from select well pairs and piezometers with control limits, as outlined in Attachment D of this Settlement Agreement and Stipulation and Order (incorporated herein).
- b. Water levels shall be monitored on a monthly basis, year-round. For this evaluation, the Settling Respondent shall collect continual pressure transducer data by the end of the month (e.g. January 31) and a data evaluation shall be submitted by the Settling Respondent by the 15<sup>th</sup> of the subsequent month (e.g. February 15). If the evaluation demonstrates that the average monthly water level data from any of the well pair metrics provided in Attachment D is not met, the Settling Respondent shall:
  1. Verify the water levels manually within five days of the evaluation, and in any case no later than the 20<sup>th</sup> of the month when the data evaluation is submitted.
  2. If the manual measurements confirm that there is no longer an inward gradient, the Settling Respondent will adjust operations within five days in the field using existing infrastructure (i.e. adjust individual well pumping rates).
  3. With the Regional Water Board staff's written approval, the Settling Respondent may demonstrate plume capture using alternative metrics (e.g. well pairs) to verify inward plume capture.
- c. The Regional Water Board may find the Settling Respondent out of compliance with this Settlement Agreement and Stipulation if either of the following occurs:
  1. The third consecutive month of data (e.g. January, February and March) indicates that the well pair metrics are still not met, or
  2. If capture metrics are not met 3 out of 12 months during the course of one year (e.g., July 2012 through July 2013).
- d. Should either condition 9.c.1. or 9.c.2. occur, then by the 15<sup>th</sup> of the following month, the Settling Respondent shall submit a contingency plan to re-

establish capture in addition to the existing infrastructure. The Regional Water Board staff will review the contingency plan and either accept it or request modifications in writing.

- e. The Regional Water Board may determine that the Settling Respondent is out of compliance with this Settlement Agreement and Stipulation if Settling Respondent fails to timely submit a contingency plan as described in condition 9.d., the Regional Water Board may issue a letter of non-compliance for not complying with either condition 9.c.1. or 9.c.2., and/or 9.d. and seek additional civil liability as authorized by the California Water Code.

**10. Actions to Reduce Plume Migration in Area Generally North of Thompson Road:** The Settling Respondent shall take reasonable and practicable corrective actions to reduce hexavalent chromium concentrations in groundwater and to reduce plume migration in areas north of Thompson Road (as illustrated by Attachment E) by taking the following interim actions prior to the approval of the final remedy proposed by Settling Respondent:

- a. Starting the summer of 2012, the Settling Respondent shall conduct groundwater extraction from June 1 through September 30 in at least one location to maximize extraction and chromium removal. Failure to implement this action will constitute a violation of this Settlement Agreement and Stipulation. The Parties may agree to modifications to this requirement, which are only effective upon the written approval of the Assistant Executive Officer or Executive Officer.
- b. By July 1, 2012, the Settling Respondent shall review existing extraction and well sampling data and evaluate the need for additional extraction within the area depicted by Attachment E. If additional extraction is deemed necessary, Settling Respondent shall evaluate extraction methods and propose additional actions and a schedule to implement further chromium removal north of Thompson Road in the area depicted on Attachment E. Settling Respondent shall include the most effective actions reasonably feasible. The Settling Respondent shall then implement these additional actions according to the schedule, subject to obtaining all required permits from regulatory agencies including approvals required by the California Environmental Quality Act and state and federal Endangered Species Acts, which approvals Settling Respondent shall diligently seek. In the event of any delay, Settling Respondent shall notify the Regional Water Board staff in writing and seek a modification of the schedule. Failure to implement this action will constitute a violation of this Settlement Agreement and Stipulation. The Parties may agree to modifications to this requirement, which modifications will be effective only on the written approval of the Assistant Executive Officer or Executive Officer.

- c. The Settling Respondent shall dispose of extracted groundwater containing chromium concentrations in a manner approved by Regional Water Board staff. The Parties may agree to modifications to this requirement in writing with the approval of the Assistant Executive Officer or Executive Officer.
- d. In the event Settling Respondent determines that the new remedial components required by this Paragraph 10 are interfering with Settling Respondent's ability to maintain inward gradients as required by Paragraph 9, Settling Respondent shall notify Regional Water Board staff within 5 business days of that determination and provide written evidence supporting Settling Respondent's determination. After notifying the Regional Water Board, Settling Respondent may suspend the remedial requirements required by this Paragraph 10 for no longer than is necessary to develop alternative pumping regimes north and/or south of Thompson Road that will maintain internal hydraulic capture south of Thompson Road while maximizing chromium removal north of Thompson Road. Settling Respondent shall consult Regional Water Board staff as necessary and seek written approval before taking any actions inconsistent with either Paragraph 9 or 10 of this Settlement Agreement and Stipulation.

11. Any violation of this Settlement Agreement and Stipulation by the Settling Respondent may subject the Settling Respondent to civil liability as authorized by the California Water Code. Paragraphs 9 and 10 of this Settlement and Stipulation shall be incorporated into an amended 2008 Cleanup and Abatement Order. A violation of Paragraphs 9 and 10 shall be a violation of the 2008 Order as amended. Nothing herein precludes the Regional Water Board from issuing any additional investigative or cleanup and abatement orders related to the Settling Respondent's chromium discharge, including for areas north of Thompson Road.

12. **Supplemental Environmental Project:** The Parties agree that this resolution includes a supplemental environmental project (SEP) as provided for as follows:

**a. Definitions**

"Waste Discharge Permit Fund" – the State Water Pollution Waste Discharge Permit Fund.

"Designated Regional Water Board Representative" – the representative from the Regional Water Quality Control Board responsible for oversight of the supplemental environmental project (SEP). The contact information for this representative is as follows:

Lisa Dernbach, Senior Engineering Geologist (Specialist)  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Blvd.

South Lake Tahoe, CA 96150  
(530) 542-5424  
LDernbach@waterboards.ca.gov

"Enforcement Coordinator" – The person on the Regional Water Quality Control Board staff who is responsible for enforcement coordination.

"Milestone Requirement" – A requirement with an established time schedule for meeting/ascertaining certain identified measurements of completed work. Upon the timely and successful completion of each milestone requirement, an amount of liability will be permanently suspended or excused as set forth in the Description of the SEP below.

"SEP Completion Date" – The date on which the SEP will be completed in its entirety.

"SEP Amount" – The portion of the \$3,600,000 administrative civil liability that is to be spent by the Settling Respondent on constructing and maintaining the SEP.

#### **b. Administrative Civil Liability and Costs Of Enforcement**

##### **1. Total Civil Liability**

Settling Respondent shall be subject to administrative civil liability in the total amount of \$3,600,000. The civil liability includes credit for a SEP in the amount of \$1,800,000. The cost of the SEP will be referred to as the SEP Amount and will be treated as a Suspended Administrative Civil Liability.

##### **2. Payment and Costs**

Payment shall be made within 30 days of the effective date of the Settlement Agreement and Stipulation. Payment shall be made by a check payable to the State Water Resources Control Board's Waste Discharge Permit Fund. Payment shall be submitted to the Designated Regional Water Board Representative.

##### **3. Funding of Special Environmental Projects.**

Settling Respondent agrees to fund and perform the SEP as described further in Section III, Paragraph 12.c. and Attachment A.

#### **c. Description of the SEP**

The SEP is comprised of a water infrastructure project at the Hinkley Elementary/Middle School at 37600 Hinkley Road in Hinkley, California. The project will provide a new permanent water supply at the school. The SEP includes construction and maintenance of new facilities through the SEP Completion Date of December 31, 2017, but does not include plans for long-term maintenance, except for maintenance of

Page | 7

equipment on Settling Respondent's property. This project is related to the Alleged Violations in that the permanent replacement water will decrease water supply pumping in the immediate vicinity of the Hinkley School and the surrounding community, which will reduce the demand on the limited aquifer in the area. Sustained groundwater pumping at high enough volumes may cause movement in the groundwater plume in the Hinkley area. By lowering the amount of groundwater being pumped in the vicinity of the school, the SEP lowers the potential for the groundwater plume to move and provides more groundwater supply for other beneficial uses. Further details are contained in Attachment A.

#### **d. Representations and Agreements Regarding SEPS**

##### **1. Representation of the Settling Respondent**

As a material consideration for the Regional Water Board's acceptance of this Settlement Agreement and Stipulation, the Settling Respondent represents that it will utilize the funds outlined in Paragraph 6 to implement the SEP in accordance with the Schedule for Performance contained in Attachment A. The Settling Respondent understands that it is agreeing to implement the SEP in its entirety and in accordance with the schedule for implementation. Any failure to completely satisfy the milestones in the SEP may subject the Settling Respondent to paying a portion or all of the suspended administrative civil liability as described in Paragraphs 12.i. and 12.j. below.

##### **2. Agreement of Settling Respondent to Implement SEP**

The Settling Respondent represents that: a) it will spend the SEP amount as described in this Settlement Agreement and Stipulation, including Attachment A, b) it will provide a certified, written report to the Regional Water Board consistent with the terms of this Settlement Agreement and Stipulation detailing the implementation of the SEP, and c) within 30 days of the completion of the SEP, it will provide written certification, under penalty of perjury, that the SEP complied with all applicable environmental laws and regulations including, but not limited to, the California Environmental Quality Act, the federal Clean Water Act and the Porter-Cologne Act. The Settling Respondent agrees that the Regional Water Board has the right to require an audit of the funds expended by it to implement the SEP.

#### **e. Publicity Associated with SEP**

Whenever the Settling Respondent, or its agents or subcontractors, publicizes one or more elements of the SEP, they shall state in a **prominent manner** that the project is being undertaken as part of the settlement of an enforcement action by the Regional Water Board against the Settling Respondent.

#### **f. Submittal of Progress Reports**

Settling Respondent shall provide quarterly progress reports to the Designated Water Board Representative on the 40th day following the end of each quarter: May 10, August 9, November 9, and February 9 of each year. Reports shall state all actions under taken for implementing the SEP during the quarter and state planned actions for the following quarter.

Settling Respondent shall permit inspection of the SEP by the Regional Water Board staff at any time without notice.

**g. Audits and Certification of Environmental Project**

1. Certification of Expenditures.

On or before December 31, 2017, Settling Respondent shall submit a certified statement by responsible corporate officials documenting the expenditures by Settling Respondent during the completion period for the SEP. The expenditures may be external payments to outside vendors or contractors implementing the SEP. In making such certification, the official may rely upon normal company project tracking systems that capture employee time expenditures and external payments to outside vendors such as environmental and information technology contractors or consultants. Settling Respondent shall provide any additional information requested by the Regional Water Board staff that is reasonably necessary to verify Settling Respondent's SEP expenditures. The certification need not address any costs incurred by the Regional Water Board for oversight.

2. Certification of Performance of Work

On or before December 31, 2017, the Settling Respondent shall submit a report, under penalty of perjury, stating that the SEP has been completed in accordance with the terms of this Settlement Agreement and Stipulation. Such documentation may include photographs, invoices, receipts, certifications, and other materials reasonably necessary for the Regional Water Board to evaluate the completion of the SEP and the costs incurred by the Settling Respondent.

3. Certification that Work Performed on SEP Met or Exceeded Requirements of CEQA and Other Environmental Laws

On or before December 31, 2017, the Settling Respondent shall submit documentation, under penalty of perjury, stating that it provided the lead agency(ies) with all documentation and support requested by the lead agency(ies) and that the SEP complied with all other environmental laws. The Settling Respondent (or the lead agency on its behalf) shall, before the SEP implementation date, consult with other interested State Agencies regarding potential impacts of the SEP. Other interested State Agencies include, but are not limited to, the California Department of Fish and Game. To ensure compliance with CEQA where necessary, the Settling Respondent

shall provide the Regional Water Board with the following documents from the lead agency:

- a) Categorical or statutory exemptions;
- b) Negative Declaration if there are no "significant" impacts;
- c) Mitigated Negative Declaration if there are potential "significant" impacts but revisions to the project have been made or may be made to avoid or mitigate those potential significant impacts;
- d) Environmental Impact Report (EIR) if there are "significant" impacts.

4. Third Party Audit

If the Designated Regional Water Board Representative obtains information that causes the representative to reasonably believe that the Settling Respondent has not expended money in the amounts claimed by the Settling Respondent or has not adequately completed any of the work in the SEP work plan, the Designated Regional Water Board Representative may require, and the Settling Respondent shall submit, at its sole cost, a report prepared by an independent third party(ies) acceptable to the Regional Water Board staff providing such party(ies)'s professional opinion that Settling Respondent has expended money in the amounts claimed by the Settling Respondent. In the event of such an audit, the Settling Respondent agrees that it will provide the third-party auditor with access to all documents which the auditor requests. Such information shall be provided to the Designated Regional Water Board Representative within three (3) months of the completion of the Settling Respondent's SEP obligations. The audit need not address any costs incurred by the Regional Water Board for oversight.

**h. Regional Water Board Acceptance of Completed SEP**

Upon the Settling Respondent's satisfaction of its obligations under this Settlement Agreement and Stipulation, including the completion of the SEP and any audits, the Designated Regional Water Board Representative, with notice to the regional Enforcement Coordinator, shall request that the Regional Water Board issue a "Satisfaction of Order." The issuance of the Satisfaction of Order shall terminate any further obligations of the Settling Respondent under this Settlement Agreement and Stipulation.

**i. Failure to Expend All Suspended Administrative Civil Liability Funds on the Approved SEP**

In the event that Settling Respondent is not able to demonstrate to the reasonable satisfaction of the Regional Water Board staff that it has spent the entire SEP Amount for the completed SEP, Settling Respondent shall pay the difference between the Suspended Administrative Civil Liability and the amount Settling Respondent can demonstrate was actually spent on the SEP, as an administrative civil liability.

**j. Failure to Complete the SEP**

If the SEP is not fully implemented within the SEP Completion Period required by this Settlement Agreement and Stipulation, or there has been a material failure to satisfy a Milestone Requirement, the Settling Respondent shall be liable to pay the entire SEP Amount in administrative civil liability, or some portion thereof less the value of any adequately completed SEP requirement(s). The amount of the liability owed shall be determined by the Executive Officer, or the Executive Officer's delegate. Upon notification of the amount assessed for failure to fully implement the SEP, the amount assessed shall be paid to the State Water Pollution Waste Discharge Permit Fund within 30 days. In addition, the Settling Respondent shall be liable for the Regional Water Board's reasonable costs of enforcement, including but not limited to legal costs and expert witness fees. Payment of the demanded amount will satisfy the Settling Respondent's obligations to implement the SEP.

13. **Compliance with Applicable Laws:** The Settling Respondent understands that payment of administrative civil liability in accordance with the terms of this Order or compliance with the terms of this Order is not a substitute for compliance with applicable laws, and that violations of the provisions of this Settlement Agreement and Stipulation may subject it to further enforcement, including administrative civil liability.

14. **Regional Water Board is Not Liable:** Neither the Regional Water Board members nor the Regional Water Board staff, attorneys, or representatives shall be liable for any injury or damage to persons or property resulting from acts or omissions by Settling Respondent its directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Settlement Agreement and Stipulation, nor shall the Regional Water Board, its members or staff be held as Parties to or guarantors of any contract entered into by Settling Respondent, its directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Settlement Agreement and Stipulation.

15. **Attorney's Fees and Costs:** Except as otherwise provided herein, each Party shall bear all attorneys' fees and costs arising from the Party's own counsel in connection with the matters set forth herein.

16. **Matters Addressed by Stipulation:** Upon adoption by the Regional Water Board as an Order, this Settlement Agreement and Stipulation represents a final and binding resolution and settlement of the Alleged Violations. The provisions of this Paragraph are expressly conditioned on the full payment of the administrative civil liability by the deadlines specified in Paragraph 8 and the Settling Respondent's full satisfaction of the obligations described in Paragraph 12. Nothing herein is meant to, or should be interpreted as, releasing the Settling Respondent of any responsibility for the discharge of chromium described in Paragraph 1.

17. **Public Notice:** The Settling Respondent understands that this Settlement Agreement and Stipulation and Proposed Order must be noticed for at least a 30-day

public review period prior to consideration by the Regional Water Board. In the event objections are raised during the public comment period, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the proposed Order as necessary or advisable under the circumstances. The Assistant Executive Officer reserves the right to rescind her approval of this Settlement Agreement and Stipulation if, after meeting and conferring with Settling Respondent, the Assistant Executive Officer determines that comments regarding the Settlement Agreement and Stipulation disclose significant new facts regarding the Alleged Violations which indicate that the Settlement Agreement and Stipulation is inappropriate, improper, or inadequate. The Respondent agrees that it may not rescind or otherwise withdraw its approval of this proposed Stipulated Order. If the Assistant Executive Officers rescinds her approval of this Settlement Agreement and Stipulation pursuant to this paragraph, nothing in this Settlement Agreement and Stipulation, drafts of this Settlement Agreement and Stipulation, or any discussions leading to this Settlement Agreement and Stipulation shall be used as evidence to support Settling Respondent's Alleged Violations of the CAO.

**18. Addressing Objections Raised During Public Comment Period:** The Parties agree that the procedure contemplated for adopting the Order by the Regional Water Board and review of this Settlement Agreement and Stipulation by the public is lawful and adequate. In the event procedural objections are raised prior to the Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure as necessary or advisable under the circumstances.

**19. Interpretation:** This Settlement Agreement and Stipulation and Order shall be construed as if the Parties prepared it jointly. Any uncertainty or ambiguity shall not be interpreted against any one Party. The Settling Respondent is represented by counsel in this matter.

**20. Modification:** This Settlement Agreement and Stipulation and Order shall not be modified by any of the Parties by oral representation made before or after its execution. All modifications must be in writing, signed by all Parties and approved by the Regional Water Board.

**21. If Order Does Not Take Effect:** In the event that this Order does not take effect because it is not approved by the Regional Water Board, or its delegate, or is vacated in whole or in part by the State Water Resources Control Board or a court, the Parties acknowledge that they expect to proceed to a contested evidentiary hearing before the Regional Water Board to determine whether to assess administrative civil liabilities for the underlying alleged violations, unless the Parties agree otherwise. The Parties agree that all oral and written statements and agreements made during the course of settlement discussions will not be admissible as evidence in the proceedings. The Parties agree to waive any and all objections based on settlement communications in this matter, including, but not limited to:

- a. Objections related to prejudice or bias of any of the Regional Water Board members or their advisors and any other objections that are premised in whole or in part on the fact that the Regional Water Board members or their advisors were exposed to some of the material facts and the Parties' settlement positions as a consequence of reviewing the Settlement Agreement and Stipulation and/or the Order, and therefore may have formed impressions or conclusions prior to any contested evidentiary hearing on the Complaint in this matter; or
- b. Laches or delay or other equitable defenses based on the time period for administrative or judicial review to the extent this period has been extended by these settlement proceedings.

22. **Waiver of Hearing:** The Settling Respondent has been informed of the rights provided by California Water Code section 13323, subdivision (b), and hereby waives its right to a hearing before the Regional Water Board prior to the adoption of the Order.

23. **Waiver of Right to Petition:** The Settling Respondent hereby waives its right to petition the Regional Water Board's adoption of the Order for review by the State Water Resources Control Board, and further waives its rights, if any, to appeal the same to a California Superior Court and/or any California appellate level court.

24. **Settling Respondent's Covenant Not to Sue:** The Settling Respondent covenants not to sue or pursue any administrative or civil claim(s) against any State Agency or the State of California, their officers, Board Members, employees, representatives, agents, or attorneys arising out of or relating to the Alleged Violations resolved by this Settlement Agreement and Stipulation.

25. **Necessity for Written Approvals:** All approvals and decisions of the Regional Water Board under the terms of this Order shall be communicated to the Settling Respondent in writing. No oral advice, guidance, suggestions or comments by employees or officials of the Regional Water Board regarding submissions or notices shall be construed to relieve the Settling Respondent of its obligation to obtain any final written approval required by this Order.

26. **Authority to Bind:** Each person executing this Settlement Agreement and Stipulation in a representative capacity represents and warrants that he or she is authorized to execute this Settlement Agreement and Stipulation on behalf of and to bind the entity on whose behalf he or she executes the Settlement Agreement and Stipulation.

27. **Effective Date:** The obligations of this Settlement Agreement and Stipulation are effective and binding on the Parties only upon the entry of an Order by the Regional Water Board which incorporates the terms of this Settlement Agreement and Stipulation.

28. **Severability:** This Settlement Agreement and Stipulation and Order are severable; should any provision be found invalid the remainder shall remain in full force and effect.

29. **Counterpart Signatures:** This Settlement Agreement and Stipulation may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one document.

**IT IS SO STIPULATED.**

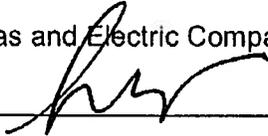
California Regional Water Quality Control Board Prosecution Team  
Lahontan Region

By: 

Lauri Kemper, Assistant Executive Officer

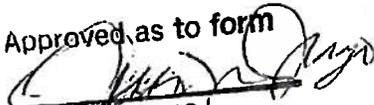
Date: 2/1/12

Pacific Gas and Electric Company

By: 

Sanford Hartman  
Vice President-Law Department

Date: 2/1/12

Approved as to form  
  
JUAN M. JAYO  
PG&E Law Dept.

**Order of the Regional Water Board**

1. This Order incorporates the foregoing Settlement Agreement and Stipulation and Attachments A through D. The Regional Water Board will adopt an amendment to Cleanup and Abatement Order R6V-2008-0002, which amendment will replace Paragraph 3 of that Order with Paragraphs 9 and 10 of this Settlement Agreement and Stipulation.

2. In accepting the foregoing Settlement Agreement and Stipulation, the Regional Water Board has considered, where applicable, each of the factors prescribed in California Water Code section 13327. The Regional Water Board's consideration of

Pacific Gas & Electric Company  
Settlement Agreement and Stipulation for Entry of Order; Order

these factors is based upon information obtained by the Regional Water Board' staff in investigating the Alleged Violations. Recitals or otherwise provided to the Regional Water Board.

3. This is an action to enforce the laws and regulations administered by the Regional Water Board. The Regional Water Board finds that issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, sections 21000 et seq.), in accordance with section 15321(a)(2), Title 14, of the California Code of Regulations.

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 March 14, 2012.

---

Harold J. Singer  
Executive Officer

Date: \_\_\_\_\_

ATTACHMENT A

HINKLEY COMMUNITY BENEFIT PROJECT PROPOSAL  
SUPPLEMENTAL ENVIRONMENTAL PROJECT

**Hinkley Community Benefit Project  
SUPPLEMENTAL ENVIRONMENTAL PROJECT  
PROPOSAL/WORK PLAN**

Pacific Gas and Electric Company (“**PG&E**”) hereby submits this Supplemental Environmental Project (“**SEP**”) proposal to the Lahontan Regional Water Quality Control Board (“**Lahontan Regional Board**”) in furtherance of confidential settlement negotiations with respect to CAO No. R6V-2008-0002 (the “**2008 CAO**”).

**1. NAME OF ORGANIZATION PROPOSING THE SEP, CONTACT PERSON, AND PHONE NUMBER.**

Name of Proposing Organization: PG&E

Primary Contact: Sheryl Bilbrey, Director of Chromium Remediation

Alternate Contact: Kevin Sullivan, PG&E Project Manager

**2. NAME AND LOCATION OF THE PROJECT, INCLUDING WATERSHED (CREEK, RIVER, BAY) WHERE IT IS LOCATED.**

Project Name: Hinkley Community Benefit Project (the “**Project**”)

Project Location: The Project will be located at and in the vicinity of the Hinkley Elementary/Middle School at 37600 Hinkley Road, Hinkley CA 92347, in San Bernardino County, California (the “**Hinkley School**”).

Watershed Location: The watershed is located in the Harper Valley Subarea of the Mojave Hydrologic Unit. The ephemeral Mojave River contributes more than 80 percent of the natural groundwater recharge to the Hinkley Valley. The closest surface water is an unnamed ephemeral stream, located about 4,000 feet northwest of the plume’s northern boundary. The ephemeral Mojave River is located less than one mile to the southeast of the facility.

**3. DESCRIBE THE PROJECT AND HOW IT FITS INTO ONE OR MORE OF THE FOLLOWING SEP CATEGORIES:**

- (a) Pollution Prevention
- (b) Environmental Restoration
- (c) Environmental Auditing
- (d) Public Awareness/Education
- (e) Watershed Assessment
- (f) Watershed Management
- (g) Facilitation Services
- (h) Non-Point Source Program Implementation

*Project Background*

PG&E owns and operates the Hinkley Compressor Station, located approximately one-half mile southeast of the community of Hinkley in San Bernardino County, California at 35863 Fairview Road (APN 048S-112-52).

On August 6, 2008, the Lahontan Regional Board issued the 2008 CAO which, in part, required PG&E to prevent the chromium plume from migrating to locations where hexavalent chromium was below background concentration levels, and achieve “containment” by December 31, 2008 which was defined in part as “no further migration or expansion of the chromium plume to locations where hexavalent chromium [was] below the background level.”<sup>1</sup>

On November 4, 2011, PG&E received a Notice of Proposed Enforcement Action and Offer to Engage in Pre-filing Settlement Discussions from the State Water Resources Control Board Office of Enforcement (the “**Enforcement Notice**”). The Enforcement Notice alleged that PG&E had violated the 2008 CAO by failing to achieve containment of the chromium plume.

PG&E desires to enter into a settlement agreement, whereby the Lahontan Regional Board will promise to forgo the initiation of any legal action against PG&E in exchange for PG&E’s agreement to remit Total Assessed Penalties, as defined below.

#### Project Description

The Project contemplates a water infrastructure project at or near the Hinkley School with the provision of a new permanent water supply at the Hinkley School.

This SEP proposal recommends total assessed penalties (“**Total Assessed Penalties**”) in an amount of \$3,600,000.00. PG&E asks that the Lahontan Regional Board permit fifty percent (50%) of the Total Assessed Penalties to be applied toward effectuating this SEP, and requests that fifty percent (50%) of the Total Assessed Penalties be applied as a fine to the California State Water Pollution Cleanup and Abatement Account (the “**Cleanup and Abatement Account**”). Accordingly, the term “**SEP-Allocated Fee**” as used herein shall mean fifty percent (50%) of Total Assessed Penalties, or \$1,800,000.00; and the term “**C&AA Fine**” as used herein shall mean fifty percent (50%) of Total Assessed Penalties, or \$1,800,000.00.

#### How the Project Fits into the SEP Categories

Implementing the Project will support the following SEP category:

- *Watershed Management*

<sup>1</sup> The 2008 CAO, at Order No. 3(a).

The permanent replacement water component will decrease water supply pumping in the immediate vicinity of the Hinkley School and surrounding community which will reduce the demand on the limited aquifer in this area. Sustained groundwater pumping at high enough volumes can cause movement in the groundwater plume in the Hinkley area. By lowering the groundwater pumping demand in the vicinity of the Hinkley School and surrounding community, the Project lowers the potential for the pumping to cause movement in the groundwater plume in the Hinkley area.

**4. DESCRIBE HOW THE PROJECT BENEFITS WATER QUALITY.**

The Project will have direct impacts on water quality by increasing the groundwater supply in the vicinity of the Hinkley School through the process of aquifer recharge. Additionally, the Project will benefit water quality for the students at the Hinkley School through watershed management, by decreasing water supply pumping in the immediate vicinity and decreasing the potential of causing movement to the area of groundwater contamination. This component will also facilitate watershed management by decreasing demand on groundwater supplies in the vicinity of the impacted area of groundwater contamination.

**5. DESCRIBE HOW THE PROJECT BENEFITS THE PUBLIC.**

The Project benefits the public through the provision of various community benefits by providing the Hinkley School with a reliable, source of water anticipated to be from PGE14, FW01 or FW02 (or an equivalent source of water with similar water quality) which meets all state and federal drinking water standards.

**6. INCLUDE DOCUMENTED SUPPORT BY ONE OR MORE OF THE FOLLOWING:**

- (a) Other agencies
- (b) Public groups
- (c) Impacted persons
- (d) Compliance with the California Environmental Quality Act

*(a) Other Agencies:*

A Letter of Support from the Barstow Unified School District is attached hereto as Exhibit A.

*(d) Compliance with the California Environmental Quality Act:*

Before construction of the Project begins, PG&E shall submit documentation, under penalty of perjury, stating that the lead agency for each component of the SEP has complied with

the requirements of CEQA, if applicable. To ensure compliance with CEQA if applicable, PG&E shall provide the Regional Board with one of the following documents from the lead agency for the SEP:

- (a) A determination by the lead agency that a categorical or statutory exemption applies to the SEP;
- (b) An adopted Negative Declaration if there are no significant impacts;
- (c) An adopted Mitigated Negative Declaration if there are potentially significant impacts but revisions to the project have been made or may be made to avoid or mitigate those potential significant impacts;
- (d) A certified Environmental Impact Report (EIR) if there are significant impacts.

**7. KEY PERSONNEL INVOLVED WITH THE PROJECT.**

- Sheryl Bilbrey, Director of Chromium Remediation
- Kevin Sullivan, PG&E Project Manager

**8. PROVIDE A DESCRIPTION OF THE PRIMARY PROJECT ACTIVITIES.**

- **“Replacement Water”:** PG&E will plan and construct infrastructure for a permanent water supply at the Hinkley School. PG&E possesses sufficient water rights for the duration of the SEP. PG&E will maintain the water supply infrastructure that is not located on the school property but which is necessary to implement this agreement (Water Supply Infrastructure). The Water Supply Infrastructure shall remain within the sole ownership, custody, and control of PG&E. PG&E shall provide sufficient water to satisfy the school’s current water needs for a period of 20 years or until, after meeting and conferring with PG&E, the School District chooses to use an alternative water supply. The source of the water is anticipated to be wells PGE14, FW01 or FW02 (or an alternative source of water with similar water quality) that meets all state and federal drinking water standards .
- **Deadline for Usage of SEP-Allocated Fee:** In the event that the SEP-Allocated Fee is not fully utilized by December 31, 2017 any remainder of the SEP-Allocated Fee will become due and payable to the Lahontan Regional Board, regardless of whether any portion of that amount has been actually expended on construction and/or start-up costs.

**9. DESCRIBE WHAT THE PROJECT HOPES TO ACHIEVE AND A DETAILED PLAN FOR DOING SO.**

The Hinkley School serves as a central gathering place for the community. By implementing the Hinkley School Community Benefit Project, PG&E seeks to demonstrate its commitment to the betterment of the Hinkley community.

All obligations under this SEP shall terminate upon the date of the exhaustion of the SEP-Allocated Fee, or December 31, 2017, whichever occurs first (the “**Project Termination Date**”), although PG&E may decide to complete or pursue Project components at its discretion after the Project Termination Date.

**10. INCLUDE A MONITORING PLAN OR QUALITY ASSURANCE PROGRAM PLAN (IF APPLICABLE).**

A monitoring plan and/or quality assurance program plan is not necessary in the context of the Project, which will involve the build-out and completion of the Project elements without ongoing maintenance or monitoring requirements.

**11. DESCRIBE THE SPECIFIC GOALS OF THE PROJECT, INCLUDING NUMERICAL OBJECTIVES WHERE APPROPRIATE (I.E., NUMBER OF PARTICIPATING STUDENTS, STUDENT-HOURS, WORKSHOPS HELD, ACRES RESTORED). WOULD THE PROJECT CREATE ANY LASTING PROGRAMS, STRUCTURES, OR DOCUMENTS?**

The specific goal of the Project is to provide the Hinkley School with a reliable, high quality water supply. The Project’s benefits and structures would be permanent.

**12. PROVIDE A TIMETABLE FOR PROJECT IMPLEMENTATION, INCLUDING ANY PROJECT MILESTONES.**

Date	Project Task
January 2012	Present SEP Proposal to Lahontan Regional Board staff for preliminary approval.
February 2012	Upon preliminary approval by Lahontan Regional Board staff, submit SEP Proposal to PG&E’s technical team and consultants for advanced planning and refinement.
March 2012	Final approval of Settlement Agreement and SEP Proposal.
March 2012	Upon receipt of final approval, commence Project preparations.
October 31, 2012	Completion of preliminary site condition surveys and 10% design of necessary infrastructure construction. Submit site condition report, surveys and 10% design documentation to Water Board and CEQA Lead Agency for environmental analysis
2013	Project Implementation Phase Continues. CEQA compliance and permitting anticipated during this year – construction may begin.
2014	Project Implementation Phase Continues.
December 31, 2017	Specific Goal: Anticipated Project Completion Date.
December 31, 2017	Project Termination Date

**13. DESCRIBE WHAT MEASURES, IF ANY, YOU WOULD TAKE TO OFFSET OR OVERCOME ANY IMPEDIMENTS AFFECTING PROJECT IMPLEMENTATION.**

*Permanent Water Supply for the Hinkley School – Implementation Impediments*

In order to supply permanent water to the Hinkley School, PG&E plans to construct an underground waterline system and source water from an offsite location. An initial impediment to construction will be obtaining the necessary approvals from the Hinkley School/Barstow Unified School District and ensuring that the school district or other appropriate lead agency complies with CEQA. Additionally, the Project may require additional land use approvals and/or state and federal environmental permits. Thereafter, PG&E will need to negotiate the terms of a construction agreement with a general contractor. Once an agreement has been reached, a remaining impediment will be the construction schedule for the water supply lines. Additionally, various permits will need to be acquired.

Measures to Offset Impediments to the Project

Since potential impediments involve approvals from third parties, CEQA compliance by third party lead agencies and actions by vendors, PG&E will have little control over issues that may arise due to delay. Nevertheless, PG&E will work judiciously and collaboratively with all third parties to ensure maximum expediency. PG&E can also provide technical assistance on CEQA compliance to the appropriate lead agencies, and actively work with municipalities and permitting authorities to ensure prompt permitting.

**14. DESCRIBE THE CRITERIA THAT WILL BE USED TO ASSESS PROJECT SUCCESS.**

Project success will be measured by the timely implementation of Project components of the Project.

**15. IDENTIFY A COMPANY OR ORGANIZATION RETAINED TO AUDIT THE PROJECT.**

PG&E will retain an independent auditing firm to audit Project implementation and SEP fund usage.

**16. DESCRIBE PLANS TO CONTINUE AND/OR MAINTAIN THE PROJECT BEYOND THE SEP-FUNDED PERIOD. IDENTIFY POTENTIAL FUNDING SOURCES FOR MAINTENANCE/CONTINUATION ACTIVITIES. FOR RESTORATION PROJECTS, DESCRIBE THE MONITORING PLAN, WHO WILL IMPLEMENT THE PLAN, AND LENGTH OF TIME THE PLAN WILL BE IN PLACE.**

The Project includes construction and maintenance of new facilities, but does not include plans for long-term maintenance beyond the Project Termination Date.

**17. INCLUDE A STATEMENT WHICH STATES THAT AFTER SUCCESSFUL COMPLETION OF THE SEP, ANY FUNDS LEFT OVER MUST BE TURNED OVER TO THE STATE CLEANUP AND ABATEMENT ACCOUNT.**

It is understood that after successful completion of the Project, any funds left over must be turned over to the Cleanup and Abatement Account if another approved SEP project is not identified.

**18. REPORTING PROCEDURES (PROGRESS REPORTS, FINAL REPORT)**

PG&E will provide quarterly progress reports, as well as a final report, to the Lahontan Regional Board, on progress towards meeting construction and start-up of the Project. The final report will detail the final specifications of the completed Project and the proportion for which the funding is responsible.

Quarterly progress reports will include a list of all activity on the SEP for each reporting period and the proposed work for the following year. Reports are due no later than the end of January, following the completion of the reporting year, in accordance with the schedule shown below. PG&E shall submit progress reports on the SEP until the project is completed, and the SEP contribution is fully expended or otherwise approved by the Lahontan Regional Board Executive Officer. A Final Report shall be submitted on January 31, 2017.

**19. INCLUDE A DETAILED BUDGET FOR THE PROJECT.**

SUPPLEMENTAL ENVIRONMENTAL PROJECT <b>Hinkley Community Benefit Project</b>		
ITEM No.	TASK DESCRIPTION	ESTIMATED COSTS
1	SEP: Provide permanent water supply at the Hinkley School	\$1,800,000.00
2	Pay Fine to the Cleanup and Abatement Account within 60 days of approval by the Lahontan Regional Board.	\$1,800,000.00
	<b>Total Assessed Penalties</b>	<b>\$3,600,000.00</b>

**ATTACHMENT B**

**LIABILITY METHODOLOGY DRAFTED BY THE CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN  
REGION, PROSECUTION STAFF<sup>1</sup>**

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<sup>1</sup> The Settling Respondent did not participate in drafting this liability methodology and does not agree with the methodology, findings or assessment.

## RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY

On November 17, 2010, the State Water Resources Control Board (“State Water Board”) adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (“Enforcement Policy”). The Enforcement Policy was approved by the Office of Administrative Law and became effective on May 20, 2010. The Enforcement Policy establishes a methodology for assessing administrative civil liability. Use of the methodology addresses the factors in California Water Code section 13327.

The policy can be found at:

[http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final11709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final11709.pdf)

The proposed administrative civil liability is based on the use of that methodology.

## DISCHARGE VIOLATIONS

Per Day Determination:

Based on the facts in this case, a per day assessment for the discharge is appropriate and is ranked as 0.8. The failure to contain the hexavalent chromium plume and the extent of its expansion that has occurred since the issuance of Cleanup and Abatement Order No. R6V-2008-0002 has resulted in significant harm to the municipal and domestic supply beneficial use of the ground waters. The per day assessment is derived from considering the potential for harm for the discharge and the deviation from the regulatory requirement. The potential for harm factor includes an analysis for the potential harm to beneficial uses, the characteristics of the discharge, and the discharge’s susceptibility to cleanup or abatement.

In this matter, first, the harm to beneficial uses of the receiving groundwater basin is major because use of the groundwater for water supply will continue to be significantly restricted for decades in the expanded chromium plume area, earning a score of 5 in the methodology. Second, the discharge poses a significant risk to potential receptors. The potential health impacts associated with elevated groundwater hexavalent chromium concentrations in the plume pose a significant threat to human health given the magnitude by which the concentrations exceed the public health goal of 0.02 ppb. Hexavalent chromium is recognized as a potent carcinogen via inhalation and oral exposure. Accordingly, a score of 4 is assigned to the characteristics of the discharge. Third, the Settling Respondent has developed several remediation proposals that indicate the Settling Respondent is able to clean up the chromium to the control limits established by the Cleanup and Abatement Order. Doing so constitutes 100% of the discharge of the chromium plume expansion being susceptible for cleanup and abatement. Since more than 50% of the discharge is susceptible to cleanup, a score of zero is assigned. The total of the three factors is 9.

Next is the extent of deviation from the regulatory requirement. Here, there was a major deviation from the plume containment provision in the Cleanup and Abatement Order. The Settling Respondent reported a hexavalent chromium concentration of 5.9 ppb in sentry well MW-62A in November 2008, and the well exceeded control limits

through the fourth quarter of 2011, except for the third quarter of 2010. However, other monitoring wells have shown increases in chromium down gradient for the entire 1,093 days of violation indicating plume migration. The Settling Respondent's inability to re-establish plume containment as defined by the 2008 Cleanup and Abatement Order has rendered the Order's plume containment requirement completely ineffective. Therefore, there is a major deviation from the requirement.

Based on the potential for harm score of 9 and the major deviation from requirement assessment, the per day deviation factor is 0.8 (see Table 2 – Per Day Factor for Discharges in the Enforcement Policy).

There are 1,093 days of violation. Therefore, the initial amount of liability based on the days of violation is \$4,372,000 (number of days of violation x per day factor x statutory maximum per day).

#### ADJUSTMENTS TO DETERMINATION OF INITIAL LIABILITY

The Settling Respondent's culpability factor is valued at 1.4 based on the response to the plume expansion. The Settling Respondent failed to maintain plume containment when it reduced groundwater extraction at the Desert View Dairy starting in November 2008. By the time the Settling Respondent began increasing extraction rates at the Desert View Dairy in spring 2009, the chromium plume had migrated enough distance to come under the influence of groundwater pumping activities at off-site agricultural fields to the northeast.

The Settling Respondent's cleanup and cooperation factor is 1.3. This value is based on the Settling Respondent's delay in implementing corrective actions when groundwater monitoring data indicated that the plume was losing containment in November 2008. Pumping was finally increased beyond normal rates in extractions wells at the Desert View Dairy in July 2010.

The Settling Respondent's history of violations factor is 1.3 in light of the history of the plume and its associated permits and enforcement actions with the Regional Water Board.

Based on these adjustments, the amount revised from the initial liability is \$9,492,392 (Initial liability x culpability factor x cleanup and cooperation factor x history of violations factor) for this violation.

The maximum statutory liability amount is \$5,465,000.

#### ABILITY TO PAY AND ABILITY TO CONTINUE IN BUSINESS

The Settling Respondent has the ability to pay the total base liability amount based on the fact that the Settling Respondent is a major energy and gas company, based in San Francisco, California. The Settling Respondent is a subsidiary of PG&E Corporation that employs approximately 20,000 people in the transmission and delivery of energy to

northern and central California. The 2010 combined annual report for PG&E Corporation and PG&E Company shows total assets of \$46.025 billion, and operating revenues of \$13.841 billion. Therefore, the Settling Respondent has the ability to pay the liability, and the total base liability amount is not adjusted.

#### OTHER FACTORS AS JUSTICE MAY REQUIRE

Staff costs for investigating and enforcing this matter are estimated at \$270,000. The prosecution is not seeking to recover staff costs in this Settlement Agreement and Stipulation because the Settling Respondent has actively partaken in the Cleanup Cost Recovery Program and has essentially already paid the staff costs.

#### ECONOMIC BENEFIT

The economic benefit estimated for the violation(s) at issue is estimated at \$521,105. The Settling Respondent realized economic savings by failing to implement its Action Plan for Well MW-62A approximately one year after plume expansion was first verified. The economic benefit was determined as follows:

(Estimated cost to implement Action Plan, \$250,000) x (0.073 interest rate) x (US EPA BEN calculation) = \$352,855

\$352,855 + (4 staff x average year-end bonuses for meeting internal budget objectives, \$37,500) = \$521,105

The Enforcement Policy requires that the adjusted Total Base Liability Amount be at least 10% higher than the economic benefit amount, which would be \$573,215.

Therefore the liability should not be adjusted.

#### FINAL LIABILITY AMOUNT

Based on the foregoing analysis, and consistent with the Enforcement Policy and Water Code section 13350, the final liability amount is calculated at \$5,465,000, the statutory maximum. The proposed stipulated administrative civil liability is \$3,600,000 for purposes of early resolution considering the risks of litigation that include mitigating circumstances (e.g. stipulating to amending Cleanup and Abatement Order R6V-2008-0002 for injunctive terms).

ATTACHMENT C

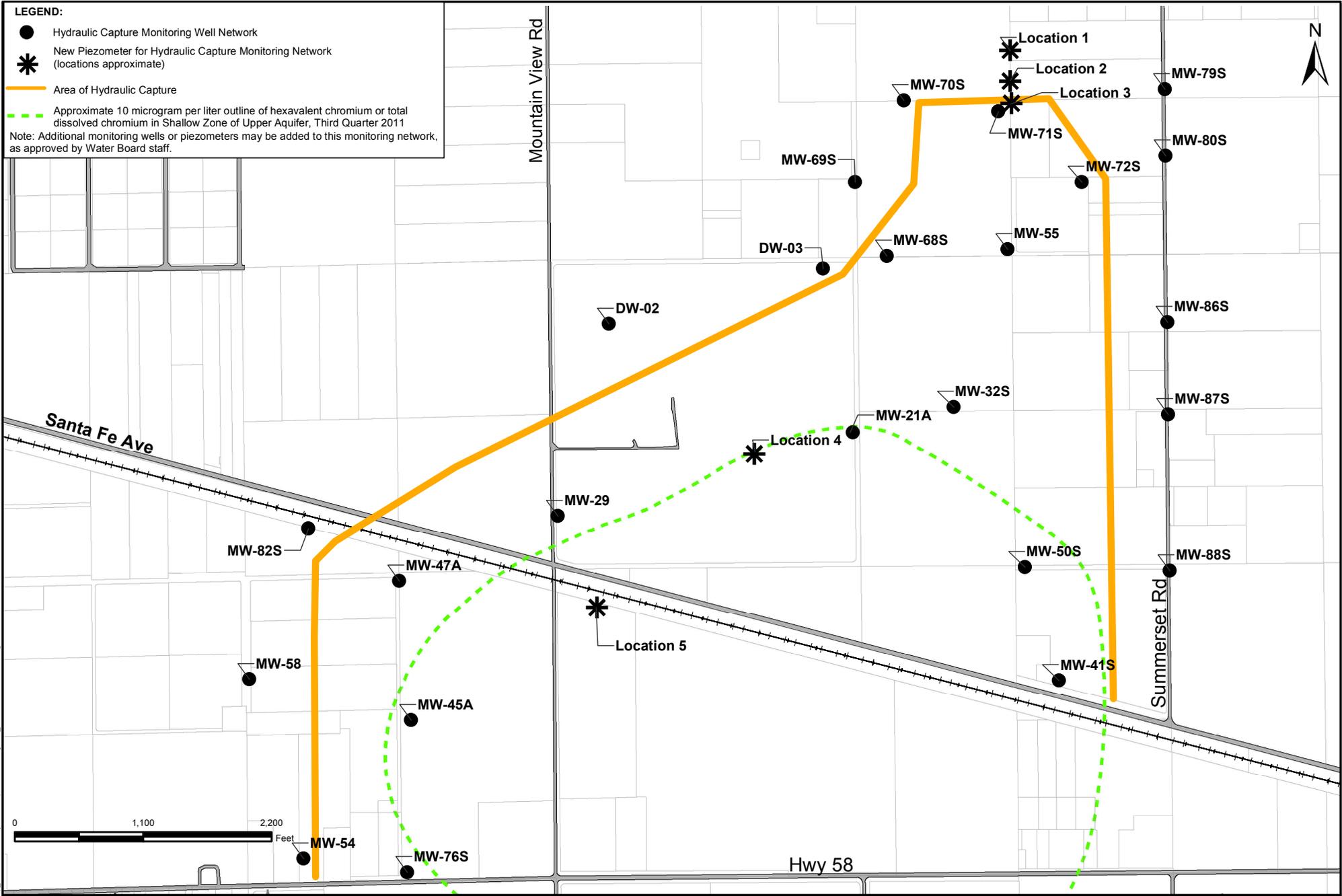
FIGURE 1 – HYDRAULIC CAPTURE MONITORING PLAN,  
SHALLOW ZONE OF UPPER AQUIFER

FIGURE 2 – HYDRAULIC CAPTURE MONITORING PLAN,  
DEEPER ZONE OF UPPER AQUIFER

**LEGEND:**

- Hydraulic Capture Monitoring Well Network
- \* New Piezometer for Hydraulic Capture Monitoring Network (locations approximate)
- Area of Hydraulic Capture
- - - Approximate 10 microgram per liter outline of hexavalent chromium or total dissolved chromium in Shallow Zone of Upper Aquifer, Third Quarter 2011

Note: Additional monitoring wells or piezometers may be added to this monitoring network, as approved by Water Board staff.



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Program Manager  
Lisa Cope

Project Manager  
Jennifer Beatty

Task Manager  
Margaret Gentile

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## Hydraulic Capture Monitoring Plan, Shallow Zone of Upper Aquifer

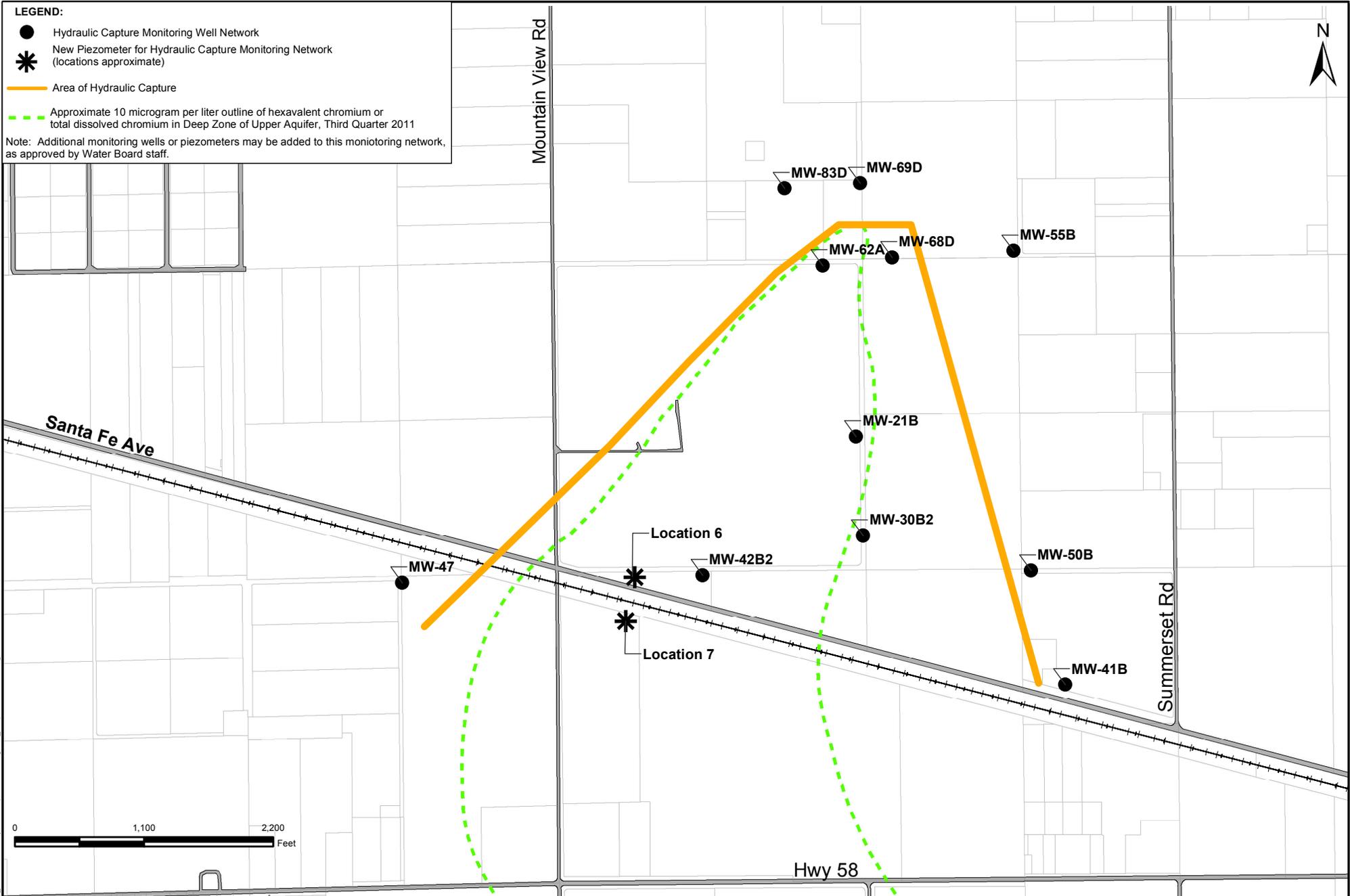
Pacific Gas and Electric Company  
Hinkley, California

FIGURE  
Attachment C,  
Figure 1

**LEGEND:**

- Hydraulic Capture Monitoring Well Network
- \* New Piezometer for Hydraulic Capture Monitoring Network (locations approximate)
- Area of Hydraulic Capture
- - - - Approximate 10 microgram per liter outline of hexavalent chromium or total dissolved chromium in Deep Zone of Upper Aquifer, Third Quarter 2011

Note: Additional monitoring wells or piezometers may be added to this monitoring network, as approved by Water Board staff.



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## Hydraulic Capture Monitoring Plan, Deep Zone of Upper Aquifer

Pacific Gas and Electric Company  
Hinkley, California

FIGURE  
Attachment C,  
Figure 2

ATTACHMENT D

HYDRAULIC CAPTURE METRICS

Hydraulic capture shall be demonstrated through analysis of potentiometric surfaces in the shallow zone (A1) and deep zone (A2) of the upper aquifer measured at least monthly. Hydraulic capture shall be demonstrated using those monitoring wells or piezometers identified in Table A-1 or other wells as accepted by Water Board staff. For well pairs, the inner well must have a potentiometric surface lower than the outer well. For well triplets, the vector described by the potentiometric surfaces at the three wells must show a gradient directed inward of the capture boundary line shown on Figures 1 or 2, for the shallow zone and deep zone of the upper aquifer, respectively.

**Table A-1 Hydraulic Capture Monitoring Plan**

Depth Interval	Well Pairs		Well Triplets
A1 Layer	Outer Well	Inner Well	
	MW-86S	MW-55S	
	MW-80S	MW-72S	
	DW-03	MW-68S	
	MW-79S	MW-71S	
	New wells <sup>1, 2</sup> (Locations 1, 2, 3 on Figure 1)	MW-71S	
			MW-88S, -87S, -32S
			MW-70S, -69S, -71S <sup>2</sup>
			DW-02, MW-29, -21A or new piezometer <sup>3</sup> near MW-31 (Location 4 on Figure 1)
			MW-58, -45A and -47A
			MW-82S, new piezometer <sup>3</sup> near EX-29/-30 (Location 5 on Figure 1)
			MW-54, -76S and -45A
			MW-50S, -88S and -41S
A2 Layer	Outer Well	Inner Well	
	MW-41B	MW-30B2	
	MW-83D	MW-62A	
	MW-69D	MW-62A <sup>2</sup>	
	MW-50B	MW-21B	
	MW-47	MW-42B2 or new piezometer <sup>3</sup> near EX-29/-30 or EX-26 (Location 6 or 7 on Figure 2)	
			MW-69D, MW55B, MW-68D <sup>2</sup>

<sup>1</sup>“New Wells” indicates one or more piezometers in a row north of MW-71S. There is technical uncertainty as to the exact location of the down gradient capture line. Therefore only one of the piezometers will need to indicate an inward gradient. This piezometer must be outboard of the containment line.”

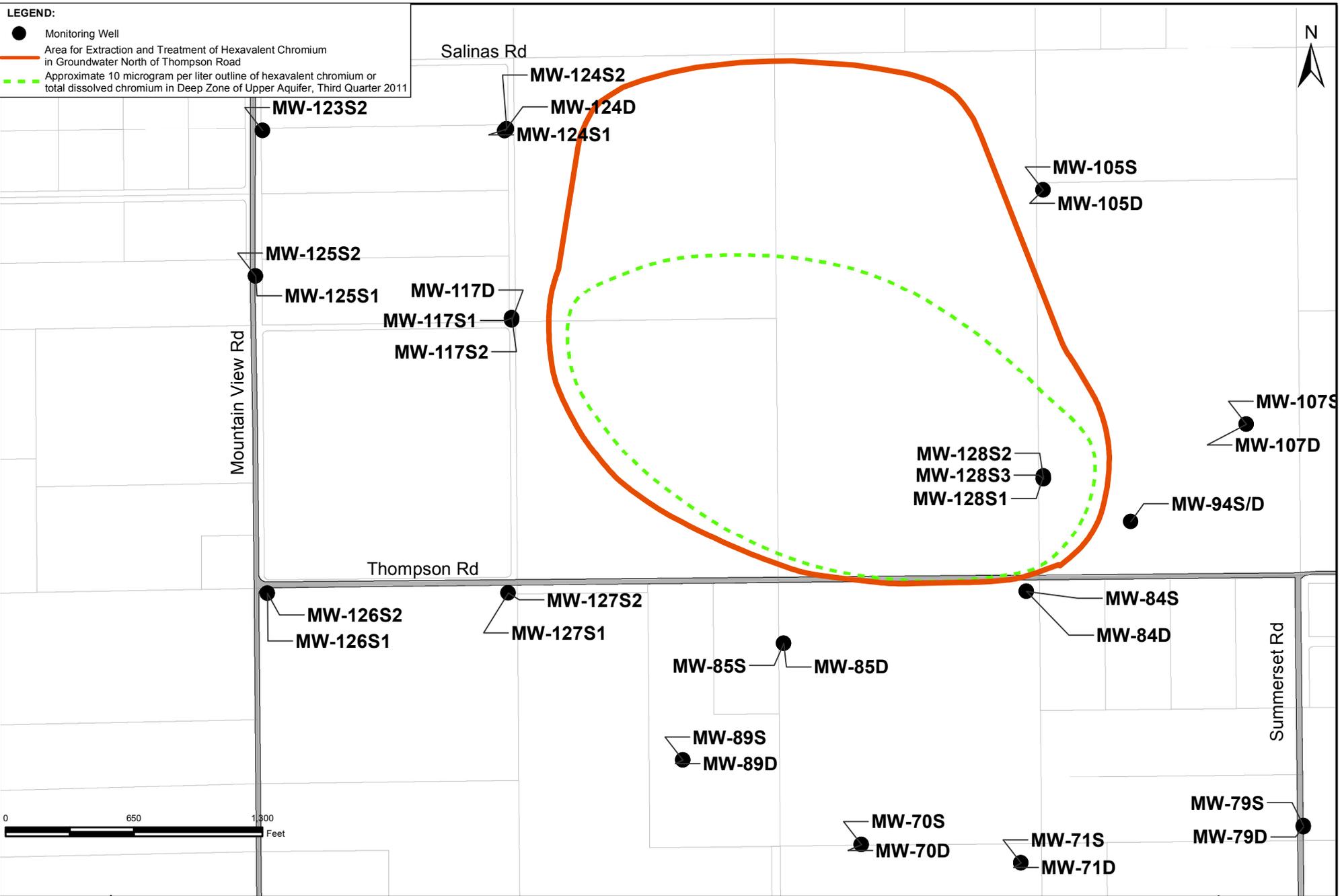
<sup>2</sup> It is understood that seasonal groundwater extraction to the north of this well pair/triplet may temporarily expand capture to the north. As a result, it is acceptable that an inward gradient or vector at these points may not be demonstrated during extraction from the shallow zone of the upper aquifer north of G2R, and/or from the deep zone of the upper aquifer north of Alcurdia Road. Expanding capture to the north will continue to meet the minimal plume capture requirement.

<sup>3</sup> If the new piezometer cannot be installed due to access limitations pursuant to Endangered Species Act, then PG&E will develop an alternative location.

ATTACHMENT E

AREAS NORTH OF THOMPSON ROAD AS  
DISCUSSED IN PARAGRAPH 10

- LEGEND:**
- Monitoring Well
  - Area for Extraction and Treatment of Hexavalent Chromium in Groundwater North of Thompson Road
  - - - Approximate 10 microgram per liter outline of hexavalent chromium or total dissolved chromium in Deep Zone of Upper Aquifer, Third Quarter 2011



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### Area for Extraction and Treatment of Hexavalent Chromium in Groundwater North of Thompson Road

Pacific Gas and Electric Company  
Hinkley, California

FIGURE

Attachment E

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# **ENCLOSURE 2**

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

**(PROPOSED) AMENDED CLEANUP AND ABATEMENT ORDER  
NO. R6V-2008-0002A3**

**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 at 35863 Fairview Road, Hinkley in San Bernardino County. For the purposes of this Order, the Pacific Gas and Electric Company is referred to as the "Discharger."
2. The purpose of this Amendment is to address the hydraulic containment of chromium-affected groundwater south of Thompson Road in Hinkley, California, and actions to reduce plume migration in the area generally north of Thompson Road.
3. On August 6, 2008, the Water Board issued Cleanup and Abatement Order No. R6V-2008-0002 (combined with its amendments, hereafter referred to as the "CAO" or "CAO R6V-2008-0002") to the Discharger to clean up 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 develop and implement a comprehensive cleanup strategy to clean up and abate the chromium plume to background levels and set an interim maximum background level of 4 parts per billion (ppb).
4. The CAO also required the Discharger to take immediate additional corrective actions to contain chromium migrating with groundwater and to continue to implement groundwater remediation in the source area and central plume area. The CAO also modified the monitoring and reporting program for permitted projects.
5. Order Paragraph 3 of the CAO required the Discharger to contain the hexavalent and total chromium plumes to locations where hexavalent chromium was below the interim background level of 4 ppb and the total chromium was below 50 ppb.

- a. The Discharger was required to achieve containment of the hexavalent chromium plume in the ground water by December 31, 2008, using the Discharger's *Boundary Control Monitoring Program and Updated Site-Wide Groundwater Monitoring Program* (submitted July 2, 2008 and prepared by Secor International) as described in Finding 16 in the Order.
  - b. The Discharger was required to achieve containment of the total chromium plume in the ground water by December 31, 2008, also based on the *Boundary Control Monitoring Program and Updated Site-Wide Groundwater Monitoring Program* as described in Finding 16 in the Order.
6. Amendment Order No. R6V-2008-0002A1, effective November 12, 2008, adopted average and maximum background levels for hexavalent chromium of 1.2 ppb and 3.1 ppb, respectively. The adopted average and maximum background levels in the Amendment Order for total chromium are 1.5 ppb and 3.2 ppb, respectively. These background levels were adopted for the purposes of establishing background water quality conditions, considering cleanup strategies and supporting future decisions regarding cleanup levels. For plume containment, the level remained at 4 ppb for both hexavalent chromium and total chromium.
  7. Amendment Order No. R6V-2008-0002A2, effective April 7, 2009, allowed lateral migration of the 4 ppb hexavalent chromium plume boundary east of the South Central Remediation In-situ Area from discharges to groundwater extracted and piped from cleanup actions in the northwest plume area. Lateral plume expansion of 1,000 feet was allowed as long as it could be shown that the chromium would be captured by the existing groundwater extraction system in the downgradient flow direction.
  8. In its First Quarterly 2009 Evaluation Monitoring Report, the Discharger reported that hexavalent chromium control limits were exceeded in Monitoring Well 62-A beginning in November 2008. The results were verified in February and March, 2009. The report was submitted April 29, 2009. Subsequent quarterly reports indicated that Monitoring Well 62-A continued to exceed hexavalent chromium control limits (with the exception of one quarter) through the Fourth Quarterly 2011 Groundwater Monitoring Report, submitted January 30, 2012. Data reported by the Discharger indicates that Monitoring Wells 72S and 79S have also exceeded hexavalent chromium concentrations, greater than 4 ppb. Since 2009, the migrating chromium plume in groundwater has affected domestic and agricultural wells at concentrations exceeding the maximum background concentration for hexavalent chromium of 3.1 ppb or total chromium of 3.2 ppb. Affected wells are located east of Summerset Road, and north of Thompson Road to Mount General Road.
  9. On March 14, 2012, the Water Board adopted Settlement Agreement and Stipulation for Entry of Order; Order No. R6V-2012-00 at its public meeting after receiving comments from the public. The Settlement Agreement addresses the period of violation of CAO R6V-2008-0002 for plume migration from January 1, 2009 to

December 31, 2011. As part of Order No. R6V-2012-00XX, the Water Board agreed to amend CAO R6V-2008-0002 to replace CAO Paragraph 3 with the requirements presented in this Amendment to CAO R6V-2008-0002 addressing chromium plume migration.

10. In the interim period prior to Water Board certification of an environmental impact report and adoption of waste discharge requirements to achieve comprehensive cleanup, modified corrective actions by the Discharger from those listed in CAO R6V-2008-0002 are necessary to achieve containment north of Highway 58, at the Desert View Dairy and north to Thompson Road, and north of Thompson Road to Salinas Road. The Discharger will take actions reasonably available and permissible to reduce chromium levels in the impacted areas during this interim period. Chromium impacts to groundwater may be subject to cleanup additional investigative and cleanup requirements set by the Water Board.
11. 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. The implementation of this CAO Amendment is an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act, and in accordance with the California Code of Regulations, title 14, sections 15301 and 15303. The existing monitor well pairs and triplets and infrastructure are subject to section 15301 because there is negligible or no expansion of their existing uses. The extraction well to be installed north of Thompson Road is a new, small structure subject to section 15303.

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

- A. Cleanup and Abatement Order No. R6V-2008-0002 is amended for the purposes of evaluating plume containment and complying with Requirement No. 3 of Cleanup and Abatement Order No. R6V-2008-0002 by replacing Requirement No. 3 with the following.

3. Plume Containment

**Hydraulic Containment of Chromium-Affected Groundwater South of Thompson Road:** As part of its effort to prevent further migration of chromium-affected groundwater, the Discharger shall achieve and maintain hydraulic capture within the targeted areas shown on Figures 1 and 2 in Attachment A (incorporated herein by reference) by completing the following.

- 3.1 Discharger shall operate and maintain the groundwater extraction system that exists as of January 15, 2012, or its functional equivalent, such that hydraulic containment is maintained within the areas indicated on Figures 1 and 2 in Attachment A on a year-round basis. Separate Areas of Hydraulic Containment are established for the shallow zone of the Upper Aquifer and the deep zone of the Upper Aquifer. The Water Board will determine hydraulic containment compliance by comparing hydraulic gradients or groundwater flow direction vectors calculated from groundwater elevation data from select well pairs and triplets and piezometers with control limits, as outlined in Attachment B of this Order (incorporated herein).
- 3.2 Water levels shall be monitored on a monthly basis, year-round. For this evaluation, the Discharger shall collect continual pressure transducer data by the end of the month (e.g., January 31) and a data evaluation shall be submitted by the Discharger by the 15<sup>th</sup> of the subsequent month (e.g., February 15). If the evaluation demonstrates that the average monthly water level data from any of the well pair or triplet metrics provided in Attachment B is not met, the Discharger shall:
  - a. Verify the water levels manually within five days of the evaluation, and in any case no later than the 20<sup>th</sup> of the month when the data evaluation is submitted.
  - b. If the manual measurements confirm that there is no longer an inward gradient, the Discharger will adjust operations within five days in the field using existing infrastructure (i.e., adjust individual well pumping rates).
  - c. With the Water Board staff's written approval, the Discharger may demonstrate plume capture using alternative metrics (e.g., well pairs or triplets) to verify inward plume capture.
- 3.3 The Water Board may find the Discharger out of compliance with this Order if either of the following occurs:
  - a. The third consecutive month of data (e.g., January, February and March) for the same well pair or triplet indicates that the capture metrics are still not met, or
  - b. If for any 3 out of 12 months during the course of one year (e.g., July 2012 through July 2013), a specific well pair or triplet does not meet capture metrics.
- 3.4 Should either condition 3.3.a. or 3.3.b. occur, then by the 15<sup>th</sup> of the following month, the Discharger shall submit a contingency plan to re-establish capture in addition to the existing infrastructure. The Water Board staff will review the contingency plan and either accept it or request modifications in writing.

**Actions to Reduce Plume Migration in Area Generally North of Thompson Road:**

The Discharger shall take reasonable and practicable corrective actions to reduce hexavalent chromium concentrations in groundwater and to reduce plume migration in areas north of Thompson Road (as illustrated by Attachment C incorporated herein by reference) by taking the following interim actions prior to the approval of the final remedy proposed by Discharger:

- 3.6 Starting the summer of 2012, the Discharger shall conduct groundwater extraction during the summer months of June 1 through September 30 in at least one location to maximize extraction and chromium removal. Failure to implement this action will constitute a violation of this Order.
- 3.7 By July 1, 2012, the Discharger shall review existing extraction and well sampling data and evaluate the need for additional extraction within the area depicted by Attachment C. If additional extraction is deemed necessary, the Discharger shall evaluate extraction methods and propose additional actions and a schedule to implement further chromium removal north of Thompson Road in the area depicted on Attachment B. The Discharger shall include the most effective actions reasonably feasible. The Discharger shall then implement these additional actions according to the schedule, subject to obtaining all required permits from regulatory agencies including approvals required by the California Environmental Quality Act and state and federal Endangered Species Acts, which approvals the Discharger shall diligently seek. In the event of any delay, the Discharger shall notify the Water Board staff in writing and seek a modification of the schedule. Failure to implement this action will constitute a violation of this Order.
- 3.8 The Discharger shall dispose of extracted groundwater containing chromium concentrations in a manner approved by Water Board staff.
- 3.9 In the event the Discharger determines that the new remedial components required by paragraphs 3.1-3.5 are interfering with the Discharger's ability to maintain inward gradients as required by paragraphs 3.1-3.5, the Discharger shall notify Water Board staff within five days of that determination and provide written evidence supporting the Discharger's determination. After notifying the Water Board, the Discharger may suspend the remedial requirements required by paragraphs 3.1-3.5 for no longer than is necessary to develop alternative pumping regimes above and/or below Thompson Road that will maintain internal hydraulic capture south of Thompson Road while maximizing chromium removal north of Thompson Road. The Discharger shall consult Water Board staff as necessary and seek written approval before taking any actions inconsistent with paragraphs 3.1-3.9 of this Order.

Any modifications to this order amending CAO No. R6V-2006-0002 are only effective upon the written approval of the Executive Officer or Assistant Executive Officer. 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 California Water Code section 13350 or referral to the Attorney General of the State of California for such legal action as she may deem appropriate.

Any person aggrieved by this action of the Lahontan Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this 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.

I, Harold J. Singer, Executive Officer and Board Advisor, 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 March 14, 2012.

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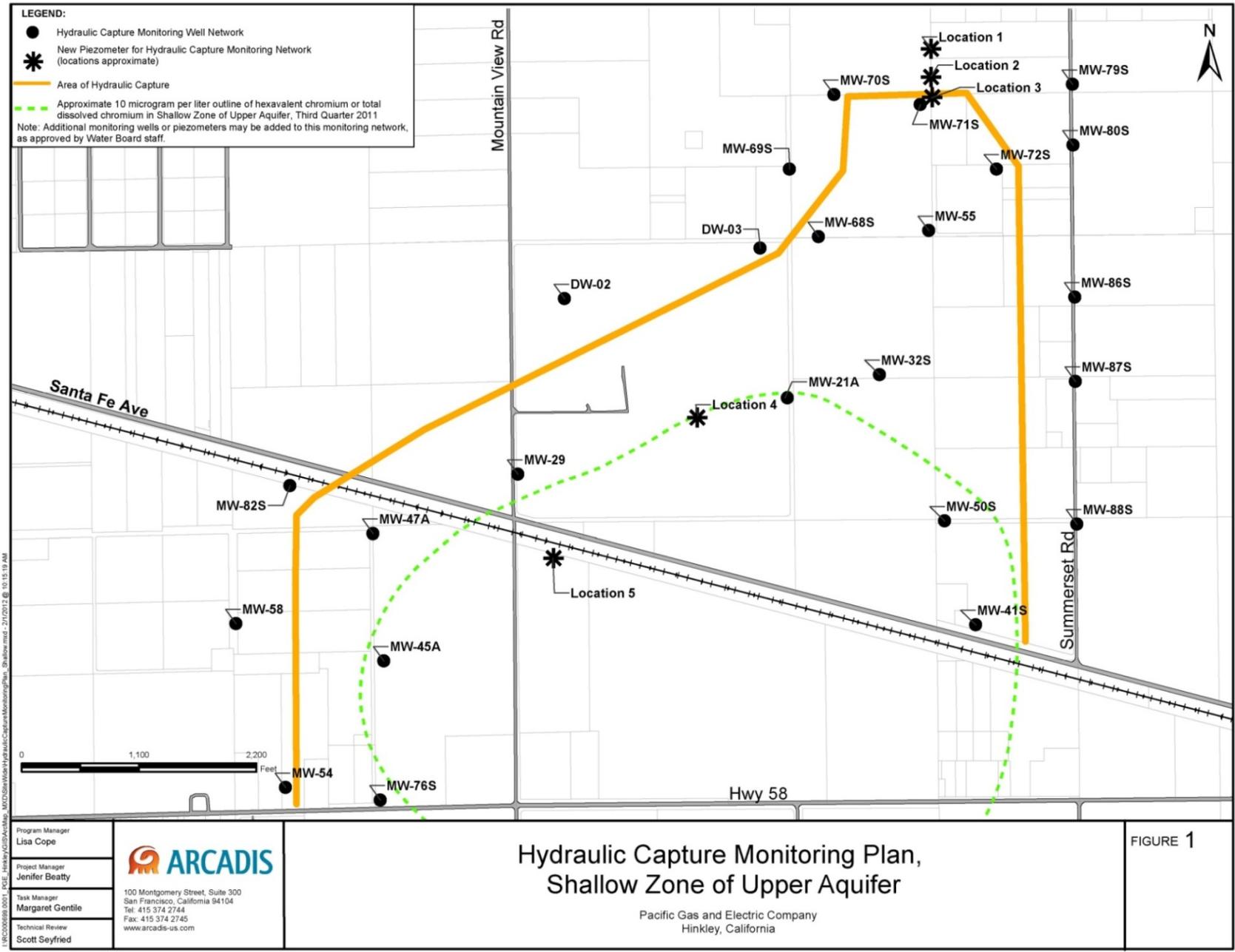
HAROLD J. SINGER  
EXECUTIVE OFFICER

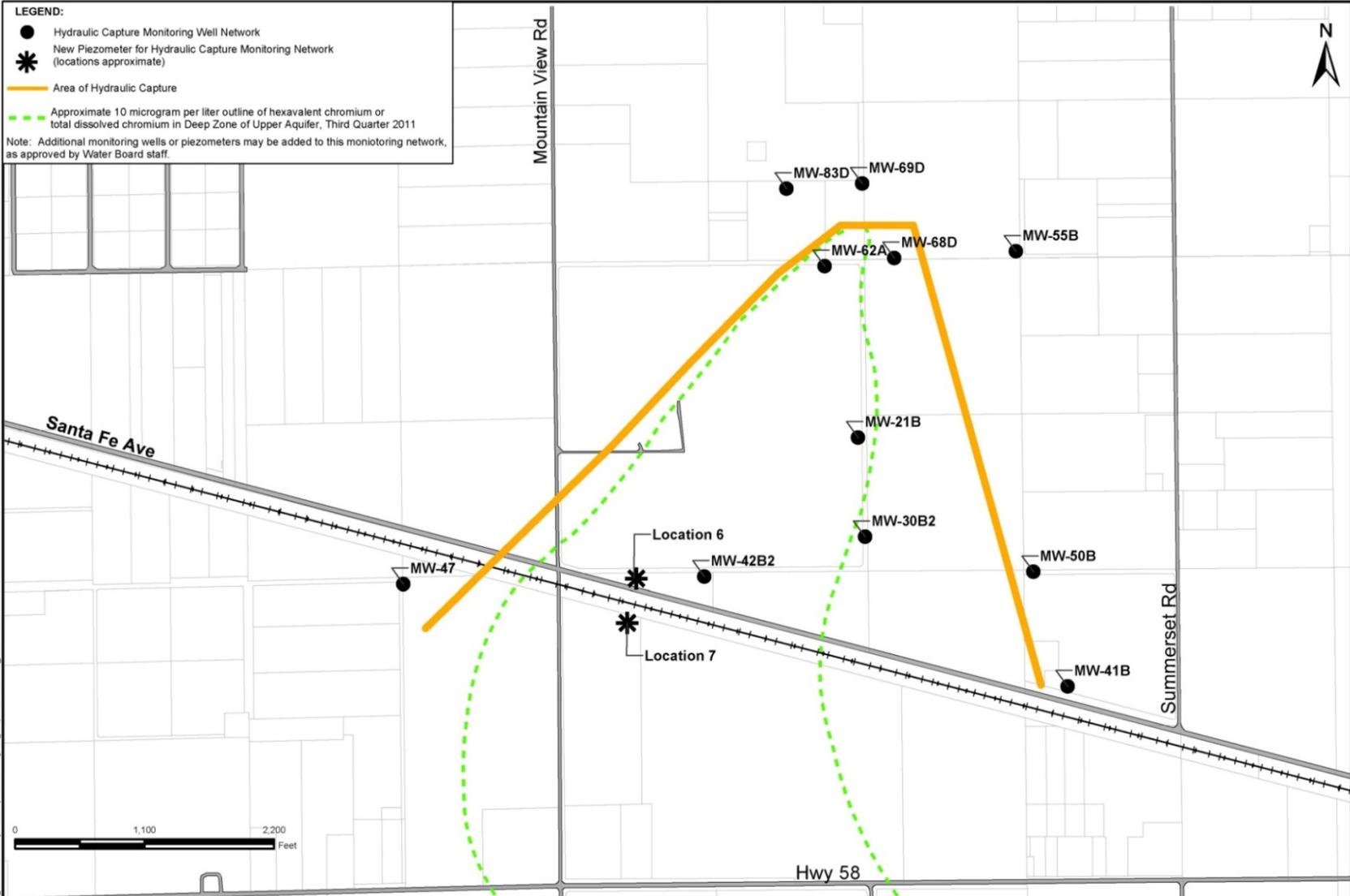
Attachments:

- A. Hydraulic Capture Zones, Figures 1 and 2
- B. Hydraulic Zone Capture Metrics
- C. Area for Extraction and Treatment of Hexavalent Chromium in Ground Water North of Thompson Road

ATTACHMENT A  
HYDRAULIC CAPTURE ZONES  
FIGURES 1 AND 2

PROPOSED





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### Hydraulic Capture Monitoring Plan, Deep Zone of Upper Aquifer

Pacific Gas and Electric Company  
Hinkley, California

FIGURE 2

ATTACHMENT B  
HYDRAULIC ZONE CAPTURE METRICS

PROPOSED

Hydraulic capture shall be demonstrated through analysis of potentiometric surfaces in the shallow zone (A1) and deep zone (A2) of the upper aquifer measured at least monthly. Hydraulic capture shall be demonstrated using those monitoring wells or piezometers identified in Table A-1 or other wells as accepted by Water Board staff. For well pairs, the inner well must have a potentiometric surface lower than the outer well. For well triplets, the vector described by the potentiometric surfaces at the three wells must show a gradient directed inward of the capture boundary line shown on Figures 1 or 2, for the shallow zone and deep zone of the upper aquifer, respectively.

**Table A-1 Hydraulic Capture Monitoring Plan**

Depth Interval	Well Pairs		Well Triplets
	Outer Well	Inner Well	
A1 Layer	MW-86S	MW-55S	
	MW-80S	MW-72S	
	DW-03	MW-68S	
	MW-79S	MW-71S	
	New wells <sup>1,2</sup> (Locations 1, 2, 3 on Figure 1)	MW-71S	
			MW-88S, -87S, -32S
			MW-70S, -69S, -71S <sup>2</sup>
			DW-02, MW-29, -21A or new piezometer <sup>3</sup> near MW-31 (Location 4 on Figure 1)
			MW-58, -45A and -47A
			MW-82S, new piezometer <sup>3</sup> near EX-29/-30 (Location 5 on Figure 1)
		MW-54, -76S and -45A	
		MW-50S, -88S and -41S	
A2 Layer	MW-41B	MW-30B2	
	MW-83D	MW-62A	
	MW-69D	MW-62A <sup>2</sup>	
	MW-50B	MW-21B	
	MW-47	MW-42B2 or new piezometer <sup>3</sup> near EX-29/-30 or EX-26 (Location 6 or 7 on Figure 2)	
			MW-69D, MW55B, MW-68D <sup>2</sup>

<sup>1</sup>"New Wells" indicates one or more piezometers in a row north of MW-71S. There is technical uncertainty as to the exact location of the down gradient capture line. Therefore only one of the piezometers will need to indicate an inward gradient. This piezometer must be outboard of the containment line."

<sup>2</sup> It is understood that seasonal groundwater extraction to the north of this well pair/triplet may temporarily expand capture to the north. As a result, it is acceptable that an inward gradient or vector at these points may not be demonstrated during extraction from the shallow zone of the upper aquifer north of G2R, and/or from the deep zone of the upper aquifer north of Alcudia Road. Expanding capture to the north will continue to meet the minimal plume capture requirement.

<sup>3</sup> If the new piezometer cannot be installed due to access limitations pursuant to Endangered Species Act, then PG&E will develop an alternative location.

ATTACHMENT C

AREA FOR EXTRACTION AND TREATMENT OF HEXAVALENT  
CHROMIUM IN GROUND WATER NORTH OF THOMPSON ROAD

PROPOSED



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# **ENCLOSURE 3a**

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

**CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002**

**WDID NO. 6B369107001**

**REQUIRING PACIFIC GAS AND ELECTRIC COMPANY  
TO CLEANUP 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 (Lahontan 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 December 29, 1987, the Lahontan Water Board issued Cleanup and Abatement Order (CAO) No. 6-87-160 to the Discharger because wastewater containing hexavalent chromium (also known as chrome six, chromium (VI), and Cr (VI)) was discharged at the Facility in a manner that polluted groundwater. The CAO required the Discharger to complete a site investigation, to characterize the hydrogeology of the site, and to initiate cleanup and abatement of hexavalent chromium in the soil and groundwater. The site investigation delineated a zone of groundwater polluted with elevated hexavalent chromium (the "plume") extending downgradient from the initial discharge area at the Facility to approximately 1 1/2 miles north of, and off, the PG&E compressor Facility. The requirements of CAO No. 6-87-160 have been completed.
3. Amendments to CAO No. 6-87-160 were issued on June 3, 1994 (CAO 6-87-160A1) and August 3, 1998 (CAO 6-87-160A2). The amendments required the Discharger to conduct further site characterization, determine the extent of soil and groundwater pollution, begin full-scale cleanup actions, estimate the time necessary to reach cleanup levels in groundwater, and submit annual reports evaluating the progress of cleanup. The Discharger chose to clean up the pollution by pumping polluted groundwater and using this water to irrigate forage crops at two land treatment units near the Facility. The land treatment units resulted in the conversion of hexavalent chromium in the pumped groundwater to trivalent chromium in the upper soils. This remedial method appeared to contain the chromium plume from further migration.

4. In response to the detection of hexavalent chromium in air samples taken surrounding the land treatment units, the Lahontan Water Board issued CAO No. 6-01-50 on June 29, 2001. This CAO required the Discharger to immediately abate the creation of a threatened nuisance formed by any airborne discharges of hexavalent chromium originating from the land treatment units. The CAO required submittal of a report evaluating hexavalent chromium treatment methods that would not have the potential for releasing airborne hexavalent chromium. The CAO also required groundwater sampling and the submittal of reports to evaluate stability of the chromium contaminant plume.
5. On June 29, 2001, the Discharger stopped groundwater extraction and irrigation at the two land treatment units because it had not identified a mechanism for preventing airborne discharges containing hexavalent chromium. The Discharger initiated well sampling to monitor stability of the chromium plume in groundwater. Sampling data obtained since July 2001 indicate that the chromium plume has expanded in a northerly direction.
6. On March 13, 2002, the Discharger submitted a report titled, *Draft Proposed Approach for Remediation of Hexavalent Chromium in Groundwater at the Hinkley Compressor Station, San Bernardino County*. The main elements of the proposal include: (a) in the short-term, implementing an action for controlling plume migration; (b) conducting a study of naturally-occurring chromium in groundwater; (c) conducting a feasibility study and pilot study of certain groundwater remedial technologies; and (d) implementing remediation of groundwater contamination.
7. In August 2004, the Discharger implemented a corrective action at the northern end of the plume by pumping groundwater from extraction wells to regain hydraulic control of chromium plume migration. Extracted water is distributed at the Desert View Dairy by a subsurface drip irrigation system, where soil and water interact to reduce hexavalent chromium to trivalent chromium. Crops are grown on the land that is irrigated. The discharge of pumped groundwater at the Desert View Dairy is regulated by Waste Discharge Requirements under Board Order No. R6V-2004-0034. This corrective action at the Desert View Dairy has halted the northern migration of the chromium plume but has not stopped migration to the west in the northern portion of the plume. Additional actions are necessary to completely contain the plume's migration.
8. On October 13, 2004, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2004-041 allowing the Discharger to conduct two in-situ pilot tests to evaluate remediation of hexavalent chromium in groundwater. The results of the field-scale tests, submitted in the July 2005 document titled, *Final Report, In-situ Remediation Pilot Study*, showed that lactate and emulsified vegetable oil successfully converted hexavalent chromium in groundwater to trivalent chromium and also showed an overall decrease in total chromium concentrations in groundwater in a limited area. This reduction in total chromium concentration occurred because the trivalent chromium tends to bind with the aquifer materials, resulting in less total chromium in the

- groundwater. Besides chromium, reducing conditions also affect other metals in the aquifer, such as manganese and iron. While these by-products exist at levels exceeding drinking water standards, they do not migrate beyond cell boundaries. Because the water quality has not yet been restored in the pilot test cells, the Discharger is required to continue the monitoring program.
9. On June 14, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-023 allowing the Discharger to conduct a large-scale in-situ pilot study for remediation of hexavalent chromium in the central area of the groundwater plume. The field-scale study consists of injecting lactate, whey, and emulsified vegetable oil into the subsurface to evaluate in-situ remediation for long-term plume cleanup. The first phase of project implementation occurred October 2006 until February 2007. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
  10. On November 9, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-0054 allowing the Discharger to conduct a full-scale in-situ project for remediation of hexavalent chromium in the source area of the groundwater plume at the compressor station. The project consists of injecting lactate, whey, emulsified vegetable oil, and/or ethanol, into the subsurface using a recirculation system for long-term plume cleanup. Hydrologic testing using clean water and baseline sampling of a recirculation well were conducted in fall 2006. Project startup began in May 2008. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
  11. The Groundwater Monitoring Report for October 2007 contains data indicating plume migration continues along the northwest boundary. Groundwater data shows that total and hexavalent chromium concentrations increased above the drinking water standard of 50 µg/L (micrograms per liter) in monitoring wells MW-38A and MW-45A. The information suggests that the plume core boundary, consisting of total chromium concentrations of 50 µg/L or greater, migrated approximately 300 feet to the west along at least a one-half mile length in the northwestern area of this 50 µg/L plume boundary. Data in the report did not indicate that the plume boundary of the interim background chromium concentration of 4 µg/L had migrated during the same sampling event. However, historical data trends suggest that the latter boundary migration is a delayed effect that will likely be detected in future groundwater sampling events.
  12. On November 28, 2007, the Lahontan Water Board adopted Amended Waste Discharge Requirements under Board Order No. R6V-2004-0034A1 that allows the Discharger to discharge to land at the Desert View Dairy groundwater containing chromium from off-site parcels. The project is intended to contain plume migration along the northwest boundary. The Waste Discharge Requirements allow disposal of groundwater extracted from six wells located

between Santa Fe Avenue and Highway 58, near the intersection of Mountain View Road. However, the revised Order did not increase the volume of groundwater that the Discharger may dispose; therefore, groundwater extraction will be reduced at the Desert View Dairy property to accommodate the additional extraction at off-site parcels. While modeling has indicated that plume containment can still be achieved at this reduced extraction level, continued monitoring of the plume in this area is needed. The project has been operating continuously since June 2008.

13. Also on November 28, 2007, the Lahontan Water Board adopted Revised Waste Discharge Requirements under Board Order No. R6V-2007-0032 for the Revised Central Area In-situ Remediation project. The Waste Discharge Requirements revises the project referenced in Finding No. 9 by allowing the use of ethanol for in-situ remediation. Full-scale implementation of the project began on November 29, 2007.
14. CAO No. 6-87-160A2 established the cleanup level for chromium in groundwater at background concentrations. Sampling at the Facility and in the vicinity indicates that hexavalent and total chromium occur naturally in groundwater at variable concentrations. On February 27, 2007, the Discharger submitted the document, *Background Chromium Study*. The Study presents the results of one year of water sampling from wells located outside the boundaries of the chromium plume. The Study concludes that statistical analysis shows maximum likely background chromium concentrations of near 4 µg/L for total and hexavalent chromium in groundwater in the Hinkley Valley. The mean concentrations detected in background are 1.19 µg/L for hexavalent chromium and 1.52 µg/L for total chromium. The Water Board has not accepted this report or its conclusions. However, it intends to use the information in the report to: (1) determine plume delineation levels; and, (2) establish background water quality as part of a process to establish final numerical cleanup levels.
15. On August 27, 2007, the Discharger submitted a report of waste discharge describing various remediation projects to provide plume containment and to clean up chromium contamination in groundwater at different locations within and outside the plume boundaries. The Lahontan Water Board adopted, at its April 9, 2008 meeting, general waste discharge requirements (Board Order No. R6V-2008-0014) allowing the Discharger to implement these types of projects as needed to contain and cleanup the chromium pollution in soils and groundwater.
16. On July 2, 2008, the Discharger submitted to the Lahontan Water Board a document titled, *Boundary Control Monitoring Program and Updated Site-wide Groundwater Monitoring Program*. The Discharger proposes in the Boundary Control Monitoring Program groundwater monitoring and data evaluation methods to evaluate if its remedial measures are complying with the requirement to achieve chromium plume stability. The method includes calculation of control limits, using the 95% upper confidence limits, for selected wells based on the chromium concentrations in those wells from February 2005 through the 3<sup>rd</sup> quarter 2008. Concentrations above the

control limits may indicate plume movement, which would be assessed through an evaluation monitoring program. If warranted, a corrective action program would be implemented to address the plume movement.

The document also proposes revisions to the site-wide monitoring program, which includes certain monitoring wells from remediation and plume control projects and from other wells that are used to evaluate plume stability. The proposed revisions include adding certain wells, eliminating monitoring at certain wells, and reducing the frequency at certain wells.

17. 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 micrograms per liter ( $\mu\text{g/L}$ )
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18. The Groundwater Monitoring Report for February 2008 contains the results of groundwater sampling of 137 monitoring, domestic, agricultural and inactive wells. The wells define the lateral and vertical extent of chromium in groundwater. Well PMW-05, located north of the Compressor Station property, contains the highest concentrations of chromium:

Total chromium	2,120 $\mu\text{g/L}$
Hexavalent chromium	2,270 $\mu\text{g/L}$

(Note that hexavalent chromium concentrations may exceed total chromium concentrations in a given well due to the different analytical methods used for hexavalent and total chromium and the analytical error of up to  $\pm 15$  and  $\pm 25\%$  for the respective methods.)

19. The concentrations of total chromium and hexavalent chromium detected in groundwater samples at 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 pollution as defined in Water Code section 13050, subdivision (l).
20. The discharge of waste, such as chromium, to the groundwaters of the Mojave Hydrologic Unit, as described in Finding Nos. 2, 19 and 20 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.”

21. Chromium in groundwater continues to migrate in the northwest direction. Furthermore, chromium in the source area at the compressor station continues to adversely affect groundwater quality. Additional work is needed to clean up and abate the effects of the discharge. This Cleanup and Abatement Order requires implementing corrective actions for plume containment and long-term groundwater remediation. Technical reports are necessary to verify corrective action implementation, cleanup of water quality to background concentrations, and progress towards restoring the beneficial uses of the aquifer.
22. 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. The Discharger must conduct the investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup. All technical documents submitted to the Lahontan Water Board must contain the signature and stamp of the registered individual overseeing corrective actions.
2. The Discharger shall not cause or permit any additional waste chromium to be discharged or deposited where it is, or probably will be, discharged into waters of the State.
3. Plume Containment

The Discharger must achieve containment of the chromium plume in groundwater. For the purposes of this Order, containment is defined as:

- (a) no further migration or expansion of the chromium plume to locations where hexavalent chromium is below the background level, or
- (b) no further migration or expansion of the 50 µg/L total chromium plume.

The current background level (interim level) in groundwater for hexavalent chromium is 4 µg/L. This level will be used to determine background until the Water Board either confirms this level or establishes another level based on the previously cited background chromium study.

The Discharger may propose that the Water Board allow a quantified (for specific area and for a defined period of time) migration of the 4 µg/L hexavalent chromium

plume or the 50 µg/L total chromium plume as part of a proposed remedial action project. The proposal must clearly justify that the quantified migration is necessary to achieve compliance with this Order and is the only feasible method readily available to the Discharger. Additionally, the Discharger must clearly describe the actions that will be implemented to return the 4 µg/L hexavalent chromium plume or the 50 µg/L total chromium plume to their prior boundaries. If allowed, the Water Board will amend this order to establish the boundaries of this migration and the date that the Discharger must eliminate all levels of hexavalent chromium above 4 µg/L or total chromium above 50 µg/L in groundwater in the area of the allowed migration.

- 3.1. **By December 31, 2008**, achieve containment of the chromium plume in groundwater as defined in (a) above. Compliance will be determined by comparing groundwater samples collected after this date to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.
- 3.2. **By December 31, 2008**, achieve containment of the 50 µg/L total chromium plume, as defined in (b) above. Compliance will be determined by comparing groundwater samples collected after this date will be compared to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.

#### 4. Interim Groundwater Chromium Remediation

The Discharger must implement corrective actions to remediate the elevated chromium concentrations in groundwater in the source area at and near the Compressor Station.

- 4.1. The Discharger must continue implementation of full-scale in-situ corrective actions in the central area of the plume as described in Finding Nos. 9 and 13, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the central area of the plume.
- 4.2. The Discharger must continue implementation of the full-scale in-situ corrective actions in the source area described in Finding No. 10, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the source area.

5. Final Cleanup Actions

The Discharger must take all actions necessary to clean up and abate the effects of the discharge and threatened discharge of chromium to waters of the State.

- 5.1. **By September 1, 2010**, the discharger must submit a feasibility study report that assesses remediation strategies implemented at the site or proposed for the site for achieving compliance with State Water Resources Control Board Resolution 92-49, as amended. If the Discharger proposes a final cleanup strategy that will result in cleanup to concentrations higher than background water quality, the report must include a detailed analysis of different cleanup strategies, one of which must achieve background water quality, if feasible. For those strategies that have been implemented at the site, the report must describe the effectiveness of each remediation strategy compared to expected or modeled effectiveness. Any adverse environmental or public health impacts created from the implemented strategies must be reported along with remedies taken to correct such problems. The report must also include estimated cleanup times and costs for each remediation strategy to achieve the background level established by the Water Board or a level above background if it is not reasonable to achieve background levels considering the factors in section III.G. of Resolution 92-49. If background levels of water quality cannot be restored, the report must describe an alternate level of water quality above background that the remediation strategy can achieve and must describe why such a level is (1) consistent with the maximum benefit to the people of the state, (2) will not unreasonably affect present and anticipated beneficial use of the water, and (3) will not result in water quality less than that prescribed in the Water Quality Control Plans and Policies of the State and Lahontan Water Boards (See section III.G. of Resolution 92-49). Finally, the report must recommend a final remediation strategy for the entire site to achieve background levels of water quality or certain levels above background if achieving background is not reasonable and provide justifications for the recommendation.
- 5.2. **By April 1, 2011**, implement the final cleanup strategy as approved by Water Board.

6. Reporting

- 6.1. Groundwater monitoring associated with the site-wide groundwater monitoring program, the Desert View Dairy Land Treatment Unit, the Central Area In-Situ Remediation Zone project, and the Source Area In-Situ Remediation Zone project shall be reported on a coordinated schedule. Required quarterly sampling shall be reported by the 30<sup>th</sup> day following the end of the quarter, i.e., by April 30<sup>th</sup>, July 30<sup>th</sup>, October 30<sup>th</sup>, and January 30<sup>th</sup> of each year. Required semiannual sampling shall be

reported by April 30<sup>th</sup> and October 30<sup>th</sup> of each year. Sampling is to be conducted in the quarter prior to the appropriate reporting dates, i.e., from January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year. The site-wide monitoring program shall conform to the wells and schedule presented in PG&E's July 2, 2008 *Updated Site-Wide Groundwater Monitoring Program* described in Finding No. 16, except that monitoring well MW-34 shall continue to be monitored semiannually and monitoring wells MW-64B and MW-67B shall be monitored semiannually.

This Order modifies the Monitoring and Reporting Program for Waste Discharge Requirements No. R6V-2006-0054 for the Source Area In-Situ Remediation Zone project and modifies the required monitoring and reporting periods of the August 17, 2007 order pursuant to Water Code section 13267 for the In-Situ Remediation Pilot Test Project.

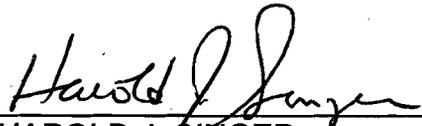
- 6.2. The 3<sup>rd</sup> quarter 2008 groundwater monitoring report must contain a tabulation of the hexavalent and total chromium control limits for boundary control monitoring wells identified in the July 2, 2008 *Boundary Control Monitoring Program* described in Finding No. 16. The last eight samples for each well through 3<sup>rd</sup> quarter 2008 shall be used to calculate the 95 percent upper control limits, which become the control limits for those wells.
- 6.3. **Beginning September 30, 2008**, submit semiannual status reports describing actions taken to remediate chromium levels in groundwater and contain plume migration. The initial report must evaluate actions taken between January 1, 2008 and June 30, 2008 and subsequent reports must evaluate actions taken during each subsequent six-month period. Status reports must discuss remedial actions being implemented according to the cleanup plan approved by the Water Board. The report must tabulate the volume, concentration, and location of wastes discharged under orders from the Lahontan Water Board. Any and all violations of orders must be discussed and cite corrective measures taken. The report must provide groundwater monitoring data and discuss the actual effectiveness of the implemented remedy compared to its predicted effectiveness. Any adverse environmental or public health impacts created from the project must be reported along with remedies taken to correct such problems. The report must provide recommendations and an implementation schedule for increasing effectiveness if current actions are not achieving plume containment and expected reductions in chromium concentrations in groundwater. Subsequent semi-annual status reports must be submitted by March 31 and September 30 of each year.
- 6.4. **Beginning March 31, 2012**, submit semi-annual final cleanup effectiveness reports to the Water Board. The first report should evaluate actions taken between April 1, 2011 and December 31, 2011. Subsequent

reports must evaluate actions taken during six-month periods, the initial period being January 1, 2012 to June 30, 2012. Each report must discuss the actual effectiveness of the final cleanup remedy compared to expected effectiveness. If current actions are not achieving expected reductions in chromium concentrations throughout the entire site, the report must propose recommendations and an implementation schedule to increase effectiveness. Subsequent semi-annual status reports must be submitted by September 30 and March 31 of each calendar year.

7. Rescissions

This order rescinds Order No. 4 in CAO No. 6-01-50 requiring monthly groundwater monitoring and the May 1, 2003 Water Code section 13267 order that allowed bimonthly sampling to replace monthly sampling.

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.

Ordered by:   
HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated: August 6, 2008

# **ENCLOSURE 3b**

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# California Regional Water Quality Control Board

## Lahontan Region



Linda S. Adams  
Secretary for  
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150  
(530) 542-5400 • Fax (530) 544-2271  
<http://www.waterboards.ca.gov/lahontan>

Arnold Schwarzenegger  
Governor

November 18, 2008

TO ALL INTERESTED PERSONS:

**ADOPTED AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002A1  
FOR PACIFIC GAS AND ELECTRIC COMPANY'S COMPRESSOR STATION,  
HINKLEY, SAN BERNARDINO COUNTY**

Enclosed is a copy of Board Order No. R6V-2008-0002A1 that was adopted at the Regional Board meeting held in Barstow, CA on November 12, 2008.

Carrie Hackler  
Office Technician

Enclosure

*California Environmental Protection Agency*

Recycled Paper



**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

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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

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 (I).

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 evaluating 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. In addition, there is no possibility that the proposed activity will have a significant effect on the environment. In pertinent part, California Code of Regulations, title 14, section 15061, subdivision (b)(3), known as the "common sense exemption", states that where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. In this case, the proposed activity maintains the interim background concentration for hexavalent chromium of 4 ug/L for the purpose of plume containment and establishes background concentrations for hexavalent chromium and total chromium against which remediation strategies are to be assessed. Consequently, because there is no possibility that the proposed activity will have a significant effect on the environment, the proposed activity is also exempt from CEQA pursuant to California Code of Regulations, title 14, section 15061, subdivision (b)(3).

**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. For the purposes of evaluating plume containment and complying with Requirement No. 3 of Cleanup and Abatement Order No. R6V-2008-0002, the interim background concentration for hexavalent chromium of 4 µg/L remains in effect.
2. For the purposes of complying with Requirement No. 5, Final Cleanup Actions, of Cleanup and Abatement Order No. R6V-2008-0002, background concentrations against which remediation strategies are to be assessed are established as follow:

Maximum background hexavalent chromium = 3.1 µg/L  
Maximum background total chromium = 3.2 µg/L  
Average background hexavalent chromium = 1.2 µg/L  
Average background total chromium = 1.5 µg/L

Remediation strategy assessment must include an evaluation of achieving average concentrations within the cleanup area that meet the average background concentrations established here, with discrete samples within the cleanup area not exceeding the maximum background concentrations established here.

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.

Any person aggrieved by this action of the Lahontan 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 this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, of 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.

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.

  
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HAROLD J. SINGER  
EXECUTIVE OFFICER

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

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

**CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002**

**WDID NO. 6B369107001**

**REQUIRING PACIFIC GAS AND ELECTRIC COMPANY  
TO CLEANUP 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 (Lahontan 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 December 29, 1987, the Lahontan Water Board issued Cleanup and Abatement Order (CAO) No. 6-87-160 to the Discharger because wastewater containing hexavalent chromium (also known as chrome six, chromium (VI), and Cr (VI)) was discharged at the Facility in a manner that polluted groundwater. The CAO required the Discharger to complete a site investigation, to characterize the hydrogeology of the site, and to initiate cleanup and abatement of hexavalent chromium in the soil and groundwater. The site investigation delineated a zone of groundwater polluted with elevated hexavalent chromium (the "plume") extending downgradient from the initial discharge area at the Facility to approximately 1 1/2 miles north of, and off, the PG&E compressor Facility. The requirements of CAO No. 6-87-160 have been completed.
3. Amendments to CAO No. 6-87-160 were issued on June 3, 1994 (CAO 6-87-160A1) and August 3, 1998 (CAO 6-87-160A2). The amendments required the Discharger to conduct further site characterization, determine the extent of soil and groundwater pollution, begin full-scale cleanup actions, estimate the time necessary to reach cleanup levels in groundwater, and submit annual reports evaluating the progress of cleanup. The Discharger chose to clean up the pollution by pumping polluted groundwater and using this water to irrigate forage crops at two land treatment units near the Facility. The land treatment units resulted in the conversion of hexavalent chromium in the pumped groundwater to trivalent chromium in the upper soils. This remedial method appeared to contain the chromium plume from further migration.

4. In response to the detection of hexavalent chromium in air samples taken surrounding the land treatment units, the Lahontan Water Board issued CAO No. 6-01-50 on June 29, 2001. This CAO required the Discharger to immediately abate the creation of a threatened nuisance formed by any airborne discharges of hexavalent chromium originating from the land treatment units. The CAO required submittal of a report evaluating hexavalent chromium treatment methods that would not have the potential for releasing airborne hexavalent chromium. The CAO also required groundwater sampling and the submittal of reports to evaluate stability of the chromium contaminant plume.
5. On June 29, 2001, the Discharger stopped groundwater extraction and irrigation at the two land treatment units because it had not identified a mechanism for preventing airborne discharges containing hexavalent chromium. The Discharger initiated well sampling to monitor stability of the chromium plume in groundwater. Sampling data obtained since July 2001 indicate that the chromium plume has expanded in a northerly direction.
6. On March 13, 2002, the Discharger submitted a report titled, *Draft Proposed Approach for Remediation of Hexavalent Chromium in Groundwater at the Hinkley Compressor Station, San Bernardino County*. The main elements of the proposal include: (a) in the short-term, implementing an action for controlling plume migration; (b) conducting a study of naturally-occurring chromium in groundwater; (c) conducting a feasibility study and pilot study of certain groundwater remedial technologies; and (d) implementing remediation of groundwater contamination.
7. In August 2004, the Discharger implemented a corrective action at the northern end of the plume by pumping groundwater from extraction wells to regain hydraulic control of chromium plume migration. Extracted water is distributed at the Desert View Dairy by a subsurface drip irrigation system, where soil and water interact to reduce hexavalent chromium to trivalent chromium. Crops are grown on the land that is irrigated. The discharge of pumped groundwater at the Desert View Dairy is regulated by Waste Discharge Requirements under Board Order No. R6V-2004-0034. This corrective action at the Desert View Dairy has halted the northern migration of the chromium plume but has not stopped migration to the west in the northern portion of the plume. Additional actions are necessary to completely contain the plume's migration.
8. On October 13, 2004, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2004-041 allowing the Discharger to conduct two in-situ pilot tests to evaluate remediation of hexavalent chromium in groundwater. The results of the field-scale tests, submitted in the July 2005 document titled, *Final Report, In-situ Remediation Pilot Study*, showed that lactate and emulsified vegetable oil successfully converted hexavalent chromium in groundwater to trivalent chromium and also showed an overall decrease in total chromium concentrations in groundwater in a limited area. This reduction in total chromium concentration occurred because the trivalent chromium tends to bind with the aquifer materials, resulting in less total chromium in the

groundwater. Besides chromium, reducing conditions also affect other metals in the aquifer, such as manganese and iron. While these by-products exist at levels exceeding drinking water standards, they do not migrate beyond cell boundaries. Because the water quality has not yet been restored in the pilot test cells, the Discharger is required to continue the monitoring program.

9. On June 14, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-023 allowing the Discharger to conduct a large-scale in-situ pilot study for remediation of hexavalent chromium in the central area of the groundwater plume. The field-scale study consists of injecting lactate, whey, and emulsified vegetable oil into the subsurface to evaluate in-situ remediation for long-term plume cleanup. The first phase of project implementation occurred October 2006 until February 2007. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
10. On November 9, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-0054 allowing the Discharger to conduct a full-scale in-situ project for remediation of hexavalent chromium in the source area of the groundwater plume at the compressor station. The project consists of injecting lactate, whey, emulsified vegetable oil, and/or ethanol, into the subsurface using a recirculation system for long-term plume cleanup. Hydrologic testing using clean water and baseline sampling of a recirculation well were conducted in fall 2006. Project startup began in May 2008. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
11. The Groundwater Monitoring Report for October 2007 contains data indicating plume migration continues along the northwest boundary. Groundwater data shows that total and hexavalent chromium concentrations increased above the drinking water standard of 50 µg/L (micrograms per liter) in monitoring wells MWV-38A and MWV-45A. The information suggests that the plume core boundary, consisting of total chromium concentrations of 50 µg/L or greater, migrated approximately 300 feet to the west along at least a one-half mile length in the northwestern area of this 50 µg/L plume boundary. Data in the report did not indicate that the plume boundary of the interim background chromium concentration of 4 µg/L had migrated during the same sampling event. However, historical data trends suggest that the latter boundary migration is a delayed effect that will likely be detected in future groundwater sampling events.
12. On November 28, 2007, the Lahontan Water Board adopted Amended Waste Discharge Requirements under Board Order No. R6V-2004-0034A1 that allows the Discharger to discharge to land at the Desert View Dairy groundwater containing chromium from off-site parcels. The project is intended to contain plume migration along the northwest boundary. The Waste Discharge Requirements allow disposal of groundwater extracted from six wells located

between Santa Fe Avenue and Highway 58, near the intersection of Mountain View Road. However, the revised Order did not increase the volume of groundwater that the Discharger may dispose; therefore, groundwater extraction will be reduced at the Desert View Dairy property to accommodate the additional extraction at off-site parcels. While modeling has indicated that plume containment can still be achieved at this reduced extraction level, continued monitoring of the plume in this area is needed. The project has been operating continuously since June 2008.

13. Also on November 28, 2007, the Lahontan Water Board adopted Revised Waste Discharge Requirements under Board Order No. R6V-2007-0032 for the Revised Central Area In-situ Remediation project. The Waste Discharge Requirements revises the project referenced in Finding No. 9 by allowing the use of ethanol for in-situ remediation. Full-scale implementation of the project began on November 29, 2007.
14. CAO No. 6-87-160A2 established the cleanup level for chromium in groundwater at background concentrations. Sampling at the Facility and in the vicinity indicates that hexavalent and total chromium occur naturally in groundwater at variable concentrations. On February 27, 2007, the Discharger submitted the document, *Background Chromium Study*. The Study presents the results of one year of water sampling from wells located outside the boundaries of the chromium plume. The Study concludes that statistical analysis shows maximum likely background chromium concentrations of near 4 µg/L for total and hexavalent chromium in groundwater in the Hinkley Valley. The mean concentrations detected in background are 1.19 µg/L for hexavalent chromium and 1.52 µg/L for total chromium. The Water Board has not accepted this report or its conclusions. However, it intends to use the information in the report to: (1) determine plume delineation levels; and, (2) establish background water quality as part of a process to establish final numerical cleanup levels.
15. On August 27, 2007, the Discharger submitted a report of waste discharge describing various remediation projects to provide plume containment and to clean up chromium contamination in groundwater at different locations within and outside the plume boundaries. The Lahontan Water Board adopted, at its April 9, 2008 meeting, general waste discharge requirements (Board Order No. R6V-2008-0014) allowing the Discharger to implement these types of projects as needed to contain and cleanup the chromium pollution in soils and groundwater.
16. On July 2, 2008, the Discharger submitted to the Lahontan Water Board a document titled, *Boundary Control Monitoring Program and Updated Site-wide Groundwater Monitoring Program*. The Discharger proposes in the Boundary Control Monitoring Program groundwater monitoring and data evaluation methods to evaluate if its remedial measures are complying with the requirement to achieve chromium plume stability. The method includes calculation of control limits, using the 95% upper confidence limits, for selected wells based on the chromium concentrations in those wells from February 2005 through the 3<sup>rd</sup> quarter 2008. Concentrations above the

control limits may indicate plume movement, which would be assessed through an evaluation monitoring program. If warranted, a corrective action program would be implemented to address the plume movement.

The document also proposes revisions to the site-wide monitoring program, which includes certain monitoring wells from remediation and plume control projects and from other wells that are used to evaluate plume stability. The proposed revisions include adding certain wells, eliminating monitoring at certain wells, and reducing the frequency at certain wells.

17. 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 micrograms per liter (µg/L)
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18. The Groundwater Monitoring Report for February 2008 contains the results of groundwater sampling of 137 monitoring, domestic, agricultural and inactive wells. The wells define the lateral and vertical extent of chromium in groundwater. Well PMW-05, located north of the Compressor Station property, contains the highest concentrations of chromium:

Total chromium	2,120 µg/L
Hexavalent chromium	2,270 µg/L

(Note that hexavalent chromium concentrations may exceed total chromium concentrations in a given well due to the different analytical methods used for hexavalent and total chromium and the analytical error of up to ±15 and ±25% for the respective methods.)

19. The concentrations of total chromium and hexavalent chromium detected in groundwater samples at 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 pollution as defined in Water Code section 13050, subdivision (l).
20. The discharge of waste, such as chromium, to the groundwaters of the Mojave Hydrologic Unit, as described in Finding Nos. 2, 19 and 20 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.”

21. Chromium in groundwater continues to migrate in the northwest direction. Furthermore, chromium in the source area at the compressor station continues to adversely affect groundwater quality. Additional work is needed to clean up and abate the effects of the discharge. This Cleanup and Abatement Order requires implementing corrective actions for plume containment and long-term groundwater remediation. Technical reports are necessary to verify corrective action implementation, cleanup of water quality to background concentrations, and progress towards restoring the beneficial uses of the aquifer.
22. 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. The Discharger must conduct the investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup. All technical documents submitted to the Lahontan Water Board must contain the signature and stamp of the registered individual overseeing corrective actions.
2. The Discharger shall not cause or permit any additional waste chromium to be discharged or deposited where it is, or probably will be, discharged into waters of the State.
3. Plume Containment

The Discharger must achieve containment of the chromium plume in groundwater. For the purposes of this Order, containment is defined as:

- (a) no further migration or expansion of the chromium plume to locations where hexavalent chromium is below the background level, or
- (b) no further migration or expansion of the 50 µg/L total chromium plume.

The current background level (interim level) in groundwater for hexavalent chromium is 4 µg/L. This level will be used to determine background until the Water Board either confirms this level or establishes another level based on the previously cited background chromium study.

The Discharger may propose that the Water Board allow a quantified (for specific area and for a defined period of time) migration of the 4 µg/L hexavalent chromium

plume or the 50 µg/L total chromium plume as part of a proposed remedial action project. The proposal must clearly justify that the quantified migration is necessary to achieve compliance with this Order and is the only feasible method readily available to the Discharger. Additionally, the Discharger must clearly describe the actions that will be implemented to return the 4 µg/L hexavalent chromium plume or the 50 µg/L total chromium plume to their prior boundaries. If allowed, the Water Board will amend this order to establish the boundaries of this migration and the date that the Discharger must eliminate all levels of hexavalent chromium above 4 µg/L or total chromium above 50 µg/L in groundwater in the area of the allowed migration.

- 3.1. **By December 31, 2008**, achieve containment of the chromium plume in groundwater as defined in (a) above. Compliance will be determined by comparing groundwater samples collected after this date to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.
- 3.2. **By December 31, 2008**, achieve containment of the 50 µg/L total chromium plume, as defined in (b) above. Compliance will be determined by comparing groundwater samples collected after this date will be compared to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.

#### 4. Interim Groundwater Chromium Remediation

The Discharger must implement corrective actions to remediate the elevated chromium concentrations in groundwater in the source area at and near the Compressor Station.

- 4.1. The Discharger must continue implementation of full-scale in-situ corrective actions in the central area of the plume as described in Finding Nos. 9 and 13, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the central area of the plume.
- 4.2. The Discharger must continue implementation of the full-scale in-situ corrective actions in the source area described in Finding No. 10, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the source area.

5. Final Cleanup Actions

The Discharger must take all actions necessary to clean up and abate the effects of the discharge and threatened discharge of chromium to waters of the State.

- 5.1. **By September 1, 2010**, the discharger must submit a feasibility study report that assesses remediation strategies implemented at the site or proposed for the site for achieving compliance with State Water Resources Control Board Resolution 92-49, as amended. If the Discharger proposes a final cleanup strategy that will result in cleanup to concentrations higher than background water quality, the report must include a detailed analysis of different cleanup strategies, one of which must achieve background water quality, if feasible. For those strategies that have been implemented at the site, the report must describe the effectiveness of each remediation strategy compared to expected or modeled effectiveness. Any adverse environmental or public health impacts created from the implemented strategies must be reported along with remedies taken to correct such problems. The report must also include estimated cleanup times and costs for each remediation strategy to achieve the background level established by the Water Board or a level above background if it is not reasonable to achieve background levels considering the factors in section III.G. of Resolution 92-49. If background levels of water quality cannot be restored, the report must describe an alternate level of water quality above background that the remediation strategy can achieve and must describe why such a level is (1) consistent with the maximum benefit to the people of the state, (2) will not unreasonably affect present and anticipated beneficial use of the water, and (3) will not result in water quality less than that prescribed in the Water Quality Control Plans and Policies of the State and Lahontan Water Boards (See section III.G. of Resolution 92-49). Finally, the report must recommend a final remediation strategy for the entire site to achieve background levels of water quality or certain levels above background if achieving background is not reasonable and provide justifications for the recommendation.
- 5.2. **By April 1, 2011**, implement the final cleanup strategy as approved by Water Board.

6. Reporting

- 6.1. Groundwater monitoring associated with the site-wide groundwater monitoring program, the Desert View Dairy Land Treatment Unit, the Central Area In-Situ Remediation Zone project, and the Source Area In-Situ Remediation Zone project shall be reported on a coordinated schedule. Required quarterly sampling shall be reported by the 30<sup>th</sup> day following the end of the quarter, i.e., by April 30<sup>th</sup>, July 30<sup>th</sup>, October 30<sup>th</sup>, and January 30<sup>th</sup> of each year. Required semiannual sampling shall be

reported by April 30<sup>th</sup> and October 30<sup>th</sup> of each year. Sampling is to be conducted in the quarter prior to the appropriate reporting dates, i.e., from January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year. The site-wide monitoring program shall conform to the wells and schedule presented in PG&E's July 2, 2008 *Updated Site-Wide Groundwater Monitoring Program* described in Finding No. 16, except that monitoring well MW-34 shall continue to be monitored semiannually and monitoring wells MW-64B and MW-67B shall be monitored semiannually.

This Order modifies the Monitoring and Reporting Program for Waste Discharge Requirements No. R6V-2006-0054 for the Source Area In-Situ Remediation Zone project and modifies the required monitoring and reporting periods of the August 17, 2007 order pursuant to Water Code section 13267 for the In-Situ Remediation Pilot Test Project.

- 6.2. The 3<sup>rd</sup> quarter 2008 groundwater monitoring report must contain a tabulation of the hexavalent and total chromium control limits for boundary control monitoring wells identified in the July 2, 2008 *Boundary Control Monitoring Program* described in Finding No. 16. The last eight samples for each well through 3<sup>rd</sup> quarter 2008 shall be used to calculate the 95 percent upper control limits, which become the control limits for those wells.
- 6.3. **Beginning September 30, 2008**, submit semiannual status reports describing actions taken to remediate chromium levels in groundwater and contain plume migration. The initial report must evaluate actions taken between January 1, 2008 and June 30, 2008 and subsequent reports must evaluate actions taken during each subsequent six-month period. Status reports must discuss remedial actions being implemented according to the cleanup plan approved by the Water Board. The report must tabulate the volume, concentration, and location of wastes discharged under orders from the Lahontan Water Board. Any and all violations of orders must be discussed and cite corrective measures taken. The report must provide groundwater monitoring data and discuss the actual effectiveness of the implemented remedy compared to its predicted effectiveness. Any adverse environmental or public health impacts created from the project must be reported along with remedies taken to correct such problems. The report must provide recommendations and an implementation schedule for increasing effectiveness if current actions are not achieving plume containment and expected reductions in chromium concentrations in groundwater. Subsequent semi-annual status reports must be submitted by March 31 and September 30 of each year.
- 6.4. **Beginning March 31, 2012**, submit semi-annual final cleanup effectiveness reports to the Water Board. The first report should evaluate actions taken between April 1, 2011 and December 31, 2011. Subsequent

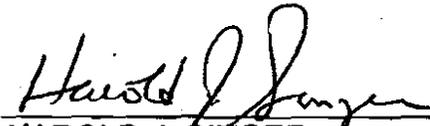
reports must evaluate actions taken during six-month periods, the initial period being January 1, 2012 to June 30, 2012. Each report must discuss the actual effectiveness of the final cleanup remedy compared to expected effectiveness. If current actions are not achieving expected reductions in chromium concentrations throughout the entire site, the report must propose recommendations and an implementation schedule to increase effectiveness. Subsequent semi-annual status reports must be submitted by September 30 and March 31 of each calendar year.

7. Rescissions

This order rescinds Order No. 4 in CAO No. 6-01-50 requiring monthly groundwater monitoring and the May 1, 2003 Water Code section 13267 order that allowed bimonthly sampling to replace monthly sampling.

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.

Ordered by:

  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated:

August 6, 2008

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# **ENCLOSURE 3c**

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

**AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002A2**

**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 at 35863 Fairview Road, Hinkley in San Bernardino County. For the purposes of this Order, the Pacific Gas and Electric Company is referred to as the "Discharger."
2. The purpose of this Amendment is to allow the lateral migration of the 4 micrograms per liter ( $\mu\text{g/L}$ ) hexavalent chromium [Cr(VI)] eastern plume boundary during implementation of cleanup actions to contain chromium expansion on the downgradient boundary in the northwest direction. The requirement for plume containment is listed in Cleanup and Abatement Order (CAO) No. R6V-2008-0002 (attached).
3. The Third Quarter 2008 Groundwater Monitoring Report for the Source Area In-situ Remediation Project contains monitoring data showing up to 6,420  $\mu\text{g/L}$  Cr(VI) and 5,920  $\mu\text{g/L}$  total chromium [Cr(T)] in groundwater at the Facility.
4. On August 6, 2008, the Water Board issued CAO No. R6V-2008-0002 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. Among the requirements listed in the Order, is the requirement for the Discharger to take additional corrective actions to contain chromium migrating with groundwater. The Order allows the Discharger to propose that the Water Board allow a quantified migration of the 4  $\mu\text{g/L}$  Cr(VI) plume boundary or the 50  $\mu\text{g/L}$  Cr(T) plume as part of a proposed remedial action project.
5. On September 24, 2008, the Discharger submitted a Notice of Intent (NOI) under General Waste Discharge Requirements (Board Order No. R6V-2008-0014). The Discharger also submitted an NOI Addendum on November 6, 2008 and a revised Figure 3 on November 24, 2008. The project proposes additional remediation activities for hexavalent chromium in groundwater at the site. One of the components of the proposed project includes groundwater extraction from within the northwestern portion of the chromium plume and injection of extracted water

dosed with reductant within the plume to the area south of the Central Area In-situ Remediation Project. The location of the dosed water discharge is referred to as the South Central Area. Up to 110 gallons per minute of groundwater may be injected into wells in the South Central Area. Modeling shows that such injections may result in groundwater mounding causing up to 1,000 feet of lateral migration of the 4 µg/L Cr(VI) eastern plume boundary. Some of the lateral spreading of the plume boundary may extend beyond PG&E-owned property onto private property to the east. PG&E has an agreement in place with the private party to not operate water wells that could cause further plume spreading. Modeling also predicts that any potential migration of the 4 µg/L Cr(VI) plume boundary as a result of project implementation will return to pre-project conditions approximately ten years or less after injections cease.

6. On November 12, 2008, the Water Board issued CAO No. R6V-2008-0002A1 (attached) to the Discharger establishing background chromium concentrations to be considered when defining plume boundaries and final cleanup actions.
7. Chromium in groundwater in and downgradient of the source area at the Facility continues to adversely affect groundwater quality. This Amended Cleanup and Abatement Order allows the lateral migration of the 4 µg/L Cr(VI) eastern plume boundary during implementation of the project described in Finding No. 4 above. Technical reports required pursuant to Board Order No. R6V-2008-0014 are necessary to verify corrective action implementation, cleanup of water quality, and progress towards restoring the beneficial uses of the aquifer.
8. Corrective actions proposed by the Discharger are necessary to maintain compliance with the CAO R6V-2008-0002 for containing plume migration. The proposed corrective action is the only feasible method readily available to the Discharger as it can be implemented almost immediately and still prevent adverse impacts to active users of groundwater in the area.
9. 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-2008-0002A1 is amended to allow lateral spreading of the 4 µg/L Cr(VI) eastern plume boundary to no more than 1,000 feet, as shown on the attached map, and shall not extend to areas of existing groundwater use. Lateral spreading of the plume must be monitored and described in monitoring reports required pursuant to Board Order No. R6V-2008-0014.

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.

Any person aggrieved by this action of the Lahontan 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, section 2050 and following. The State Water Board must receive the petition by 5:00pm., 30 days after the date of this 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.

Ordered by: Harold J. Singer  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated: April 7, 2009

Attachments: Cleanup and Abatement Order No. R6V-2008-0002  
Cleanup and Abatement Order No. R6V-2008-0002A1  
Area of Allowed Plume Expansion

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

**CLEANUP AND ABATEMENT ORDER NO. R6V-2008-0002**

**WDID NO. 6B369107001**

**REQUIRING PACIFIC GAS AND ELECTRIC COMPANY  
TO CLEANUP 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 (Lahontan 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 December 29, 1987, the Lahontan Water Board issued Cleanup and Abatement Order (CAO) No. 6-87-160 to the Discharger because wastewater containing hexavalent chromium (also known as chrome six, chromium (VI), and Cr (VI)) was discharged at the Facility in a manner that polluted groundwater. The CAO required the Discharger to complete a site investigation, to characterize the hydrogeology of the site, and to initiate cleanup and abatement of hexavalent chromium in the soil and groundwater. The site investigation delineated a zone of groundwater polluted with elevated hexavalent chromium (the "plume") extending downgradient from the initial discharge area at the Facility to approximately 1 1/2 miles north of, and off, the PG&E compressor Facility. The requirements of CAO No. 6-87-160 have been completed.
3. Amendments to CAO No. 6-87-160 were issued on June 3, 1994 (CAO 6-87-160A1) and August 3, 1998 (CAO 6-87-160A2). The amendments required the Discharger to conduct further site characterization, determine the extent of soil and groundwater pollution, begin full-scale cleanup actions, estimate the time necessary to reach cleanup levels in groundwater, and submit annual reports evaluating the progress of cleanup. The Discharger chose to clean up the pollution by pumping polluted groundwater and using this water to irrigate forage crops at two land treatment units near the Facility. The land treatment units resulted in the conversion of hexavalent chromium in the pumped groundwater to trivalent chromium in the upper soils. This remedial method appeared to contain the chromium plume from further migration.

4. In response to the detection of hexavalent chromium in air samples taken surrounding the land treatment units, the Lahontan Water Board issued CAO No. 6-01-50 on June 29, 2001. This CAO required the Discharger to immediately abate the creation of a threatened nuisance formed by any airborne discharges of hexavalent chromium originating from the land treatment units. The CAO required submittal of a report evaluating hexavalent chromium treatment methods that would not have the potential for releasing airborne hexavalent chromium. The CAO also required groundwater sampling and the submittal of reports to evaluate stability of the chromium contaminant plume.
5. On June 29, 2001, the Discharger stopped groundwater extraction and irrigation at the two land treatment units because it had not identified a mechanism for preventing airborne discharges containing hexavalent chromium. The Discharger initiated well sampling to monitor stability of the chromium plume in groundwater. Sampling data obtained since July 2001 indicate that the chromium plume has expanded in a northerly direction.
6. On March 13, 2002, the Discharger submitted a report titled, *Draft Proposed Approach for Remediation of Hexavalent Chromium in Groundwater at the Hinkley Compressor Station, San Bernardino County*. The main elements of the proposal include: (a) in the short-term, implementing an action for controlling plume migration; (b) conducting a study of naturally-occurring chromium in groundwater; (c) conducting a feasibility study and pilot study of certain groundwater remedial technologies; and (d) implementing remediation of groundwater contamination.
7. In August 2004, the Discharger implemented a corrective action at the northern end of the plume by pumping groundwater from extraction wells to regain hydraulic control of chromium plume migration. Extracted water is distributed at the Desert View Dairy by a subsurface drip irrigation system, where soil and water interact to reduce hexavalent chromium to trivalent chromium. Crops are grown on the land that is irrigated. The discharge of pumped groundwater at the Desert View Dairy is regulated by Waste Discharge Requirements under Board Order No. R6V-2004-0034. This corrective action at the Desert View Dairy has halted the northern migration of the chromium plume but has not stopped migration to the west in the northern portion of the plume. Additional actions are necessary to completely contain the plume's migration.
8. On October 13, 2004, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2004-041 allowing the Discharger to conduct two in-situ pilot tests to evaluate remediation of hexavalent chromium in groundwater. The results of the field-scale tests, submitted in the July 2005 document titled, *Final Report, In-situ Remediation Pilot Study*, showed that lactate and emulsified vegetable oil successfully converted hexavalent chromium in groundwater to trivalent chromium and also showed an overall decrease in total chromium concentrations in groundwater in a limited area. This reduction in total chromium concentration occurred because the trivalent chromium tends to bind with the aquifer materials, resulting in less total chromium in the

groundwater. Besides chromium, reducing conditions also affect other metals in the aquifer, such as manganese and iron. While these by-products exist at levels exceeding drinking water standards, they do not migrate beyond cell boundaries. Because the water quality has not yet been restored in the pilot test cells, the Discharger is required to continue the monitoring program.

9. On June 14, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-023 allowing the Discharger to conduct a large-scale in-situ pilot study for remediation of hexavalent chromium in the central area of the groundwater plume. The field-scale study consists of injecting lactate, whey, and emulsified vegetable oil into the subsurface to evaluate in-situ remediation for long-term plume cleanup. The first phase of project implementation occurred October 2006 until February 2007. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
10. On November 9, 2006, the Lahontan Water Board adopted Waste Discharge Requirements under Board Order No. R6V-2006-0054 allowing the Discharger to conduct a full-scale in-situ project for remediation of hexavalent chromium in the source area of the groundwater plume at the compressor station. The project consists of injecting lactate, whey, emulsified vegetable oil, and/or ethanol, into the subsurface using a recirculation system for long-term plume cleanup. Hydrologic testing using clean water and baseline sampling of a recirculation well were conducted in fall 2006. Project startup began in May 2008. While monitoring reports are being submitted every three months, remediation effectiveness reports are not required but should be to evaluate progress towards aquifer restoration.
11. The Groundwater Monitoring Report for October 2007 contains data indicating plume migration continues along the northwest boundary. Groundwater data shows that total and hexavalent chromium concentrations increased above the drinking water standard of 50 µg/L (micrograms per liter) in monitoring wells MW-38A and MW-45A. The information suggests that the plume core boundary, consisting of total chromium concentrations of 50 µg/L or greater, migrated approximately 300 feet to the west along at least a one-half mile length in the northwestern area of this 50 µg/L plume boundary. Data in the report did not indicate that the plume boundary of the interim background chromium concentration of 4 µg/L had migrated during the same sampling event. However, historical data trends suggest that the latter boundary migration is a delayed effect that will likely be detected in future groundwater sampling events.
12. On November 28, 2007, the Lahontan Water Board adopted Amended Waste Discharge Requirements under Board Order No. R6V-2004-0034A1 that allows the Discharger to discharge to land at the Desert View Dairy groundwater containing chromium from off-site parcels. The project is intended to contain plume migration along the northwest boundary. The Waste Discharge Requirements allow disposal of groundwater extracted from six wells located

between Santa Fe Avenue and Highway 58, near the intersection of Mountain View Road. However, the revised Order did not increase the volume of groundwater that the Discharger may dispose; therefore, groundwater extraction will be reduced at the Desert View Dairy property to accommodate the additional extraction at off-site parcels. While modeling has indicated that plume containment can still be achieved at this reduced extraction level, continued monitoring of the plume in this area is needed. The project has been operating continuously since June 2008.

13. Also on November 28, 2007, the Lahontan Water Board adopted Revised Waste Discharge Requirements under Board Order No. R6V-2007-0032 for the Revised Central Area In-situ Remediation project. The Waste Discharge Requirements revises the project referenced in Finding No. 9 by allowing the use of ethanol for in-situ remediation. Full-scale implementation of the project began on November 29, 2007.
14. CAO No. 6-87-160A2 established the cleanup level for chromium in groundwater at background concentrations. Sampling at the Facility and in the vicinity indicates that hexavalent and total chromium occur naturally in groundwater at variable concentrations. On February 27, 2007, the Discharger submitted the document, *Background Chromium Study*. The Study presents the results of one year of water sampling from wells located outside the boundaries of the chromium plume. The Study concludes that statistical analysis shows maximum likely background chromium concentrations of near 4 µg/L for total and hexavalent chromium in groundwater in the Hinkley Valley. The mean concentrations detected in background are 1.19 µg/L for hexavalent chromium and 1.52 µg/L for total chromium. The Water Board has not accepted this report or its conclusions. However, it intends to use the information in the report to: (1) determine plume delineation levels; and, (2) establish background water quality as part of a process to establish final numerical cleanup levels.
15. On August 27, 2007, the Discharger submitted a report of waste discharge describing various remediation projects to provide plume containment and to clean-up chromium contamination in groundwater at different locations within and outside the plume boundaries. The Lahontan Water Board adopted, at its April 9, 2008 meeting, general waste discharge requirements (Board Order No. R6V-2008-0014) allowing the Discharger to implement these types of projects as needed to contain and cleanup the chromium pollution in soils and groundwater.
16. On July 2, 2008, the Discharger submitted to the Lahontan Water Board a document titled, *Boundary Control Monitoring Program and Updated Site-wide Groundwater Monitoring Program*. The Discharger proposes in the Boundary Control Monitoring Program groundwater monitoring and data evaluation methods to evaluate if its remedial measures are complying with the requirement to achieve chromium plume stability. The method includes calculation of control limits, using the 95% upper confidence limits, for selected wells based on the chromium concentrations in those wells from February 2005 through the 3<sup>rd</sup> quarter 2008. Concentrations above the

control limits may indicate plume movement, which would be assessed through an evaluation monitoring program. If warranted, a corrective action program would be implemented to address the plume movement.

The document also proposes revisions to the site-wide monitoring program, which includes certain monitoring wells from remediation and plume control projects and from other wells that are used to evaluate plume stability. The proposed revisions include adding certain wells, eliminating monitoring at certain wells, and reducing the frequency at certain wells.

17. 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 micrograms per liter (µg/L)
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18. The Groundwater Monitoring Report for February 2008 contains the results of groundwater sampling of 137 monitoring, domestic, agricultural and inactive wells. The wells define the lateral and vertical extent of chromium in groundwater. Well PMW-05, located north of the Compressor Station property, contains the highest concentrations of chromium:

Total chromium	2,120 µg/L
Hexavalent chromium	2,270 µg/L

(Note that hexavalent chromium concentrations may exceed total chromium concentrations in a given well due to the different analytical methods used for hexavalent and total chromium and the analytical error of up to ±15 and ±25% for the respective methods.)

19. The concentrations of total chromium and hexavalent chromium detected in groundwater samples at 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 pollution as defined in Water Code section 13050, subdivision (l).
20. The discharge of waste, such as chromium, to the groundwaters of the Mojave Hydrologic Unit, as described in Finding Nos. 2, 19 and 20 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.”

21. Chromium in groundwater continues to migrate in the northwest direction. Furthermore, chromium in the source area at the compressor station continues to adversely affect groundwater quality. Additional work is needed to clean up and abate the effects of the discharge. This Cleanup and Abatement Order requires implementing corrective actions for plume containment and long-term groundwater remediation. Technical reports are necessary to verify corrective action implementation, cleanup of water quality to background concentrations, and progress towards restoring the beneficial uses of the aquifer.
22. 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. The Discharger must conduct the investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup. All technical documents submitted to the Lahontan Water Board must contain the signature and stamp of the registered individual overseeing corrective actions.
2. The Discharger shall not cause or permit any additional waste chromium to be discharged or deposited where it is, or probably will be, discharged into waters of the State.
3. Plume Containment

The Discharger must achieve containment of the chromium plume in groundwater. For the purposes of this Order, containment is defined as:

- (a) no further migration or expansion of the chromium plume to locations where hexavalent chromium is below the background level, or
- (b) no further migration or expansion of the 50 µg/L total chromium plume.

The current background level (interim level) in groundwater for hexavalent chromium is 4 µg/L. This level will be used to determine background until the Water Board either confirms this level or establishes another level based on the previously cited background chromium study.

The Discharger may propose that the Water Board allow a quantified (for specific area and for a defined period of time) migration of the 4 µg/L hexavalent chromium

plume or the 50 µg/L total chromium plume as part of a proposed remedial action project. The proposal must clearly justify that the quantified migration is necessary to achieve compliance with this Order and is the only feasible method readily available to the Discharger. Additionally, the Discharger must clearly describe the actions that will be implemented to return the 4 µg/L hexavalent chromium plume or the 50 µg/L total chromium plume to their prior boundaries. If allowed, the Water Board will amend this order to establish the boundaries of this migration and the date that the Discharger must eliminate all levels of hexavalent chromium above 4 µg/L or total chromium above 50 µg/L in groundwater in the area of the allowed migration.

3.1. **By December 31, 2008**, achieve containment of the chromium plume in groundwater as defined in (a) above. Compliance will be determined by comparing groundwater samples collected after this date to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.

3.2. **By December 31, 2008**, achieve containment of the 50 µg/L total chromium plume, as defined in (b) above. Compliance will be determined by comparing groundwater samples collected after this date will be compared to the control limits established using data through the third quarter 2008 using the methodology contained in the *Boundary Control Monitoring Program* (see Finding No. 16, above, and Order 6.2, below), except that only the last eight samples for each well through the 3<sup>rd</sup> quarter 2008 must be used to determine the control limits.

4. **Interim Groundwater Chromium Remediation**

The Discharger must implement corrective actions to remediate the elevated chromium concentrations in groundwater in the source area at and near the Compressor Station.

4.1. The Discharger must continue implementation of full-scale in-situ corrective actions in the central area of the plume as described in Finding Nos. 9 and 13, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the central area of the plume.

4.2. The Discharger must continue implementation of the full-scale in-situ corrective actions in the source area described in Finding No. 10, or an alternate but equally effective method, to remediate the elevated chromium concentrations in groundwater in the source area.

5. Final Cleanup Actions

The Discharger must take all actions necessary to clean up and abate the effects of the discharge and threatened discharge of chromium to waters of the State.

- 5.1. **By September 1, 2010**, the discharger must submit a feasibility study report that assesses remediation strategies implemented at the site or proposed for the site for achieving compliance with State Water Resources Control Board Resolution 92-49, as amended. If the Discharger proposes a final cleanup strategy that will result in cleanup to concentrations higher than background water quality, the report must include a detailed analysis of different cleanup strategies, one of which must achieve background water quality, if feasible. For those strategies that have been implemented at the site, the report must describe the effectiveness of each remediation strategy compared to expected or modeled effectiveness. Any adverse environmental or public health impacts created from the implemented strategies must be reported along with remedies taken to correct such problems. The report must also include estimated cleanup times and costs for each remediation strategy to achieve the background level established by the Water Board or a level above background if it is not reasonable to achieve background levels considering the factors in section III.G. of Resolution 92-49. If background levels of water quality cannot be restored, the report must describe an alternate level of water quality above background that the remediation strategy can achieve and must describe why such a level is (1) consistent with the maximum benefit to the people of the state, (2) will not unreasonably affect present and anticipated beneficial use of the water, and (3) will not result in water quality less than that prescribed in the Water Quality Control Plans and Policies of the State and Lahontan Water Boards (See section III.G. of Resolution 92-49). Finally, the report must recommend a final remediation strategy for the entire site to achieve background levels of water quality or certain levels above background if achieving background is not reasonable and provide justifications for the recommendation.
- 5.2. **By April 1, 2011**, implement the final cleanup strategy as approved by Water Board.

6. Reporting

- 6.1. Groundwater monitoring associated with the site-wide groundwater monitoring program, the Desert View Dairy Land Treatment Unit, the Central Area In-Situ Remediation Zone project, and the Source Area In-Situ Remediation Zone project shall be reported on a coordinated schedule. Required quarterly sampling shall be reported by the 30<sup>th</sup> day following the end of the quarter, i.e., by April 30<sup>th</sup>, July 30<sup>th</sup>, October 30<sup>th</sup>, and January 30<sup>th</sup> of each year. Required semiannual sampling shall be

reported by April 30<sup>th</sup> and October 30<sup>th</sup> of each year. Sampling is to be conducted in the quarter prior to the appropriate reporting dates, i.e., from January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year. The site-wide monitoring program shall conform to the wells and schedule presented in PG&E's July 2, 2008 *Updated Site-Wide Groundwater Monitoring Program* described in Finding No. 16, except that monitoring well MW-34 shall continue to be monitored semiannually and monitoring wells MW-64B and MW-67B shall be monitored semiannually.

This Order modifies the Monitoring and Reporting Program for Waste Discharge Requirements No. R6V-2006-0054 for the Source Area In-Situ Remediation Zone project and modifies the required monitoring and reporting periods of the August 17, 2007 order pursuant to Water Code section 13267 for the In-Situ Remediation Pilot Test Project.

- 6.2. The 3<sup>rd</sup> quarter 2008 groundwater monitoring report must contain a tabulation of the hexavalent and total chromium control limits for boundary control monitoring wells identified in the July 2, 2008 *Boundary Control Monitoring Program* described in Finding No. 16. The last eight samples for each well through 3<sup>rd</sup> quarter 2008 shall be used to calculate the 95 percent upper control limits, which become the control limits for those wells.
- 6.3. **Beginning September 30, 2008**, submit semiannual status reports describing actions taken to remediate chromium levels in groundwater and contain plume migration. The initial report must evaluate actions taken between January 1, 2008 and June 30, 2008 and subsequent reports must evaluate actions taken during each subsequent six-month period. Status reports must discuss remedial actions being implemented according to the cleanup plan approved by the Water Board. The report must tabulate the volume, concentration, and location of wastes discharged under orders from the Lahontan Water Board. Any and all violations of orders must be discussed and cite corrective measures taken. The report must provide groundwater monitoring data and discuss the actual effectiveness of the implemented remedy compared to its predicted effectiveness. Any adverse environmental or public health impacts created from the project must be reported along with remedies taken to correct such problems. The report must provide recommendations and an implementation schedule for increasing effectiveness if current actions are not achieving plume containment and expected reductions in chromium concentrations in groundwater. Subsequent semi-annual status reports must be submitted by March 31 and September 30 of each year.
- 6.4. **Beginning March 31, 2012**, submit semi-annual final cleanup effectiveness reports to the Water Board. The first report should evaluate actions taken between April 1, 2011 and December 31, 2011. Subsequent

reports must evaluate actions taken during six-month periods, the initial period being January 1, 2012 to June 30, 2012. Each report must discuss the actual effectiveness of the final cleanup remedy compared to expected effectiveness. If current actions are not achieving expected reductions in chromium concentrations throughout the entire site, the report must propose recommendations and an implementation schedule to increase effectiveness. Subsequent semi-annual status reports must be submitted by September 30 and March 31 of each calendar year.

7. Rescissions

This order rescinds Order No: 4 in CAO No. 6-01-50 requiring monthly groundwater monitoring and the May 1, 2003 Water Code section 13267 order that allowed bimonthly sampling to replace monthly sampling.

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.

Ordered by:

  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated:

August 6, 2008

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

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 evaluating 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. In addition, there is no possibility that the proposed activity will have a significant effect on the environment. In pertinent part, California Code of Regulations, title 14, section 15061, subdivision (b)(3), known as the "common sense exemption", states that where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. In this case, the proposed activity maintains the interim background concentration for hexavalent chromium of 4 ug/L for the purpose of plume containment and establishes background concentrations for hexavalent chromium and total chromium against which remediation strategies are to be assessed. Consequently, because there is no possibility that the proposed activity will have a significant effect on the environment, the proposed activity is also exempt from CEQA pursuant to California Code of Regulations, title 14, section 15061, subdivision (b)(3).

**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. For the purposes of evaluating plume containment and complying with Requirement No. 3 of Cleanup and Abatement Order No. R6V-2008-0002, the interim background concentration for hexavalent chromium of 4 µg/L remains in effect.
2. For the purposes of complying with Requirement No. 5, Final Cleanup Actions, of Cleanup and Abatement Order No. R6V-2008-0002, background concentrations against which remediation strategies are to be assessed are established as follow:

Maximum background hexavalent chromium = 3.1 µg/L  
Maximum background total chromium = 3.2 µg/L  
Average background hexavalent chromium = 1.2 µg/L  
Average background total chromium = 1.5 µg/L

Remediation strategy assessment must include an evaluation of achieving average concentrations within the cleanup area that meet the average background concentrations established here, with discrete samples within the cleanup area not exceeding the maximum background concentrations established here.

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.

Any person aggrieved by this action of the Lahontan 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 this 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.

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

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# **ENCLOSURE 4**

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**Settlement Agreement and Stipulation for Entry of Order [Proposed]  
Order No R6V-2011-00XX [PROPOSED]**

**Response to Comments**

**Prepared by California Regional Water Quality Control Board,  
Lahontan Region Prosecution Team**

**March 8, 2012**

**Background**

On February 1, 2012, the Lahontan Water Board Prosecution Team circulated for public comment a proposed Settlement Agreement with Pacific Gas and Electric Company (PG&E) concerning alleged violations of the Regional Water Board's Cleanup and Abatement Order (CAO) No. R6V-2008-0002. Order paragraph 3 of the CAO directed PG&E, in part, to contain the hexavalent chromium plume. The Prosecution Team alleges that PG&E failed to do so for a period of 1,093 days. The Water Board Prosecution Team is not recommending any changes to the February 1, 2012 Settlement Agreement. The Prosecution Team, including attorneys from the Office of the Attorney General, negotiated the terms of this Settlement Agreement and believes this is an appropriate resolution.

The proposed Settlement Agreement was available for a public comment period of 30 days, consistent with State Water Board policy. The Prosecution Team held a public meeting in Hinkley on February 16, 2012, to describe the Settlement Agreement and to receive written and oral comments.

A total of 15 comment letters were received during the 30 day comment period from February 1 to March 1, 2012. Staff has reviewed all comments received, including oral comments from the February 16, 2012 public meeting. The following table summarizes all the comments and contains responses from the Prosecution Team. Copies of each comment letter are included in the appendix. Comment letters are numbered to correspond with the number noted in the second column of the table.

<b>Response Reference</b>	<b>Comment Letter #</b>	<b>Comment</b>	<b>Response</b>
A	1, 8, 13, 16	The State should not get 50 percent of the money.	California Water Code statutes that govern the Water Board require that administrative civil liabilities (similar to fines) collected pursuant to section 13350 shall go to the State Waste Discharge Permit Fund. However, if the parties settle before going to an evidentiary hearing, part of the settlement may include a Supplemental Environmental Project (SEP) for up to 50% of the money according to the State Board Enforcement Policy. In this matter, the parties have settled without going to hearing, allowing for half of the \$3.6 million to be used for PG&E to complete a SEP to provide water to the school, and only half of the money going to the State fund. If the parties had gone to hearing before the Water Board who may have issued a fine, 100% of the fine would go to the State fund. Note that the money in the Waste Discharge Permit Fund is used to assist in cleaning up waste or abating the effects of waste on waters for the state.
B	1, 13	If replacement water project comes in under budget, the remaining money should be used to help the community, and not go to the State.	See Response A. In the event that the replacement water project comes in under budget, PG&E shall pay the difference between the \$1.8 million and what was spent on the SEP to the State Waste Discharge Permit Fund. It is anticipated that PG&E will spend the entire \$1.8 million on installing the infrastructure and equipment, and for the appropriate permits in completing the project.
C	2	New water should be disinfected with UV or hydrogen peroxide, not toxic chlorine.	The SEP proposal does not specify a particular process for disinfection. The water will be disinfected in a manner that meets all the county and/or State Department of Health requirements.
D	3, 13	How is PG&E going to replace the water they are extracting?	If the extraction is completed as planned, there will be no need to replace the water extracted from a location north of Thompson Road. The Settlement Agreement contains alternatives should the extraction become more harmful than helpful. The Water Board will require PG&E to monitor changes to the water table caused by pumping from extraction wells for plume containment. If such actions cause too much lowering of the water table, PG&E will be required to conduct actions to mitigate potential adverse effects, such as decrease pumping amount.  For the Supplemental Environmental Project replacement water to the school, the clean water will originate from PG&E's water supply wells south

Response Reference	Comment Letter #	Comment	Response
			of the Compressor Station. Those supply wells are less than one mile from the Mojave River, which has ample water supply. PG&E will pump water at an amount allowed by the Mojave Water Agency. No replacement water is needed for restoring the aquifer in regards to supplying replacement water to the school.
E	4	PG&E should be forced to provide clean drinking water to what's left of the school children. Eventually the school district will die out.	The Settlement Agreement provides for PG&E to supply clean drinking water to the Hinkley School. On February 10, 2012, the Barstow Unified School District Board unanimously supported the SEP. See Comment Letter 9.
F	4, 13	\$3.6 million should not be the final settlement. The Water Board should be able to continue penalizing PG&E if they continue to violate or fail to clean up. PG&E should also be forced to reimburse and/or pay damage they caused due to destroying the community of Hinkley.	The Settlement Agreement amount of \$3.6 million addresses specific violations of Paragraph 3 in Cleanup and Abatement Order (CAO) R6V-2008-0002, pursuant to which PG&E is directed to contain the plume. The Settlement Agreement covers the period of the time between December 2008 and December 2011 (1,093 days total). The Settlement Agreement does not excuse any potential future violations of any Water Board orders, including the amended 2008 CAO. If PG&E were to violate any directives in the amended 2008 CAO or other orders, the Water Board may issue civil liabilities for those violations as well. This legal action is between the State and PG&E, and is not to replace or supplement any individual lawsuit brought by a member of the Hinkley community. The Water Board is not authorized or allowed to direct dischargers to reimburse or pay damages to a community.
G	5, 13	Why is the school being singled out for the PG&E project, why isn't the neighborhood surrounding the school receiving water?	The Hinkley School is particularly suited for the SEP because it is the largest user of domestic water supply within the Hinkley Valley. Further, the aquifer below the school is very thin and has limited water supply. In addition, the school water contains fairly high levels of total dissolved solids (salts), but within the drinking water standards. PG&E's proposed project will pipe drinking water to the school that is of better water quality than current drinking water. The project increases the amount of water supply below the school available for other users in the area, instead of the school using it. PG&E's proposal indicates that the cost to complete the project for the school will use all of the \$1.8 million available for a supplemental

Response Reference	Comment Letter #	Comment	Response
			environmental project.
H	6,13	It is not fair that the state receives \$1.8 million sooner than the school receiving the water.	California Water Code section 13323 requires a discharger to pay an administrative civil liability within 30 days of the Water Board issuing an order. There is no similar section requiring immediate payment for a SEP. The State Board's enforcement program is designed to deter violations by the regulated community (e.g., PG&E), and to encourage the regulated community to correct violations. Requiring immediate payment of the liability is intended to have a punitive or punishment effect. The school will receive the benefit of the settlement as quickly as PG&E is able to construct the pipeline and infrastructure.
I	6	PG&E is getting off the hook (regarding the Settlement Agreement) and the community is suffering.	The Prosecution Team advocates that the settlement amount is appropriate within the confines of Water Code section 13350 and the State Board Enforcement Policy. The Settlement Agreement states that PG&E has agreed to imposition of \$3.6 million in administrative civil liabilities. This amount is within the range of civil liabilities that the Water Board can impose for violation of a cleanup and abatement order. The Water Code section that allows the Water Board to impose penalties (section 13350) requires the Water Board to consider factors that could lower the fine amount from the calculated maximum. Attachment B to the Settlement Agreement contains an extensive evaluation of the factors. The final paragraph explains the \$3.6 million was reached "for purposes of early resolution considering the risks of litigation that include mitigating circumstances (e.g. stipulating to amending Cleanup and Abatement Order R6V-2008-0002 for injunctive terms)." Also see Responses A and F. This legal action between the State and PG&E covers a narrow set of violations for violating a portion of a Water Board Order. If PG&E violates other portions of the 2008 CAO or other Water Board orders, additional enforcement may occur.
J	7	CAO R6V-2008-0002 is a bad idea between the Water Board and PG&E. It is against Hinkley, it is a clear cut "get out of jail card" for PG&E. It squashes the 2008 CAO	Cleanup and Abatement Order R6V-2008-0002 directs PG&E to clean up and abate the chromium plume in groundwater to background levels, and to contain the chromium plume. This Settlement Agreement alleges violations of the directives on containment of the plume, and provides new containment criteria through an amendment to the 2008 CAO. The Settlement Agreement keeps all cleanup directives in the 2008 CAO in

Response Reference	Comment Letter #	Comment	Response
		agreement.	effect. Only the plume containment directive is being revised in an amended order. The 2008 CAO remains in effect.
K	7	It changes and enlarges the boundaries for PG&E from 3.1 ppb to 10 ppb on the behalf of PG&E.	The amended 2008 CAO will provide new containment requirements. The Settlement Agreement states that the plume containment requirements in the 2008 CAO will be modified to require hydraulic capture based on a line defined by a set of specified well pairs/triplets, and the evaluation of groundwater elevations. The amended 2008 CAO will also require new extraction and remediation actions in at least one area north of Thompson Road where chromium concentrations are at or above 10 ppb. Future cleanup and abatement orders will address additional remediation of groundwater north of Thompson Road as permissible in advance of certifying an environmental impact report, and again following the certification of the environmental impact report.
L	7	It stops penalties against PG&E. Trade-off our community. All of these things are using the school and school board as pawns.	The Settlement Agreement addresses the alleged violations of failing to maintain plume containment for 1,093 days from December 2008 through December 2011. The amendment to the 2008 CAO plume containment language addresses the specific alleged violations. See Response K. All the cleanup and remediation requirements in the 2008 CAO remain in effect, along with all other orders of the Water Board. Any future violations will be subject to enforcement, including civil liabilities. When a new cleanup and abatement order is issued, new deadlines will take effect that require additional actions by PG&E. The supplemental environmental project (SEP) that PG&E proposed benefits the school directly and the surrounding neighborhood that will have an increased amount of groundwater available. See Response G.
M	7	Keep the original mandate of the 2008 [CAO] in place!	See Responses F, K and L.
N	8	Strongly support settlement agreement. Hinkley School is only K-8 school in the Barstow Unified School District, and is a California Distinguished School which serves not only local	No response needed.

Response Reference	Comment Letter #	Comment	Response
		students but those who have requested to attend from other areas of the district.	
O	8, 13, 15, 16	All the money should be used on projects within the community. If all the \$1.8 million is not completely expended on the replacement water, the remainder should be used on other projects within Hinkley, rather than going to the State.	See Response B.
P	9	Pleased to see replacement water for the Hinkley School is proposed as part of the settlement agreement.	No response needed.
Q	9	School Board unanimously supports the replacement water project, and is committed to coordinating with PG&E on its implementation efforts.	No response needed.
R	9	If additional funds from the settlement agreement become available for use in the community, request that funds be considered to support other school priorities and water-related projects.	See Response B.

Response Reference	Comment Letter #	Comment	Response
S	9	Express appreciation to PG&E and Lahontan Water Board for recognition and consideration of the Hinkley school and community.	No response needed.
T	10, 13	The State Water Board should only impose punitive penalty on PG&E of \$3.6 million, and receive such punitive amount within 30 days, absent of any stipulations and settlement agreements.	By the Water Board entering into this Settlement Agreement, the community benefits with up to 50 percent of the fine against the discharger staying in the community for the SEP.
U	10	In absence of quash/strike of said Order/Settlement Agreement, all administrative remedy will be declared as exhausted and The People of Hinkley will commence litigations in the Judicial Venues.	If the Water Board rejects the Settlement Agreement, the Prosecution Team and PG&E may continue settlement negotiations or proceed to a contested evidentiary hearing on the alleged violations. If there is a contested hearing before the Water Board, the Water Board members will decide whether the violations occurred or not, and whether to impose administrative civil liability or not. If the Water Board imposes administrative civil liability after a contested evidentiary hearing, then PG&E and interested parties may petition the result to the State Board. Another alternative is that the Water Board may refer the enforcement matter to the California Attorney General for civil prosecution.
V Questions 1.A.-C.	11	A. Is it the intent that the Settlement directly amends the 2008 CAO or will the Prosecution Team be proposing a separate proposed order to accomplish this amendment and if so,	The Settlement Agreement contemplates that, should the Water Board approve the Settlement, it will also adopt amendments to the 2008 CAO at the same time. The Prosecution Team has proposed draft amendments, which closely track Paragraphs 9 and 10 of the Settlement Agreement. For the reasons suggested in the questions, the proposed amendments will not be a verbatim adoption of Paragraphs 9 and 10.

Response Reference	Comment Letter #	Comment	Response
		<p>when?</p> <p>B. Is it the intent of the Settlement that Paragraphs 9 and 10 be included verbatim into an amended CAO? Our concern is that Paragraphs 10.a., 10.b., and 10.c. of the Settlement include language that both Parties must agree to a modification of certain requirements. This language is not appropriate in an order adopted by the Water Board as it limits the Water Board's ability to later modify or amend portions of an order. Additionally, the Settlement uses the term "Settling Respondent" to refer to PG&amp;E while the 2008 CAO uses Discharger to refer to PG&amp;E and refers to "this Settlement Agreement and Stipulation," which would be out of context in the 2008 CAO. If it is not the intent to include Paragraphs 9 and 10 verbatim, please provide specific language for the Water Board's consideration.</p> <p>C. Paragraph 23 of the Settlement indicates the Settling Respondent waives its right to petition the Water Board</p>	<p>The Prosecution Team has worked with PG&amp;E to assure the terms of the amendments to the 2008 CAO are consistent with the negotiated agreement between the Parties. Therefore, it is not necessary to extend the provisions of Paragraph 23 to the amendments to the 2008 CAO.</p> <p>Further, the Prosecution Team believes a challenge to the agreed upon modifications of the 2008 CAO would effectively nullify the Settlement Agreement.</p>

Response Reference	Comment Letter #	Comment	Response
		adoption of the Order. We believe this refers to the Settlement and Stipulation for Entry of Order. Should this waiver also refer to the amended CAO?	
V Question 1.D.	11	If, in the future, the Water Board determines that an amendment to the CAO that incorporates the requirements of Paragraphs 9 and 10 of the Settlement is needed for any reason, do the Parties intend that the Settlement Agreement limits the ability of the Water Board to unilaterally modify requirements in a manner that may not be consistent with the Settlement (e.g. more specific capture requirements for area north of Thompson Road or imposition of final cleanup requirements)? If not, we believe the Settlement should explicitly provide for that possibility.	<p>The Settlement Agreement does not limit the authority of the Water Board to modify the requirements of the 2008 CAO or take any other action that would otherwise be within its authority. The Prosecution Team believes that the Water Board's authority is adequately protected by Paragraph 11 of the Settlement Agreement.</p> <p>However, in any challenge to a subsequent modification by the Water Board, the State Board or a court might infer that the Water Board made a good faith commitment to give the alternative containment requirements specified in the Settlement Agreement an opportunity to work. The State Board or court may then evaluate whether the modifications were inconsistent with such a commitment.</p>
V Question 2.	11	What is the Water Board's authority under the Water Code to subject PG&E to civil liability for violations of the Settlement Agreement and Stipulation? (Note: We acknowledge that if provisions of the Settlement are made part of an amended	The Settlement Agreement provision regarding liability under the Water Code pertains primarily to the settlement terms adopted into the amendments to the 2008 CAO. There are separate, effective enforcement provisions for failure to complete the Supplemental Environmental Project (SEP) (see Paragraphs 12.i. and 12.j.)

Response Reference	Comment Letter #	Comment	Response
		CAO, violations of the CAO would subject PG&E to enforcement under the California Water Code.)	
V Questions 3.A.-B.	11	<p>A. How does the Water Board ensure that the project goal of reducing pumping in the area is met if PG&amp;E's obligations under the SEP end when construction of the pipeline and other appurtenant facilities are complete or earlier if the \$1.8M is expended? How does the Water Board ensure that PG&amp;E continues to provide water to the Hinkley School for the 20 year duration?</p> <p>B. If the goal of the project funded by the \$1.8M is intended to reduce pumping, as described in the Settlement, and not just to construct or partially construct the infrastructure to support the Project, how does the criteria in Paragraph 14 of Attachment A for assessing project success adequately determine if the Project goal of reducing pumping in the area of the Hinkley School is being met? How are the requirements in the SEP Policy for tracking and reporting whether "expected</p>	<p>The project goal for the SEP is to make a reliable, high quality water supply available to the Hinkley School for up to twenty years. Any failure by PG&amp;E to provide water (other than the school no longer wanting the water) in that period would be a violation of the SEP and enforceable as a breach of contract. The statement in Paragraph 9 of the SEP document that PG&amp;E's obligations under the SEP expire on December 13, 2017 does not apply to PG&amp;E's obligation to provide replacement water. Reducing pumping in the vicinity of the Hinkley School is a secondary benefit, not the primary goal of the SEP. The Prosecution Team believes the stated criteria for success precisely measure whether PG&amp;E meets the primary goal, and adequately assures the secondary benefit of reduced demand is realized.</p> <p>Paragraph 12 (c) describes the SEP: "The project will provide a new permanent water supply at the school." Paragraph 12 (d) states: "The Settling Respondent understands that it is agreeing to implement the SEP in its entirety . . ." If PG&amp;E decides to stop the project before completion, whether based on exhausting the \$1.8 million or any other reason, it runs substantial risks under the terms of Settlement Agreement. Under Paragraph 12 (j), if the SEP is not fully implemented within the Completion Period, PG&amp;E is responsible to pay up to the entire amount of the SEP as determined by the Executive Officer. Under Paragraph 16, resolution of the Alleged Violations is conditioned upon PG&amp;E's "full satisfaction of the obligations described in Paragraph 12." If the failure to complete the SEP results from PG&amp;E's conduct, it runs the risk of losing the benefit of the release of liability from the Settlement Agreement.</p>

Response Reference	Comment Letter #	Comment	Response
		outcome(s) or performance standard(s)" are met -when the criteria used to determine the project's success is "timely implementation of Project components" and not assessment of reduced pumping from the area?	
V Question 3.C.	11	Has the School District agreed to take the water?	Yes. See Comment Letter 9.
V Question 3.D.	11	How are the goals of the SEP met if the School District decides to not take the water? (See Paragraph 8 of Attachment A of the Settlement, stating that PG&E shall provide water for 20 years or until the School District chooses alternative water supply.) Could an "alternative water supply" be the existing Hinkley School wells and if so, how does this achieve the Project goals?	The SEP will have achieved its goal if the School District has the option of taking cleaner, safer water for as long as the District wants that water for a period of 20 years. The Settlement Agreement terms cannot control for all contingencies. The Prosecution Team believes that making the cleaner water available to the Hinkley School for however long the School District wants the water up to 20 years accomplishes the project's goal.
V Question 4	11	If replacement water is required to be provided to the Hinkley School under the provisions of R6V-2011-000SA1, how would the Parties reconcile the completion schedule in the SEP with the compliance schedule in Water Board Order No. R6V-2011-000SA1 for providing replacement water (not bottled	The Prosecution Team believes it is unlikely that the water in the Hinkley School wells will exceed the trigger requirements in the 2011 CAO. Should the trigger be exceeded before the replacement water infrastructure is completed, the Executive Officer (or the Executive Officer's delegate) will determine whether it is appropriate to give SEP credit to PG&E and, if so, how much SEP credit. (See Paragraph 12.j.) Once the project is operational, it will be much less likely that the 2011 CAO trigger levels are exceeded at the Hinkley School, and less relevant for water replacement purposes provided PG&E maintains the water quality standards required under the Settlement Agreement.

Response Reference	Comment Letter #	Comment	Response
		water)?	The Project Goal for the SEP is to provide replacement water to the school for as long as the School District wants that water, up to twenty years. Any failure by PG&E to provide water in that period would be a violation of the SEP and enforceable as a breach of contract. The statement in Paragraph 9 of the SEP document that PG&E's obligations under the SEP expire on December 13, 2017 does not apply to PG&E's obligation to provide replacement water.
V Question 5.	11	How do the Parties intend that this Settlement Agreement, particularly Paragraphs 9 and 10, will limit the Water Board's discretion in setting final cleanup requirements?	The Settlement Agreement will not limit the Water Board's discretion in setting final cleanup levels. The containment requirements to be adopted in the amendments to the 2008 CAO are intended to be interim measures until a new CAO is issued. The Parties understand that final cleanup requirements may consider data collected under these interim measures.
V Question 6.	11	Please confirm that the Settlement contemplates that PG&E is required to fully implement the SEP even if costs exceed \$1.8M. If this is accurate, we believe it is appropriate and necessary to include specific language to that effect in the Settlement and clarifying that the Settlement language supersedes that in Attachment A to the Settlement if there are conflicts.	Section 9 of the SEP indicates that PG&E has discretion to stop construction of the SEP project on December 31, 2017 or after spending \$1.8 million. However, should PG&E exercise that discretion and fail to complete the project, it would be frustrating the intent of the Parties and breaching the terms of the Settlement Agreement. The Executive Officer might determine that it is not appropriate to give SEP credit. Further, such failure might reopen the Alleged Violations resolved under the Settlement Agreement. Also, the Executive Officer has discretion under Paragraph 11 (j) to address the consequences "if the SEP is not fully implemented."
V Question 7.	11	Please explain how the goal of the SEP will be met (see Section H.3. of the State Water Board SEP Policy) if PG&E does not complete the SEP and why it should be credited for any portion of the SEP Amount if the goal is not met.	Whether PG&E would be entitled to any SEP credit if it does not complete the SEP would depend on the particular circumstances and why PG&E did not complete the project.

Response Reference	Comment Letter #	Comment	Response
V Question 8.	11	Please clarify if the Parties intend that the Settlement only require that capture be maintained rather than first be achieved by a future date and then be maintained.	The requirement is for PG&E to achieve hydraulic capture <i>and</i> maintain hydraulic capture. The Prosecution Team contends that capture in the sense of Paragraph 9.a. has been achieved except for possibly during winter when fields do not generally receive much water. The requirement to maintain capture is operative regardless whether it has already been achieved.
V Question 9.A.	11	Do the terms "well pair metrics" in Paragraph 9.c.1. and "capture metrics" in Paragraph 9.c.2. mean the same thing and, if so, shouldn't they be phrased identically?	No, the term "well pairs metrics" in 9.c.1. refers to well pairs, whereas "capture metrics" in 9.c.2. refer to plume capture demonstrated by inward gradient of groundwater flow using well pairs and well triplets.
V Question 9.B.	11	Should the term "well pair metrics" in Paragraph 9.c.1. refer to both well pairs and well triplets?	Yes.
V Question 9.C.	11	Does the "three consecutive month" standard in Paragraph 9.c.1. apply when any well pair/triplet does not meet control limits in three consecutive months or only when the same well pair/triplet does not meet control limits in three consecutive months?	The statement "three consecutive months" in 9.c.1. applies to the same well pair or well triplet that does not meet control limits for three consecutive months, regardless of how many months of monitoring have been conducted.
V Question 9.D.	11	Same issue as raised in question 9.C. above applied to Paragraph 9.c.2.	In 9.c.2., "capture metrics" refers to an inward gradient of groundwater flow between well pairs or well triplets.
V Question 9.E.	11	Is it appropriate to interpret Paragraph 9.c.2. such that PG&E is out of compliance once three non-consecutive months demonstrate that control limits are not met, or is	PG&E would be out of compliance as soon as any three months of non-compliance out of twelve consecutive months were complete.

Response Reference	Comment Letter #	Comment	Response
		non-compliance only triggered when a full 12 months of data evaluation is complete?	
V Question 9.F.	11	Is the one year (July 2012 through July 2013) reference a moving 12 month period or is it specific to July of one year through June of the following year?	It is based on a moving year.
V Question 9.G.	11	Is the requirement in Paragraph 9.d. to submit a contingency plan triggered when the numeric criteria in paragraphs 9.c.1. and 2. are exceeded or only when the Water Board makes an explicit finding that PG&E is out of compliance, in accordance with Paragraph 9.c ("Regional Water Board may find the Settling Respondent out of compliance ...")?	PG&E's obligation to submit a contingency plan would be triggered as soon as the criteria in 9.c.1. or 9.c.2. were exceeded, without prior notification by the Water Board.
V Question 9.H.	11	In Table A-1 in Attachment D to the Settlement, in the well triplet column on the row that begins with MW-82s, should there be a third well location specified?	There is no third well meant for this well metric. Instead, the row listing "MW-82S, new piezometer near EX-29/30" was supposed to go under the column for "Well Pairs," with MW-82S under the "Outer Well" column and "new piezometer near EX-29/30 (Location 5 on Figure 1)" to go under column for "Inner Well."
V Question 10.A.	11	What criteria will be used to determine if PG&E has "maximized extraction and chromium removal" as specified in Paragraph 10.a?	Paragraph 10 essentially requires PG&E to make its best efforts given the constraint of needing to maintain containment south of Thompson Road. Regional Board staff would evaluate PG&E's compliance based on all of the circumstances, including by comparing the pumping rate of the new extraction well to the pumping rates of other nearby extraction wells, and using elevation data in monitoring wells to determine the extent of drawdown.

<b>Response Reference</b>	<b>Comment Letter #</b>	<b>Comment</b>	<b>Response</b>
V Question 10.B.	11	What criteria will be used to determine if "additional extraction is needed" as specified in Paragraph 10.b?	See Response V Question 10.A. Regional Board staff would evaluate PG&E's compliance based on all of the circumstances, including water quality data and whether additional extraction is needed based on the pumping rate of the new extraction well compared to other nearby extraction wells and the estimated areal extent of drawdown.
V Question 10.C.	11	If criteria are not specified for Paragraphs 10.a. and b., how will the Water Board be able to determine if PG&E has complied with these requirements?	See Response V Question 10.A. Regional Board staff would evaluate PG&E's compliance based on all of the circumstances, including extraction well pumping rates, water elevations in monitoring wells, and any change in chromium detected in down gradient domestic wells.
V Question 11.A.	11	Can the \$1.8 million be used for planning, design, environmental review, and permitting (both construction and water system operation)?	Yes.
V Question 11.B.	11	What maintenance activities are contemplated by the phrase "The SEP includes construction and maintenance of new facilities through the SEP Completion Date of December 31,2017" in Paragraph 12.c. of the Settlement?	The Prosecution Team anticipates the terms of the Settlement Agreement include those maintenance activities that would accompany similar construction projects, and the initial start-up and operations of the water supply system.
V Question 11.C.	11	Please clarify the intent of the phrase"... but does not include plans for long-term maintenance, except for maintenance of equipment on Settling Respondent's property" as this appears to allow PG&E to fund maintenance of equipment on its property from the \$1.8M after December 31,	After December 31, 2017, PG&E must perform all needed maintenance of equipment on its property at its own expense.

Response Reference	Comment Letter #	Comment	Response
		2017?	
V Question 11.D.	11	Is this pipeline intended to be used to deliver water for uses other than at the Hinkley School and, if so, how are costs that can be charged against the SEP Amount and those associated with the other use to be determined? Specifically, will costs be assigned based on straight percentages or on incremental costs	The Prosecution Team understands that PG&E currently has a north-south distribution line in place as part of its remediation efforts. The SEP requires PG&E to construct an east-west pipeline dedicated solely to providing water to the Hinkley School. Accordingly, the Prosecution Team does not anticipate a need to allocate construction costs. Prior to December 31, 2017, PG&E may charge to the SEP-allocated funds those costs associated with bringing water to the surface and treating that water. How such costs would be prorated or assigned will be determined based on the circumstances.
V Question 11.E.	11	Please justify the four plus years for project construction as identified in the timetable in Paragraph 12 of Attachment A to the Settlement (portions of calendar year 2013 and calendar years 2014 through 2017).	The schedule allows time for the CEQA process and other permit and typical construction delays.
V Question 11.F.	11	The Settlement requires PG&E to provide water to the Hinkley School that meets drinking water standards. Are the Prosecution Team and PG&E willing to specify a maximum level of hexavalent chromium that will be provided to the Hinkley School if an MCL for hexavalent chromium has not been established when the project is complete?	No; this concern was addressed by specifying existing wells as the source and assuring current water quality standards in those existing wells is maintained.

<b>Response Reference</b>	<b>Comment Letter #</b>	<b>Comment</b>	<b>Response</b>
V Question 12.	11	Would PG&E be willing to indemnify and defend the Water Board for any CEQA challenge related to approval of this Order?	An indemnification provision was not part of the agreement between the Prosecution Team and PG&E. Further, the Prosecution Team does not anticipate that the Water Board will necessarily be the lead agency for construction of the project.
W	12	If the Board agrees to this settlement then it will be selling out not only yourselves but the people of Hinkley.	See Response I.
X	12	The Board knows that PG&E lies, hides evidence and even commits fraud.	No response needed.
Y	12, 13	PG&E needs to be held to the original order (i.e., CAO R6V-2008-0002) on plume expansion.	See Responses J, K and L.
Z	12, 13	It is time for PG&E to pay the entire fine, not a lesser amount.	See Responses A, I and T.
AA	12, 13	The original Order needs to stay in place as far as plume migration is concerned and continue to fine them every day PG&E is out of compliance.	See Responses J, K and L.
BB	12	I have been a strong advocate of Lahontan but enough is enough, stop allowing PG&E to continue the lie.	No response needed.

Response Reference	Comment Letter #	Comment	Response
CC	12	The way this is being handled is a travesty of justice.	All actions propose in the Settlement Agreement comply with State laws, regulations, and policies. Moreover, the public comment period and public hearing are designed to ensure public involvement in the settlement, and a complete airing of any issues regarding the settlement.
DD	12, 13	The school is losing more students and will lose many more; in the next few years it will not be open, so allowing PG&E to provide the school water is waste and another scam.	Comments submitted to the Water Board by the Barstow Unified School District supports the proposed project to bring water supply to the Hinkley School and does not state or imply future plans to close the school.
EE	13	New water system is not needed at the school; bottled water supplied by PG&E is good enough.	Bottled water being supplied to the Hinkley School is a good interim action that PG&E has been doing voluntarily. Piping in water avoids some of the environmental drawbacks of bottled water. Further, bringing replacement water to faucets and taps within the school, including the outdoor drinking faucets that are currently turned off, provides additional health benefits to the students and school community.
FF	12	People say levels (of chromium) are safe and below the State standard, but this does not comfort me when I give my son a shower or expose him to this known poison.	No response is needed in regards to the Settlement Agreement. However, the Public Health Goal for hexavalent chromium of 0.02 ppb adopted by the State in July 2011 indicates that this is a safe level for a person exposed over a lifetime (i.e., 70 years). The California Drinking Water Standard of 50 ppb for total chromium is outdated and does not take into consideration new science for hexavalent chromium. The State Department of Public Health is overseeing the development of a new standard for total chromium that takes into consideration more recently known health effects of hexavalent chromium. The new standard will likely be released in about three years.
GG	12	No one can tell us what hexavalent chromium does to a person at low levels, because there is no research to tell us.	No response is needed in regards to the Settlement Agreement. However, the Public Health Goal for hexavalent chromium indicates that a concentration of 0.02 ppb is safe for public health. The PHG is a level of drinking water contaminant at which adverse health effects are not expected to occur from a lifetime of exposure. The science used to set the PHG showed that hexavalent chromium is a carcinogen in animals and a

Response Reference	Comment Letter #	Comment	Response
			suspected carcinogen in humans at levels above the PHG. Other health information about hexavalent chromium can be obtained at the Office of Environmental Health Hazard Assessment website at <a href="http://www.oehha.ca.gov">www.oehha.ca.gov</a> .
HH	12	My levels were at non-detect and they continue to rise with every test, as does my in-laws, we are in the plume.	No response needed for the Settlement Agreement. See <a href="http://www.waterboards.ca.gov/lahtontan/water_issues/projects/pge/index.shtml#wbo">http://www.waterboards.ca.gov/lahtontan/water_issues/projects/pge/index.shtml#wbo</a> , the Cleanup Orders section in particular.
II	12	Someone needs to hold PG&E completely liable in every way or at least hold them to the orders and penalties that have already been justifiably given.	In the proposed Settlement Agreement, PG&E agrees to civil liabilities of \$3.6 million with regards to violations of the one plume containment requirement of Cleanup and Abatement Order R6V-2008-0002. Water Board staff will continue to require PG&E to follow all existing and future orders and requirements.
JJ	12	Please move the plume out to its real line.	Water Board prosecution staff is unclear what is meant by 'real line'. The chromium plume line is being addressed in the review of the 2007 Background Chromium Study and future Water Board orders.
KK	13	PG&E should be required to maintain the new school water supply project forever, or as long as the plume remains in groundwater, instead of the 20 years stated in the Settlement Agreement.	The Settlement Agreement states that PG&E will maintain the new school water for up to 20 years. It is unreasonable to foresee the viable future of the Hinkley School beyond this period.
LL	13	Disagree with re-setting the chromium plume containment number from 4 ppb to 10 ppb; then PG&E would push for future cleanup to only the 10 ppb line.	The new containment requirements in the Settlement Agreement and the amendments to the 2008 CAO do not in any way change PG&E's long-term cleanup obligations. The 2008 CAO requires PG&E to develop and implement a long-term cleanup program, which must ultimately return the chromium concentrations to background levels, and to contain the chromium plume in the interim. The Prosecution Team alleges that the chromium plume has expanded since the 2008 CAO, and the new containment requirements are therefore more realistic until the Water Board adopts a new comprehensive cleanup and abatement order.

Response Reference	Comment Letter #	Comment	Response
MM	12, 13	It is wrong to allow the 10 ppb line to move farther north, shame on the Board if that passes.	See Response LL.
NN	13	Extracting water from pumping wells north and south of Thompson Road might adversely affect the water table in nearby domestic wells.	See Response D.
OO	13, 15	Dubious about the proposed cost of implementing the SEP, especially since it involves laying only ½ mile of pipeline	The Settlement Agreement states that if PG&E has not fully spent the amount of money claimed to complete the SEP, the Water Board may require PG&E to submit a report/audit by an independent third party about expended money claimed. If PG&E is not able to demonstrate to the reasonable satisfaction of Board staff that it has spent the entire SEP amount, the difference between the \$1.8 million suspended for the SEP and the demonstrated reasonable amount spent on the SEP shall be paid to the State Waste Discharge Permit Fund.
PP	13	Supports Settlement Agreement.	No response needed.
QQ	14	Request that all negotiations (between PG&E and Water Board) cease and desist until the CAC can meet and negotiate a settlement.	The Community Advisory Committee (CAC) is not a party to this legal action between the State and PG&E, and therefore is not allowed to participate in settlement negotiations. All members of the community are encouraged to participate in the public comment period and at the public meeting on March 14, 2012 where the Board Members will decide whether to accept or reject the Settlement Agreement
RR	15	No objection to fine amount or water replacement project, but concerns about PG&E implementing project.	Paragraph 12 and its sub-paragraphs in the Settlement Agreement describe the SEP and process should PG&E not complete the SEP. PG&E is agreeing to certify its expenditures and work performance, and subject itself to a third party audit. If the SEP is not completed or is finished under

Response Reference	Comment Letter #	Comment	Response
			budget, PG&E is to pay the difference of \$1.8 million minus actual reasonable costs to the State Waste Discharge Permit Fund. See Response OO.
SS	15	The time allowed for project operation of four and one-half years is excessive. Water Board should reduce project operation time to at least half the current proposal, if not sooner.	If the SEP results in a material failure to satisfy a milestone requirement, the Water Board may hold PG&E liable to pay the entire SEP amount or some portion thereof less the amount of adequately completed work, prior to the SEP completion date of December 31, 2017. The schedule allows time for the CEQA process and other permit and typical construction delays. See Responses OO and RR.
TT	15	Costs seem excessive - Caltrans or the Architect's Office should conduct a review or audit of PG&E's costs.	If the costs appear unreasonable, the Water Board may request a third-party audit. See Responses OO, RR and SS.
UU	15	PG&E should not be allowed to profit (through interest earned on delaying expenditures). Request the Water Board add a requirement to Settlement Agreement that PG&E must provide an annual accounting for project money spent versus money remaining so the interest can be calculated to go back to the project or the State. I think it unlawful to "loan" PG&E money without accruing interest.	Interest on the liability amount suspended for the SEP was not a term negotiated by the parties, but is in fact an incentive for a discharger to propose a SEP instead of paying an entire liability amount. Comment noted. If the costs appear unreasonable, the Water Board may request a third-party audit. See Responses OO, RR, and SS.
VV	15	The term "alleged violations" seems ridiculous in the Settlement Agreement. PG&E	The Prosecution Team firmly believes that these violations occurred. PG&E contests there were violations. The term "alleged violations" is used in the Settlement Agreement because the alleged violations have not been

Response Reference	Comment Letter #	Comment	Response
		was found to be in violation and the word “alleged” should not be used.	adjudicated; a trying body has not heard the facts and evidence and made a ruling (i.e. the Water Board did not hold a contested evidentiary hearing nor make any rulings on whether the violations occurred). The Water Board members have not found PG&E to be in violation.
WW	16	PG&E has reached out to the community in many different ways that we all appreciate and thank them for. On the other hand, the state of California has not helped us other than to provide you as the regulators, and even you are paid by PG&E. To date, you and the state have done nothing to really help those that are hurting in the community. No money has been spent by you in Hinkley to help the people of this community cope with the situation that they wake up to everyday . . .	Since 1987, the Water Board has required PG&E to: define the boundaries of waste chromium in groundwater, sample domestic wells, conduct a background study, implement cleanup actions, provide an independent consultant for the community, and provide bottled water; and, soon, whole household replacement water to some Hinkley residents. The Board staff has also issued fact sheets and held numerous public meetings to keep residents up to date on plume and clean up status. The Water Board continues to hold PG&E accountable to clean up its waste chromium in Hinkley.
XX	16	The replacement water project should be modified to give all money to Hinkley, for Community Center, Ball Fields, and additional improvements to Elementary School.	See Response B.
YY	16	Settlement Agreement wording (referring to term “suspended”) is bothersome. Seems to indicate that if the replacement	The Settlement Agreement states that unused funds at project completion must be submitted to the State Waste Discharge Permit Fund. PG&E will spend at least \$3.6 million in administrative civil liability and the SEP – no less.

Response Reference	Comment Letter #	Comment	Response
		water project can be completed for less than \$1.8 million that the rest of the fine would be done away with.	
ZZ	16	This agreement does not fully address the Injured Party issue and allows for further governmental misdirection of funds.	This enforcement action is between the State and PG&E; individual people are not party to this enforcement action. In this enforcement action, the State is the injured party. Therefore, the administrative civil liability is directed to the State Waste Discharge Permit Fund to assist in cleaning up waste or abating the effects of waste on waters of the state. By entering into the Settlement Agreement, up to \$1.8 million may be directed to the SEP to provide replacement water to the school, a task that is above and beyond what PG&E is required to complete. See Response F.

# **ENCLOSURE 5**

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Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002

Name (optional) COURTNEY & GEOFFREY HEWITT

Address (optional) 

Email address (optional) \_\_\_\_\_

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Provide comment(s)\* on the overall Settlement Agreement:

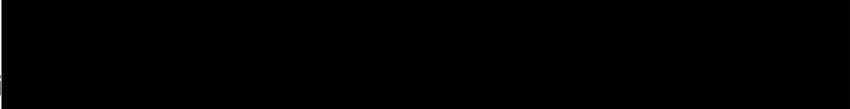
WE BELIEVE THAT IF THE HINKLEY SCHOOL WATER REPLACEMENT PROJECT COMES IN UNDER BUDGET THAT THE REMAINING MONEY SHOULD BE PUT INTO ~~THE~~ HELPING THE COMMUNITY INSTEAD OF GOING TO THE STATE. THEY ARE ALREADY GETTING 50%. CAN'T THEY PUT IN THE AGREEMENT THAT THE COMMUNITY GETS WHATEVER IS LEFT OVER. ~~WE~~ WE ACTUALLY DON'T THINK THAT THE STATE SHOULD GET 50%.

\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

**Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002**

Name (optional) Victoria Harper

Address (optional) 

Email address (optional) 

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

suggest disinfecting new water  
system with U.V. or H<sub>2</sub>O<sub>2</sub> rather  
than toxic chlorine.

2. Provide comment(s)\* on the overall Settlement Agreement:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

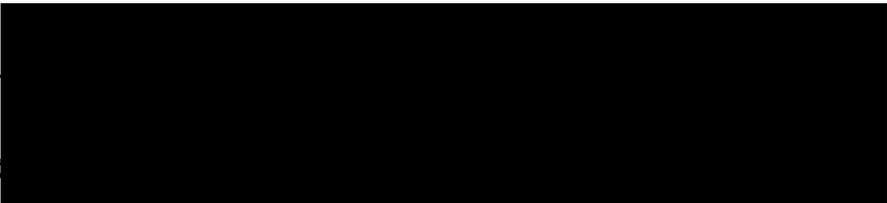
\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002

Name (optional) Susan MacDonald

Address (optional)

Email address (optional)



Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

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2. Provide comment(s)\* on the overall Settlement Agreement:

When the water is extracted  
How <sup>is PG&E</sup> ~~are they~~ going to replace  
the water PG&E is extracting?

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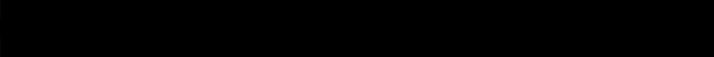
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\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002

Name (optional) NAZ AWAD

Address (optional) 

Email address (optional) 

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

PG & E should be forced to  
provide clean drinking water  
to whats left of the School children  
eventually this school will probably die out.

2. Provide comment(s)\* on the overall Settlement Agreement:

the 3.6 M. should not be the final settlement,  
the water Board should be able to continue  
penalizing PG & E if they continue to violate  
or fail to clean up. PG & E should also be  
forced to re-imbese or and or pay damage  
they caused due to destroying the community  
of Hinkley, it's my opinion that Hinkley  
will never be again.

\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002

Name (optional) \_\_\_\_\_

Address (optional) \_\_\_\_\_

Email address (optional) \_\_\_\_\_

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

Why is the School being singled out  
for ~~water~~ the PG&E project, why  
is not the neighborhood surrounding the  
School receiving water.

2. Provide comment(s)\* on the overall Settlement Agreement:

\_\_\_\_\_  
\_\_\_\_\_  
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\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

**Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002**

Name (optional) \_\_\_\_\_

Address (optional) \_\_\_\_\_

Email address (optional) \_\_\_\_\_

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

We do not agree with the settlement.  
It is not fair that the State receives  
1.8 million sooner than the school receiving  
the water.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Provide comment(s)\* on the overall Settlement Agreement:

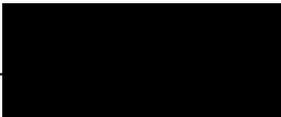
PG&E is getting off the hook and  
the community is suffering.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.*

Comments on Settlement Agreement  
Between PG&E and the  
Lahontan Regional Water Board (Prosecution Team)  
for Administrative Civil Liability,  
Alleged Violations of  
Cleanup and Abatement Order R6V-2008-0002

Name (optional) Joel Valenzuela

Address (optional) 

Email address (optional) \_\_\_\_\_

Check the box if you are not on our mailing list and want to be:

1. Provide comment(s)\* on the Hinkley School water replacement project:

Cleanup and abatement Order R6V-2008-0002  
is a bad deal between the Water Board and  
PG&E. It is against Hinkley, it is a clean  
cut "Get out of Jail Card for PG&E. I squashes  
2008 clean up order agreement. It changes  
that enlarges the boundaries for PG&E. It  
raises from 3.1 parts to 10. parts in be favor of  
PG&E. It stops penalties against PG&E.  
Trade off - our community. All of these things

2. Provide comment(s)\* on the overall Settlement Agreement:

are ~~needed to make it fair like~~ using the  
school, the School Board as pawns,  
Keep the original mandate of 2008 in  
place!

\*all comments will be made public as part of the March 14-15, 2012 Water Board meeting packet.

February 16, 2012

Ms. Lauri Kemper  
Lahontan Water Board  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 96150

Dear Ms. Kemper:

I am the Co-Chair of the Hinkley Community Advisory Committee and a member of the Barstow Unified School District Board of Trustees. I would like to strongly support the settlement agreement which requires a new permanent replacement water supply to Hinkley School. The only K-8 school in the Barstow Unified School District, this California Distinguished School is an important centerpiece in the Hinkley community. Because of its strong record of academic excellence, the school serves not only local students, but also students who have requested to attend from other areas within our district. I strongly urge the Board to accept the agreement and move forward without delay as this replacement system will help alleviate the concerns of parents and staff regarding the quality of the water.

While I greatly appreciate that all parties want to see as much of the money as possible benefit the Hinkley community, I believe all of the money, not just half, should be used on projects within the community. Hinkley is the damaged party and should benefit from this fine. In addition, I would like to request that it be written into the settlement agreement, that if all of the \$1.8 million is not completely expended on the water replacement system project at the school, that the remainder be used on other projects within the Hinkley community rather than going to the State.

Sincerely,

  
Julie Clemmer



February 14, 2012

**TO:** Board of Trustees

**FROM:** Jeff Malan, Interim Superintendent

**SUBJECT:** Letter of Support: To Support Proposed PG&E Hinkley Community Benefit Project at Hinkley School

**RECOMMENDATION:**

Recommending the Board of Trustees adopt the Letter of Support- To Support Proposed Pacific Gas & Electric (PG&E) Hinkley Community Benefit Project to provide a new permanent replacement water supply at Hinkley School.

**SUPPORTING DATA:**

1. **Background**

- a. On February 1, 2012, a settlement agreement was reached between the Lahontan Regional Water Quality Control Board (LRWQCB) prosecution team and PG&E in the matter of an administrative civil liability for alleged violations of the 2008 cleanup and abatement order requiring PG&E to contain the plume of water contaminated by chromium 6.
- b. At a Special Board meeting held on February 10, 2012, representatives from PG&E were present to describe and discuss the company's recently approved settlement agreement with the LRWQCB whereby PG&E has agreed to the imposition of \$3,600,000 in administrative liability and will pay \$1.8 million to the State Water Resources Control Board Waste Discharge Fund, with the remaining \$1.8 million in penalties dedicated to the completion of a Supplemental Environmental Project (SEP) titled the Hinkley Community Benefit Project.

2. **Current Considerations/Alternatives**

- a. The proposed Hinkley Community Benefit Project will provide a new permanent replacement water supply at Hinkley School where fresh water will be supplied via extending an existing PG&E pipeline which currently services their injection facilities.
- b. Pursuant to State Water Resources Control Board policy, the LRWQCB must provide a thirty-day public notice and comment period for consideration by the Regional Water Board members.

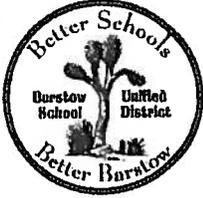
- c. The State Water Resources Control Board will consider whether to accept or reject the proposed agreement at their regularly scheduled meetings on March 14 and 15, 2012.
- d. Upon approval of the agreement, PG&E will coordinate planning and implementation of the proposed project with the District.

3. **Financial Implications**

None.

4. **Superintendent's Comments**

Superintendent recommends approval.



# Barstow Unified School District

## Superintendent's Office

551 South Avenue "H" ☒ Barstow, CA 92311  
(760) 255-6006 ☎

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February 15, 2012

Ms. Lauri Kemper  
Assistant Executive Office  
Lahontan Water Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150

**Subject: Barstow Unified School District Board Formal Comments Regarding *Hinkley Community Benefit Project* (Supplemental Environmental Project or "SEP")**

Dear Ms. Lauri Kemper:

The purpose of this letter is to provide you with formal comments from the Barstow Unified School District Board (the "School Board") regarding the recent settlement agreement between Pacific Gas and Electric Company (PG&E) and the Lahontan Regional Water Quality Control Board and the proposed \$1,800,000 Supplemental Environmental Project ("SEP") titled the *Hinkley Community Benefit Project* for providing new permanent replacement water supply at the Hinkley School.

Last month, the District provided PG&E with a list of our highest priority projects for the Hinkley School for this year as they relate to PG&E. We were pleased to see that one of these priorities, namely the installation of a water replacement or water treatment system for the Hinkley School, is proposed to be funded by PG&E as part of the settlement agreement.

On Friday, February 10, 2012, the School Board conducted a special public meeting and work study session in order to better understand and discuss the proposal. Representatives from PG&E were invited to attend the meeting to present information and answer questions. Based on the School Board's deliberations and direction at the meeting, I am pleased to provide you with the following comments regarding the SEP:

1. The School Board unanimously supports the SEP as it is consistent with the priorities for the Hinkley School described in our letter of January 17, 2012, to PG&E.
2. The School Board is committed to coordinating with PG&E on its implementation efforts.
3. In the event that additional funds from the settlement agreement become available for use in the community, the School Board requests that these funds be considered for the support of other school priorities and water-related projects.

Finally, on behalf of the School Board, we want to express our appreciation to PG&E and the Lahontan Regional Water Quality Control Board for the recognition and consideration of the Hinkley School and Hinkley community.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Malan". The signature is fluid and cursive, with the first name "Jeff" being more prominent than the last name "Malan".

Jeff Malan  
Interim Superintendent  
Barstow Unified School District

cc: Ray Gonzalez, Pacific Gas and Electric Company

**BARSTOW UNIFIED SCHOOL DISTRICT**  
551 South Avenue H, Barstow, California 92311

**AGENDA**  
Special Board Meeting  
February 14, 2012, 5:45 p.m.  
Board Room, Education Center

**PLEASE NOTE:** Non-exempt agenda related documents distributed to the Board of Trustees prior to the Board Meeting may be viewed in the Superintendent's Office, 551 South Avenue H, Barstow, California 92311. THE SPECIAL BOARD MEETING WILL BEGIN AT 5:45 P.M.

The proceedings of this meeting are being tape recorded. Persons wishing to address the Board are requested to identify themselves. Individuals who require special accommodation, including but not limited to an American sign language interpreter, accessible seating, or documentation in accessible formats, should contact the Superintendent or designee at least two days before the meeting date.

**A. CALL TO ORDER/FLAG SALUTE**

Time Chairman

**ROLL CALL**

**C. BUSINESS FROM THE FLOOR**

**H. ADOPTION OF AGENDA**

**L. DISCUSSION ITEMS**

**I. General**

1. **Letter of Support: To Support Proposed PG&E Hinkley Community Benefit Project at Hinkley School**  
(Recommending the Board of Trustees adopt the Letter of Support- To Support Proposed Pacific Gas & Electric (PG&E) Hinkley Community Benefit Project to provide a new permanent replacement water supply at Hinkley School.)

**ACTION**

**O. ADJOURNMENT**

**THE PEOPLE OF HINKLEY, BY THE PEOPLE AND FOR THE PEOPLE  
WE THE PEOPLE**

On behalf of and for the People, by Nick Panchev



**STATE OF CALIFORNIA**

**Comment Letter #10**

**Emergency Petition by the People of Hinkley, CA**

The People's Constitutional Initiative, before the Instituted Government:

**State Water Resources Control Board Lahontan Region**

**IN RESPONSE TO SOUGHT PUBLIC COMMENTS:**

**IN THE MATTER OF:**

**PACIFIC GAS AND ELECTRIC  
COMPANY**

**ADMINISTRATIVE CIVIL  
LIABILITY**

**ORDER No. R6V-2012-00XX**

**SETTLEMENT AGREEMENT  
AND STIPULATION FOR  
ENTRY OF ORDER**

**(PROPOSED)**

The People of Hinkley, California, by the People and for the People, We the People, has spoken on February 18, 2012 and has executed an EMERGENCY PETITION, in response to the sought public participation, on above referenced matter.

Inclusive, incorporating the Bagley-Keene Open Meeting Act; Administrative Adjudication Statutes; Water Boards' Meeting Regulations; and Rules.

The undersigned Petitioners, by attached hereto EMERGENCY PETITION, hereby petition the California Regional Water Quality Control Board, Lahontan Region, to consider this Emergency Petition, executed by the People of Hinkley, California, as a Quash / Strike, in its entirety, of that certain Order No. R6V-2012-00XX, Settlement Agreement and Stipulation for Entry of Order (Proposed).

In the Matters of: Pacific Gas and Electric Company Administrative Civil Liability, on the following grounds:

1. Omitted significant facts, associated therewith the Hinkley's People Simple Majority Life, Limb, Health, Safety and Welfare, the society as a whole, based upon evidentiary exhibits. (To be presented at adjudicative proceedings
2. Said Settlement Agreement and Stipulation is unlawful absent of due process of law, inappropriate, improper, and inadequate, on further distinctively stipulated several grounds, not limited to of not serving the best interest of The People of Hinkley, California.
3. Said Settlement Agreement and Stipulation is setting an extremely dangerous precedence, of National implication, not limited to exhibiting extreme lax of enforcement, that can negatively binds future actions in judicial and criminal venues by the People, on Constitutional and inherent right's grounds.
4. The People's Objection only will not be in the best interest of the People and in the society as a whole, construed as severely inadequate remedy.

THEREFORE, The State Water Board should only impose the Punitive Penalty on PG&E, sought at \$3.6 million and receive such punitive amount within 30 days, absent of any stipulations and settlement agreements.

In the absence of stay on quash/strike of said Order/Settlement Agreement, all administrative remedy will be declared as exhausted and The People of Hinkley, CA may commence litigations in the Judicial Venues, invoking the due process of law.

## **POINTS AND AUTHORITY**

State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters.

The People has delegated to the Regional Boards, in specific, The State Water Resources Control Board, Lahontan Region, the tasks to develop and enforce water quality and implement plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

State and Lahontan Board's task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the State and Regional Water Quality Control Boards and as delegated by The People of the State of California.

**CALIFORNIA CONSTITUTION:** All political power is inherent in the People. Government is instituted for their protection, security, and benefit, and they have the right to alter or reform it when the public good may require.

**CALIFORNIA GOVERNMENT CODE, SECTION 11120 et seq. 11120.**

It is the public policy of this state that public agencies exist to aid in the conduct of the People's business...

**CALIFORNIA GOVERNMENT CODE, SECTION 54950 et seq. 54950.**

In enacting this chapter, the Legislature finds and declares that the public commissions, boards and councils and the other public agencies in this State exist to aid in the conduct of the people's business.

The legislative power of this State is vested in the California Legislature which consists of the Senate and Assembly, but the People reserve to themselves the powers of initiative and referendum.

California's new "anti-SLAPP" statute, Code of Civil Procedure 415.16.

The United States and California constitutions grant every person the right to participate in government and civic affairs, speak freely on public issues, and petition all government officials for redress of grievances.

Yet, individuals and community groups are often sued for exercising these constitutional rights.

These suits are know as "SLAPPs," or "Strategic Law suits Against Public Participation." Courts have adopted this acronym for any lawsuit filed primarily to chill the defendant's exercise of First Amendment rights –such as free speech, petitioning a government body for redress of grievances, or pursuing legal remedies in a court of law. (See *Briggs v. Eden Council for Hope & Opportunity* (1999) 19 Cal.4th 1106, 1109, fn. 1(Briggs).)

Victims' Bill of Rights - Marsy Right. California Constitution, Article I, Section 28 (b) The above Marsy Rights are to be provided to each crime victim pursuant to Penal Code Section 679.026 Victims' Bill of Rights Act of 2008: Marsy's Law(Proposition 9 Passed 11-4-2008) To be treated with fairness and respect for his or her privacy and dignity, and to be free from intimidation, harassment, and abuse, throughout the criminal or juvenile justice process. To be reasonably protected from the defendant and persons acting on behalf of the defendant.

To restitution.

(A) It is the unequivocal intention of the People of the State of California that all persons who suffer losses as a result of criminal activity shall have the right to seek and secure restitution from the persons convicted of the crimes causing the losses they suffer.

(B) Restitution shall be ordered from the convicted wrongdoer in every case, regardless of the sentence or disposition imposed, in which a crime victim suffers a loss.

(C) All monetary payments, monies, and property collected from any person who has been ordered to make restitution shall be first applied to pay the amounts ordered as restitution to the victim.

California Constitution: Article II, Section 8 of the California Constitution states that to place a constitutional amendment on the ballot, signatures equaling 8% of this vote are required. To place a statute, or veto referendum on the ballot, signatures equaling 5% of this vote are required.

People of Hinkley, California, has set precedence for a start of a Statewide Initiative, in regards to Public Participation before California State Water Boards.

ATTACHED HERETO: True copies of executed EMERGENCY PETITION by the People of Hinkley, California, by the People and for the People, We the People.

DATED: February 20, 2012

*Nick Panchev*

By: \_\_\_\_\_

Nick Panchev

On behalf of and for The People of  
Hinkley, California, We the People

## EMERGENCY PETITION

AN INITIATIVE BY THE PEOPLE OF HINKLEY, CALIFORNIA 92347      February 18, 2011

The undersigned Petitioners hereby petition the California State Water Resources Control Board and the California Regional Water Quality Control Board, Lahontan Region, to consider this Emergency Petition as a Quash/ Strike, in its entirety, of that certain Order No. R6V-2012-00XX, Settlement Agreement and Stipulation for Entry of Order (Proposed); In RE: Pacific Gas and Electric Company/ PG&E Corporation, the Polluter-Discharger that has committed violations, on the following grounds:

1. Omitted significant facts, associated therewith the Hinkley's People Simple Majority Life, Limb, Health, Safety and Welfare, the society as a whole, based upon evidentiary exhibits.
2. Said Settlement Agreement and Stipulation is unlawful absent of due process of law, inappropriate, improper, and inadequate, on further distinctively stipulated several grounds, not limited to of not serving the best interest of The People of Hinkley, California.
3. Said Settlement Agreement and Stipulation is setting an extremely dangerous precedence, of National implication, not limited to exhibiting extreme lax of enforcement, that can negatively binds future actions in judicial and criminal venues by the People, on Constitutional and inherent right's grounds.
4. The People's Objection only will not be in the best interest of the People and in the society as a whole, construed as severely inadequate remedy.

The State Water Board should only impose the Punitive Penalty on PG&E, sought at \$3.6 million and receive such punitive amount within 30 days, absent of any stipulations and settlement agreements. In the absence of quash/strike of said Order/Settlement Agreement, all administrative remedy will be declared as exhausted and The People of Hinkley, CA will commence litigations in the Judicial Venues

Petitioner:

Name	Signature
YVONNE KIRKPATRICK	<i>Y. Kirkpatrick</i>
HERBERT V. NETHERY	<i>Herbert V. Nethery</i>
RON LATER	<i>Ron Later</i>
EDNA LATER	<i>Edna Later</i>
LLOYD K VINSON	<i>Lloyd K Vinson</i>
JULES H. MARTINEZ	<i>Jules H. Martinez</i>
MARTHA COARCIA	<i>Martha Coarcia</i>
ROL JOHNSTON	<i>Rol Johnston</i>
SUSAN MACDONALD	<i>Susan Macdonald</i>
JOHN A. MATA	<i>John A. Mata</i>
JOANNA CASTRO VELASQUEZ	<i>Feliciano Padilla</i>

Emergency Petition (No.4) processed by: Nick Panchev, on behalf of and for the People of Hinkley, County of San Bernardino, California

Page 1 of 4

# EMERGENCY PETITION

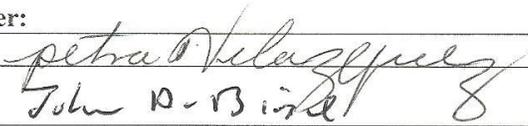
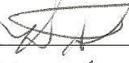
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Petitioner:

Name	Signature
petra Velazquez John D. Bird	
James E Seifert	
Mary Lou Seifert	Mary Lou Seifert
Joan D. Bird	Joan D. Bird
Robert L Morris	R L Morris
DAVID L. SOWARDS	
Claudia Garcia	Claudia Garcia
Alvex Tapiq	Alvex Tapiq
Martina Alvarez	Martina Alvarez
Salvador Alvarez	Salvador Alvarez
Esperanza	Esperanza V.

Emergency Petition (No.4) processed by: Nick Panchev, on behalf of and for the People of Hinkley, County of San Bernardino, California

Page 2 of 4

## EMERGENCY PETITION

AN INITIATIVE BY THE PEOPLE OF HINKLEY, CALIFORNIA 92347      February 18, 2011

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The State Water Board should only impose the Punitive Penalty on PG&E, sought at \$3.6 million and receive such punitive amount within 30 days, absent of any stipulations and settlement agreements. In the absence of quash/strike of said Order/Settlement Agreement, all administrative remedy will be declared as exhausted and The People of Hinkley, CA will commence litigations in the Judicial Venues

Petitioner:

Name	Signature
EDWARD A. EARLE JR John Frazier	
BRIAN MILLER	
ANDY & SUE, MARTINEZ	
David Tapia	
JOHN CASTRO	
Ricardo Gomez	
Danny Kearney	

Emergency Petition (No.4) processed by: Nick Panchev, on behalf of and for the People of Hinkley, County of San Bernardino, California

## EMERGENCY PETITION

AN INITIATIVE BY THE PEOPLE OF HINKLEY, CALIFORNIA 92347 February 18, 2011

The undersigned Petitioners hereby petition the California State Water Resources Control Board and the California Regional Water Quality Control Board, Lahontan Region, to consider this Emergency Petition as a Quash/ Strike, in its entirety, of that certain Order No. R6V-2012-00XX, Settlement Agreement and Stipulation for Entry of Order (Proposed); In RE: Pacific Gas and Electric Company/ PG&E Corporation, the Polluter-Discharger that has committed violations, on the following grounds:

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The State Water Board should only impose the Punitive Penalty on PG&E, sought at \$3.6 million and receive such punitive amount within 30 days, absent of any stipulations and settlement agreements. In the absence of quash/strike of said Order/Settlement Agreement, all administrative remedy will be declared as exhausted and The People of Hinkley, CA will commence litigations in the Judicial Venues

**Petitioner:**

Name	Signature
<i>Shantel A. D'Ha</i> <i>Reynolds D'ha</i>	<i>Shantel A. D'Ha</i> <i>Reynolds D'ha</i>

Emergency Petition (No.4) processed by: Nick Panchev, on behalf of and for the People of Hinkley, County of San Bernardino, California



# California Regional Water Quality Control Board Lahontan Region

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150  
(530) 542-5400 • FAX (530) 544-2271  
<http://www.waterboards.ca.gov/lahontan>



**Matthew Rodriguez**  
Secretary for  
Environmental Protection

**Edmund G. Brown Jr.**  
Governor

**Comment Letter #11**

February 13, 2012

Ms. Lauri Kemper, Assistant Executive Officer  
CA Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Blvd.  
South Lake Tahoe, CA 06150

Mr. Stanford Hartman, Vice President – Law Department  
Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94105-1814

## QUESTIONS ON SETTLEMENT AGREEMENT AND STIPULATION ENTRY OF ORDER (SETTLEMENT)

I and other members of the CA Regional Water Quality Control Board, Lahontan Region (Water Board) Advisory Team have reviewed the Settlement. We acknowledge the effort that went into its preparation and the willingness of both the Water Board Prosecution Team and Pacific Gas and Electric Company (PG&E) (referred to jointly as "Parties") to reach a settlement on the violations alleged by the Prosecution Team.

We believe that some aspects of the Settlement need to be clarified to eliminate possible ambiguities in future interpretation of the Settlement and to ensure that both internal and external expectations are clear. Additionally, we have questions on specific aspects of the Settlement, particularly how the Settlement Agreement ensures that the Project goal of reducing pumping from the area of the Hinkley School is met.

### Questions on Settlement

1. Conversion of Paragraphs 9 and 10 of the Settlement to an amended Cleanup and Abatement Order (CAO)

Comment: Paragraph 11 of the Settlement states "Paragraphs 9 and 10 of this Settlement and Stipulation shall be incorporated into an amended 2008 Cleanup and Abatement Order."

Questions:

- A. Is it the intent that the Settlement directly amends the 2008 CAO or will the Prosecution Team be proposing a separate proposed order to accomplish this amendment and if so, when?
- B. Is it the intent of the Settlement that Paragraphs 9 and 10 be included verbatim into an amended CAO? Our concern is that Paragraphs 10.a., 10.b., and 10.c. of the Settlement include language that both Parties must agree to a modification of certain requirements. This language is not appropriate in an order adopted by the Water Board as it limits the Water Board's ability to later modify or amend portions of an order. Additionally, the Settlement uses the term "Settling Respondent" to refer to PG&E while the 2008 CAO uses Discharger to refer to PG&E and refers to "this Settlement Agreement and Stipulation," which would be out of context in the 2008 CAO. If it is not the intent to include Paragraphs 9 and 10 verbatim, please provide specific language for the Water Board's consideration.
- C. Paragraph 23 of the Settlement indicates the Settling Respondent waives its right to petition the Water Board adoption of the Order. We believe this refers to the Settlement and Stipulation for Entry of Order. Should this waiver also refer to the amended CAO?
- D. If, in the future, the Water Board determines that an amendment to the CAO that incorporates the requirements of Paragraphs 9 and 10 of the Settlement is needed for any reason, do the Parties intend that the Settlement Agreement limits the ability of the Water Board to unilaterally modify requirements in a manner that may not be consistent with the Settlement (e.g. more specific capture requirements for area north of Thompson Road or imposition of final cleanup requirements)? If not, we believe the Settlement should explicitly provide for that possibility.

## 2. Enforceability of the Settlement

Comment: Paragraph 11 includes language that violations of Settlement may subject PG&E to liability pursuant to the California Water Code.

Question:

- A. What is the Water Board's authority under the Water Code to subject PG&E to civil liability for violations of the Settlement Agreement and Stipulation? (Note: We acknowledge that if provisions of the Settlement are made part of an amended CAO, violations of the CAO would subject PG&E to enforcement under the California Water Code.)

### 3. Description of Project in context of SEP goals

Comment: As described in many places in the body of the Settlement and in Attachment A to the Settlement, the goal of the SEP is to reduce groundwater pumping in the area of the Hinkley School in order to reduce the possibility that groundwater pumping will draw the contamination plume to this area of the aquifer. Therefore, the goal of the SEP will not be achieved until an alternate water source is available and is utilized for an extended period of time (up to 20 years). However, the Settlement contemplates that PG&E's obligations under the Settlement terminate when the infrastructure is built (Paragraph 12.f. of the Settlement) and possibly before the infrastructure is complete (Paragraph 9 of Attachment A: "exhaustion of the SEP Allocated Fee").

#### Questions

- A. How does the Water Board ensure that the project goal of reducing pumping in the area is met if PG&E's obligations under the SEP end when construction of the pipeline and other appurtenant facilities are complete or earlier if the \$1.8M is expended? How does the Water Board ensure that PG&E continues to provide water to the Hinkley School for the 20 year duration?
- B. If the goal of the project funded by the \$1.8M is intended to reduce pumping, as described in the Settlement, and not just to construct or partially construct the infrastructure to support the Project, how does the criteria in Paragraph 14 of Attachment A for assessing project success adequately determine if the Project goal of reducing pumping in the area of the Hinkley School is being met? How are the requirements in the SEP Policy for tracking and reporting whether "expected outcome(s) or performance standard(s)" are met – when the criteria used to determine the project's success is "timely implementation of Project components" and not assessment of reduced pumping from the area?
- C. Has the School District agreed to take the water? (There is a reference in Paragraph 6.a. of Attachment A to the Settlement to a letter from the Barstow Unified School District. The letter is not included in the Settlement.)
- D. How are the goals of the SEP met if the School District decides to not take the water? (See Paragraph 8 of Attachment A of the Settlement, stating that PG&E shall provide water for 20 years or until the School District chooses alternative water supply.) Could an "alternative water supply" be the existing Hinkley School wells and if so, how does this achieve the Project goals?

4. Relationship of the SEP to Other Water Board Orders (Water Board Order No. R6V-2011-0005A1)

Comment: During 2011, the groundwater quality in the Hinkley School wells generally fluctuated between 1 and 2 ppb hexavalent chromium. While it is anticipated that PG&E's remedial actions will contain the chromium plume to the east of the Hinkley School wells, we believe it is appropriate to understand the implications if hexavalent chromium in the Hinkley School wells ever meet the trigger requirements in Water Board Order No. R5V-2011-0005A1, requiring replacement water to be provided prior to the time replacement water is provided pursuant to the SEP.

Questions:

- A. If replacement water is required to be provided to the Hinkley School under the provisions of R6V-2011-0005A1, how would the Parties reconcile the completion schedule in the SEP with the compliance schedule in Water Board Order No. R6V-2011-0005A1 for providing replacement water (not bottled water)?

5. Final Cleanup and Abatement Order and WDRs

Comment: As you know, the Water Board is in the process of preparing an environmental impact report to support the issuance of a cleanup and abatement order that will set forth the requirements for final cleanup.

Question:

- A. How do the Parties intend that this Settlement Agreement, particularly Paragraphs 9 and 10, will limit the Water Board's discretion in setting final cleanup requirements?

6. Cost of the SEP

Comment: Paragraph 12.b.1. of the Settlement states "The cost of the SEP will be referred to as the SEP Amount" which is \$1.8M. Paragraph 12.b.3. of the Settlement states that "Settling Respondent agrees to fund and perform the SEP..." However, Paragraph 9 of Attachment A of the Settlement states that PG&E's obligations under the SEP terminates upon exhaustion of the \$1.8M and "PG&E may decide to complete project components at its discretion." Paragraph 12.i. of the Settlement requires PG&E to pay the difference between the \$1.8M (suspended liability) and the amount spent on implementing the SEP (if it is less than the suspended liability) as an administrative civil liability.

Question:

- A. Please confirm that the Settlement contemplates that PG&E is required to fully implement the SEP even if costs exceed \$1.8M. If this is accurate, we believe it is appropriate and necessary to include specific language to that effect in the Settlement and clarifying that the Settlement language supersedes that in Attachment A to the Settlement if there are conflicts.

7. Failure to Complete the SEP

Comment: Paragraph 12.j. of the Settlement provides for partial credit of the SEP Amount should PG&E complete portions of the SEP but not the entire SEP. As described in Question 3 above, the goal of the SEP is to eliminate the pumping at the Hinkley School wells thereby reducing the possibility that the plume will be drawn towards the west.

Question:

- A. Please explain how the goal of the SEP will be met (see Section H.3. of the State Water Board SEP Policy) if PG&E does not complete the SEP and why it should be credited for any portion of the SEP Amount if the goal is not met.

Questions on Sections 9 and 10 of the Settlement

8. Capture of chromium plume south of Thompson Road

Comment: First sentence in Paragraph 9 states: "... Respondent shall achieve and maintain hydraulic capture ...." This phrase implies two actions: achieve capture and maintain capture. Paragraph 9.a. of the Settlement states "Settling Respondent shall operate and maintain the groundwater capture system that exists as of January 15, 2012 ... such that hydraulic capture is maintained..." This implies that containment has been achieved.

Question:

- A. Please clarify if the Parties intend that the Settlement only require that capture be maintained rather than first be achieved by a future date and then be maintained.

## 9. Demonstration of plum capture south of Thompson Road

## Questions:

- A. Do the terms "well pair metrics" in Paragraph 9.c.1. and "capture metrics" in Paragraph 9.c.2. mean the same thing and, if so, shouldn't they be phrased identically?
- B. Should the term "well pair metrics" in Paragraph 9.c.1. refer to both well pairs and well triplets?
- C. Does the "three consecutive month" standard in Paragraph 9.c.1. apply when any well pair/triplet does not meet control limits in three consecutive months or only when the same well pair/triplet does not meet control limits in three consecutive months?
- D. Same issue as raised in question 9.C. above applied to Paragraph 9.c.2.
- E. Is it appropriate to interpret Paragraph 9.c.2. such that PG&E is out of compliance once three non-consecutive months demonstrate that control limits are not met, or is non-compliance only triggered when a full 12 months of data evaluation is complete?
- F. Is the one year (July 2012 through July 2013) reference a moving 12 month period or is it specific to July of one year through June of the following year?
- G. Is the requirement in Paragraph 9.d. to submit a contingency plan triggered when the numeric criteria in Paragraphs 9.c.1. and 2. are exceeded or only when the Water Board makes an explicit finding that PG&E is out of compliance, in accordance with Paragraph 9.c ("Regional Water Board may find the Settling Respondent out of compliance...")?
- H. In Table A-1 in Attachment D to the Settlement, in the well triplet column on the row that begins with MW-82s, should there be a third well location specified?

## 10. Groundwater remediation criteria for areas north of Thompson Road

## Questions:

- A. What criteria will be used to determine if PG&E has "maximized extraction and chromium removal" as specified in Paragraph 10.a?
- B. What criteria will be used to determine if "additional extraction is needed" as specified in Paragraph 10.b?
- C. If criteria are not specified for Paragraphs 10.a. and b., how will the Water Board be able to determine if PG&E has complied with these requirements?

Supplemental Environmental Project

## 11. Scope of SEP subject to use of \$1.8M

## Questions:

- A. Can the \$1.8M be used for planning, design, environmental review, and permitting (both construction and water system operation)?
- B. What maintenance activities are contemplated by the phrase "The SEP includes construction and maintenance of new facilities through the SEP Completion Date of December 31, 2017" in Paragraph 12.c. of the Settlement?
- C. Please clarify the intent of the phrase "...but does not include plans for long-term maintenance, except for maintenance of equipment on Settling Respondent's property" as this appears to allow PG&E to fund maintenance of equipment on its property from the \$1.8M after December 31, 2017?
- D. Is this pipeline intended to be used to deliver water for uses other than at the Hinkley School and, if so, how are costs that can be charged against the SEP Amount and those associated with the other use to be determined? Specifically, will costs be assigned based on straight percentages or on incremental costs?
- E. Please justify the four plus years for project construction as identified in the timetable in Paragraph 12 of Attachment A to the Settlement (portions of calendar year 2013 and calendar years 2014 through 2017).
- F. The Settlement requires PG&E to provide water to the Hinkley School that meets drinking water standards. Are the Prosecution Team and PG&E willing to specify a maximum level of hexavalent chromium that will be provided to the Hinkley School if an MCL for hexavalent chromium has not been established when the project is complete?

Compliance with the California Environment Quality Act (CEQA)

## 12. Paragraph 3 of the Order of the Water Board is a CEQA finding to support the Water Board's adoption of the Settlement.

## Question:

- A. Would PG&E be willing to indemnify and defend the Water Board for any CEQA challenge related to approval of this Order?

The Advisory Team is willing to meet with the Parties to clarify these questions or to informally review any response. Additionally, we would like to receive a response to these questions and, if proposed, a modified version of the Settlement at least a week

prior to the March 14, 2012 Water Board meeting so we can review the changes and provide a copy to the Water Board in advance of the meeting.

Please direct any comments or questions to me at (530) 542-5412 or [hsinger@waterboards.ca.gov](mailto:hsinger@waterboards.ca.gov).



Harold J. Singer  
Executive Officer

- c. Kim Niemeyer, State Water Board, Office of Chief Counsel (e-mail only)
- Laura Drabandt, State Water Board, Office of Enforcement (e-mail only)
- Jim Potter, Office of the Attorney General (e-mail only)
- Michael Zarro, Office of the Attorney General (e-mail only)
- Chuck Curtis, Lahontan Water Board (e-mail only)
- Scott Ferguson, Lahontan Water Board (e-mail only)
- Lisa Dernbach, Lahontan Water Board (e-mail only)
- Tracy J. Egoscue, Egoscue Law Group (e-mail only)
- Drew Page, Law Office of J. Drew Page (e-mail only)
- Juan Jayo, Pacific Gas and Electric Company (e-mail only)
- Cheryl Bilbrey, Pacific Gas and Electric Company (e-mail only)
- Kevin Sullivan, Pacific Gas and Electric Company (e-mail only)

>>> Daron Banks <[REDACTED]> 2/21/2012 12:54 AM >>>

Laurie I know that you at the Lahontan regional office have done a lot to move forward with our situation, but I feel that if the board agrees to this settlement then all of you will be selling out not only yourselves but the people of Hinkley. When Lahontan was given the responsibility with the oversight of PG&E in the clean up of the chromium 6 they were asked to do the right thing and for almost twenty years did very little boarding on negligence and allowed PG&E to do as they pleased by relying on them to be honest. I realize that they were ordered to do the right thing by the board but because someone was not standing over their shoulder they did not make it better the plume and exposure got much worse. Both you and the board know that PG&E lies, hides evidence and even commits fraud all while under the watch of the board. PG&E is in this position because they did not care and thought it would just go off the grid and continue to be monitored from afar and here we are as we know the plume grown by more than double, some of you have put forth in my opinion a good and honest effort but it's not enough as we know sometimes doing the right thing is hard but it's always right. PG&E needs to be held to their original order on plume expansion It's their fault that the plume moved so far north, east and west the last few decades. It's now time for them to pay the entire fine not a lesser amount allowing them to bargain out of their penalty is wrong on top of that the settlement allows them to move the 10 ppb line further north shame on the board if that passes. I feel that the powers that be at least need to be honest and say that due to political reasons or money reasons we are once again caving to pressure and giving them an easier way out. The original order needs to stay in place as far as the plume migration is concerned and continue to fine them everyday they are out of compliance if you do that they may get off their high horse and start controlling the situation better because if the board or anyone else thinks that the plume is in anyway contained they are either ignorant, blind or dishonest. All of you know that the plume has migrated way further north than is actually shown on the PG&E plume maps when is the board going to say enough, at some point even I am going to start to believe the paranoid groups of people that say the board is just as dirty as PG&E is. I have been a strong advocate of Lahontan but enough is enough stop allowing them to continue the lie. I'm sorry but the way this is being handled is a travesty of justice. The school is losing students and will lose many more in the next few years it will not be open for to many more years I will email you I told you so it will happen so allowing PG&E to provide them water is a waste and another scam. In my case I know that some people say that my levels are safe and below the state standard is that supposed to comfort me when I give my son a shower or expose him in anyway to this known poison I do not need to lecture you or anyone at Lahontan about what chromium 6 does to a human being if I do need to remind anyone then they can speak to my father in law about how his mom died or my wife about why she gets uncontrollable bloody noses or at times is in debilitating pain from lupus. As you know no one can tell us what hex chromium does to a person at low levels because there is no research to tell us. Are you or anyone else willing to risk your loved ones I would hope not. My levels were at ND and they continue to rise at every test as does my in laws we are in the plume. I know that the state bureaucrats have some input or control on what decisions are made or how orders are written but someone needs to step up and hold PG&E completely liable in every way or at least hold them to the orders and penalties that have already been justly given to them. Please move the plume out to its real line you know what is right. PG&E has had decades to do the right thing but has not instead they saved themselves and their share holders billions. They are still dictating or manipulating the direction of this situation where is the justice in that.

Sincerely, Daron Banks

Sent from my iPad

## Verbal Comments from public at Feb. 16, 2012 meeting at Hinkley School re the Water Board's Settlement Agreement with PG&E

1. Resident objected to the negotiated amount of \$3.6 million. Believes State should go after the full ACL amount of \$5.4 million even if it means no Settlement Agreement.
2. Resident objected to PG&E being given a "clean slate" of future fines for violations of the 2008 CAO. Believes that 2008 CAO should remain in effect and PG&E remain in violation until it comes into compliance with plume containment at the 4 ppb line.
3. Resident didn't think that a new water system was needed at the school and that bottle water supplied by PG&E is good enough.
4. PG&E should be required to maintain the new school water supply project forever, or as long as the plume remains in groundwater, instead of the 20 years stated in the Settlement Agreement.
5. Resident disagreed with re-setting the chromium plume containment number from 4 ppb to 10 ppb. Feared that PG&E would push for future cleanup to only the 10 ppb line.
6. By re-setting the plume containment line to 10 ppb, resident feared that chromium in groundwater at lesser concentrations migrating north of Thompson Road would never get cleaned up.
7. Resident objected to the State getting 50 percent of the \$3.6 million amount when the harm was done to the Hinkley community.
8. Resident objected to the State getting their half of the Settlement Agreement amount (\$1.8 million) within 30 days but the school having to wait to the end of 2017 for the new water system to begin operating.
9. Resident stated that since PG&E is bringing clean water to the school for the SEP, the housing tract due north of the school should be included in the project so as to reduce groundwater pumping there as well.
10. Resident was concerned that pumping at extraction wells north and south of Thompson Road might adversely affect the water table in nearby domestic wells.
11. Resident asked what happens if PG&E does not spend the entire \$1.8 million on the SEP—who gets the left over money?
12. Resident was dubious about the proposed cost of implementing the SEP, especially since it involves laying only ½ mile of pipeline.
13. The Interim Superintendent of the Barstow Unified School District read a letter of the School Board's support of the Settlement Agreement and proposed new water system for Hinkley School. Recommends that if there is un-used SEP money, it should be kept in the Hinkley/Barstow community to fund other water projects.
14. John Quass, chairman of the Hinkley Community Advisory Committee, stated the CAC was in favor of the Settlement Agreement.
15. Julie Clemmer, member of the CAC, read a statement citing her support for the Settlement Agreement.

Comment Letter #14

**From:** lester white [REDACTED]  
**To:** <hsinger@waterboards.ca.gov>, <lkemper@waterboards.ca.gov>, <lkemper@wat...  
**Date:** 2/28/2012 9:46 PM  
**Subject:** my offical statment for order no.R6V-2008-0002

I Lester White a land manager life lone community member and a c.a.c. member for the community of Hinkley requinized by your office as the only legal group to represent the community orders were negotiated behind closed doors with PG&E and California Regional Water Quality Control Board as a cac member i do here by respectfully request that all orders sec and desist till the full board can come to the table and negotiate a settlement. Lester White

February 29, 2012

Ms. Kemper,

Please accept my comments for the Water Board's Settlement Agreement with PG&E.

I have no objections to the fine amount of \$3.6 million or to the drinking water project proposed for the Hinkley School. I do, however, have concerns about certain portions of project implementation by PG&E.

First, the time allowed for project operation of four-and-a-half years is excessive. Since PG&E's argument is that they are installing the water system at the school to reduce the pumping of water to halt plume migration, isn't this of utmost urgency?

A four-and-a-half year timeline says to me that PG&E isn't dedicated to stopping the plume from migrating at all and their reasoning would be faulty. If PG&E's argument to stop plume migration is being accepted, then an interim system (e.g. supply tanks) should be required to be installed immediately and remain in operation until the new system is installed and operational. It has been reported that PG&E has already installed over three miles of clean-water pipeline from the Compressor Station to areas in Hinkley in a fraction of the time they are proposing to install the mere one-half mile of pipeline to Hinkley School. It is important to note that the land where the new pipeline is proposed is already disturbed and close to railroad tracks, so is unlikely to be endangered species habitat. I suggest that the Water Board accept a Settlement Agreement that reduces the project operation time to at least half of the current proposal, if not sooner.

Second, the proposed project cost of \$1.8 million seems excessive. While I do not claim to be an expert on construction costs, I'm sure the same could be said of Board staff. I suggest that the Water Board accept a Settlement Agreement that requires an outside state agency familiar with construction projects (e.g., Caltrans or the Architect's office) conduct a review or audit of PG&E costs. Costs that are found to be excessive should be used for an additional beneficial project or be remanded to the state.

Third, PG&E should not be allowed to profit from extending the project deadline longer than is necessary. I'm referring to the interest earned on project money not spent right away. I request that the Water Board add a requirement in the Settlement Agreement that PG&E has to provide an annual accounting for project money spent versus money remaining so interest can be

calculated to go back into the project or to the state. If interest is not charged it is detrimental to the Hinkley residents and the state.

In fact I would think it would be unlawful for the state to 'loan' PG&E money without accruing interest. Since the settlement is for \$3.6 million dollars and not small amounts over time, I would think it is the obligation of the Water Board to collect interest or demand the money up front so the State can earn the interest directly.

And fourth, the term "alleged violations" seems ridiculous in the Settlement Agreement. Hasn't Board staff already determined that PG&E has violated the 2008 cleanup order and said so in much correspondence? If so, shouldn't that be stated in the Settlement Agreement instead of using a term like "alleged" that just dances around the issue? When is PG&E going to have to take responsibility for their actions?

PG&E was found to be in violation and the word 'alleged' should not be used.

Thank you for considering these comments.

Carmela Spasojevich

Lauri Kemper, Assistant Executive Officer

Lahontan Water Board

2501 Lake Tahoe Boulevard

South Lake Tahoe, Ca 92347

Response to Settlement Agreement between PG&E and Lahontan Regional Water Board

Dear Ms. Kemper;

As you can see, I have waited till the last minute to respond to this settlement agreement. It is not my desire to mess up the agreement, but to enrich it for the Injured Party, the Community of Hinkley.

Our community has suffered much for a very long period of time; physically, financially, and emotionally. To date, only PG&E has reached out to the community and done anything for us in the three listed areas. The court settlement several years ago was flawed in that many people who should have received help did not. Yet, PG&E has reached out to the community in many different ways that we all appreciate and thank them for. On the other hand the state of California has not helped us other than to provide you as the regulators and even you are paid by PG&E. To date, you and the state have done nothing to really help those that are hurting in the community.

No money has been spent by you in Hinkley to help the people of this community cope with the situation that they wake up to every morning, hexavalent chromium in the water that they drink, cook, laundry, and bathe with.

This settlement that you and PG&E are suggesting to the Lahontan Regional Board and possibly to the State Board is flawed. You are only giving lip service to the Community of Hinkley. Total fine to PG&E is to be \$3.6 million, with \$1.8 million to go to the State Water Resources Control Board Waste Discharge Permit Fund, and \$1.8 million to go to the Hinkley Elementary School replacement water system. That is great, as far as it goes. It is of special interest to me why those who have never given to the Community of Hinkley, want to take money out of Hinkley. The Injured Party in any Court of Law would be the Community of

Hinkley. How does the Water Board figure they should receive any monies from PG&E when PG&E already pays all their expenses and they are whole?

I feel that the Supplemental Environmental Project, or SEP, should be modified by the Board, giving the entire \$3.6 million settlement to the Community of Hinkley for projects that benefit the injured parties, making their lives better. These of course need to be items other than those already ordered by Lahontan for PG&E to do. This would be allowed by the exception allowances given by the legislation allowing the SEP in the first place.

Other projects could be a Hinkley Community Center, Ball Fields and additional improvements to the Hinkley Elementary School. Windbreaks and infrastructure could also be looked at. I am sure there are all sorts of suggestions that PG&E and the community could come up with.

The overall Settlement Agreement has some wording that bothers me, I would visit the term "suspended". This term seems to indicate that if the SEP can be completed for less than the \$1.8 Million that the rest of the fine would be done away with. I really believe that this kind of language only goes to cause mistrust between you and the Community of Hinkley, Injured Party. I would ask the Community Advisory Board be invited to make formal recommendations to both Lahontan and PG&E in these matters now and in the future.

In closing, may I remark that I feel that this agreement does not fully address the Injured Party issue and allows for further governmental misdirection of funds, ie. Re-development funds, etc. I feel that under current policy, the Governor would take these funds should he hear of them being in your account and the Supreme Court would most likely back him up.

Jonathan Quass, Vice Chair, PG&E Community Advisory Committee

