

Attachment 1. CAO and Investigative Orders Replaced by CAO No. R6V-2015-~~DRAFT~~PROP

Board Order, Date Issued	Summary of Key Requirements	Status
REPLACED CLEANUP AND ABATEMENT ORDERS (CAOs)		
CAO R6V-2008-0002 August 6, 2008	1. Requires: a) No further migration of plume b) Achieve plume containment by Dec 31, 2008 c) Develop and implement final cleanup strategy (Feasibility Study or FS) 2. Establishes quarterly and semiannual reporting	1 a) and b). Ongoing. Requirement for ongoing and improved plume containment for southern plume retained in 2015 CAO. See CAO sections II and V. 1 c) FS completed, implementation in progress. Interim remedial targets contained in 2015 CAO. See CAO section VI. 2. Ongoing. 2015 CAO contains monitoring and reporting requirements. See CAO Attachment 8.
CAO R6V-2008-0002A1 November 12, 2008	1. Establishes background levels of chromium (Cr) to assess remediation strategies	1. Background levels retained in 2015 CAO, including acknowledgement of USGS background study and potential future revision of background values. See findings 14 and 15.
CAO R6V-2008-0002A2 April 7, 2009	1. Allows up to 1,000 feet migration of 4 parts per billion (ppb) plume line on eastern boundary to implement South Central injection area	1. Ongoing. Retained in 2015 CAO, see Attachment 2 and section V.I.
CAO R6V-2008-0002A3 March 14, 2012	1. Sets hydraulic containment metrics south of Thompson road 2. Requires plume containment north of Thompson road 3. Sets monthly monitoring and reporting	1. Ongoing. Retained in 2015 CAO, with provisions to allow for adaptive management (plume shrinkage/rebound). See section V. 2. Southern contiguous plume north of Thompson Road is contained as required. For northern plumes, 2015 CAO requires hotspot remediation. See section VI. B.2. 3. Ongoing. 2015 CAO sets monitoring and reporting requirements for hydraulic capture. See section V. C.
CAO R6V-2008-0002A4 January 8, 2013	1. Requires full definition of chromium plume 2. Sets mapping, lab analysis, reporting and submittal requirements	1. Ongoing. Retained in 2015 CAO, see section IV. 2. Ongoing. Retained in 2015 CAO, see section IX, X and Attachment 8.
CAO R6V-2011-0005	1. Requires bottled water to all well users	1. 2015 CAO requires bottled water for wells users with Cr6 at

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January 7, 2011	with water exceeding background levels within 3,000 feet of defined chromium plume 2. Quarterly reporting	or above MCL within 2 days of first detection. 2. Retained in 2015 CAO for wells with Cr6 at or above MCL.
CAO R6V-2011-0005A1 October 11, 2011	<p>1. Affected well definition refined:</p> <ul style="list-style-type: none"> a) If well has chromium 6 (Cr6) at Public Health Goal (PHG) or greater and increasing trend is present b) If well has greater than background levels c) Notes that CAO may be amended to use future Cr6 Maximum Contaminant Level (MCL) for affected wells <p>2. Affected area defined as one mile down or cross gradient of defined Cr plume</p> <p>3. Replacement water quality requirement of 0.06 ppb</p> <p>4. Requires feasibility study for whole house replacement water and implementation of such</p> <p>5. Recognizes Community Advisory Committee and need for independent consultant paid for by discharger</p>	<p>1 a). 2015 CAO requires replacement water plan if increasing trend in domestic wells, or within 20 percent of Cr6 MCL.</p> <p>1 b) and c). Cr6 MCL now in effect for affected well definition. 2015 CAO reflects Cr6 MCL for affected well definition.</p> <p>2. Retained in 2015 CAO. See findings 43 and 44.</p> <p>3. Replacement water must meet MCLs.</p> <p>4. Complete. 2015 CAO contains requirements for replacement water plans when private supply well contains hexavalent chromium concentrations exhibiting an increasing trend indicating likely future exceedances of the Cr6 MCL, or any private supply well with hexavalent chromium concentrations within 20 percent of the Cr6 MCL (i.e., 8 µg/L Cr6).</p> <p>5. Ongoing. Requirement for independent consultant retained in 2015 CAO. See section VI and finding 45.</p>

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	6. Quarterly reporting	6. Ongoing. 2015 CAO contains modified requirements for monitoring and reporting. See section VII.2iii.
CAO R6V-2011-0005A2 June 7, 2012	1. Requires implementation of PG&E's expanded whole house water program: a) Affected wells are those with detectable (>0.06 ppb) Cr6 within one mile of Cr plume b) Water quality must meet at CA MCLs, and Cr6 PHG, or Cr6 MCL once adopted c) Once Cr6 MCL is adopted, MCL defines affected well 2. Suspends requirement for trend analysis to determine affected wells	1 a) and c). 2015 CAO reflects Cr6 MCL for affected well definition. See section VII.A.2 and findings 43 and 44. 1 b). Replacement water must meet Cr6 MCL. See section VII.A.2. 1 c). Cr6 MCL defines affected well in 2015 CAO. See finding 44. 2. 2015 CAO requires Discharger submit replacement water plans where private supply well concentrations exhibit increasing trends indicating the likelihood of future exceedances of the hexavalent chromium MCL, or if a private supply well has chromium reaching within 20 percent of the hexavalent chromium MCL.
CAO R6V-2011-0005A3 February 18, 2014	1. Revises replacement bottled water quality to allow up to 1.2 ppb Cr6.	1. 2015 CAO requires bottled water to meet Cr6 MCL. See section VII.1.ii.

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REPLACED INVESTIGATIVE ORDERS (IOs) AND LETTER DIRECTIVES		
Investigative Order (IO) R6V-2011-0079	1. Sets mapping information and content requirements. 2. Sets report content requirements.	1 and 2 retained in 2015 CAO. See Attachment 8.

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September 29, 2011		
IO R6V-2013-0051 June 26, 2013	<ol style="list-style-type: none"> 1. Approves criteria for removal of domestic wells from sampling program 2. Accepts recommendation to abandon inactive wells screened across water both aquifers 3. Outlines reporting requirements for inactive domestic wells 	1, 2 and 3 retained in 2015 CAO. See Attachment 8 section IV.
IO R6V-2013-0087 October 30, 2013	1. Conditionally approves Action Plan for Western Area to reduce chromium concentrations in groundwater west of the freshwater injection area.	1. Requirement for continued operation contained in 2015 CAO. See section VI. B.1.a.i.
Prosecution Team Letter August 2, 2013	<ol style="list-style-type: none"> 1. Requests action plan for western area and supplemental information 2. Request for additional information in semi-annual reports related to western area: <ol style="list-style-type: none"> a) Changes in Cr concentrations between reporting periods b) Changes in remedial operations between reporting periods c) Changes in remedial effectiveness between reporting periods 	<ol style="list-style-type: none"> 1. Complete. 2. Replaced with requirement to reach background levels in western area by 2016, see section VI.B.1a.ii.
Executive Officer Letter October 4, 2013	1. Clarifies use of historical data in Cr plume boundary.	1. Complete.
<u>Prosecution Team Letter</u> <u>November 7, 2013</u>	<u>1. Requests a byproduct monitoring report.</u>	<u>1. Complete.</u>

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Executive Officer Letter December 12, 2013	1. Review of compliance versus interpreted plume maps, 3 rd Quarter 2013: a) Cr detections on and east of Dixie Road no longer need to be drawn on compressor station plume maps b) Cr detections at MWs 159, 160, and 163 no longer need to be drawn on plume maps c) Cr detections at MWs 169S2, 121S and 153 are to be drawn connected to contiguous plume d) Cr detections north of Thompson Road above background are to be drawn on plume maps	1 a) through d) Ongoing interpretation, retained in 2015 CAO. <ul style="list-style-type: none"> • See attachment 8, section 1.G for 1 a) and b). • See CAO section IV. for requirements to install MWs in northern area.
<u>Prosecution Team Letter</u> <u>February 25, 2014</u>	<u>1. Status report of chromium in western area</u>	<u>1. Complete.</u>
Executive Officer Letter February 26, 2014	1. Accepts Northern area investigation 2. Notify Water Board within 10 days if increasing concentrations (change of 30% or more) to the north or northwest of MW-193S3 are detected 3. Sample domestic wells in eastern area of Harper Dry Lake valley each quarter 4. Include domestic wells north of Grasshopper road in plume contouring if above background	1. See CAO section IV. For requirements to install MWs in northern area. 2. 2015 CAO requires hotspot remediation in northern area. 3. Ongoing, modified requirements in 2015 CAO. See attachment 8. 4. Ongoing, retained requirements in 2015 CAO. See attachment 8.

Notes:

1. CAO R6V-2008-0034 (as amended) contains replacement water provisions and other requirements regarding nitrate pollution related to Desert View Dairy animal operations. Mr. Paul Ryken is the primary responsible party for the purposes of those CAO requirements; PG&E has secondary responsibility. That CAO is not included in this table and will not be affected by new CAO requirements.

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2. Replacement water requirements for increases of chromium or remediation byproducts, and decreases in groundwater levels in domestic wells due to agricultural treatment unit operations are contained in Waste Discharge Requirements R6V-2014-0023, issued to PG&E in March 2014. Those requirements will not be affected by 2015 CAO requirements for replacement water.