
Lahontan Regional Water Quality Control Board

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HYDRAULIC CAPTURE MONITORING REPORT COMPLIANCE STATUS, PACIFIC GAS AND ELECTRIC COMPANY (PG&E), HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY, AMENDED CLEANUP AND ABATEMENT ORDER (CAO) NO. R6V-2008-0002A3

This letter describes PG&E's compliance status with demonstrating hydraulic capture of chromium in groundwater south of Thompson Road from January to November 2015, pursuant to amended CAO R6V-2008-0002A3.

Background

PG&E submits monthly reports to the Lahontan Water Board to demonstrate chromium plume capture in groundwater south of Thompson Road in Hinkley. Demonstration is achieved by showing inward hydraulic flow gradients in the shallow zone and deep zone of the upper aquifer using groundwater elevation data at prescribed well pairs and triplets.

If inward hydraulic capture is not demonstrated by prescribed well pairs and triplets, the amended CAO allows PG&E to submit additional data in reports that may help to demonstrate chromium plume capture. For instance, inward capture may be confirmed by groundwater elevation data for alternate well pairs and triplets showing an inward groundwater gradient downgradient of the capture metric. Inward capture may also be demonstrated by groundwater elevation data in the downgradient flow direction at extraction wells indicating capture in the cone of depression at the northern boundary.

Results

The Water Board compiled the monthly capture metric results for the period of January to November 2015 into the table below. Just as in the amended CAO, capture metrics are divided into the shallow zone and deep zone of the upper aquifer with each zone using different well pairs and triplets for demonstrating hydraulic capture.

Month in 2015	Shallow Zone of Upper Aquifer			Deep Zone of Upper Aquifer			Overall Compliance?
	Do metrics show inward capture at all locations?	Inward capture by alternate metrics?	Inward capture by down-gradient extraction?	Do metrics show inward capture at all locations?	Inward capture by alternate metrics?	Inward capture by down-gradient extraction ?	
January	No	none	No	No	none	No	No
February	No	none	No	No	none	No	No
March	No	none	Yes	No	none	No	No
April	No	none	Yes	Yes			Yes
May	No	No*	Yes	Yes			Yes
June	No	No*	Yes	Yes			Yes
July	No	No*	Yes	Yes			Yes
August	No	No*	Yes	Yes			Yes
September	No	No*	Yes	Yes			Yes
October	No	No*	Yes	Yes			Yes
November	No	No*	Yes	Yes			Yes

*Alternate metric is either upgradient or outside Summerset Rd

As shown in the table, all months evaluated contained at least one capture metric indicating an outward flow gradient instead of an inward gradient. Most of the months also contained information indicating eventual inward capture at the downgradient cone of depression from extraction wells (fourth column). The Compliance Column at the right end of the table offers a conclusion whether overall hydraulic capture metric compliance was achieved in each month. This column shows that compliance was achieved in the months of April through November, in accordance with the amended CAO. This indicates the chromium plume was being captured south of Thompson Road during that time period.

The Compliance Column also shows that capture metric compliance was not achieved in the months of January through March. Groundwater elevation data collected from well pairs and triplets during this time show an outward hydraulic gradient, suggesting no groundwater capture at those locations. During the first three months of 2015, PG&E implemented an alternate hydraulic capture pilot test that moved plume capture farther south. Therefore, compliance with hydraulic capture metrics was not achieved during the pilot test conducted in winter 2015.

Conclusion

While PG&E did not demonstrate adequate hydraulic capture during the months of January through March, the Water Board in our December 19, 2014 letter agreed to not hold PG&E responsible for achieving capture metric compliance during the winter 2015 pilot test. Otherwise, PG&E has adequately demonstrated hydraulic capture of the

chromium plume in groundwater south of Thompson Road from April through November of 2015. Thus, PG&E was in compliance with Board orders during the latter time period in 2015.

CLEANUP AND ABATEMENT ORDER NO R6V-2015-0068

Cleanup and Abatement Order No. R6V-2015-0068 (Order) was adopted by the Water Board on November 4, 2015. The Order contains the same demonstration of monthly capture metric requirements as were in CAO R6V-2008-0002A3. The only difference in the Order is the reporting period: quarterly reports instead of monthly reports must demonstrate monthly hydraulic capture metrics. The first quarterly report, due on January 15, 2016, will be for fourth quarter 2015. Subsequent quarterly reports will be due by April 15, July 15, October 15, and January 15 of each year.

If you should have any questions, please contact me at (530) 542-5436 (lauri.kemper@waterboards.ca.gov) or Lisa Dernbach, Senior Engineering Geologist, at (530) 542-5424 (lisa.dernbach@waterboards.ca.gov).



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cc: PG&E Technical Iyris list (and web posting)
Lisa Dernbach,

LSD/ma/T: PG&E 2015 Capture metric compliance status
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