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Project No: 12-101  
Via Email and Regular Mail

Ms. Lauri Kemper  
Assistant Executive Officer  
California Regional Water Quality Control Board  
Lahontan Region  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150

**RE: IRP Manager and CAC Comments Regarding PG&E's Cr6 Monitoring  
Work Plan Submitted in Response to Cleanup and Abatement Order No.  
R6V-2008-0002-A4**

Dear Ms. Kemper:

The dialogue regarding the formulation and implementation of a new monitoring plan to further improve the definition of the Hinkley groundwater Cr6 plume has been ongoing since July 2012, when the Water Board issued a draft Order for public comment<sup>1</sup>. The IRP Manager submitted comments on the draft Order on August 10, 2012<sup>2</sup>. A revised Order was subsequently issued on January 8, 2013<sup>3</sup>, possibly in part because of some vagueness in the draft Order and also possibly because of PG&E's petitioning of the details of the Order on February 7, 2013<sup>4</sup>. As we understand it, from the draft Order's original point of departure in July 2012, today's status is now described in a proposed PG&E Cr6 Investigation Work Plan of February 22, 2013<sup>5</sup>, to which an Addendum<sup>6</sup> was recently issued on March 15, 2013 after discussions between PG&E and the Water Board in South Lake Tahoe on March 7, 2013.

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<sup>1</sup> Public Notice of Opportunity to Comment on Draft Cleanup and Abatement Order No. R6V-2008-0002-A4, July 25, 2012.

[http://www.waterboards.ca.gov/rwqcb6/water\\_issues/projects/pge/docs/draft\\_2008\\_0002a4.pdf](http://www.waterboards.ca.gov/rwqcb6/water_issues/projects/pge/docs/draft_2008_0002a4.pdf)

<sup>2</sup> Comments from the IRP Manager on behalf of the Community Advisory Committee regarding the draft amended Cleanup and Abatement Order No. R6V-2008-0002-A4 issued for Public Comment on July 25, 2012; Project Navigator, Ltd., 37pp, August 10, 2012.

[http://www.waterboards.ca.gov/rwqcb6/water\\_issues/projects/pge/docs/cmmnts/cmnt081012/cac.pdf](http://www.waterboards.ca.gov/rwqcb6/water_issues/projects/pge/docs/cmmnts/cmnt081012/cac.pdf)

<sup>3</sup> Water Board Cleanup and Abatement Order, No. R6V-2008-0002-A4 issued to PG&E, January 8, 2013

<sup>4</sup> PG&E Petition for Review of Cleanup and Abatement Order No. R6V-2008-0002-A4, submitted by Sheryl Bilbrey, PG&E, February 7, 2013

<sup>5</sup> PG&E Work Plan, Prepared by Stantec and CH2M Hill, submitted by Kevin Sullivan, PG&E, February 22, 2013

<sup>6</sup> Addendum to Work Plan to Address Provision I.A. of Cleanup and Abatement Order No. R6V-2008-0002-A4, Submitted to Lauri Kemper (Water Board) by Kevin Sullivan (PG&E), March 15, 2013

<http://www.hinkleygroundwater.com/wp-content/themes/hinkleygw/documents/whwt/Cr-Investigation-WP-addendum-letter-March-15-2013.pdf>

**Figure 1**, compiled from Figures 7 and 9 in the Work Plan Addendum, shows the latest locations for the new proposed monitoring wells for the north in Water Valley (Investigation Area 1) and to east of Dixie Road (Investigation Area 3).

Even with input from the IRP Manager, the CAC and Community have had difficulty (and skepticism) following the above lengthy process. The IRP Manager has been explaining the status of the process at the monthly Community meetings, and especially since January 8, 2013 when the Order was issued. Even since January, the process has been complicated with many seeming modifications to the Order's requirements being made. The CAC's "window-in" to this process is best expressed by reviewing the recent timeline of events which has taken us from the Revised Order's release on January 8, 2013, to the proposed monitoring well locations of Figure 1 on March 15, 2013. The key stages are shown in **Figure 2**, which focuses on the northern area.

With the complexities of this process in mind, the CAC is commenting in three broad areas:

1. The omission of domestic well data collection for the purposes of siting dedicated monitoring wells,
2. The need for improved Cr6 monitoring in the Mulberry/Flower Streets area, and
3. The need to initiate a more formal "plume monitoring technical exchange process" which would be similar in nature to the dialog which is occurring on manganese assessment program<sup>7</sup>.

These two issues are now expanded upon.

#### Domestic Well Information for the Purposes of Siting Monitoring Wells:

What appears to have dropped out of the new monitoring well siting process, as a result of PG&E and Water Board discussions, is the requirement from the January 8, 2013 Order that 6 months of local domestic well data, and data trends with respect to time (irrespective of the Cr6 concentration), would be used to determine the optimum locations for new PG&E dedicated monitoring wells.

While the use of domestic well data for plume definition is important to the CAC, the IRP Manager and the CAC have also been discussing a scenario where if an *adequate number* of appropriately sited monitoring wells were to be installed to assess groundwater conditions in the north and east, then the need for "pre-siting

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<sup>7</sup> See IRP Manager's Presentation at March 28, 2013 Community Meeting, Hinkley which focused on the manganese assessment program. (<http://www.hinkleygroundwater.com/wp-content/themes/hinkleygw/documents/whwt/Cr-Investigation-WP-addendum-letter-March-15-2013.pdf>)

domestic well information” becomes less important. The IRP Manager’s thinking, as he has discussed with the CAC and Community, is described in **Figure 3**.

PG&E advocates that domestic well data is not critical for improved plume definition in the north and east since (a) in the north all domestic wells have, or will have (per the new Work Plan), a monitoring well within a ¼ mile, and (b) in the east there are five active domestic wells which are “just outside a ¼ mile radius, but within an existing “robust monitoring well network.”

While the CAC sees and understands the IRP Manager’s thinking described in the above paragraph and the enclosed Figure 3, the CAC also seeks further discussion time to understand Figures 2&3 of the March 15 Amendment Letter, where some active domestic wells (e.g. active domestic well 09-01 in Figure 2) are shown located out with the ¼ mile radii circles drawn around monitoring well locations.

In the grand scheme, the CAC is simply seeking that the Cr6 plume created by PG&E’s release is accurately defined and monitored. While the CAC agrees that domestic well data do not give a *highly accurate* assessment of where PG&E’s specific Cr6 release is located, in the absence of monitoring well data specific to a location, domestic well information is still very valuable and should continue to be collected.

In this regard, (and this is where another program overlaps with Cr6 monitoring specifically discussed in this letter), PG&E has recently submitted a Plan<sup>8</sup> to the Water Board to remove a large number of inactive domestic wells from the Domestic Well Sampling Program. At this time, the CAC and the IRP Manager are in the process of reviewing which of the proposed domestic wells may still be valuable for gathering plume information and therefore should be retained and sampled, until a dedicated monitoring well is located nearby<sup>9</sup>. We consider this work to be part of the dialog which needs to occur as the CAC and Community climb the Cr6 monitoring “S-curve,” (...which is later presented in Figure 4). We would appreciate if the CAC can participate in the Cr6 plume monitoring technical dialog between PG&E and the Water Board, especially when the use of domestic well data is being discussed.

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<sup>8</sup> Plan for Removal of Inactive Domestic Wells from the Domestic Well Sampling Program, submitted by Kevin Sullivan, PG&E to Lauri Kemper and Lisa Dernbach, Water Board, 16pp, March 6, 2013.

<sup>9</sup> The CAC and IRP Manager recognize that PG&E has provided criteria for when a domestic well can be plugged and abandoned with respect to its ability to collect meaningful Cr6 plume monitoring information (viz: if there is at least one multi-depth monitoring well within 2,000 feet of the domestic well, or, if sampling results since September 29, 2011 indicates that the well does not contain Cr6 greater than 2.0 ppb).

Improved Cr6 monitoring in the Mulberry/Flower Streets area:

Ordering Section I.A.1.<sup>10</sup> requires a Work Plan for Cr6 sampling not only in the north and east of the currently indentified Cr6 plume, but at “*any other areas outside of the currently identified primary contiguous plume boundary that may show anomalous or otherwise unexplained concentrations of chromium in domestic wells.*”

The CAC believes that the cluster of domestic wells in the Mulberry/Flower Streets area meets such a classification. The CAC requests that an appropriately located monitoring well is installed in this area to contribute to the **process** of improved Cr6 assessment in this area.

The CAC’s request for further discussion time on these topics feeds into our third more general comment, as follows.

Initiate a “Plume Monitoring Technical Exchange **Process**.”

In these remarks we are purposely not proposing extra monitoring wells “dots on a map.” This, simply because the CAC feels it is not sufficiently informed on the nuances of what has happened during the ebb and flow of the planning process (as exemplified in Figure 2), even with input from our IRP Manager.

In other words, the CAC is not positioned high enough on the S-shaped information curve, which the IRP Manager has recently introduced<sup>11</sup> as a general tool to facilitate technical understanding and alignment.

The CAC feels that, with respect to plume definition, a technical “**process**” needs to be put in motion, specific to Cr6 monitoring, to discuss concepts long before they become final. The Community would then have the opportunity to learn as the monitoring process is designed, and thereby have a greater chance of accepting the results when they become available. This “**process**” would help with the conveyance of data and information which can be used to close the gap on the “S-curve”, specific to plume investigation. See **Figure 4** for further details.

Given the recent success of the conversations occurring for monitoring well siting under the Mn assessment program and the Background Study program, the CAC and the IRP Manager respectively request that at least one CAC/Community briefing session should be dedicated to the siting of the newly proposed Cr6 monitoring wells.

<sup>10</sup> Order No. R6V-2008-002-A4, Section I.A.1.,page 6.

<sup>11</sup> See Slide 21 of 22 in IRP Manager’s Presentation at March 28, 2013 Community Meeting. Available at: [http://www.hinkleygroundwater.com/wp-content/themes/hinkleygw/documents/presentations/hinkley-community-briefing-12\\_2013-03-28.pdf](http://www.hinkleygroundwater.com/wp-content/themes/hinkleygw/documents/presentations/hinkley-community-briefing-12_2013-03-28.pdf)

Sincerely yours,



Ian A. Webster, Sc.D.  
IRP Manager



Raudel Sanchez, Ph.D.  
Project Manager  
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Attachments: Figures 1 to 4

cc:  
Devin Hassett, Keadjian and Associates  
CAC Members  
Dr. John Izbicki, USGS