Building Trust via Technical Outreach at a Complex Project: PG&E’s Chromium-6 Groundwater Remediation Program at Hinkley, CA

21st International Petroleum Environmental Conference

October 14-16, 2014
Houston, TX

Presented by
Dr. Ian A. Webster
Project Navigator, Ltd.
Brea, CA
Explaining Solutions at a Technically Complex Project Where There is Very Low Trust.

PG&E's Chromium-6 Groundwater Remediation Program in Hinkley, CA
Getting Situated: Drive 180 Miles North from Los Angeles into the California Mojave Desert...
...Travel Half Way to Las Vegas...
…and You Arrive in the Community of Hinkley…
Unfortunately the Project has Notoriety.

She brought a small town to its feet and a huge company to its knees.
Today, Well Beyond the Massive Settlements of the 90’s and 00’s, the Community is Very Active…

thepeopleofhinkley.org

PG&E did it, and always knew, since 1952!!
...Plus Voicing Opinions of Other Perceived Impacts.
Recently, PG&E Has Decided to Act More Proactively…

“PG&E has for many years acknowledged with genuine regret its responsibility for its chromium contamination in the Hinkley community.

PG&E is committed to working cooperatively with the Water Board to expeditiously clean up groundwater contamination resulting from PG&E’s historical operations at the Hinkley Compressor Station.”

~ PG&E, 2012
...and Key in the New Approach Was the Retention of an IRP Manager.

- IRP = *Independent* Review Panel Manager

- Mission is *unbiased technical input*, based on my professional judgment
The IRP Manager Reviews, Comments and Communicates with the Community…Builds Trust.

IRP Manager
- Review and Interpretation
- Professional Judgment
- Relationships and Trust Development
- Visualization of Data
- Presentations
- Communications

CAC and Hinkley Community
- 32 Monthly Community Meetings
- 3 Community Open Houses
- 120 Weekly CAC Meetings
- 100 Major Reports Reviewed
- Monthly Community Mailers
- 4 Community Workshops
- 200 days of office hours in Hinkley
- Hired experts:
  - EIR
  - Toxicologist
  - Facilitator
- 1000’s of Questions Answered
- www.HinkleyGroundwater.com

PG&E’s Hinkley Groundwater Remediation Team

Lahontan Water Board

MB’s of files, 1000’s pp of information

Water Board review and comment
PG&E Provided Office Space in the Community…
...and We Went About Explaining Below-Ground-Science to a Skeptical “Client-Base”.

1. Plume Investigation
2. South End Treatment
3. North End Treatment
4. Systems for the School
5. Background Study 2014-2018
6. “Mn Issue”

4,000 ppb
Including: 1. *In Situ* Treatment for Highest Cr6 Levels, and…

1. Ethanol is diluted with water and injected into the core of the Cr$^{+6}$ plume
2. Ethanol enhances the biodegradation process in the subsurface
3. Cr$^{+6}$ and Cr$^{+3}$ conversion occurs though direct microbial reduction and for indirect chemical reduction by reduced Iron, Sulfur, and other metals
4. Cr$^{+3}$ is removed from groundwater though precipitation of relatively insulated chromium hydroxide and iron-chromium hydroxide
2. Agricultural Treatment for Low Chromium-6 Concentrations.
But, Enter a Key Initiative: For 400 Homes Within the “1-Mile Affected Area,” PG&E Offers a Water Treatment System...or Home Purchase.
Result: 30 Ion Exchange-Reverse Osmosis Water Treatment Systems Installed, Thereby Decoupling Residents from the Plume, ...But...
…370 Owners Elect to Sell Their Property to PG&E.
How to Technically Mediate in this Environment...
Establish a Culture that “We’re All on a Learning Curve”…Community, PG&E & Water Board.
A. Demonstrate “Data Transparency.”
IRP Manager Receives All Data.
B. Start the Technical Education Process with Community Leaders…A Charter Establishes the Community Advisory Committee (CAC).
C. Encourage PG&E to Host Site Tours.
D. Facilitate Meetings Between CAC, PG&E & Consulting Resources.
E. Host Monthly Technical Briefings at the Hinkley School.

Attendance ranges from 80 to 120 people.
The purpose of the Community Advisory Committee (CAC) is for Hinkley residents and community leaders to advise, share concerns with, and provide direct input into the Hinkley Groundwater Remediation Program.

Local phone number for IRP Manager: 760.253.2560
Alternate number at Project Navigator, Ltd: 714.288.1899

Updates
August 6, 2013
IRP MANAGER TO HOST COMMUNITY WORKSHOPS FOR THE MONTH OF AUGUST
May 19, 2013

Current Programs
PG&E Proposed Plan for Removal of Inactive Domestic Wells from the Dom
G. Organize Community BBQs.
So...Many Opportunities to Learn...However, Also Become “Confused/Distrustful” Because of Conflicting Opinions.
As IRP Manager… A Strategic Adjustment.

► Moved Away from Structured Talks.
► Greater Use of Physical Models.

Use of Simulation Videos to Explain Groundwater and Cr6 Movement
2. Simplify, Simplify, Simplify, the Message.
3. Build Models for Each Technical Feature of the Project...
...Including an Accurate 3-D Chromium-6 Plume for Use at Community Meetings.
4. Use “Stations” with a Central Model.
5. Use Project “Building Blocks” to Drive “Issue Stickiness”.
6. Visualize Data.

Cr6 > 50 ppb
In Conclusion…Some Tips.
Use “Jobs-Like” Clarity.

15 million iPads sold in 2010
9 months (April-December)

More than every Tablet PC ever sold

$9.5 billion in 2010

>90% market share

Competitors flummoxed
Define Where Stakeholders are on the “S Curve” and Discuss their Perceptions.
Take-Aways

- “Trust” is essential
- Slowly Replace “Lore” with “Facts”
- Explain the S-Curve
- Define Tipping Point(s)
- “Station-Style” Community Meetings
- Use 3-D Hard Models
- Accept “10-steps forward / 9-back” slow progress
“Achieving progress is a long, slow, clunky, diplomatic slog.”

- Secretary of State John Kerry on an interview on CNN, February 5th, 2014
PG&E is Working Hard to Build Technical Trust and Recover from Negative Perceptions Generated by the Movie "Erin Brockovich... The IRP* Manager is Playing a Key Role.

Different Perspectives

Erin Brockovich Movie Clip (2000)

NIGHTLINE: Hinkley Interview with PG&E Senior Vice President, Des Bell (Dec, 2011)

IRP Manager’s Technical Outreach Work has helped “Bridge the Gap” between Community and Media Perceptions and PG&E’s Commitment to a Solution

The IRP Manager independently helps the Community understand PG&E’s technical activities, and build "trust." **

* IRP = Independent Review Program (Manager).
** The IRP Manager was selected by the Hinkley Community via a Community Advisory Committee (CAC). IRP Manager’s role is to provide independent technical interpretation and advise the Community. The IRP Manager is funded by PG&E via an escrow account, further validating the IRP Manager’s autonomy.
Videos

NIGHTLINE: Hinkley Interview with Des Bell, PG&E

Erin Brockovich Movie Clip
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