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## Lahontan Regional Water Quality Control Board

### Status of Actions October 2020 PG&E Hinkley Chromium Contamination

#### Chromium Plume Boundary

In general, the Second Quarter 2020 groundwater data indicate that plume migration is not occurring but do reflect natural fluctuations of groundwater concentrations as remediation progresses. The Second Quarter 2020 chromium plume maps can be viewed on GeoTracker at [Second Quarter 2020 Groundwater Monitoring Report and Domestic Well Sampling Results](https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/7701366722/SL0607111288.PDF) ([https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/7701366722/SL0607111288.PDF](https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/7701366722/SL0607111288.PDF)), and are Figures 5-1 through 5-6 of this report.

Previous quarters chromium plume maps are posted on the Water Board's Hinkley website at [Water Board's Hinkley website](http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml) ([http://www.waterboards.ca.gov/lahontan/water\\_issues/projects/pge/index.shtml](http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml)), at the bottom of the page under the section titled "Other Documents and Information." The Third Quarter 2020 plume map is due on November 10, 2020, consistent with the reporting due dates contained in Cleanup and Abatement Order (CAO) No. R6V-2015-0068.

#### Request to Expand In-Situ Remediation Zone Permitted Area

PG&E requested a revision to the In-Situ Remediation Zone (IRZ) permitted area under the existing Notice of Applicability (NOA) of General Waste Discharge Requirements, Board Order No. R6V-2008-0014. PG&E proposes to expand the IRZ areas as follows: 600 feet to the west for the Central Area; and 140 feet to the west and 650 feet to the north for the South-Central Reinjection Area. The proposal also includes changes to the sentry well monitoring network used to monitor for treatment byproducts from IRZ operations. These increased IRZ areas are conservative but would allow for future remedial expansion.

Expanding the permitted IRZ areas will require reissuance of the NOA. Water Board staff are also identifying areas where flexibility can be incorporated into the new NOA that would allow PG&E to implement adaptive management as remediation progresses. PG&E is also requesting streamlined reporting, specifically a change from quarterly to semi-annual reporting, while continuing to collect monitoring data on a quarterly frequency. The process by which notifications of adverse conditions are reported will remain unchanged. Water Board staff are working with the IRP Manager to identify ways to allow for public participation by community members prior to release of a draft NOA for public comment, which we anticipate will be released in fall 2020.

## **Pilot Test of Modified Groundwater Extraction for Lower Aquifer Remediation**

PG&E has observed stagnating chromium concentrations in the area of a clay transition zone along the western edge of the plume. Because of upper and lower aquifer communication, some hexavalent chromium has entered the lower aquifer in this area. This pilot study will determine whether modified pumping at extraction wells EX-29, EX-30, and EX-37 will promote remediation of the chromium in the lower aquifer. Water Board staff accepted PG&E's proposal to perform the pilot test on May 12, 2020. The pilot test is scheduled to begin in Third Quarter 2020. When sufficient data have been obtained to assess the potential benefits of limited or no extraction from wells EX-29, EX-30, and/or EX-37, PG&E will summarize the findings and propose a longer-term strategy for addressing concentrations at monitoring wells MW-92C and MW-100C in the lower aquifer.

## **Northern Source Area Investigation**

PG&E submitted a 14-day notification for the *Northern Source Area Investigation* on April 29, 2020. This investigation was part of PG&E's remedial efforts to address elevated chromium concentrations that may remain in the shallow zone of the northern Source Area. The potential area of elevated chromium concentrations located beneath the surface impoundment (Pond 8) was not treated by previous upgradient injections. PG&E is installing two 45-degree slant monitoring wells beneath Pond 8 to monitor the chromium plume beneath the pond and to refine the conceptual site model in this area. Water Board staff reviewed the 14-day notification and concurred with the proposed scope of work on June 1, 2020. PG&E installed the slant borings and found the concentrations of hexavalent chromium were not as high as anticipated. They concluded that the previous treatment in the area may have treated the plume under Pond 8.

## **Four-Year Comprehensive Cleanup Status and Effectiveness Report (2016-2019)**

PG&E submitted the first *Four-Year Comprehensive Cleanup Status and Effectiveness Report for Years 2016 through 2019* on March 30, 2020. The four-year report evaluated the progress of remedial actions to reaching cleanup timeframes. As part of the 2015 CAO (R6V-2015-0068), Attachment 8, Section II.C, a *Remedial Timeframe Assessment Action Plan* was submitted on April 29, 2020 as part of the four-year review. The timeframe assessment presented recommendations to enhance remedial activities and increase remedy effectiveness to reach the goals set out in the 2015 CAO. The IRP Manager provided their comments on the four-year report to Water Board staff on July 1, 2020. Water Board staff are reviewing these documents, including the IRP Manager's suggestions to improve the reporting in the four-year report. The next four-year report is due March 30, 2024.

The *Four-Year Comprehensive Cleanup Status and Effectiveness Report* can be found at [Four-Year Comprehensive Cleanup Status and Effectiveness Report](https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/6213955223/SL_0607111288.PDF) ([https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/6213955223/SL\\_0607111288.PDF](https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/6213955223/SL_0607111288.PDF))

and the *Remedial Timeframe Assessment* at [Remedial Timeframe Assessment \(https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo\\_report/7075251698/SL0607111288.PDF\)](https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/7075251698/SL0607111288.PDF).

The IRP Manager's July 1, 2020 comments on the four-year report can be found at [IRP Comments on the Four-Year Comprehensive Cleanup Status Report \(https://geotracker.waterboards.ca.gov/view\\_documents?global\\_id=SL0607111288&document\\_id=6019081\)](https://geotracker.waterboards.ca.gov/view_documents?global_id=SL0607111288&document_id=6019081).

## **Chromium Background Study**

The Hinkley Chromium Background Study Report consists of 11 chapters, 10 of which were submitted for USGS supervisory review, USGS colleague review, USGS specialist review, and Technical Working Group (TWG) stakeholder review January 6, 2020. Reviewed manuscripts were returned to the USGS by April 1, 2020. One chapter was submitted for reviews October 9, 2020. An accelerated review timeline will allow this chapter to catch-up to the other chapters in the review and approval process. Table 1 below shows the status of each chapter within the USGS review process.

Numerous additional reports, data releases, and electronic data tables were prepared in support of the study. There are tens of thousands of measurements and other data provided in support of the final report, with the intent that the study could be independently duplicated from those data releases.

As of October 2020, the final report is anticipated for late December 2020 or early in 2021. Additional USGS review requirements for data releases, imposed after the report schedule was first envisioned, have added some time to the reviewing schedule.

## **Your Water Board Staff Contacts**

Water Board oversight of the PG&E Hinkley Chromium Cleanup project is provided by staff in the Water Board's Victorville office, which is located at 15095 Amargosa Road, Building 2, Suite 210, Victorville, CA 92394. Your Water Board staff contacts are listed below. Please feel free to contact any of the those listed should you need assistance.

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\*Please note, the majority of Lahontan Water Board staff are teleworking due to an Executive Order from Governor Newsom. However, we are available via email and voicemail. We are responding to emails throughout the workday. Responses to voicemail may take more than one business day.

**Table 1:** Summary of Hinkley Background Study Report review status, October 2020  
(x = complete; o = in progress; - = pending)

| Chapter   | Content   | Draft manuscript | USGS supervisory review | TWG review | USGS specialist review | Revision and response to reviews | USGS supervisory review | Data Management Section review | Editorial review | Submission to regional review and approval |
|-----------|---|------------------|-------------------------|------------|------------------------|----------------------------------|-------------------------|--------------------------------|------------------|--|
| Chapter A | Introduction  | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter B | Elemental composition of rock, alluvium, and drill cuttings | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter C | Mineralogy  | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter D | Historical data and Cr(VI) trend analyses                   | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter E | Groundwater chemistry                                       | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter F | Isotope and groundwater age-dating data                     | x                | x                       | x          | x                      | x                                | x                       | o                              | -                | -  |
| Chapter G | Summative scale analyses                                    | x                | x                       | x          | x                      | x                                | o                       | -                              | -                | -  |
| Chapter H | Hydrogeologic data  | x                | x                       | x          | x                      | x                                | o                       | -                              | -                | -  |
| Chapter I | Model particle track results                                | x                | x                       | x          | x                      | x                                | o                       | -                              | -                | -  |
| Chapter J | Task 8 experiments (Menlo Park)                             | x                | x                       | x          | o                      | -                                | -                       | -                              | -                | -  |
| Chapter K | Summary and conclusions                                     | x                | x                       | x          | x                      | x                                | -                       | -                              | -                | -  |