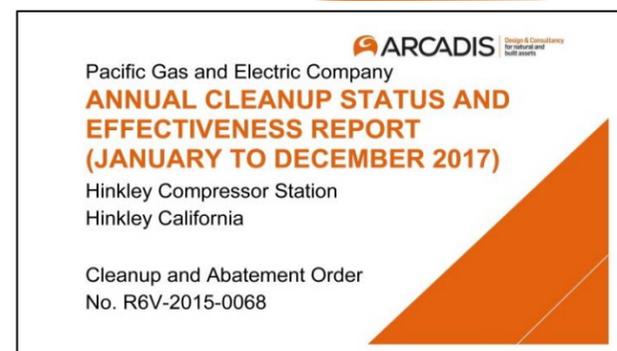




During March of 2018, the USGS collected additional core samples throughout the Hinkley Valley to further evaluate chromium in soils.



PG&E Issues Annual Cleanup Status and Effectiveness Report

On February 28, 2018, PG&E issued their Annual Cleanup Status and Effectiveness Report (the Report) to the Water Board. This Report is required by the Cleanup and Abatement Order (CAO), No. R6V-2015-0068, that was approved in November 2015. Per the CAO, PG&E is required to evaluate the effectiveness of their remedy. The effectiveness of the remedy is measured by the ability of the groundwater remedy to meet the remedial targets defined in the CAO. For example, remedial targets are specific dates by which the Water Board requires PG&E to remediate groundwater to well defined Cr(VI) target concentrations. For your recall, PG&E's remedy consists of groundwater extraction and injection systems, agricultural treatment units (ATUs), and the in-situ Reactive Zone (IRZ) system which treats the remaining highest concentrations of Cr(VI) in groundwater under PG&E owned land, north of the compressor station. The ATUs consist of carefully cultivated alfalfa fields which are irrigated with Cr(VI) impacted groundwater. The root-zone of the crops then converts Cr(VI) to innocuous Cr(III). At the IRZ system, low concentrations of an ethanol in water mixture is injected into the highest Cr(VI) concentration areas to aggressively convert Cr(VI) to Cr(III). PG&E's Report also provides recommendations on the ways to make further adjustments to the remedy to achieve the aforementioned remedial targets.

Key findings in the Report include the following:

- Groundwater extraction in the Thompson Road area, situated at northern end of the main plume which emanates from the compressor station, continues to show that the core of the plume, with the highest Cr(VI) concentrations, is not flowing north of Highway 58. The ATU and IRZ systems continue to reduce the Cr(VI) concentrations in groundwater, and have treated a total of 4,900 pounds of Cr(VI) or 70% of the estimated plume volume.
- The ATU and IRZ systems continue to reduce the Cr(VI) concentrations in groundwater. PG&E reports that a total of 4,900 pounds of Cr(VI) has been treated from Hinkley's groundwater in the period 1992 to 2017.

USGS Issues the Cr(VI) Background Study Midterm Report for Hinkley

Dr. John Izbicki of the United States Geological Survey (USGS) released a Cr(VI) Background Study Midterm Report to the Public on March 22, 2018.

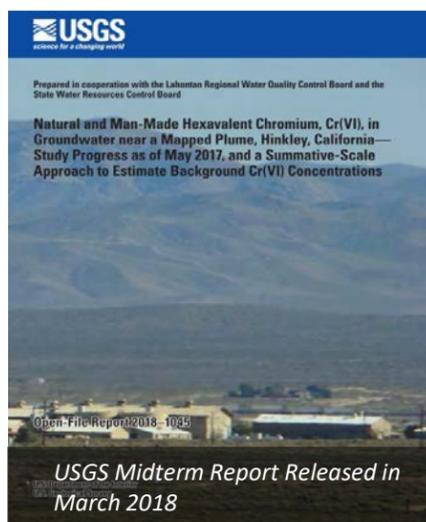
This Report provides a summary of the field data collected, the project's remaining schedule into 2019, and how Cr(VI) background concentrations in Hinkley's groundwater will be estimated.

This report is a major accomplishment as it outlines the method by which the USGS will use to identify the differences between man-made and naturally occurring Cr(VI) throughout the Hinkley Valley. While admittedly complex, the method that will be used to compute the background Cr(VI) concentrations is called the "Summative-Scale Approach." (For more information about this Approach see the FAQ section below.)

Key benefits to the Summative-Scale Approach include:

1. Providing a transparent framework for initial data interpretation in which all stakeholders (including Hinkley Community members) can participate;
2. Providing an unbiased initial interpretation that is traceable to numerical measurements and locally collected groundwater data;
3. Forcing data to be considered "collectively" (or in groupings), thereby minimizing "cherry picking" of selected data; and
4. Consolidating different data types into simple, easy-to-understand figures that will facilitate interpretation, Community discussions and understanding.

When the Summative-Scale Approach analysis is completed, the USGS will compare the results with the study's computer groundwater model. This mathematical model is currently being developed by the engineering firm, Arcadis, with input and oversight by USGS. A quality check on the entire effort will occur when the Summative-Scale Analysis and the computer model results are compared. Cr(VI) background numbers will be estimated for the east, west and north areas of the Hinkley Valley. Statistical methods will be used to calculate the final Cr(VI) background numbers. Community members, along with the IRP Manager, have participated in the Background Study's Technical Working Group (TWG²). The TWG has been meeting regularly to learn about Dr. Izbicki's work. The TWG has provided comments and suggestions during the Midterm Report's preparation. For Hinkley Community members interested in learning more about the USGS Midterm Report, please contact the IRP Manager's staff. The report can also be downloaded from www.hinkleygroundwater.com.



Frequently Asked Questions: How will the Background Cr(VI) Concentrations be Determined, and what is the Summative-Scale Approach?

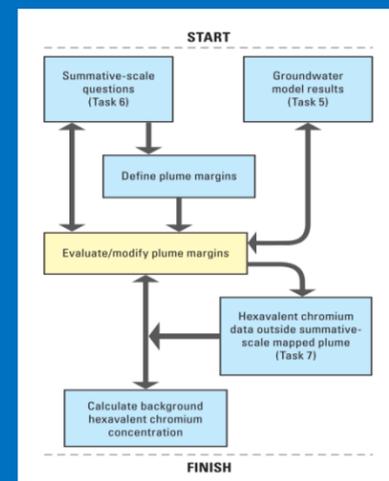
The Summative-Scale Approach is a point-based system commonly used in scientific research. The methodology has wide application and is, now, especially useful as a tool in calculating the contribution of any background Cr(VI) to the total Cr(VI) concentrations measured in groundwater in the Hinkley Valley. To use the Approach, "scoring points" are either added or subtracted based on groundwater-project-specific-questions.

The aforementioned USGS Midterm Report describes the questions which will be asked to help identify the differences between man-made and naturally occurring Cr(VI). Each question requires a YES or NO answer. All answers will be assigned a value of +1 or -1, depending on the scoring criteria.

A +1 score signifies results consistent with man-made Cr(VI), while a score of -1 results represent naturally occurring Cr(VI).

After all the questions have been answered by inquiring of the data collected at each sampled groundwater well, each well will have an assigned cumulative score. Wells having higher scores and thereby rankings will be indicative of the presences of man-made Cr(VI), while lower scores/rankings will be indicative of natural Cr(VI).

The results³ of the Summative-Scale Analysis approach will be compared with the results of the Computer Groundwater Model under the guidance of the TWG. If the results of the Summative-Scale approach and the Computer Groundwater Model are in agreement, a Cr(VI) background number will be determined. If the results are not in agreement, the Summative-Scale predictions and the Computer Groundwater Model's estimates will go through a recalculation/iterative process to zero in on, and optimize a solution.



¹ The Independent Review Panel (IRP) Manager is a resource for the Hinkley Community that provides explanations and answers to Community questions regarding PG&E's Hinkley Cr(VI) Remediation Program.
² The TWG consists of members from the Hinkley Community, the Lahontan Regional Water Quality Control Board, USGS, PG&E and the IRP Manager's Staff.
³ Results for the Summative-Scale Analysis will identify man-made or natural Cr(VI) at that specific well location.



Photo of Hinkley Station 1908 from "Once Upon A Desert" at the Mojave River Valley Museum

Interesting Historical Facts about Hinkley²

Presented by Margaret DeAngelis

This article was taken from the book "Once upon a Desert" published by the Mojave River Valley Museum association in Barstow, CA. The book contains many articles written by various authors and it is a great source of valuable historical information and photographs of the Mojave Desert.

The Hill Family

By Melvin Hill as told to Thelma M. Carder

"I was born on a homestead ranch in a railroad-tie house. Mother and Dad, along with my six older brothers, had homesteaded the 160 acres in 1908. Dad was then working at the Bagdad-Chase mill located on the west side of what is now "B" hill.

The family moved onto the property in the spring of 1908 with a team of mules and a tent, plus a lot of fortitude and ambition. Dad put down the first well here, and many others around the community, mostly by hand, with one-mule power.

In 1914 when I came along, mother was active in school work. In 1915, she and Abby Waterman of the Waterman mine were successful with a petition to establish a high school. Three of my older brothers and sisters graduated in the same class in 1919, with the other four following as we came along.

When I started walking to grammar school in 1920, its building was located one and a half miles away, where it stayed. A concrete building was built about 1924. I still have the old wooden one-room schoolhouse.

The parties, ice-cream socials they called them then, when the whole community would gather by wagon or buggy, were joyous occasions. Everybody knew everybody for 25 miles around, and they would all turn out.

My first memory of a church experience was riding with dad in the Model T to Harper Lake for Sunday School. A minister would drive from Long Beach for this group of six families.

Dad was active in the Farm Bureau as long as he was able to get around, and I can remember raising onions as a 4H project in 1925. I was a member, in 1928, when we named the local club "Hinkley Rollicking Ranchers."

Years later, many neighbors and myself were leaders of the club which is still active, and has won many awards over the years. For the County Fair we used the idea of growing plants in flats to have a green live exhibit booth with an operating sprinkler system. Jackie Simmons pumped the water.

The outstanding trip of my life was with 25 members from California to the 4H Club Congress in Chicago. I rate 4H Club members high anyway, and one in a thousand got to go on this trip.

Since I graduated from high school in the "hungry '30's" very few of us went away for more schooling. In the spring of 1957 when I was chairman of the high school board, I began thinking about that. We asked the superintendent, Dr. Robert Hilburn, to investigate the possibilities of junior college in this area.

The Hill family has been living in the Mojave River Valley, mining and ranching, for nearly 70 years. Chances are there will be Hills many years to come."

Contact Information

The IRP Manager frequently updates the IRP website dedicated to the Hinkley remediation. For more up-to-date information, please contact the IRP Manager's office or visit the website at www.HinkleyGroundwater.com. If you would like to speak with the IRP Manager's staff, schedule a meeting, or suggest input on the newsletter, please contact Dr. Raudel Sanchez at (714) 388-1800, or email at rsanchez@projectnavigator.com.

Locally, Margaret DeAngelis at mdeangelis@projectnavigator.com is also available to provide advice. You can also contact Community member Roger Killian at acgeneratorservice008@gmail.com.



Water Board Meeting Held Its Annual Meeting on April 11

The Lahontan Region State Water Board meeting was held on April 11, 2011 at the Barstow City Hall in the Council Chambers. The Board heard updates from Water Board Staff, IRP Manager, and PG&E. For additional information, the IRP Manager's presentation can be downloaded from www.HinkleyGroundwater.com.

Important Upcoming Dates in 2018

- July 26:** 6:30 PM – 8:00 PM
Quarterly Hinkley Community Meeting at Hinkley Community & Senior Center
- Oct 25:** 6:30 PM – 8:00 PM
Quarterly Hinkley Community Meeting at Hinkley Community & Senior Center

IRP Manager's Office Hours 36236 Serra Rd., Hinkley, CA 92347

- May 3:** 5:00 PM – 8:00
- May 12:** 8:00 AM – 10:00 AM
at Hinkley Community & Senior Center
- May 17:** 5:00 PM – 8:00 PM



The IRP Manager's Function

Project Navigator, Ltd. (PNL) was selected in 2012 as the Independent Review Panel (IRP) Manager by the Hinkley Community Advisory Committee (CAC).

PNL is a project management company based in Brea, CA, known for its expertise in advising on complex, long-term environmental remediation projects. PNL also specializes in converting complex technical information into easy-to-understand visuals that can enhance communication.

The IRP Manager's Scope of Work (SOW) is detailed in the Water Board November 4, 2015, Cleanup and Abatement Order (CAO). Tasks include the following:

- Reviews all technical documentation regarding PG&E's Cr(VI) Groundwater Remediation Program
- Provides comments and feedback to the Water Board regarding key reports and Water Board's orders
- Participates in the planning and implementation of the USGS Cr(VI) Background Study
- Performs outreach to Hinkley residents to explain the different parts of PG&E's Cr(VI) Groundwater Remediation Program (via office hours, quarterly monthly meetings, website, and newsletters)
- This Newsletter is being issued in the spirit of helping fulfill the above technical outreach commitment.

¹ The Independent Review Panel (IRP) Manager is a resource for the Hinkley Community that provides explanations and answers to Community questions regarding PG&E's Hinkley Cr(VI) Remediation Program.
² See previous editions of this newsletter for more "Historical Facts About Hinkley." Available at www.HinkleyGroundwater.com.