IRP Manager’s Perspectives on the Future of the Project

The Groundwater Remedy’s “Omnipresence” within the Hinkley Community

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Barstow, California

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Board Members’ Meeting

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“Omnipresence”

Present in all places at all times.

- Merriam-Webster Dictionary, 2014
The Flow of My Remarks

- Technical Outreach Has Been Significant
  - Now driving towards a final, integrated CAO

- It’s Challenging to Maintain a Focus on the Final Objective
  - i.e. Cr6 impacts, protectively remediated to background conditions

- “Above Ground Topics” Now Dominate over “Below Ground Topics”
  - The Results of an Informal Poll on the Community’s Focus

- Can a Sustainable Remedy be the End Result?
Massive Improved Community Understanding of the Program’s “Building Blocks”…

From June 27, 2013 Community Meeting
...to the Extent that, on Technical Issues, Few Stones Remain Unturned.
Today’s Technical Focus is on Cleanup Speed, Effectiveness and Protectiveness of the Final Remedy.

PG&E’s Kevin Sullivan explains the future of the cleanup at September 2014 Water Board Meeting
Soon After, 50 Community Members Attended the September Community Meeting, Where...
...Continuing with the IRP Manager’s Outreach Plan, Models and Visuals Were Used to Aid Communications...
...However, Maintaining a Technical Focus is Continually Challenging.

Final Remedy

Plume’s Western Finger

Perceptions of Impacts Which are Clearly Upgradient

Perceptions of “Black Water” Releases from the IRZ

Western Waste Pit
For Example, Significant Resources (CAC, WB, PG&E & IRP) Discussed the “Former Western Waste Pit” at the IRP Manager’s Office in September.
But What I’ve Come to Appreciate is that the Community Views “Grand Progress” Differently.

What the Hinkley Community Sees
- Declining population
- Homes being demolished
- School closing
- Dying trees/Fire hazards
- Vacant lots/Dust
- Stray dogs

Ground Surface

What the Water Board, PG&E, and the IRP Manager Sees

“Progress/Success” in plume management is not perceived as “progress” at ground surface

Groundwater

Plume Investigation
- Hydraulic Gradient Controls
- Background Study
- IRZ Operations
- Ag Treatment Operations
- SEP Program

Cr6 → Cr3 (*)

New PG&E modeling forecasts predict time frames to attain MCL, plume-wide.
1st DRAFT, 7/3/14, IRP Manager
For Example, Some Community Stakeholders Prefer to Invest Their Time (and Passion) in Watering Trees on PG&E Owned Property.
To Assess, We Conducted a Poll to Rank “Above Ground” Vs “Below Ground” Topics…First, at a Community Meeting…
...and Later with a Different Group of Residents at the Hinkley Senior & Community Center.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Notes</th>
<th>Property Purchase</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plume Definition And Containment</td>
<td>(vacant lots, blowing sand, trees, dogs, etc.)</td>
<td>Wells</td>
<td>Household</td>
</tr>
<tr>
<td>IRZ (Treatment of Cr 6 hotspots in place in groundwater)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Treatment Units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEP (Freshwater pipeline to school)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USGS Background Study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Pit (impact on groundwater)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Please write issue on post-it</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participants received 3 post-it notes to “vote” on MOST IMPORTANT issues to that post-it. Votes on one issue or divide up as individual sees fit. Write name on post-it.
**Result: Above Ground Topics are Most Important to the Hinkley Community.**

### Above Ground Issues

<table>
<thead>
<tr>
<th>Topic</th>
<th>Survey at Community Meeting</th>
<th>Survey at Senior Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>25%</td>
<td>15%</td>
</tr>
<tr>
<td>Property Values</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Water - WHWR</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Water Domestic Wells</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Property Purchase</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Note: Results from Senior Center were after rescindment of WHW/bottled water.*

### Below Ground Issues

<table>
<thead>
<tr>
<th>Topic</th>
<th>Survey at Community Meeting</th>
<th>Survey at Senior Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>USGS BGS</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Plume Def. and Containment</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Groundwater Treatment</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>SEP</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Recognize that PG&E’s Remedy, Pursuant to Water Board Orders, Will Alter the Above-Ground Landscape...

(Addition of up to 500 Acres of “Green” ATUs within the Current 1,400 Acres of Core Plume)
So, Is There an Opportunity to Adjust Our Thinking to Frame the Concept of a “Sustainable Remedy” Which Will Exist for Decades in the Hinkley Community to the Benefit of all Stakeholders?

Per EPA, a Sustainable Remedy is:

“The practice of considering all environmental effects of remedy implementation and incorporating options to minimize the environmental footprints of cleanup actions.”

Many Sustainable Remedy Factors Are Presently “In Operation,” …But Could The Topic be Integrated Under a Master Plan?

### TABLE 3-3 Sustainable Remedy Selection Factors

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Social</th>
<th>Economic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Impacts on air (including climate change)</td>
<td>1. Impacts on human health and safety</td>
<td>1. Direct economic costs and benefits</td>
</tr>
<tr>
<td>2. Impacts on soil and ground condition</td>
<td>2. Ethics and equality</td>
<td>2. Indirect economic costs and benefits</td>
</tr>
<tr>
<td>3. Impacts on groundwater and surface water</td>
<td>3. Impacts on neighborhood and locality</td>
<td>3. Employment and employment capital</td>
</tr>
<tr>
<td>4. Impacts on ecology</td>
<td>4. Communities and community involvement</td>
<td>4. Induced economic costs and benefits</td>
</tr>
<tr>
<td>5. Use of natural resources and waste</td>
<td>5. Uncertainty and evidence</td>
<td>5. Project lifespan and flexibility</td>
</tr>
</tbody>
</table>

Conclusion: Can a “Common Ground” be Defined Regarding a Sustainable Remedy?

- **For PG&E**
  - Requires the company’s continued work in the project space, beyond pure compliance
  - Willingness to continue to participate in discussions on the 2 right-hand columns in the prior slide

- **For Water Board**
  - Review of WB’s authority to add components of 2 right-hand columns into final CAO

- **For Community**
  - Willingness to adopt a “show me results and recognize them” attitude which can drive improved “Trust & Collaboration”