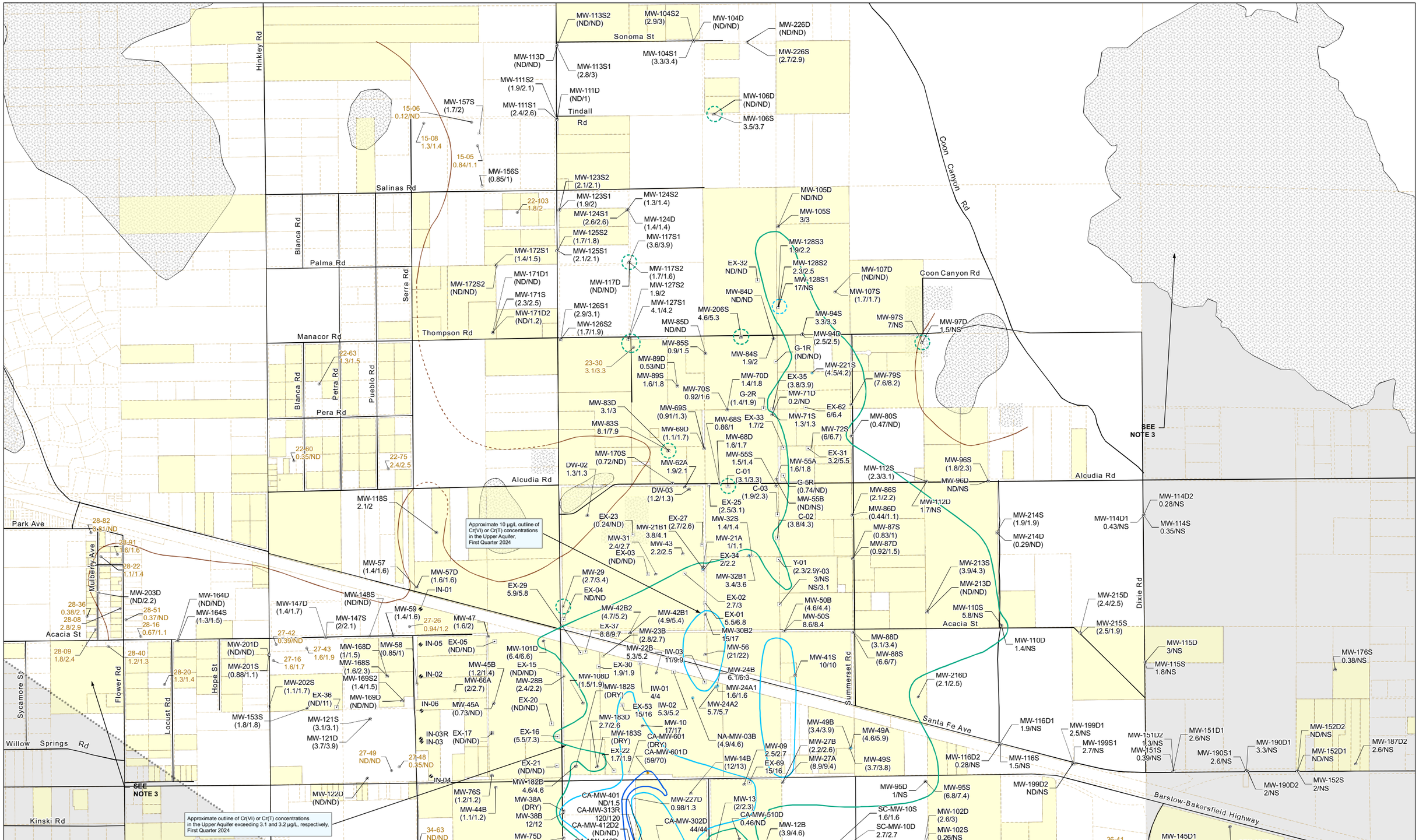
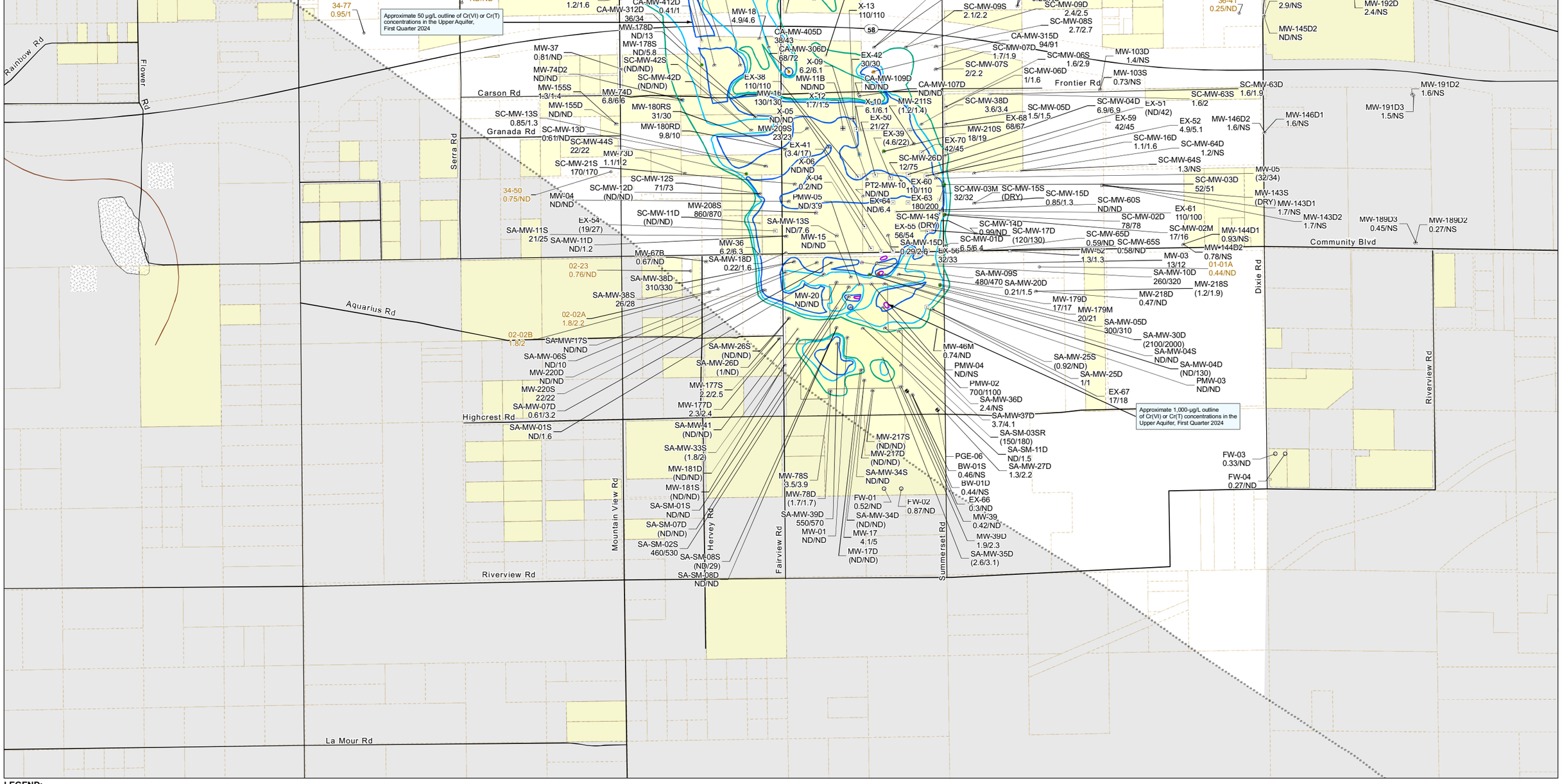
ARCADIS


Sonoma St
Tindall Rd
Salinas Rd
Palma Rd
Manacor Rd
Thompson Rd
Pera Rd
Alcudia Rd
Park Ave
Acacia St
Willow Springs Rd
Kinski Rd
Santa Fe Ave
Barstow-Bakersfield Highway
Coon Canyon Rd
Hinkley Rd
Blanca Rd
Serra Rd
Petra Rd
Pueblo Rd
Mulberry Ave
Sycamore St
Flower Rd
Locust Rd
Hope St
Summerset Rd
Dixie Rd
SEE NOTE 3
Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in the Upper Aquifer, First Quarter 2024
Approximate outline of Cr(VI) or Cr(T) concentrations in the Upper Aquifer exceeding 3.1 and 3.2 µg/L, respectively, First Quarter 2024



LEGEND:

- Monitoring Well
- Domestic Supply Well (Active and Inactive)
- Other Supply Well
- Groundwater Extraction Well
- Multi-Use Test Well, or Inactive Extraction/Injection Well
- Freshwater Injection Well
- PG&E-Owned Property
- PG&E Compressor Station
- County Parcel
- Approximate Limit of Saturated Alluvium Upper Aquifer (Dashed Where Inferred)
- Approximate Location of Lockhart Fault; Fault Trace Is Inferred, and There Is No Surface Expression (Stamos et al. 2001)
- Bedrock Exposed at Ground Surface

DRY Groundwater Monitoring Program Well that has been dry for at least a year

SA-MW-11S Well ID
21/25 Cr(VI)/Cr(T) concentrations in µg/L; maximum of primary and duplicate samples during First Quarter 2024 sampling.
(1.7/1.7) Data in parentheses are from previous reporting period. See Table E-1 for sample dates.

Groundwater Cr(VI) Concentrations in Monitoring Wells:

- More than 1,000 µg/L
- 100 to 1,000 µg/L
- 50 to 100 µg/L
- 10 to 50 µg/L
- 3.1 to 10 µg/L
- Less than 3.1 µg/L or ND

ABBREVIATIONS:

µg/L	Microgram per Liter
Cr(VI)	Hexavalent Chromium
Cr(T)	Total Dissolved Chromium
J	Estimated Result
ND	Not Detected
NS	Not Sampled
PG&E	Pacific Gas and Electric Company
Water Board	California Regional Water Quality Control Board, Lahontan Region

NOTES:

1. Chromium results are shown for site-wide Groundwater Monitoring Program and domestic wells sampled in the First Quarter (January through March) 2024 monitoring period. For wells sampled multiple times during the reporting period, the most recent results are shown.
2. The concentration contours are based on First Quarter 2024 chromium results for the groundwater monitoring and extraction wells that are completed in the shallow zone and deep zone of the Upper Aquifer as noted on Figures 5-1 and 5-2. Results for domestic wells (brown-colored labels) were not used for chromium plume contouring, except for those in the northern disputed plume areas, pursuant to the Water Board's Cleanup and Abatement Order dated November 4, 2015 (Water Board 2015).
3. Pursuant to the Water Board's Cleanup and Abatement Order dated November 4, 2015 (Water Board 2015), groundwater monitoring wells are not used for chromium contouring if they are located in the areas southwest of the Lockhart Fault and on or east of Dixie Road. Monitoring wells sampled southwest of Lockhart Fault and east of Dixie Road were sampled in support of U.S. Geological Survey background chromium investigations.
4. Chromium plume contours in the general area south of Highway 58 were developed using a larger set of monitoring data which is presented in the First Semi-Annual 2024 Monitoring Report for the In Situ Reactive Zone and Freshwater Injection Projects (Arcadis, in progress). Select wells from that program are shown here for reference.
5. Chromium west of Serra Road and in the Northern Disputed Plume Area was determined to be predominantly naturally occurring in the U.S. Geological Survey Report titled Evaluation of Natural and Anthropogenic (Human-Made) Hexavalent Chromium (Izbicki 2023). As a result of the findings of this report, chromium isoconcentration contours were not developed west of Serra Road and the Northern Disputed Plume Area other than at well MW-106S where a small portion of anthropogenic chromium may be present.

WORK CITED:

Arcadis. In progress. First Semi-Annual 2024 Monitoring Report for the In Situ Reactive Zone and Freshwater Injection Projects, Hinkley Compressor Station, Hinkley, California, August 15.

Izbicki, J.A.. 2023. Natural and Anthropogenic (Human-Made) Hexavalent Chromium, Cr(VI), in Groundwater near a Mapped Plume, Hinkley, California. U .S. Geological Survey Professional Paper 1885. April 25.

Stamos, C.L., P. Martin, T. Nishikawa, and B.F. Cox. 2001. *Simulation of Ground-Water Flow in the Mojave River Basin, California*. U.S. Geological Survey Water-Resources Investigations Report 01-4002, Version 3. Prepared in cooperation with the Mojave Water Agency.

Water Board. 2015. Cleanup and Abatement Order No. R6V-2015-0068 Requiring Pacific Gas and Electric Company to Cleanup and Abate Waste Discharges of Total and Hexavalent Chromium to the Groundwaters of the Mojave Hydrologic Unit. November 4.

N

0 750 1,500 Feet

FIGURE 5-5
CHROMIUM RESULTS FOR FIRST QUARTER 2024 GROUNDWATER MONITORING AND DOMESTIC WELL SAMPLING AND MAXIMUM COMPOSITE PLUME OUTLINE IN UPPER AQUIFER

FIRST QUARTER 2024 GROUNDWATER MONITORING REPORT AND DOMESTIC WELL SAMPLING RESULTS
SITE-WIDE GROUNDWATER MONITORING PROGRAM

PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA