

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
MEETING OF SEPTEMBER 12-13, 2012
BARSTOW, CA**

ITEM: 10

SUBJECT: **PACIFIC GAS & ELECTRIC COMPANY, HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY - PUBLIC WORKSHOP FOR DRAFT ENVIRONMENTAL IMPACT REPORT, COMPREHENSIVE GROUNDWATER CLEANUP STRATEGY FOR HISTORICAL CHROMIUM DISCHARGES**

CHRONOLOGY: This chronology lists Water Board actions related to requiring PG&E to develop a comprehensive cleanup strategy for chromium in groundwater.

Aug. 6, 2008 Cleanup and Abatement Order (CAO) No. R6V-2008-0002 directed PG&E, among other things, to develop and implement a comprehensive cleanup strategy for chromium in groundwater.

Nov. 12, 2008 Amended CAO R6V-2008-0002A1 established background chromium concentrations against which cleanup strategies are assessed.

Nov. 24, 2010 Water Board staff circulated CEQA Notice of Preparation to interested parties and agencies, requesting input on the scope and content of an environmental document for comprehensive cleanup of waste chromium in groundwater.

BACKGROUND: The Water Board will issue new General Waste Discharge Requirements (General Permit) for expanded cleanup activities in Hinkley. Although many of the same technologies that are currently being implemented (agricultural treatment, in-situ remediation, plume containment, freshwater injection) would continue to be implemented under the new General Permit, the intensity and geographical extent of these methods would be

increased, and above-ground treatment facilities may be added. The potential impacts from these expanded and new activities must be disclosed to the public and agencies, in compliance with the California Environmental Quality Act (CEQA).

In addition to issuing a General Permit for expanded cleanup, the Water Board will consider issuing a new Cleanup and Abatement Order (CAO) to PG&E, which will specify cleanup goals and time schedules to achieve those goals. The issuance of a CAO is also subject to CEQA.

With their consultant, ICF International, staff has developed and is circulating a CEQA Draft Environmental Impact Report (DEIR) for a 60-day review period. The DEIR describes the cleanup project goals and objectives, provides details on five "action alternatives" to meet those goals, and discusses impacts associated with each alternative. Ways to avoid or reduce impacts (mitigation measures) are outlined. Impacts which cannot be avoided or reduced to less than significant levels are clearly identified in the DEIR, and are outlined in the discussion section below.

Water Board staff worked with PG&E to develop feasible, aggressive remedial approaches, and sought input from the US EPA, the California Department of Toxic Substances Control, and the public on the range of remedial approaches analyzed in the DEIR. Water Board staff have held four meetings to hear input and provide information on the DEIR at the Hinkley School since December 2010, when EIR development began.

The discussion below provides information on the alternatives analysis contained in the DEIR, public input on the DEIR, and the potentially significant and unavoidable impacts identified in the DEIR.

DISCUSSION:

No "Preferred Alternative" Identified: Often, an EIR will identify a "preferred alternative" for a project, evaluating that one alternative in great detail, and analyzing other alternatives at a lesser level of detail. This can be an effective approach when there is a clear preference for one project alternative. Because the DEIR alternatives involve fundamental tradeoffs between different impacts, choosing a single environmentally superior alternative involves making value judgments about those impacts. Therefore, the DEIR

provides a comprehensive analysis of six alternatives to remove hexavalent chromium from the groundwater (one is the "no project" alternative as required by CEQA, plus five "action alternatives"). This approach allows the Water Board maximum flexibility to direct PG&E to implement the full range of remediation methods analyzed in the DEIR over the entire project area, without being constrained by choosing one alternative.

A fundamental goal of the project, based on prior public input, is to restore groundwater quality to background levels of chromium in the minimum amount of time feasible, while limiting or mitigating environmental impacts of the cleanup activities. While all of the action alternatives in the DEIR will clean up hexavalent chromium from groundwater, the alternatives that accomplish this in the shortest timeframe also have greater environmental impacts. The acceptable balance between faster groundwater cleanup and increased impacts will be best understood by seeking input on the public's desire for rapid cleanup, tolerance levels for impacts, and acceptance of the mitigation measures described in the DEIR.

Based on public input gathered during this 60-day review period, the Water Board, in its General Permit can set limits on allowable impacts, require mitigation measures and monitoring, and its upcoming CAO, can set cleanup levels and timeframes to meet those levels. PG&E could then use any combination of the technologies analyzed in the DEIR to meet those requirements.

Public Meeting on August 29, 2012: Water Board staff hosted a meeting at the Hinkley School to discuss the DEIR, and get public opinion on the types and amounts of environmental impacts that most concerned them. A questionnaire was distributed, aimed at determining attendees' opinion on the tradeoffs between achieving the fastest cleanup times versus an acceptable amount of impacts.

Significant and Unavoidable Impacts: Most potentially significant impacts identified in the DEIR can be reduced to less than significant levels with mitigation measures. However, certain impacts to water and biological resources may be significant and unavoidable for the "action" alternatives (i.e., alternatives 4B, and 4C-2 through 4C-5).

For water resources, all impacts affecting domestic supply wells can be mitigated by requiring PG&E to provide alternate water supplies to domestic wells users, or expedite remedial actions to avoid the impact before it occurs. However, impacts to water quality within the aquifer due to remediation byproducts (e.g., iron, manganese, TDS, arsenic) and temporary chromium increases due to remediation ("plume bulge") may occur. Further, aquifer compaction from groundwater drawdown due to increased agricultural pumping may be potentially significant and unavoidable for the aquifer (again, domestic wells users would be provided alternate water supplies).

For biological resources, expanded agricultural treatment units could substantially impede movement patterns of desert tortoise in the Hinkley Valley. A mitigation measure to establish "movement corridors" by spacing out agricultural treatment units was considered, but was ultimately rejected because of uncertainty that tortoise would actually use such corridors. Therefore, this impact may be significant and unavoidable, depending on the final configuration and extent of agricultural treatment units.

RECOMMENDATION:

This is an information item only. The Water Board may provide direction to staff as appropriate.

ENCLOSURES:

Enclosure	Item	Bates Number
1	Key Water Resource Impact and Mitigation Measures Summary Chart	10-7
2	Cleanup Times versus Impacts for EIR Alternatives	10-11
3	EIR Schedule (2012-2013)	10-15

ENCLOSURE 1

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Key Water Resources Impacts and Mitigation Measures

Impact	Mitigation Measure					
	Purchase water rights (MM-1)	Address remedial impacts during project (MM-2)	Alternate water supply (MM-2)	Cr plume bulge control (MM-3)	Restore aquifer after project (MM-4)	Byproduct monitoring & control (MM 5-7)
Groundwater drawdown: water supply wells			✓		✓	
Groundwater drawdown: aquifer	✓				✓	
Aquifer compaction: water supply wells			✓			
Aquifer compaction: aquifer	Potentially significant and unavoidable					
Cr Plume Bulge: water supply wells*		✓	✓	✓		
Cr Plume Bulge: aquifer*	Potentially temporarily significant and unavoidable during remediation (MM-4 applies following project completion)					
TDS/Uranium byproducts: water supply wells*		✓	✓		✓	✓
TDS/Uranium byproducts: aquifer*	Potentially temporarily significant and unavoidable during remediation (MM-4 applies following project completion)					
Mn, Fe, As byproducts: water supply wells*		✓	✓		✓	✓
Mn, Fe, As byproducts: aquifer*	Potentially temporarily significant and unavoidable during remediation (MM-4 applies following project completion)					

* Cr = Chromium; TDS = Total dissolved solids; Mn = Manganese; As = Arsenic; Fe = Iron.

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ENCLOSURE 2

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Cleanup Times versus Relative Impact Rankings* for EIR Alternatives

EIR Alternative	No Project	4B	4C-2	4C-3	4C-4	4C-5
Cleanup Time Rankings <i>1 = fastest</i> <i>6 = slowest</i>	6	4	3	2	1	5
Key Impact Rankings * <i>1 = lowest among alternatives</i> <i>6 = highest among alternatives</i>						
Groundwater Drawdown	1	2	4	5	6	3
Aquifer Compaction	1	2	4	5	6	3
Cr Plume Bulge	1	2	3	5	5	3
TDS/Uranium byproducts**	1	2	3	5	6	3
Mn, As, Fe byproducts**	1	4	4	3	4	2
Wildlife or habitat loss	1	2	3	5	6	4
Average of Key Impact Rankings <i>1 = lowest among alternatives</i> <i>6 = highest among alternatives</i>	1	2	4	5	6	3

* Relative, not absolute rankings. Selected water and biological impacts only.

** Cr = Chromium; TDS = Total dissolved solids; Mn = Manganese; As = Arsenic; Fe = Iron.



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ENCLOSURE 3

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PG&E Hinkley Groundwater Chromium Cleanup Environmental Impact Report Schedule 2012 - 2013



	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
Release Draft EIR for 60-day comment period	●————● Aug 21 - Oct 19, 2012							
Public Meeting in Hinkley (review Draft EIR)	● August 29, 2012							
Water Board meeting in Barstow (review Draft EIR)		● Sept 12, 2012						
Release draft Waste Discharge Requirements (WDRs) for 30-day comment period			●————● Late Sept - Late Oct					
Public Meeting in Hinkley (review WDRs & Draft EIR)			● Mid October					
Release proposed General WDRs for 30-day comment period				●————● Late Nov - Late Dec				
Public Meeting (review WDRs)				● Early December				
Water Board hearing to certify Final EIR, adopt WDRs, and discuss Clean up and abatement Order (CAO)				January 2013 ●				
Release proposed CAO				Throughout Feb 2013 ●————●				
Water Board hearing to adopt CAO with cleanup requirements						March 2013 ●		