



# Technical Memorandum

## 2022 Groundwater Monitoring Summary (Including Fourth Quarter 2022 Groundwater Sampling Event) National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California

Final

June 2023

This technical memorandum summarizes the results of the fourth quarter 2022 groundwater sampling event completed as part of the groundwater monitoring program at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL). The fourth quarter 2022 groundwater sampling event was conducted from October 21 through November 4, 2022.

### INTRODUCTION

The JPL groundwater monitoring well (MW) network consists of 25 monitoring wells, 10 of which are shallow standpipe wells constructed with a single screen, and 15 of which are multiport wells constructed with 2 to 5 screens for a combined total of 82 individual monitoring locations. During the fourth quarter 2022 sampling event, groundwater samples were collected from 18 of 25 JPL monitoring wells (MWs), both on- and off-facility and analyzed for volatile organic compounds (VOCs), total chromium, hexavalent chromium [Cr(VI)], and perchlorate. In select wells, chloride, nitrate, sulfate, nitrite, and orthophosphate were also analyzed. During the fourth quarter 2022 sampling event, shallow standpipe wells MW-5, MW-6, MW-7, MW-8, MW-10, MW-13, and MW-16 were dry and not sampled. In addition, the uppermost screen (i.e., Screen 1) of multiport wells MW-3, MW-4, MW-12, MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23, and MW-26 were dry and not sampled. In total, 64 of 82 monitoring locations were sampled during this monitoring event. Figure 1 shows the locations of the groundwater monitoring wells. In addition, samples were collected from the Monk Hill Treatment System (MHTS) upgradient surveillance monitoring wells and analyzed in accordance with the City of Pasadena's State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) drinking water permit.

Groundwater samples were shipped to Pace Environmental Sciences (Pace), in Bakersfield, California, for chemical analysis. Pace is certified by the SWRCB and Department of Defense (DoD) Environmental Laboratory Accreditation Programs (ELAP). Sample collection procedures and sample analyses were conducted in accordance with the approved *Work Plan for Performing a Remedial Investigation/Feasibility Study*<sup>1</sup>. No reported data was rejected for non-compliance with method requirements during validation, and no reported data were deemed unusable.

Table 1 summarizes analytical results for VOCs and perchlorate and Table 2 summarizes analytical results for metals from the last five sampling events. Table 3 summarizes VOC and perchlorate concentrations in production wells located near the JPL facility from the last five sampling events. No tentatively identified compounds (TICs) were detected in the samples collected during the fourth quarter of 2022.

Figures summarizing the results from the fourth quarter 2022 sampling event are included in this technical memorandum. Figure 2 shows the lateral extent of carbon tetrachloride concentrations in

<sup>1</sup> Ebasco. 1993. *Work Plan for Performing a Remedial Investigation/Feasibility Study*, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California. December.

groundwater, and Figure 3 provides a cross section detailing the horizontal and vertical extent of carbon tetrachloride. Figure 4 shows the lateral extent of perchlorate concentrations in groundwater, and Figure 5 provides a cross section detailing the horizontal and vertical extent of perchlorate in groundwater. Figure 6 shows the lateral extent of tetrachloroethene (PCE) concentrations in groundwater. Figure 7 shows the lateral extent of trichloroethene (TCE) concentrations in groundwater. Figure 8 shows groundwater elevation contours from the fourth quarter 2022 event and groundwater flow directions.

Attachment 1 summarizes the field and laboratory quality assurance (QA), data verification and data validation procedures utilized for the JPL groundwater monitoring program. Attachment 2 contains the data validation reports performed by an independent subcontractor, Laboratory Data Consultants (LDC). Attachment 3 contains the laboratory analytical reports prepared by Pace. Attachment 4 contains the groundwater sample collection field logs for the JPL groundwater monitoring wells. Attachment 5 contains water level field measurement log sheets. Attachment 6 presents time series plots for select wells and analytes. Attachment 7 presents historical perchlorate, VOC, and metals concentrations from 1996 to present. A summary of the well construction details for the JPL groundwater monitoring wells is included in Attachment 8.

The groundwater monitoring wells have been grouped into four categories:

- On-facility source area wells (MW-7, MW-13, MW-16, and MW-24);
- Other on-facility wells (MW-6, MW-8, MW-11, MW-22, and MW-23);
- Perimeter off-facility wells (MW-1, MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14, and MW-15 [MW-1 and MW-9 are only sampled during the second and fourth quarter events]); and
- Off-facility wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-25, and MW-26).

MW-2 was decommissioned in July 2018. Well MW-2 had not been sampled during the groundwater monitoring program since it was replaced with well MW-14.

## **ON-FACILITY SOURCE AREA WELLS**

On-facility source area wells consist of wells that have historically contained the highest concentration of site-related chemicals. This group of wells is located within the JPL facility (on-facility) and consists of monitoring wells MW-7, MW-13, MW-16, and MW-24.

The source area treatment system has been operating since 2005 and addresses groundwater beneath the JPL facility, which has historically contained the highest concentrations of perchlorate and VOCs (i.e., the source area). Operation of the source area treatment system appears to have resulted in a significant reduction of chemicals of interest in wells MW-7, MW-16, and MW-24, which are located within the treatment zone. Additional details regarding chemical concentrations in the on-facility source area wells are presented below.

It should be noted that during all four quarters of 2022, wells MW-7, MW-13, and MW-16 were dry and could not be sampled. Declining water levels were associated with the drought in California.

## PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2022, perchlorate was detected above the state Maximum Contaminant Level (MCL) (6.0 µg/L) in well MW-24 (Screens 1 [35.0 µg/L] and 2 [17.0 µg/L]).
- Perchlorate was not detected in MW-24 (Screens 3 to 5) during the fourth quarter 2022 with a reporting limit of 2.0 µg/L.
- Over the course of 2022, the perchlorate concentrations in MW-24 (Screen 1) consistently exceeded the state MCL of 6.0 µg/L, with values of 164.0 µg/L in the first quarter, 140.0 µg/L in the second quarter, 95.0 µg/L in the third quarter, and 35.0 µg/L in the fourth quarter.
- Throughout the year, the perchlorate levels in MW-24 (Screen 2) varied, starting at 5.2 µg/L in the first quarter, then increasing to 9.6 µg/L in the second, 15.0 µg/L in the third, and peaking at 17.0 µg/L in the fourth quarter, with the latter three detections exceeding the state MCL of 6.0 µg/L.
- Perchlorate was not detected in MW-24 (Screen 3) during all four quarters of 2022. Samples were collected from MW-24 (Screens 4 and 5) and analyzed for perchlorate during the second and fourth quarters of 2022 and perchlorate was not detected.

## VOC ANALYTICAL RESULTS

- During the fourth quarter 2022, carbon tetrachloride was not detected in MW-24 (Screens 1 to 5) with a reporting limit of 0.5 µg/L.
- In 2022, carbon tetrachloride was detected in MW-24 (Screen 1) during the first quarter at a concentration of 2.3 µg/L which exceeded the state MCL (0.5 µg/L) but was not detected during the second through fourth quarters. During all four quarters of 2022, carbon tetrachloride was not detected in MW-24 (Screens 2 through 5) with a reporting limit of 0.5 µg/L.
- During the fourth quarter 2022, TCE and PCE were not detected in well MW-24 (Screens 1 through 5) with a reporting limit of 0.5 µg/L.
- During all four quarters of 2022, TCE was not detected in well MW-24 (Screens 1 through 5) with a reporting limit of 0.5 µg/L.
- In 2022, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-24 (Screen 1) during the first quarter at a concentration of 1.6 µg/L but was not detected during the second through fourth quarters. During all four quarters of 2022, PCE was not detected in MW-24 (Screens 2 through 5) with a reporting limit of 0.5 µg/L.

## OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2022, Cr(VI)<sup>2</sup> was detected below the state MCL (50.0 µg/L) in MW-24 (Screens 1, 2, and 5 [6.00 µg/L, 1.50 µg/L, and 2.30] µg/L, respectively). Cr(VI) was not detected in MW-24 (Screens 3 and 4) with a reporting limit of 0.20 µg/L.

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<sup>2</sup> On August 1, 2017, the State Water Resources Control Board (SWRCB) removed the previously adopted MCL for Cr(VI). See [https://www.waterboards.ca.gov/press\\_room/press\\_releases/2017/pr080117\\_mcl\\_removal.pdf](https://www.waterboards.ca.gov/press_room/press_releases/2017/pr080117_mcl_removal.pdf).

- In 2022, Cr(VI) was detected in MW-24 (Screens 1, 2, 4, and 5) at concentrations that ranged from 0.10J  $\mu\text{g/L}$  to 6.00  $\mu\text{g/L}$  which are below the state MCL (50.0  $\mu\text{g/L}$ ). Cr(VI) was not detected in MW-24 (Screen 3) during the four quarters of 2022.
- During the fourth quarter 2022, total chromium was detected below both the state MCL (50.0  $\mu\text{g/L}$ ) and federal MCL (100.0  $\mu\text{g/L}$ ) in MW-24 (Screens 1 and 5) at concentrations of 9.2  $\mu\text{g/L}$  and 3.6  $\mu\text{g/L}$ , respectively. All other total chromium results were non-detect in MW-24 (Screens 2 to 4).
- In 2022, total chromium was detected below both the state MCL (50.0  $\mu\text{g/L}$ ) and federal MCL (100.0  $\mu\text{g/L}$ ) in MW-24 (Screens 1 to 5) at concentrations that ranged from 0.80J  $\mu\text{g/L}$  to 9.2  $\mu\text{g/L}$ .
- During the second quarter of 2022, arsenic was detected below the state and federal MCL (10.0  $\mu\text{g/L}$ ) in MW-24 (Screens 1 through 5 [1.3J  $\mu\text{g/L}$ , 2.0  $\mu\text{g/L}$ , 1.7J  $\mu\text{g/L}$ , 1.3J  $\mu\text{g/L}$ , and 2.7  $\mu\text{g/L}$ , respectively]). Notably, these results illustrate that the arsenic levels in these monitoring wells remain compliant with regulatory limits.
- During the second quarter 2022, lead was detected in MW-24 (Screens 2 and 5) at concentrations of 0.53J  $\mu\text{g/L}$  and 0.45J  $\mu\text{g/L}$ , both below the regulatory action level (15.0  $\mu\text{g/L}$ ).

## OTHER ON-FACILITY WELLS

This well group consists of monitoring wells MW-6, MW-8, MW-11, MW-22, and MW-23. These wells are located on the JPL facility but outside the source area.

During all quarters of 2022, MW-6 was dry and MW-8 was dry during the first, third, and fourth quarters of 2022 and could not be sampled. The uppermost screen (i.e., Screen 1) in MW-23 was dry during the first, third, and fourth quarters, and MW-22 (Screen 1) was dry during the third and fourth quarters of 2022.

### PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2022, perchlorate was not detected in the other on-facility wells, that were sampled, at concentrations exceeding the state MCL (6.0  $\mu\text{g/L}$ ).
- During the fourth quarter 2022, perchlorate was detected below the state MCL (6.0  $\mu\text{g/L}$ ) in MW-22 (Screens 2 through 4 [3.2  $\mu\text{g/L}$ , 3.1  $\mu\text{g/L}$ , and 1.1J  $\mu\text{g/L}$ , respectively]), and MW-23 (Screens 2 through 4 [5.2  $\mu\text{g/L}$ , 4.6  $\mu\text{g/L}$ , and 1.9J  $\mu\text{g/L}$ , respectively]).
- During the fourth quarter 2022, perchlorate was not detected in MW-11 (Screens 1 through 5), MW-22 (Screen 5), and MW-23 (Screen 5) with a reporting limit of 2.0  $\mu\text{g/L}$ .
- Perchlorate concentrations exceeded the state MCL of 6.0  $\mu\text{g/L}$  in MW-8 during the second quarter (7.9  $\mu\text{g/L}$ ) and MW-22 (Screen 1) during the first (17.6  $\mu\text{g/L}$ ) and second (60.0  $\mu\text{g/L}$ ) quarters. MW-23 (Screen 1) also exceeded the MCL in the second quarter (6.7J  $\mu\text{g/L}$ ).
- In 2022, perchlorate concentrations below the state MCL (6.0  $\mu\text{g/L}$ ) were found in MW-22 (Screen 2) with ranges from 2.3J to 3.7  $\mu\text{g/L}$ , Screen 3 with ranges from 2.9J to 3.5  $\mu\text{g/L}$ , and Screen 4 with concentrations of 1.1J  $\mu\text{g/L}$ . MW-23 also had concentrations below the MCL in Screen 2 (3.6J to 5.2  $\mu\text{g/L}$ ), Screen 3 (3.2J to 4.6  $\mu\text{g/L}$ ), and Screen 4 (1.9J  $\mu\text{g/L}$ ).

- Perchlorate was not detected in MW-11 (Screens 1 through 5) and MW-22 (Screen 5), as well as MW-23 (Screen 5) during the specified periods of 2022.
- An increase in perchlorate concentration was observed in MW-22 (Screen 1) from 17.6 µg/L in the first quarter to 60.0 µg/L in the second quarter of 2022; MW-22 (Screen 1) was dry in third and fourth quarter of 2022 and could not be sampled.
- Perchlorate was detected in MW-22 (Screen 1) at concentrations above the state MCL (6.0 µg/L) in the third quarter 1998 (6.4 µg/L) and first quarter 1999 (6.4 µg/L), all four quarters of 2011 (22.9 µg/L, 40.1 µg/L, 98.7 µg/L, and 85.2 µg/L, respectively) and second quarter 2012 (6.5 µg/L). From third quarter 2012 through first quarter 2019 perchlorate concentrations ranged from non-detect to 5.6 µg/L. From second quarter 2019 to fourth quarter 2022, perchlorate has exceeded the MCL in eight of eleven quarters ranging from 17.6 µg/L to 320.0 µg/L. Perchlorate remained below the MCL in MW-22 (Screen 1) in the first and second quarters of 2021 at concentrations ranging from 3.4J µg/L to 3.9J µg/L. However, perchlorate was detected above the MCL during the first and second quarters of 2022 at concentrations of 17.6 µg/L and 60.0 µg/L. During the third and fourth quarters of 2021 and 2022, MW-22 (Screen 1) was dry and could not be sampled. MW-22 is located within the capture zone of the MHTS. Concentrations of perchlorate in MW-22 (Screen 1) will continue to be monitored closely.

#### VOC ANALYTICAL RESULTS

- During the fourth quarter 2022, carbon tetrachloride was not detected in any of the other on-facility wells at a reporting limit of 0.5 µg/L.
- Carbon tetrachloride was not detected during 2022 in any of the other on-facility wells at a reporting limit of 0.5 µg/L.
- During the fourth quarter 2022, TCE was detected in MW-11 (Screen 4) and MW-23 (Screen 2) at concentrations of 0.3J µg/L and 0.8 µg/L, respectively which are below the state and federal MCL (5.0 µg/L).
- TCE was not detected in the other on-facility wells that were sampled during the fourth quarter 2022.
- In 2022, TCE was detected below the state and federal MCL of 5.0 µg/L in MW-11 (Screen 3) during the first and second quarters with concentrations of 0.5 µg/L and 0.3J µg/L, respectively.
- MW-11 (Screen 4) had TCE concentrations under the MCL all four quarters of 2022, specifically 0.6 µg/L, 0.8 µg/L, 0.6 µg/L, and 0.3J µg/L.
- TCE concentrations below the state and federal MCL (5.0 µg/L) were detected in MW-22 (Screen 1) during the first (0.4J µg/L) and second (1.9 µg/L) quarters of 2022.
- MW-23 (Screen 1) TCE concentrations were detected below the state and federal MCL (5.0 µg/L), specifically 1.0 µg/L in the second quarter of 2022, the only quarter that it could be sampled in 2022.
- Throughout all four quarters of 2022, TCE was detected in MW-23 (Screen 2) at concentrations ranging from 0.6 µg/L to 2.2 µg/L, which are below the state and federal MCL (5.0 µg/L).
- No other TCE detections were reported in other on-facility wells in 2022.

- During the fourth quarter 2022, PCE was detected in MW-23 (Screen 2) at a concentration of 0.31 µg/L which is below the state and federal MCL (5.0 µg/L).
- PCE was not detected in the other on-facility wells that were sampled during the fourth quarter 2022.
- In 2022, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-22 (Screen 1 [second quarter (0.6 µg/L)]) and MW-23 (Screen 2 [all four quarters (1.0 µg/L, 0.31 µg/L, 0.5 µg/L, and 0.31 µg/L, respectively)]). No other PCE detections occurred in the other on-facility wells.

#### **OTHER NOTABLE ANALYTICAL RESULTS**

- During the fourth quarter 2022, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-22 (Screens 2 through 4 [3.40 µg/L, 1.80 µg/L, and 2.50 µg/L, respectively]), and MW-23 (Screens 2 through 4 [1.90 µg/L, 2.70 µg/L, and 4.10 µg/L, respectively]).
- Cr(VI) was not detected in MW-11 (Screens 1 through 5), MW-22 (Screen 5) and MW-23 (Screen 5) during the fourth quarter 2022.
- In 2022, detections of Cr(VI) in the other on-facility wells were relatively consistent (low detections or non-detect) and all remained below the state MCL of 50.0 µg/L.
- During the fourth quarter 2022, total chromium was detected below the state MCL (50.0 mg/L) and federal MCL (100.0 µg/L) in MW-11 (Screen 5 [3.4 µg/L]), MW-22 (Screen 4 [3.0 µg/L]), and MW-23 (Screens 2 through 4 [1.9 µg/L, 2.7 µg/L and 4.2 µg/L, respectively]). No other total chromium detections occurred in the other on-facility during the fourth quarter 2022.
- In 2022, detections of total chromium in the other on-facility wells were relatively consistent (low detections or non-detect) and all remained below the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L).
- Total chromium results will continue to be closely evaluated during subsequent sampling events.
- During the second quarter of 2022, arsenic was detected below the state and federal MCL (10.0 µg/L) in MW-11 (Screens 2 through 5 [1.0 µg/L, 3.5 µg/L, 3.8 µg/L, and 6.1 µg/L, respectively]), MW-22 (Screens 3 and 4 [0.9 µg/L and 0.9 µg/L]), MW-23 (Screens 2 through 5 [1.2 µg/L, 1.1 µg/L, 1.7 µg/L, and 2.4 µg/L, respectively]). These results illustrate that the arsenic levels in these monitoring wells remain compliant with regulatory limits.
- During the second quarter 2022, lead was detected in MW-11 (Screen 5), and MW-22 (Screen 5), MW-23 (Screens 3 and 5), at concentrations of 2.40 µg/L, 0.20 µg/L, 0.18 µg/L, and 0.20 µg/L, respectively, which are all below the regulatory action level (15.0 µg/L).
- Lead was not detected in MW-11 (Screens 2 through 4), MW-22 (Screens 1 through 4), and MW-23 (Screens 1, 2, or 4) in the second quarter 2022.
- MW-6 was dry for all quarters of 2022, while MW-8 and MW-22 (Screen 1) were dry during specific quarters. MW-11 (Screen 1) was dry during the second quarter, while Screen 5 was not sampled during the first and third quarters. MW-23's Screen 1 was also dry for three quarters in 2022. Sampling was done for MW-22 and MW-23 (Screens 4 and 5) during the second and fourth quarterly monitoring events.

## PERIMETER OFF-FACILITY WELLS

The perimeter off-facility wells are located near the JPL fence line along the perimeter of the property. This group of wells consists of MW-1, MW-3, MW-4, MW-5, MW-9, MW-10, MW-12, MW-14, and MW-15.

It should be noted that during all four quarters of 2022, MW-14 (Screen 1) lacked sufficient water volume to collect a sample. MW-5 and MW-10 were dry during the first, third, and fourth quarters of 2022. MW-4 (Screen 1) and MW-12 (Screen 1) were dry during the third and fourth quarters of 2022. Lastly, MW-3 (Screen 1) was dry during the fourth quarter 2022.

### PERCHLORATE ANALYTICAL RESULTS

- Perchlorate concentrations exceeding the state MCL of 6.0 µg/L were detected in MW-3 (Screen 5) with a concentration of 6.1 µg/L, and in MW-4 (Screen 2) with a concentration of 36.0 µg/L during the fourth quarter of 2022.
- Concentrations of perchlorate below the MCL were detected during the fourth quarter 2022 in MW-3 (Screens 2, 3, and 4) at concentrations of 4.6 µg/L, 6.0 µg/L, and 5.0 µg/L, respectively, and in MW-4 (Screens 3 and 4) at concentrations of 3.2 µg/L and 2.7 µg/L, respectively. MW-12 (Screens 3 to 5) and MW-14 (Screens 2 to 4) also had detections below the MCL ranging from 1.5J µg/L to 4.0 µg/L.
- During the fourth quarter, perchlorate was not detected in wells MW-1, MW-4 (Screen 5), MW-9, MW-14 (Screen 5), and MW-15. MW-12 (Screen 2) also showed no detection of perchlorate.
- The perchlorate concentration increased in several sample locations from the third to the fourth quarters: MW-3 (Screen 2) went from 3.6 µg/L to 4.6 µg/L, MW-3 (Screen 3) rose from 3.1 µg/L to 6.0 µg/L, MW-3 (Screen 4) increased from 3.2 µg/L to 5.0 µg/L, and MW-3 (Screen 5) saw a rise from 2.6 µg/L to 6.1 µg/L between the second to the fourth quarter. Additionally, MW-4 (Screen 3) saw an increase from 1.4J µg/L to 3.2 µg/L between the third and fourth quarter, MW-4 (Screen 4) increased from 2.1 µg/L to 2.7 µg/L between the second to the fourth quarter, and MW-12 (Screen 5) went from 1.1J µg/L to 1.5J µg/L between the third to the fourth quarters.
- Conversely, perchlorate concentration decreased in certain sample locations: MW-4 (Screen 2) went down from 46.0 µg/L to 36.0 µg/L between the third to fourth quarter, and MW-4 (Screen 5) fell from 1.0J µg/L to non-detect between the second to the fourth quarter. Decreases were also observed in MW-12 (Screen 2) from 0.9J µg/L to non-detect, MW-12 (Screen 3) from 2.6 µg/L to 1.7J µg/L, and MW-12 (Screen 4) from 2.3 µg/L to 2.0 µg/L between the third to the fourth quarters. Moreover, in MW-14 (Screen 3), there was a decrease from 4.2 µg/L to 4.0 µg/L and MW-14 (Screen 4) saw a drop from 3.7 µg/L to 3.2 µg/L between the third to the fourth quarters.
- Perchlorate concentrations remained unchanged in MW-14 (Screen 2), staying at 3.2 µg/L between the third to fourth quarters. No changes were observed for MW-14 (Screen 5) and MW-15, with perchlorate not being detected during the third and fourth quarters of 2022 and second and fourth quarters of 2022, respectively.
- Perchlorate concentrations exceeding the state MCL of 6.0 µg/L were found in three locations in 2022. Specifically, MW-3 (Screen 5) had a concentration of 6.1 µg/L in the fourth quarter 2022. MW-4 (Screen 2) saw levels ranging from 36.0 µg/L to 49.9 µg/L throughout all four quarters, exceeding the MCL in each. In MW-14 (Screen 2), the perchlorate concentration in the

first quarter was 6.5 µg/L, while MW-14 (Screen 3) had a first-quarter concentration of 12.0 µg/L, both of which are above the state MCL (6.0 µg/L).

- The presence of perchlorate was detected in various sample locations throughout 2022. MW-3 (Screen 2) showed concentrations ranging from 3.4 µg/L to 4.6 µg/L, MW-3 (Screen 3) from 1.0J µg/L to 6.0 µg/L, and MW-3 (Screen 4) from 1.1J µg/L to 5.0 µg/L. In MW-3 (Screen 5), the detected concentrations were 2.6 µg/L and 6.1 µg/L. For MW-4, concentrations ranged from 1.0J µg/L to 49.9 µg/L across Screens 2 to 5. MW-12 (Screen 2) showed a concentration of 0.9J µg/L, while MW-12 (Screens 3 to 5) ranged from 1.1J µg/L to 2.6 µg/L. In MW-14, Screen 2 had concentrations from 3.2 µg/L to 6.5 µg/L, Screen 3 from 4.0 µg/L to 12.0 µg/L, Screen 4 from 3.2 µg/L to 4.0 µg/L, and Screen 5 had a concentration of 3.9J µg/L in the first quarter.
- There were instances of increasing perchlorate concentrations in 2022. MW-3 (Screen 2) saw an increase from 3.4 µg/L to 4.6 µg/L (second to fourth quarter), while MW-3 (Screen 3) went from 1.0J µg/L to 6.0 µg/L (first to fourth quarter), and MW-3 (Screen 4) increased from 1.1J µg/L to 5.0 µg/L (first to fourth quarter). MW-3 (Screen 5) also increased from 2.6 µg/L in the second quarter to 6.1 µg/L in the fourth quarter. For MW-4, Screen 3 showed an increase from 1.4J µg/L to 3.2 µg/L (third to fourth quarter), and Screen 4 went from 2.1 µg/L to 2.7 µg/L (second to fourth quarter).
- Several locations recorded decreasing perchlorate concentrations in 2022. MW-4 (Screen 2) fell from 49.9 µg/L in the first quarter to 36.0 µg/L in the fourth quarter. MW-14 (Screen 2) saw a decrease from 6.5 µg/L in the first quarter to 3.2 µg/L in the fourth quarter, and MW-14 (Screen 3) also dropped from 12.0 µg/L in the first quarter to 4.0 µg/L in the fourth quarter.
- The concentrations of perchlorate remained unchanged in several sample locations. Perchlorate was not detected in 2022 in MW-1, MW-3 (Screen 1), MW-4 (Screen 1), MW-5, MW-9, MW-10, and MW-15. Moreover, there were no changes in perchlorate concentrations (non-detect) in MW-14 (Screen 5) from the second to the fourth quarter.
- The perchlorate concentration of 36.0 µg/L in MW-4 (Screen 2) during the fourth quarter 2022 continues to be down from the high detection of 250.0 µg/L (third quarter 2013). Since the first quarter 2011, concentrations have exceeded the state MCL (6.0 µg/L) (ranging from 6.5 µg/L to 250.0 µg/L) with thirteen exceptions: first, third, and fourth quarters of 2015, all four quarters of 2016 and 2017, and first and third quarters of 2018. Perchlorate concentrations in MW-4 (Screen 2) increased from fourth quarter 2018 (9.9 µg/L) to third quarter 2019 (34.0 µg/L) and then fluctuated between fourth quarter 2019 (32.0 µg/L) and second quarter 2021 (65.0 µg/L). Perchlorate concentrations have been on a downward trend from fourth quarter 2021 (59.1 µg/L) to fourth quarter 2022 (36.0 µg/L). Perchlorate concentrations will continue to be closely monitored since MW-4 is within the capture zone of the MHTS.

## VOC ANALYTICAL RESULTS

- During the fourth quarter 2022, carbon tetrachloride was not detected in any of the perimeter off-facility wells at a reporting limit of 0.5 µg/L.



- During the third quarter 2022, carbon tetrachloride was detected in MW-12 (Screen 3) at a concentration of 0.9 µg/L which is above the state MCL (0.5 µg/L). However, carbon tetrachloride was not detected in MW-12 (Screen 3) during the fourth quarter 2022 monitoring event. In addition, carbon tetrachloride was detected in MW-12 (Screen 4) and MW-12 (Screen 5) during the third quarter 2022 at concentrations of 0.4 µg/L and 0.3 µg/L, respectively, which are below the state MCL (0.5 µg/L).
- During the fourth quarter 2022, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-4 (Screen 2 [0.3 µg/L]) and MW-14 (Screens 2 and 3 [1.3 µg/L and 0.8 µg/L, respectively]). No other TCE detections occurred in the perimeter off-facility wells during the fourth quarter 2022.
- In 2022, TCE was not detected above the state and federal MCL (5.0 µg/L) in the perimeter off-facility wells. Detections of TCE in the perimeter off-facility wells remained relatively consistent ranging from non-detect to 1.8 µg/L.
- During the fourth quarter 2022, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-4 (Screen 2 [0.2 µg/L]), MW-14 (Screens 2 and 3 [0.3 µg/L and 0.5 µg/L, respectively]). No other PCE detections occurred in the perimeter off-facility wells during the fourth quarter of 2022.
- In 2022, PCE was not detected above the state and federal MCL (5.0 µg/L) in the perimeter off-facility wells. In the perimeter off-facility wells, PCE remained relatively consistent ranging from non-detect to 0.9 µg/L.

#### **OTHER NOTABLE ANALYTICAL RESULTS**

- During the fourth quarter 2022, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-3 (Screen 3 [0.53 µg/L]), MW-9 (1.50 µg/L), MW-12 (Screens 4 and 5 [0.59 µg/L and 1.10 µg/L]), MW-14 (Screens 3 and 4 [0.43 µg/L and 1.90 µg/L, respectively]), and MW-15 (0.26 µg/L). No other Cr(VI) detections occurred in the perimeter off-facility wells during the fourth quarter 2022.
- In 2022, concentration of Cr(VI) in the perimeter off-facility wells were relatively consistent, ranging from non-detect to 2.30 µg/L and remained below the state MCL (50.0 µg/L).
- During the fourth quarter 2022, total chromium was detected above the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) in MW-9 (620.0 µg/L).
- During the fourth quarter 2022, total chromium was detected below the state MCL (50.0 µg/L) in MW-3 (Screens 2 through 5 [0.9 µg/L, 1.1 µg/L, 14.0 µg/L, and 42.0 µg/L, respectively]), MW-4 (Screens 2 through 5 [0.5 µg/L, 2.4 µg/L, 1.1 µg/L, and 1.2 µg/L, respectively]), MW-12 (Screens 2, 4, and 5 [1.5 µg/L, 0.5 µg/L, 1.1 µg/L, respectively]), MW-14 (Screens 2 and 4 [0.6 µg/L and 2.1 µg/L, respectively]), and MW-15 (18.0 µg/L).
- In 2022, total chromium remained relatively consistent in the perimeter off-facility wells at concentrations below the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) ranging from non-detect to 42.0 µg/L with two exceptions during the first and fourth quarters 2022: MW-3 (Screen 4 [61.0 µg/L]) and MW-9 (620.0 µg/L).
- The total chromium detection of 61.0 µg/L in MW-3 (Screen 4) during the first quarter 2022 sampling event is the fourth detection at concentrations above the state MCL (50.0 µg/L) since

the third quarter 1996. The other detections above the state MCL were the first quarter 2015 (75.1 µg/L), fourth quarter 2019 (95.0 µg/L), and second quarter 2019 (64.0 µg/L).

- Total chromium was consistently detected in MW-9 during the fourth quarter of each year from 2015 to 2022 except 2017 at concentrations exceeding the state MCL of 50.0 µg/L. Specific detections were 110.0 µg/L (2015), 100.0 µg/L (2016), 130.0 µg/L (2018), 80.0 µg/L (2019), 240.0 µg/L (2020), 140.0 µg/L (2021), and 620.0 µg/L (2022). These results also exceeded the federal MCL of 100.0 µg/L in all years except 2016 where it was equal to the federal limit and in 2019 where it was below the federal limit.
- During the second quarter of 2022, arsenic was detected below the state and federal MCL (10.0 µg/L) in MW-3 (Screens 3, 4, and 5 [1.5 µg/L, 4.7 µg/L, and 1.9 µg/L, respectively]), MW-4 (Screens 3 and 4 [1.9 µg/L and 3.8 µg/L, respectively]), MW-9 (1.3 µg/L), MW-14 (Screen 5 [0.9 µg/L]), and MW-15 (1.1 µg/L). Notably, these results illustrate that the arsenic levels in these monitoring wells remain compliant with regulatory limits.
- Arsenic was not detected during the second quarter 2022 in MW-3 (Screens 1 and 2), MW-4 (Screens 1, 2, and 5), and MW-14 (Screens 2 through 4).
- Lead was detected in MW-14 (Screen 2) at a concentration of 0.17 µg/L during the second quarter 2022 which is below the regulatory action level (15.0 µg/L).
- Lead was not detected in MW-3 (Screens 1 through 5), MW-4 (Screens 1 through 5), MW-9, MW-14 (Screens 3 through 5), and MW-15.
- Regarding well statuses during the fourth quarter, MW-3 (Screen 1), MW-4 (Screen 1), MW-5, MW-10, and MW-12 (Screen 1) were reported as dry. MW-5, MW-10, and MW-12 (Screen 1) were dry during multiple quarters throughout 2022.

## OFF-FACILITY WELLS

The off-facility wells consist of monitoring wells MW-17, MW-18, MW-19, MW-20, MW-21, MW-25, and MW-26. These wells are located near and down gradient of the two off-facility treatment plants: MHTS and Lincoln Avenue Water Company (LAWC) treatment system. Daily operation of the MHTS began in February 2011. Operation of the LAWC perchlorate treatment system began in July 2004.

It should be noted that during all quarters 2022, the uppermost screens (i.e., Screen 1) in MW-18, MW-20, MW-21, and MW-26 were dry, and no samples were collected from these screens. In addition, MW-17 (Screen 1) was dry during the first, third, and fourth quarters of 2022.

### PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter of 2022, perchlorate was detected in MW-18 (Screen 4) and MW-25 (Screens 1 through 4) at concentrations of 17.0 µg/L and 7.0 µg/L, 11.0 µg/L, 9.7 µg/L, 8.2 µg/L, respectively, all of which exceeded the state MCL of 6.0 µg/L.
- In the fourth quarter of 2022, perchlorate was detected at concentrations below the state MCL of 6.0 µg/L across several locations. Specifically, it was detected in MW-17 (Screens 4 and 5) at concentrations of 3.6 µg/L and 3.5 µg/L, in MW-19 (Screens 2 through 5) at concentrations of 2.2 µg/L, 3.7 µg/L, 3.2 µg/L, and 2.9 µg/L, respectively. It was also detected in MW-20 (Screen 2) at a concentration of 1.2 µg/L, in MW-21 (Screens 3 through 5) at concentrations of 3.0 µg/L, 3.3 µg/L, and 3.0 µg/L, and finally in MW-26 (Screen 2) at a concentration of 2.4 µg/L.

- During the fourth quarter 2022, concentrations of perchlorate were not detected in MW-17 (Screens 2 and 3), MW-18 (Screens 2, 3, and 5), MW-19 (Screen 1), MW-20 (Screens 2 through 5), MW-21 (Screen 2), and MW-25 (Screen 5) with a reporting limit of 2.0 µg/L for most locations.
- Perchlorate concentrations increased from their respective last sampling event to the fourth quarter 2022 in MW-18 (Screen 4 [15.0 µg/L to 17.0] µg/L), MW-19 (Screens 2 through 5 [2.0 µg/L to 2.2 µg/L, 3.5 µg/L to 3.7 µg/L, 2.7 µg/L to 3.2 µg/L, and 2.6 µg/L to 2.9 µg/L, respectively]), MW-21 (Screen 5 [2.4 µg/L to 3.0 µg/L]), and MW-25 (Screens 1 and 3 [6.7 µg/L to 7.0 µg/L and 9.5 µg/L to 9.7 µg/L])
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2022 in MW-17 (Screen 5 [3.7 µg/L to 3.5 µg/L]), MW-21 (Screens 3 and 4 [3.1 µg/L to 3.0] µg/L and 3.6 µg/L to 3.3 µg/L), MW-25 (Screens 2 and 4 [12.0 µg/L to 11.0 µg/L and 8.6 µg/L to 8.2 µg/L]), and MW-26 (Screen 2 [3.0 µg/L to 2.4 µg/L]).
- Perchlorate concentrations remained unchanged from the third to fourth quarter 2022 in MW-17 (Screen 4 [3.6 µg/L]) and MW-20 (Screen 2 [1.2] µg/L).
- Perchlorate concentrations remained non-detect from their respective last sampling event to the fourth quarter 2022 in MW-17 (Screens 2 and 3), MW-18 (Screens 2, 3, and 5), MW-19 (Screen 1), MW-20 (Screens 3 through 5), and MW-25 (Screen 5).
- Perchlorate concentrations in MW-17 (Screen 3) have generally been decreasing over time since the third quarter of 2019. Starting from 5.5 µg/L in the third quarter 2019, it decreased to 4.6 µg/L in fourth quarter 2019 and then to around 3.5 to 3.9 µg/L throughout 2020. Then it wasn't detected for several quarters in 2021, and when it was detected again in fourth quarter 2021, it was at a much lower concentration (1.5] µg/L). In the first quarter 2022, it increased slightly to 1.9] µg/L, but then was not detected again for the remaining quarters of 2022. Overall, there is a clear decreasing trend, with some quarters where it was not detected at all. MW-17 is located within the capture zone of the LAWC treatment system.
- The perchlorate concentration of 3.6 µg/L in MW-17 (Screen 4) is the thirty second detection below the state MCL (6.0 µg/L) since the first quarter 2015. From the third quarter 2002 to the fourth quarter 2012, the perchlorate concentrations in MW-17 (Screen 4) had been either non-detect or below the state MCL (6.0 µg/L) with only one detection that exceeded the state MCL (second quarter 2003 [6.5 µg/L]). From the first quarter 2013 through the fourth quarter 2014, the perchlorate concentrations in MW-17 (Screen 4) exceeded the state MCL in seven of the eight quarters with exceedances ranging from 6.8 µg/L to 18.0 µg/L. From the first quarter 2015 to the fourth quarter 2022 sampling events, perchlorate in MW-17 (Screen 4) remained below the state MCL (6.0 µg/L) with concentrations ranging from non-detect (first quarter 2017) to 5.4 µg/L (fourth quarter 2020). The changes in perchlorate concentrations at MW-17 (Screen 4) are believed to be associated with changes in groundwater flow associated with operation of NASA's mid-plume treatment system, which began operation in 2011.
- Perchlorate concentrations in MW-18 (Screen 3) have been below the state MCL (6.0 µg/L) since third quarter 2017 and during the four quarters 2022 the perchlorate was not detected in MW-18 (Screen 3). From the fourth quarter 2005 to second quarter 2017 perchlorate concentrations in MW-18 (Screen 3) were above the state MCL (6.0 µg/L) ranging from 6.2 µg/L (second quarter 2017) to 144.0 µg/L (third quarter 2011) with one exception (non-detect [first quarter 2007]).
- At MW-20 (Screen 2), perchlorate has been detected above the state's MCL of 6.0 µg/L on four separate occasions since it was initially sampled for perchlorate in the second quarter of 1997.

The instances of elevated detection were as follows: 6.4 µg/L in second quarter 2012, 7.0 µg/L in first quarter 2015, 9.8 µg/L in fourth quarter 2020, and 7.4 µg/L in second quarter 2021. Between the second quarter 1997 and third quarter 2007, over the course of forty sampling events, no perchlorate was detected. It was only in fourth quarter 2007 that perchlorate was first detected, at a concentration of 3.7 µg/L. From this point until third quarter 2020 (excluding second quarter 2012 and first quarter 2015 when levels were detected above the MCL), perchlorate was detected in forty-three out of fifty-two sampling events with concentrations varying from 0.9J µg/L to 5.2 µg/L. Interestingly, from fourth quarter 2020 through fourth quarter 2022, there were quarters where no perchlorate was detected: namely, first, third, and fourth quarters of 2021, as well as first quarter 2022. However, concentrations that exceeded the state MCL were detected at 9.8 µg/L in fourth quarter 2020 and 7.4 µg/L in second quarter 2021. Perchlorate levels were detected below the state MCL during second to fourth quarters of 2022, at concentrations of 1.8J µg/L, 1.2J µg/L, and 1.2J µg/L, respectively.

- Since the initial sampling for perchlorate in MW-20 (Screen 3) in the third quarter of 1997, there have been six detections of the analyte: 1.0 µg/L in fourth quarter 2008, 3.7 µg/L in first quarter 2009, 1.7 µg/L in second quarter 2010, 12.6 µg/L in first quarter 2012, 1.7J µg/L in third quarter 2015, and 1.4J µg/L in second quarter 2018. However, only the detection in first quarter 2012, with a concentration of 12.6 µg/L, exceeded the state's MCL of 6.0 µg/L.
- During the period from the third quarter 2008 through first quarter 2012, perchlorate was detected in MW-20 (Screen 4) at concentrations exceeding the state MCL (6.0 µg/L) during seven of fifteen sampling events. Concentrations exceeding the state MCL ranged from 15.1 µg/L to 123.0J µg/L. Perchlorate was not detected during the remaining eight sampling events between the third quarter 2008 and first quarter 2012. Perchlorate has not been detected in MW-20 (Screen 4) since the first quarter 2012 (43 sampling events).
- During the period from third quarter 2008 through first quarter 2012, perchlorate was detected in MW-20 (Screen 5) at concentrations exceeding the state MCL (6.0 µg/L) during seven of sixteen sampling events. During this time, perchlorate concentrations exceeding the state MCL ranged from 11.5 µg/L to 56.5 µg/L. Perchlorate was not detected during the remaining nine sampling events during this period with one exception (4.2 µg/L [second quarter 2011]). From the second quarter 2012 to fourth quarter 2022 (43 sampling events) perchlorate concentrations have remained non-detect in MW-20 (Screen 5).
- Perchlorate has consistently been detected above the state's MCL of 6.0 µg/L in multiple screens of MW-25 since 2005. Specifically, in MW-25 (Screen 1), perchlorate was detected above the MCL since third quarter 2007, with concentrations ranging from 6.0 µg/L to 12.0 µg/L. For MW-25 (Screen 2), the detections surpassing the MCL began in second quarter of 2005, showing concentrations between 9.7J µg/L and 18.0 µg/L since the exceedances began. In MW-25 (Screen 3), concentrations exceeding the MCL were found since first quarter of 2005, ranging from 6.0 µg/L to 15.0 µg/L since the exceedances began. The only exception to these detections was in the second quarter of 2006 when perchlorate was not detected in MW-25 (Screen 3). In MW-25 (Screen 4), concentrations exceeding the MCL were found since first quarter of 2005, ranging from 6.2 µg/L to 19.0 µg/L since exceedances began. The only exceptions to these detections in MW-25 (Screen 4) were during second and third quarters of 2007 where no perchlorate was detected, and fourth quarter of 2012 when the level was below the MCL at 5.6 µg/L.
- In MW-25 (Screen 5), perchlorate concentrations exceeded the MCL on six distinct occasions since first quarter 2005, specifically in third and fourth quarters of 2008 (33.8 µg/L and 16.5 µg/L), fourth quarter 2009 (12.0 µg/L), second quarter 2010 (44.5 µg/L), second quarter 2011

(39.2 µg/L), and first quarter 2012 (54.8 µg/L). However, in first quarter 2017, the concentration dropped below the MCL to 2.0 µg/L. Additionally, there were seventy-one sampling events when no perchlorate was detected in MW-25 (Screen 5).

- In 2022, perchlorate concentrations in the off-facility wells ranged from non-detect to 17.5 µg/L.

## VOC ANALYTICAL RESULTS

- Carbon tetrachloride was not detected in the off-facility wells during the fourth quarter of 2022 with a laboratory detection limit of 0.17 µg/L.
- In 2022, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screen 4) during the first through third quarters (i.e., 4.3 µg/L, 1.5 µg/L, and 2.2 µg/L, respectively). In 2022, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-18 (Screen 3) during the first quarter (0.2 µg/L). No other carbon tetrachloride detections occurred in the off-facility wells during 2022.
- In 2022, carbon tetrachloride was detected in MW-18 (Screen 3) during the first quarter at a concentration of 0.2 µg/L, which is below the state MCL (0.5 µg/L) but was not detected during the second through fourth quarters. During the period starting with third quarter 2018 and ending with fourth quarter 2022, carbon tetrachloride was detected ten times with concentrations ranging from 0.2 µg/L to 0.4 µg/L. During the same period, carbon tetrachloride was not detected during eight quarters. In fact, carbon tetrachloride has not been detected in eight of the last eleven quarters. It should be noted from first quarter 2005 to third quarter 2018, carbon tetrachloride was consistently detected at concentrations exceeding (i.e., 0.5 µg/L to 43.0 µg/L) the state MCL and often exceeding the federal MCL (5.0 µg/L).
- Carbon tetrachloride detections in MW-18 (Screen 4) have exceeded the state MCL since the third quarter 1996 with two exceptions: not detected during fourth quarter 2010 and not detected during fourth quarter 2022.
- Carbon tetrachloride has not been detected in MW-18 (Screens 1, 2, and 5) since it was first sampled in the third quarter 1996.
- During the fourth quarter 2022, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-17 (Screens 3 through 5 [0.8 µg/L, 0.3 µg/L and 0.5 µg/L, respectively]), MW-18 (Screen 4 [1.0 µg/L]), MW-19 (Screens 2 through 5 [0.5 µg/L, 0.4 µg/L, 0.5 µg/L, and 0.3 µg/L, respectively]), MW-20 (Screen 2 [0.4 µg/L]), MW-21 (Screens 3 and 4 [1.0 µg/L and 0.4 µg/L, respectively]), MW-25 (Screen 2 [0.2 µg/L]), and MW-26 (Screen 2 [0.3 µg/L]). No other TCE detections occurred in the off-facility wells during the fourth quarter 2022.
- In 2022, TCE concentrations in MW-17 (Screens 3 through 5) remained below the state and federal MCL (5.0 µg/L) ranging from 0.3 µg/L to 2.2 µg/L; TCE concentrations in MW-18 (Screen 4) ranged from 0.8 µg/L to 1.6 µg/L; TCE concentrations in MW-19 (Screens 2 through 5) ranged from 0.3 µg/L to 1.1 µg/L; TCE concentrations in MW-20 (Screen 2) ranged 0.4 µg/L to 0.6 µg/L; TCE concentrations in MW-21 (Screens 3 to 5) ranged from 0.3 µg/L to 2.0 µg/L; TCE concentrations in MW-25 (Screens 1 and 2) ranged from 0.2 µg/L to 0.4 µg/L; and TCE concentrations in MW-26 (Screen 2) ranged from 0.2 µg/L to 0.5 µg/L. TCE was not detected in MW-17 (Screen 2), MW-18 (Screens 2, 3, and 5), MW-19 (Screen 1), MW-20 (Screens 3 through 5), MW-21 (Screens 2 and 5), and MW-25 (Screens 3 through 5) during the four quarters of 2022.

- During the fourth quarter 2022, PCE was detected in MW-17 (Screens 4 and 5 [0.4] µg/L and 0.4] µg/L, respectively]), MW-18 (Screen 4 [0.7 µg/L]), MW-19 (Screens 2 through 5 [0.8 µg/L, 1.1 µg/L, 1.4 µg/L, and 0.9 µg/L, respectively]), MW-20 (Screens 2 and 3 [0.4] µg/L and 0.7 µg/L]), MW-21 (Screens 2 through 5 [0.3] µg/L, 0.5 µg/L, 0.6 µg/L, and 0.7 µg/L, respectively]), MW-25 (Screens 2 and 3 [0.3] µg/L and 3.0 µg/L]), and MW-26 (Screen 2 [1.5 µg/L]); however, no detections exceeded the state and federal MCL (5.0 µg/L). PCE was not detected in the remaining off-facility wells during the fourth quarter 2022.
- In 2022, PCE concentrations in MW-17 (Screens 3 through 5) ranged from 0.2] µg/L to 1.0 µg/L; PCE concentrations in MW-18 (Screen 4) ranged from 0.6 µg/L to 1.2 µg/L; PCE concentrations in MW-19 (Screens 2 through 5) ranged from 0.7 µg/L to 3.0 µg/L; PCE concentrations in MW-20 (Screens 2 and 3) ranged from 0.4] µg/L to 0.8 µg/L; PCE concentrations in MW-21 (Screens 2 through 5) ranged from 0.3] µg/L to 1.8 µg/L; PCE concentrations in MW-25 (Screens 2 and 3) ranged from 0.2] µg/L to 3.4 µg/L; and PCE concentrations in MW-26 (Screen 2) ranged from 1.1 µg/L to 4.1 µg/L.
- PCE was not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 2, 3 and 5), MW-19 (Screen 1), MW-20 (Screens 4 and 5) and MW-25 (Screens 1, 4, and 5) during the four quarters of 2022.

#### **OTHER NOTABLE ANALYTICAL RESULTS**

- During the fourth quarter 2022, Cr(VI) was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 4 and 5 [1.70] µg/L and 1.70 µg/L, respectively]), MW-18 (Screens 3 and 4 [1.60 µg/L and 2.40] µg/L, respectively]), MW-19 (Screens 3 through 5 [1.40] µg/L, 2.20 µg/L, and 1.40 µg/L, respectively]), MW-25 (Screens 2 through 4 [3.00] µg/L, 3.50 µg/L, and 1.20 µg/L, respectively]), and MW-26 (Screen 2 [0.52] µg/L]). Cr(VI) was not detected in the remaining off-facility wells.
- In 2022, detections of Cr(VI) in the off-facility wells ranged from 0.05] to 3.80 µg/L.
- During the fourth quarter 2022, total chromium was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 4 and 5 [2.4] µg/L and 2.7] µg/L]), MW-18 (Screens 3 and 4 [1.8] µg/L and 3.1 µg/L, respectively]), MW-19 (Screens 3 through 5 [2.2] µg/L, 1.6] µg/L, and 1.3] µg/L, respectively]), MW-25 (Screens 2 through 4 [3.0 µg/L, 3.4 µg/L, and 1.2] µg/L, respectively]), and MW-26 (Screen 2 [1.8] µg/L]). Total chromium was not detected in the remaining off-facility wells.
- In 2022, total chromium remained below the state MCL (50.0 µg/L) in the off-facility wells, ranging from non-detect to 9.1 µg/L.
- During the second quarter of 2022, arsenic was detected below the state and federal MCL (10.0 µg/L) in MW-17 (Screens 1, 4, and 5 [0.7] µg/L, 2.4 µg/L, and 1.8] µg/L]), MW-18 (Screens 2 and 3 [1.4] µg/L and 0.9] µg/L]), MW-19 (Screens 4 and 5 [0.9] µg/L and 0.9] µg/L]), MW-20 (Screens 3 through 5 [0.9] µg/L, 1.3] µg/L, and 1.1], respectively]), and MW-25 (Screen 4 [1.1] µg/L]).
- Arsenic was not detected during the second quarter 2022 in MW-17 (Screens 2 and 3), MW-18 (Screens 4 and 5), MW-19 (Screens 1 through 3), MW-20 (Screen 2), MW-21 (Screens 2 through 5), MW-25 (Screens 2, 3, and 5), and MW-26 (Screen 2).
- Lead was not detected in any off-facility wells during the second quarter 2022 monitoring event.

## ALL WELL CATEGORIES (OTHER RESULTS)

- Comparing the third quarter 2022 to the fourth quarter 2022, groundwater elevations decreased by an average of 6.99 feet.
- The shallow standpipe wells MW-5, MW-6, MW-7, MW-8, MW-10, MW-13, and MW-16 were dry and could not be sampled during the fourth quarter 2022. This is the second consecutive quarter in which wells MW-5, MW-8, and MW-10 were dry. This is the ninth consecutive quarter in which MW-7 was dry. This is the tenth consecutive quarter in which MW-6, MW-13, and MW-16 were dry.
- The uppermost sampling port (i.e., Screen 1) in multiport monitoring wells MW-3, MW-4, MW-12, MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23, and MW-26 were dry and/or lacked sufficient water and could not be sampled during the fourth quarter 2022. This is the first quarter Screen 1 in well MW-3 was dry. This is the second consecutive quarter Screen 1 in well MW-4, MW-12, MW-17, MW-22, and MW-23 were dry. This is the eighth consecutive quarter Screen 1 in well MW-26 was dry. This is the thirteenth consecutive quarter in which Screen 1 in wells MW-14, MW-18, MW-20, and MW-21 were dry.
- Groundwater elevations recorded in the JPL monitoring wells generally appear to fluctuate over time, with occasional spikes or dips that follow a seasonal pattern. Typically, the groundwater levels reach their highest during the second quarter of the year and decrease through the fourth quarter. From 1996/1997 through 2011, the groundwater elevations generally increased with some fluctuations, but then decreased from 2011 through 2022 with occasional fluctuations. As of the fourth quarter of 2022, the groundwater levels are approximately 93 feet below the elevations recorded in the second quarter of 2011. The monitoring of groundwater elevations will continue to be closely monitored.
- Groundwater level measurements collected during the fourth quarter 2022 indicate that groundwater gradients and flow directions are generally consistent with previous observations (see Figure 8).

## ATTACHMENTS

Attachments to this technical memorandum include the following:

- Attachment 1: Quality Assurance/Quality Control Summary
  - Attachment 2: Data Validation Reports
  - Attachment 3: Laboratory Analytical Reports
  - Attachment 4: Field Logs
  - Attachment 5: Water Level Measurements
  - Attachment 6: Time-Series Concentration Plots
  - Attachment 7: Tables 1A, 2A and 3A (Historical Perchlorate, VOCs, and Metals from 1996 to present)
  - Attachment 8: Summary of Construction Details for All JPL Groundwater Monitoring Wells
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## TABLES

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED DURING THE**  
**LAST FIVE SAMPLING EVENTS OF THE LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM**

(All concentrations reported in µg/L.)

(Shaded values exceed State or Federal MCL or action levels.)

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP
<b>MW-1</b>												
MW-1	May/June 2021	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-1	Oct/Nov 2021	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	
MW-1	Oct/Nov 2022	MW-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	
<b>MW-3-Screen-1</b>												
MW-3-Screen-1	May/June 2021	MW-3-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-1	Apr/May 2022	MW-3-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	
<b>MW-3-Screen-2</b>												
MW-3-Screen-2	Oct/Nov 2021	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J	
MW-3-Screen-2	Oct/Nov 2021	DUP-1-4Q21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	
MW-3-Screen-2	Jan/Feb 2022	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	
MW-3-Screen-2	Apr/May 2022	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.4 J	
MW-3-Screen-2	Jul/Aug 2022	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.6	
MW-3-Screen-2	Oct/Nov 2022	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.6	
<b>MW-3-Screen-3</b>												
MW-3-Screen-3	Oct/Nov 2021	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.7	
MW-3-Screen-3	Jan/Feb 2022	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	
MW-3-Screen-3	Jan/Feb 2022	DUP-6-1Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J	
MW-3-Screen-3	Apr/May 2022	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4 J	
MW-3-Screen-3	Jul/Aug 2022	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1	
MW-3-Screen-3	Oct/Nov 2022	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.0	
<b>MW-3-Screen-4</b>												
MW-3-Screen-4	Oct/Nov 2021	MW-3-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.7	
MW-3-Screen-4	Jan/Feb 2022	MW-3-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J	
MW-3-Screen-4	Apr/May 2022	MW-3-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.7 J	
MW-3-Screen-4	Apr/May 2022	DUP-5-2Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6 J	
MW-3-Screen-4	Jul/Aug 2022	MW-3-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2	
MW-3-Screen-4	Oct/Nov 2022	MW-3-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0	
MW-3-Screen-4	Oct/Nov 2022	DUP-6-4Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.9	
<b>MW-3-Screen-5</b>												
MW-3-Screen-5	May/June 2021	MW-3-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 J	
MW-3-Screen-5	Oct/Nov 2021	MW-3-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1	
MW-3-Screen-5	Apr/May 2022	MW-3-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6	

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-3-Screen-5	Oct/Nov 2022	MW-3-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.1		
<b>MW-4-Screen-1</b>													
MW-4-Screen-1	Jan/Feb 2022	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-1	Apr/May 2022	MW-4-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
<b>MW-4-Screen-2</b>													
MW-4-Screen-2	Oct/Nov 2021	MW-4-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	59.1		
MW-4-Screen-2	Oct/Nov 2021	DUP-3-4Q21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	57.2		
MW-4-Screen-2	Jan/Feb 2022	MW-4-2	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	49.9		
MW-4-Screen-2	Apr/May 2022	MW-4-2	0.5 U	0.6	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	1.4	46.0 J	Trichlorofluoromethane	0.2 J
MW-4-Screen-2	Jul/Aug 2022	MW-4-2	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	46.0		
MW-4-Screen-2	Oct/Nov 2022	MW-4-2	0.5 U	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	36.0		
<b>MW-4-Screen-3</b>													
MW-4-Screen-3	Oct/Nov 2021	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.0		
MW-4-Screen-3	Jan/Feb 2022	MW-4-3	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Methylene chloride	0.5 J
MW-4-Screen-3	Apr/May 2022	MW-4-3	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3		
MW-4-Screen-3	Jul/Aug 2022	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J		
MW-4-Screen-3	Oct/Nov 2022	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2		
MW-4-Screen-3	Oct/Nov 2022	DUP-7-4Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 u	1.3 J		
<b>MW-4-Screen-4</b>													
MW-4-Screen-4	May/June 2021	MW-4-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	2.5 J	
MW-4-Screen-4	Oct/Nov 2021	MW-4-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-4-Screen-4	Apr/May 2022	MW-04-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1		
MW-4-Screen-4	Apr/May 2022	DUP-3-2Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J	1,2,3-Trichloropropane	0.005 J
MW-4-Screen-4	Oct/Nov 2022	MW-4-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.7		
<b>MW-4-Screen-5</b>													
MW-4-Screen-5	May/June 2021	MW-4-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-5	Oct/Nov 2021	MW-4-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-4-Screen-5	Apr/May 2022	MW-04-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-4-Screen-5	Oct/Nov 2022	MW-4-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-5</b>													
MW-5	Apr/May 2022	MW-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-8</b>													
MW-8	Apr/May 2022	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	7.9	
<b>MW-9</b>													
MW-9	May/June 2021	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-9	Oct/Nov 2021	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-9	Apr/May 2022	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-9	Apr/May 2022	DUP-6-2Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-9	Oct/Nov 2022	MW-9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
<b>MW-10</b>													
MW-10	Apr/May 2022	MW-10	0.5 U	<b>0.8</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-11-Screen-1</b>													
MW-11-Screen-1	July 2021	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-1	Oct/Nov 2021	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-1	Jan/Feb 2022	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-1	Jul/Aug 2022	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-1	Oct/Nov 2022	MW-11-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-11-Screen-2</b>													
MW-11-Screen-2	Oct/Nov 2021	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Oct/Nov 2021	DUP-7-4Q21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Jan/Feb 2022	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-2	Apr/May 2022	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Apr/May 2022	DUP-4-2Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Jul/Aug 2022	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Oct/Nov 2022	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-2	Oct/Nov 2022	DUP-8-4Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-11-Screen-3</b>													
MW-11-Screen-3	Oct/Nov 2021	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.1 J</b>	2.0 U		
MW-11-Screen-3	Jan/Feb 2022	MW-11-3	0.5 U	<b>0.5</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	<b>0.7</b>
MW-11-Screen-3	Apr/May 2022	MW-11-3	0.5 U	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide Styrene	<b>0.6</b> <b>0.2 J</b>
MW-11-Screen-3	Jul/Aug 2022	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide Ethylbenzene Methyl-tert-butyl ether (MTBE) Styrene Toluene	<b>0.5</b> <b>0.2 J</b> <b>0.3 J</b> <b>0.5 J</b> <b>0.2 J</b>
MW-11-Screen-3	Oct/Nov 2022	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.8 J</b>
<b>MW-11-Screen-4</b>													
MW-11-Screen-4	Oct/Nov 2021	MW-11-4	0.5 U	<b>0.7</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-4	Jan/Feb 2022	MW-11-4	0.5 U	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	<b>0.2 J</b>
MW-11-Screen-4	Apr/May 2022	MW-11-4	0.5 U	<b>0.8</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-4	Jul/Aug 2022	MW-11-4	0.5 U	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	<b>0.2 J</b>
MW-11-Screen-4	Oct/Nov 2022	MW-11-4	0.5 U	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-11-Screen-5</b>													
MW-11-Screen-5	May/June 2021	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-11-Screen-5	Oct/Nov 2021	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-11-Screen-5	Apr/May 2022	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.6</b>
MW-11-Screen-5	Oct/Nov 2022	MW-11-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
<b>MW-12-Screen-2</b>													
MW-12-Screen-2	July 2021	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 J		
MW-12-Screen-2	July 2021	DUP-5-3Q21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J	Trichlorofluoromethane	0.2 J
MW-12-Screen-2	Oct/Nov 2021	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8 J		
MW-12-Screen-2	Oct/Nov 2021	DUP-4-4Q21	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8 J		
MW-12-Screen-2	Jul/Aug 2022	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J		
MW-12-Screen-2	Oct/Nov 2022	MW-12-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-12-Screen-3</b>													
MW-12-Screen-3	July 2021	MW-12-3	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	2.8		
MW-12-Screen-3	Oct/Nov 2021	MW-12-3	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	1.2 J		
MW-12-Screen-3	Jul/Aug 2022	MW-12-3	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.6		
MW-12-Screen-3	Jul/Aug 2022	DUP-5-3Q22	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	2.6		
MW-12-Screen-3	Oct/Nov 2022	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	1.7 J		
<b>MW-12-Screen-4</b>													
MW-12-Screen-4	May/June 2021	MW-12-4	1.5	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	2.3 J		
MW-12-Screen-4	July 2021	MW-12-4	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.2		
MW-12-Screen-4	Oct/Nov 2021	MW-12-4	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.3		
MW-12-Screen-4	Jul/Aug 2022	MW-12-4	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.3		
MW-12-Screen-4	Oct/Nov 2022	MW-12-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.0		
<b>MW-12-Screen-5</b>													
MW-12-Screen-5	May/June 2021	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.2 J		
MW-12-Screen-5	July 2021	MW-12-5	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.3 J		
MW-12-Screen-5	Oct/Nov 2021	MW-12-5	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.0		
MW-12-Screen-5	Jul/Aug 2022	MW-12-5	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.1 J		
MW-12-Screen-5	Oct/Nov 2022	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.5 J		
<b>MW-14-Screen-2</b>													
MW-14-Screen-2	Oct/Nov 2021	MW-14-2	0.5 U	1.0	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	4.3		
MW-14-Screen-2	Jan/Feb 2022	MW-14-2	0.5 U	1.8	0.6	0.2 J	0.5 U	0.5 U	0.5 U	0.7	6.5		
MW-14-Screen-2	Apr/May 2022	MW-14-2	0.5 U	1.0	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.3		
MW-14-Screen-2	Jul/Aug 2022	MW-14-2	0.5 U	1.8	0.6	0.2 J	0.5 U	0.5 U	0.5 U	0.6	3.2		
MW-14-Screen-2	Oct/Nov 2022	MW-14-2	0.5 U	1.3	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.2		
<b>MW-14-Screen-3</b>													
MW-14-Screen-3	Oct/Nov 2021	MW-14-3	0.5 U	0.8	0.6	0.3 J	0.5 U	0.5 U	0.5 U	0.5 J	5.1		
MW-14-Screen-3	Jan/Feb 2022	MW-14-3	0.5 U	1.2	0.9	0.4 J	0.5 U	0.5 U	0.5 U	0.7	12.0	1,2,3-Trichlorobenzene	0.2 J
MW-14-Screen-3	Apr/May 2022	MW-14-3	0.5 U	1.0	0.8	0.4 J	0.5 U	0.5 U	0.5 U	0.5 J	4.2		
MW-14-Screen-3	Apr/May 2022	DUP-2-2022	0.5 U	0.6	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.7		
MW-14-Screen-3	Jul/Aug 2022	MW-14-3	0.5 U	0.9	0.7	0.4 J	0.5 U	0.5 U	0.5 U	0.5	4.2		
MW-14-Screen-3	Oct/Nov 2022	MW-14-3	0.5 U	0.8	0.5	0.3 J	0.5 U	0.5 U	0.5 U	0.4 J	4.0		
MW-14-Screen-3	Oct/Nov 2022	DUP-2-4Q22	0.5 U	0.8	0.5	0.3 J	0.5 U	0.5 U	0.5 U	0.5 J	4.0		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
<b>MW-14-Screen-4</b>													
MW-14-Screen-4	Oct/Nov 2021	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.6		
MW-14-Screen-4	Jan/Feb 2022	MW-14-4	0.5 U	0.3 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	4.0		
MW-14-Screen-4	Apr/May 2022	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.4		
MW-14-Screen-4	Jul/Aug 2022	MW-14-4	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.7		
MW-14-Screen-4	Oct/Nov 2022	MW-14-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.2		
<b>MW-14-Screen-5</b>													
MW-14-Screen-5	Oct/Nov 2021	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-14-Screen-5	Jan/Feb 2022	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.9 J		
MW-14-Screen-5	Apr/May 2022	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-14-Screen-5	Jul/Aug 2022	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	2.0 U	Styrene	0.2 J
MW-14-Screen-5	Oct/Nov 2022	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-15</b>													
MW-15	May/June 2021	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-15	Oct/Nov 2021	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-15	Apr/May 2022	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-15	Apr/May 2022	DUP-7-2Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-15	Oct/Nov 2022	MW-15	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-17-Screen-1</b>													
MW-17-Screen-1	Apr/May 2022	MW-17-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-17-Screen-2</b>													
MW-17-Screen-2	Oct/Nov 2021	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1		
MW-17-Screen-2	Jan/Feb 2022	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.5		
MW-17-Screen-2	Jan/Feb 2022	DUP-4-1Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-17-Screen-2	Apr/May 2022	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-17-Screen-2	Jul/Aug 2022	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-17-Screen-2	Oct/Nov 2022	MW-17-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-17-Screen-3</b>													
MW-17-Screen-3	Oct/Nov 2021	MW-17-3	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 J	Styrene	0.1 J
MW-17-Screen-3	Oct/Nov 2021	DUP-2-4Q21	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 J	Styrene	0.1 J
MW-17-Screen-3	Jan/Feb 2022	MW-17-3	0.5 U	2.2	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.9 J	Styrene Toluene	0.4 J 0.2 J
MW-17-Screen-3	Apr/May 2022	MW-17-3	0.5 U	1.7	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Toluene	0.2 J
MW-17-Screen-3	Jul/Aug 2022	MW-17-3	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-17-Screen-3	Oct/Nov 2022	MW-17-3	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-17-Screen-4</b>													
MW-17-Screen-4	Oct/Nov 2021	MW-17-4	0.2 J	1.4	1.1	0.2 J	0.5 U	0.5 U	0.5 U	1.0	4.3		
MW-17-Screen-4	Jan/Feb 2022	MW-17-4	0.5 U	0.7	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.7	4.9		
MW-17-Screen-4	Apr/May 2022	MW-17-4	0.5 U	0.4 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	4.1		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-17-Screen-4	Jul/Aug 2022	MW-17-4	0.5 U	0.4 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	3.6		
MW-17-Screen-4	Oct/Nov 2022	MW-17-4	0.5 U	0.3 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	3.6		
<b>MW-17-Screen-5</b>													
MW-17-Screen-5	May/June 2021	MW-17-5	0.5 U	0.8	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	4.5		
MW-17-Screen-5	Oct/Nov 2021	MW-17-5	0.5 U	0.7	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	4.7	Methyl-tert-butyl ether (MTBE)	0.2 J
MW-17-Screen-5	Apr/May 2022	MW-17-5	0.5 U	1.1	1.0	0.5 U	0.5 U	0.5 U	0.5 U	1.0	3.7		
MW-17-Screen-5	Oct/Nov 2022	MW-17-5	0.5 U	0.5	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.7	3.5		
<b>MW-18-Screen-2</b>													
MW-18-Screen-2	Oct/Nov 2021	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-18-Screen-2	Jan/Feb 2022	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	16.7		
MW-18-Screen-2	Apr/May 2022	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
MW-18-Screen-2	Jul/Aug 2022	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-18-Screen-2	Oct/Nov 2022	MW-18-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
<b>MW-18-Screen-3</b>													
MW-18-Screen-3	Oct/Nov 2021	MW-18-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J		
MW-18-Screen-3	Jan/Feb 2022	MW-18-3	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-18-Screen-3	Apr/May 2022	MW-18-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ	Trichlorofluoromethane	0.2 J
MW-18-Screen-3	Jul/Aug 2022	MW-18-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-18-Screen-3	Oct/Nov 2022	MW-18-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
<b>MW-18-Screen-4</b>													
MW-18-Screen-4	Oct/Nov 2021	MW-18-4	3.1 J	1.6 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1.2	15.0		
MW-18-Screen-4	Oct/Nov 2021	DUP-6-4Q21	1.8 J	1.0 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.9	15.8		
MW-18-Screen-4	Jan/Feb 2022	MW-18-4	4.3	1.6	1.2	0.5 U	0.5 U	0.5 U	0.5 U	1.2	12.8		
MW-18-Screen-4	Apr/May 2022	MW-18-4	1.5	0.8	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.7	12.0 J	1,2,3-Trichloropropane	0.03
MW-18-Screen-4	Jul/Aug 2022	MW-18-4	2.2	1.0	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.8	15.0		
MW-18-Screen-4	Oct/Nov 2022	MW-18-4	0.5 U	1.0	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.8	17.0 J		
<b>MW-18-Screen-5</b>													
MW-18-Screen-5	Oct/Nov 2021	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-18-Screen-5	Jan/Feb 2022	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.9	Styrene	0.2 J
MW-18-Screen-5	Apr/May 2022	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
MW-18-Screen-5	Jul/Aug 2022	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	0.2 J
MW-18-Screen-5	Jul/Aug 2022	DUP-7-3Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	0.1 J
MW-18-Screen-5	Oct/Nov 2022	MW-18-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
<b>MW-19-Screen-1</b>													
MW-19-Screen-1	Oct/Nov 2021	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.6	2.0 U		
MW-19-Screen-1	Jan/Feb 2022	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1	2.0 U		
MW-19-Screen-1	Apr/May 2022	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.6	2.0 U		
MW-19-Screen-1	Jul/Aug 2022	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.3	2.0 U		
MW-19-Screen-1	Oct/Nov 2022	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	2.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
<b>MW-19-Screen-2</b>													
MW-19-Screen-2	Oct/Nov 2021	MW-19-2	0.5 U	0.5 J	0.7 J	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	3.6		
MW-19-Screen-2	Oct/Nov 2021	DUP-8-4Q21	0.5 U	1.5 J	2.4 J	0.2 J	0.5 U	0.5 U	0.5 U	2.1 J	3.5	cis-1,2-Dichloroethene	0.3 J
MW-19-Screen-2	Jan/Feb 2022	MW-19-2	0.5 U	0.8	1.6	0.5 U	0.5 U	0.5 U	0.5 U	1.6	3.4		
MW-19-Screen-2	Apr/May 2022	MW-19-2	0.5 U	0.9	1.4	0.5 U	0.5 U	0.5 U	0.5 U	1.7	1.6 J		
MW-19-Screen-2	Jul/Aug 2022	MW-19-2	0.5 U	1.1	2.1	0.5 U	0.5 U	0.5 U	0.5 U	1.8	2.0		
MW-19-Screen-2	Oct/Nov 2022	MW-19-2	0.5 U	0.5 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	1.1	2.2		
<b>MW-19-Screen-3</b>													
MW-19-Screen-3	Oct/Nov 2021	MW-19-3	0.5 U	1.1	3.7	0.3 J	0.5 U	0.5 U	0.5 U	3.6	4.0	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-3	Jan/Feb 2022	MW-19-3	0.5 U	1.0	2.9	0.2 J	0.5 U	0.5 U	0.5 U	3.3	4.6	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-3	Jan/Feb 2022	DUP-2-1Q22	0.5 U	1.0	3.0	0.2 J	0.5 U	0.5 U	0.5 U	3.3	4.3	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-3	Apr/May 2022	MW-19-3	0.5 U	0.8	2.2	0.2 J	0.5 U	0.5 U	0.5 U	3.0	3.4 J	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-3	Jul/Aug 2022	MW-19-3	0.5 U	0.8	2.3	0.2 J	0.5 U	0.5 U	0.5 U	2.4	3.5	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-3	Oct/Nov 2022	MW-19-3	0.5 U	0.4 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1.5	3.7		
<b>MW-19-Screen-4</b>													
MW-19-Screen-4	Oct/Nov 2021	MW-19-4	0.5 U	1.1	3.1	0.3 J	0.5 U	0.5 U	0.5 U	4.6	3.7		
MW-19-Screen-4	Jan/Feb 2022	MW-19-4	0.5 U	1.0	2.7	0.2 J	0.5 U	0.5 U	0.5 U	4.7	3.5	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-4	Apr/May 2022	MW-19-4	0.5 U	0.4 J	0.9	0.5 U	0.5 U	0.5 U	0.5 U	2.4	2.9		
MW-19-Screen-4	Jul/Aug 2022	MW-19-4	0.5 U	0.8	2.0	0.2 J	0.5 U	0.5 U	0.5 U	3.6	2.7	cis-1,2-Dichloroethene	0.4 J
MW-19-Screen-4	Oct/Nov 2022	MW-19-4	0.5 U	0.5	1.4	0.5 U	0.5 U	0.5 U	0.5 U	2.7	3.2		
<b>MW-19-Screen-5</b>													
MW-19-Screen-5	Oct/Nov 2021	MW-19-5	0.5 U	0.7	2.2	0.2 J	0.5 U	0.5 U	0.5 U	4.2	3.5		
MW-19-Screen-5	Jan/Feb 2022	MW-19-5	0.5 U	0.7	2.1	0.2 J	0.5 U	0.5 U	0.5 U	4.6	3.2		
MW-19-Screen-5	Apr/May 2022	MW-19-5	0.5 U	0.3 J	0.7	0.5 U	0.5 U	0.5 U	0.5 U	2.2	2.8 J		
MW-19-Screen-5	Jul/Aug 2022	MW-19-5	0.5 U	0.6	1.6	0.2 J	0.5 U	0.5 U	0.5 U	3.3	2.6		
MW-19-Screen-5	Oct/Nov 2022	MW-19-5	0.5 U	0.3 J	0.9	0.5 U	0.5 U	0.5 U	0.5 U	2.2	2.9		
<b>MW-20-Screen-2</b>													
MW-20-Screen-2	Oct/Nov 2021	MW-20-2	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.0 U		
MW-20-Screen-2	Jan/Feb 2022	MW-20-2	0.5 U	0.6	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.0 U		
MW-20-Screen-2	Jan/Feb 2022	DUP-1-1Q22	0.5 U	0.5 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.0 U		
MW-20-Screen-2	Apr/May 2022	MW-20-2	0.5 U	0.3 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1.8 J		
MW-20-Screen-2	Apr/May 2022	DUP-8-2Q22	0.5 U	0.5	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.7	1.5 J		
MW-20-Screen-2	Jul/Aug 2022	MW-20-2	0.5 U	0.4 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5	1.2 J		
MW-20-Screen-2	Oct/Nov 2022	MW-20-2	0.5 U	0.4 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	1.2 J		
MW-20-Screen-2	Oct/Nov 2022	DUP-1-4Q22	0.5 U	0.3 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.0 U		
<b>MW-20-Screen-3</b>													
MW-20-Screen-3	Oct/Nov 2021	MW-20-3	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	0.3 J
MW-20-Screen-3	Oct/Nov 2021	DUP-5-4Q21	0.5 U	0.2 J	1.8 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Ethylbenzene	0.2 J
												Styrene	0.3 J



Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-20-Screen-3	Jan/Feb 2022	MW-20-3	0.5 U	0.5 U	<b>0.7</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.6</b>
												Styrene	<b>0.4 J</b>
MW-20-Screen-3	Apr/May 2022	MW-20-3	0.5 U	0.5 U	<b>0.5</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-3	Jul/Aug 2022	MW-20-3	0.5 U	0.5 U	<b>0.8</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.8</b>
												Styrene	<b>0.4 J</b>
MW-20-Screen-3	Oct/Nov 2022	MW-20-3	0.5 U	0.5 U	<b>0.7</b>	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.9</b>
<b>MW-20-Screen-4</b>													
MW-20-Screen-4	Oct/Nov 2021	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-4	Jan/Feb 2022	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.5</b>
MW-20-Screen-4	Apr/May 2022	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-4	Jul/Aug 2022	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-4	Jul/Aug 2022	DUP-1-3Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-4	Oct/Nov 2022	MW-20-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.5</b>
<b>MW-20-Screen-5</b>													
MW-20-Screen-5	Oct/Nov 2021	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	<b>0.1 J</b>
MW-20-Screen-5	Jan/Feb 2022	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	<b>0.1 J</b>
MW-20-Screen-5	Apr/May 2022	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-20-Screen-5	Jul/Aug 2022	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	<b>0.2 J</b>
MW-20-Screen-5	Oct/Nov 2022	MW-20-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	<b>0.5</b>
<b>MW-21-Screen-2</b>													
MW-21-Screen-2	Oct/Nov 2021	MW-21-2	0.5 U	0.5 U	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.2 J</b>	<b>2.6</b>		
MW-21-Screen-2	Jan/Feb 2022	MW-21-2	0.5 U	0.5 U	<b>0.5 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.3 J</b>	<b>1.7 J</b>		
MW-21-Screen-2	Apr/May 2022	MW-21-2	0.5 U	0.5 U	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.4 J</b>	<b>1.7 J</b>		
MW-21-Screen-2	Jul/Aug 2022	MW-21-2	0.5 U	0.5 U	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.2 J</b>	<b>1.4 J</b>		
MW-21-Screen-2	Oct/Nov 2022	MW-21-2	0.5 U	0.5 U	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.2 J</b>	<b>4.0 U</b>		
<b>MW-21-Screen-3</b>													
MW-21-Screen-3	July 2021	DUP-6-3Q21	0.5 U	<b>2.0 J</b>	<b>2.1 J</b>	<b>0.2 J</b>	0.5 U	0.5 U	0.5 U	<b>0.7</b>	<b>2.8</b>		
MW-21-Screen-3	Oct/Nov 2021	MW-21-3	0.5 U	<b>0.7</b>	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.4 J</b>	<b>3.8</b>		
MW-21-Screen-3	Jan/Feb 2022	MW-21-3	0.5 U	<b>1.2</b>	<b>1.0</b>	<b>0.2 J</b>	0.5 U	0.5 U	0.5 U	<b>0.6</b>	<b>3.0 J</b>		
MW-21-Screen-3	Jan/Feb 2022	DUP-7-1Q22	0.5 U	<b>2.0</b>	<b>1.7</b>	<b>0.3 J</b>	0.5 U	0.5 U	0.5 U	<b>0.7</b>	<b>2.9 J</b>		
MW-21-Screen-3	Apr/May 2022	MW-21-3	0.5 U	<b>0.8</b>	<b>0.4 J</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.3 J</b>	<b>2.8</b>		
MW-21-Screen-3	Jul/Aug 2022	MW-21-3	0.5 U	<b>1.0</b>	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.4 J</b>	<b>3.1</b>		
MW-21-Screen-3	Oct/Nov 2022	MW-21-3	0.5 U	<b>1.0</b>	<b>0.5</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>0.4 J</b>	<b>3.0 J</b>		
<b>MW-21-Screen-4</b>													
MW-21-Screen-4	Oct/Nov 2021	MW-21-4	0.5 U	<b>0.3 J</b>	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>3.9</b>	<b>2.9</b>		
MW-21-Screen-4	Jan/Feb 2022	MW-21-4	0.5 U	<b>0.6</b>	<b>1.2</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>5.2</b>	<b>3.0 J</b>		
MW-21-Screen-4	Apr/May 2022	MW-21-4	0.5 U	<b>0.5 J</b>	<b>0.8</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>4.3</b>	<b>2.6</b>		
MW-21-Screen-4	Jul/Aug 2022	MW-21-4	0.5 U	<b>0.4 J</b>	<b>0.8</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>4.0</b>	<b>3.2</b>		
MW-21-Screen-4	Jul/Aug 2022	DUP-6-3Q22	0.5 U	<b>0.4 J</b>	<b>0.6</b>	0.5 U	0.5 U	0.5 U	0.5 U	<b>3.7</b>	<b>3.6</b>		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-21-Screen-4	Oct/Nov 2022	MW-21-4	0.5 U	0.4 J	0.6	0.5 U	0.5 U	0.5 U	0.5 U	3.4	3.3		
<b>MW-21-Screen-5</b>													
MW-21-Screen-5	Oct/Nov 2021	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	3.8	2.9		
MW-21-Screen-5	Jan/Feb 2022	MW-21-5	0.5 U	0.3 J	1.8	0.2 J	0.5 U	0.5 U	0.5 U	7.0	2.7 J		
MW-21-Screen-5	Apr/May 2022	MW-21-5	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	3.8	2.6		
MW-21-Screen-5	Jul/Aug 2022	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	3.2	2.4		
MW-21-Screen-5	Oct/Nov 2022	MW-21-5	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	3.2	3.0		
<b>MW-22-Screen-1</b>													
MW-22-Screen-1	Mar/Apr 2021	MW-22-1	0.5 U	1.2	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5	3.4 J		
MW-22-Screen-1	May/June 2021	MW-22-1	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	3.9 J		
MW-22-Screen-1	Jan/Feb 2022	MW-22-1	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	17.6		
MW-22-Screen-1	Apr/May 2022	MW-22-1	0.5 U	1.9	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.9	60.0		
<b>MW-22-Screen-2</b>													
MW-22-Screen-2	Oct/Nov 2021	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8		
MW-22-Screen-2	Jan/Feb 2022	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.7		
MW-22-Screen-2	Apr/May 2022	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3 J		
MW-22-Screen-2	Jul/Aug 2022	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3		
MW-22-Screen-2	Oct/Nov 2022	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2		
MW-22-Screen-2	Oct/Nov 2022	DUP-4-4Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4		
<b>MW-22-Screen-3</b>													
MW-22-Screen-3	Oct/Nov 2021	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.6		
MW-22-Screen-3	Jan/Feb 2022	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	3.5		
MW-22-Screen-3	Apr/May 2022	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.9 J		
MW-22-Screen-3	Jul/Aug 2022	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1		
MW-22-Screen-3	Oct/Nov 2022	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1		
<b>MW-22-Screen-4</b>													
MW-22-Screen-4	May/June 2021	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J		
MW-22-Screen-4	Oct/Nov 2021	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4 J		
MW-22-Screen-4	Apr/May 2022	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J		
MW-22-Screen-4	Oct/Nov 2022	MW-22-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1 J		
<b>MW-22-Screen-5</b>													
MW-22-Screen-5	May/June 2021	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Carbon disulfide	0.5
MW-22-Screen-5	Oct/Nov 2021	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			
MW-22-Screen-5	Apr/May 2022	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 J		
MW-22-Screen-5	Oct/Nov 2022	MW-22-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-23-Screen-1</b>													
MW-23-Screen-1	Apr/May 2022	MW-23-1	0.5 U	1.0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	6.7 J		
<b>MW-23-Screen-2</b>													
MW-23-Screen-2	Oct/Nov 2021	MW-23-2	0.5 U	0.7	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	6.1		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-23-Screen-2	Jan/Feb 2022	MW-23-2	0.5 U	1.0	0.5 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5	5.0		
MW-23-Screen-2	Jan/Feb 2022	DUP-5-1Q22	0.5 U	2.2	1.0	0.4 J	0.5 U	0.5 U	0.5 U	1.0	4.0 U	1,2,3-Trichlorobenzene	0.2 J
MW-23-Screen-2	Apr/May 2022	MW-23-2	0.5 U	0.6	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	3.6 J		
MW-23-Screen-2	Apr/May 2022	DUP-1-2022	0.5 U	0.6	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	3.8 J		
MW-23-Screen-2	Jul/Aug 2022	MW-23-2	0.5 U	1.0	0.5	0.2 J	0.5 U	0.5 U	0.5 U	0.5	4.4		
MW-23-Screen-2	Oct/Nov 2022	MW-23-2	0.5 U	0.8	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	5.2		
<b>MW-23-Screen-3</b>													
MW-23-Screen-3	Oct/Nov 2021	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.8		
MW-23-Screen-3	Jan/Feb 2022	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.9		
MW-23-Screen-3	Apr/May 2022	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2 J		
MW-23-Screen-3	Jul/Aug 2022	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.5		
MW-23-Screen-3	Oct/Nov 2022	MW-23-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.6		
<b>MW-23-Screen-4</b>													
MW-23-Screen-4	May/June 2021	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4 J		
MW-23-Screen-4	Oct/Nov 2021	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2		
MW-23-Screen-4	Apr/May 2022	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J		
MW-23-Screen-4	Oct/Nov 2022	MW-23-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J		
<b>MW-23-Screen-5</b>													
MW-23-Screen-5	May/June 2021	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.2 J
MW-23-Screen-5	Oct/Nov 2021	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Styrene	0.2 J
MW-23-Screen-5	Apr/May 2022	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ	Styrene	0.2 J
MW-23-Screen-5	Oct/Nov 2022	MW-23-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	0.6
<b>MW-24-Screen-1</b>													
MW-24-Screen-1	Oct/Nov 2021	MW-24-1	0.5 J	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	5.8	21.2		
MW-24-Screen-1	Jan/Feb 2022	MW-24-1	2.3	0.3 J	1.6	0.5 U	0.5 U	0.5 U	0.5 U	4.7	164.0		
MW-24-Screen-1	Apr/May 2022	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.6	140.0	Bromodichloromethane	0.3 J
MW-24-Screen-1	Jul/Aug 2022	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	95.0	Bromodichloromethane	0.3 J
MW-24-Screen-1	Oct/Nov 2022	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8	35.0		
<b>MW-24-Screen-2</b>													
MW-24-Screen-2	Oct/Nov 2021	MW-24-2	0.5 U	0.5 U	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	1.0	11.5		
MW-24-Screen-2	Jan/Feb 2022	MW-24-2	0.5 U	0.5 U	0.5 U	0.2 J	0.4 J	0.5 U	0.5 U	0.7	5.2		
MW-24-Screen-2	Apr/May 2022	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	9.6 J		
MW-24-Screen-2	Jul/Aug 2022	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	15.0		
MW-24-Screen-2	Jul/Aug 2022	DUP-3-3Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	15.0		
MW-24-Screen-2	Oct/Nov 2022	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	17.0		
MW-24-Screen-2	Oct/Nov 2022	DUP-5-4Q22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	15.0		
<b>MW-24-Screen-3</b>													
MW-24-Screen-3	Oct/Nov 2021	MW-24-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-24-Screen-3	Jan/Feb 2022	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-24-Screen-3	Jan/Feb 2022	DUP-3-1Q22	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-24-Screen-3	Apr/May 2022	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
MW-24-Screen-3	Jul/Aug 2022	MW-24-3	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-24-Screen-3	Oct/Nov 2022	MW-24-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Carbon disulfide	0.7 J
<b>MW-24-Screen-4</b>													
MW-24-Screen-4	May/June 2021	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	Styrene	0.1 J
MW-24-Screen-4	Oct/Nov 2021	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	Ethylbenzene	0.2 J
												Styrene	0.2 J
MW-24-Screen-4	Apr/May 2022	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ	Styrene	0.1 J
MW-24-Screen-4	Oct/Nov 2022	MW-24-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-24-Screen-5</b>													
MW-24-Screen-5	May/June 2021	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-5	Oct/Nov 2021	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 J		
MW-24-Screen-5	Apr/May 2022	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
MW-24-Screen-5	Oct/Nov 2022	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-25-Screen-1</b>													
MW-25-Screen-1	Oct/Nov 2021	MW-25-1	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	7.6	Methyl-tert-butyl ether (MTBE)	0.4 J
MW-25-Screen-1	Jan/Feb 2022	MW-25-1	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	8.3	Methyl-tert-butyl ether (MTBE)	0.4 J
MW-25-Screen-1	Apr/May 2022	MW-25-1	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	6.2 J	Methyl-tert-butyl ether (MTBE)	0.4 J
MW-25-Screen-1	Jul/Aug 2022	MW-25-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	6.7	Methyl-tert-butyl ether (MTBE)	0.3 J
MW-25-Screen-1	Oct/Nov 2022	MW-25-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	7.0		
<b>MW-25-Screen-2</b>													
MW-25-Screen-2	Oct/Nov 2021	MW-25-2	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	12.0		
MW-25-Screen-2	Jan/Feb 2022	MW-25-2	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	13.4		
MW-25-Screen-2	Apr/May 2022	MW-25-2	0.5 U	0.3 J	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	9.7 J		
MW-25-Screen-2	Jul/Aug 2022	MW-25-2	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	12.0		
MW-25-Screen-2	Jul/Aug 2022	DUP-2-3Q22	0.5 U	0.3 J	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	11.0		
MW-25-Screen-2	Oct/Nov 2022	MW-25-2	0.5 U	0.2 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	11.0		
MW-25-Screen-2	Oct/Nov 2022	DUP-3-4Q22	0.5 U	0.2 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	11.0		
<b>MW-25-Screen-3</b>													
MW-25-Screen-3	Oct/Nov 2021	MW-25-3	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	10.2		
MW-25-Screen-3	Jan/Feb 2022	MW-25-3	0.5 U	0.5 U	2.1	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	11.4		
MW-25-Screen-3	Apr/May 2022	MW-25-3	0.5 U	0.5 U	3.4	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	8.2 J		
MW-25-Screen-3	Jul/Aug 2022	MW-25-3	0.5 U	0.5 U	3.0	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	9.5		
MW-25-Screen-3	Oct/Nov 2022	MW-25-3	0.5 U	0.5 U	3.0	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	9.7		
<b>MW-25-Screen-4</b>													
MW-25-Screen-4	Oct/Nov 2021	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.0		
MW-25-Screen-4	Jan/Feb 2022	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	9.5		
MW-25-Screen-4	Apr/May 2022	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.3 J		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-25-Screen-4	Jul/Aug 2022	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.6		
MW-25-Screen-4	Oct/Nov 2022	MW-25-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.2		
<b>MW-25-Screen-5</b>													
MW-25-Screen-5	Oct/Nov 2021	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-25-Screen-5	Jan/Feb 2022	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-25-Screen-5	Apr/May 2022	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-25-Screen-5	Jul/Aug 2022	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-25-Screen-5	Oct/Nov 2022	MW-25-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
<b>MW-26-Screen-2</b>													
MW-26-Screen-2	Oct/Nov 2021	MW-26-2	0.5 U	0.3 J	1.8	0.5 U	0.5 U	0.5 U	0.5 U	1.8	4.0		
MW-26-Screen-2	Jan/Feb 2022	MW-26-2	0.5 U	0.3 J	2.0	0.5 U	0.5 U	0.5 U	0.5 U	1.8	17.5	cis-1,2-Dichloroethene	0.3 J
MW-26-Screen-2	Apr/May 2022	MW-26-2	0.5 U	0.5	4.1	0.5 U	0.5 U	0.5 U	0.5 U	2.3	2.4		
MW-26-Screen-2	Jul/Aug 2022	MW-26-2	0.5 U	0.2 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1.2	3.0		
MW-26-Screen-2	Jul/Aug 2022	DUP-4-3Q22	0.5 U	0.2 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1.3	3.0		
MW-26-Screen-2	Oct/Nov 2022	MW-26-2	0.5 U	0.3 J	1.5	0.5 U	0.5 U	0.5 U	0.5 U	1.4	2.4		
<b>Analyte concentration exceeds the standard for:</b>													
<b>CA MCL</b>			0.5	5.0	5.0	5.0	0.5	6.0	1200.0	TTHM	6.0		
<b>EPA REGION IX MCL</b>			5.0	5.0	5.0	NE	5.0	7.0	NE	TTHM	NE		

**Notes**

- DUP(E) Field Duplicate
- NA Not analyzed
- NE Not established
- TTHM Chloroform is regulated under the state and federal MCL of 80 µg/L for Total Trihalomethanes (TTHMs); the MCL applies to the sum of all four THMs (Bromodichloromethane, Bromoform, Dibromochloromethane, and Chloroform) as an annual average
- B Analyte is present in method blank
- UB Result should be considered “not-detected” because it was detected in a method blank or equipment blank at a similar level.
- E Analyte concentration is above calibration range
- J Analyte concentration is an estimated value
- U Analyte was analyzed for but not detected at or above the stated limit
- UJ Analyte was analyzed for but not detected; analyte concentration is an estimated value

**TABLE 2**  
**SUMMARY OF METALS DETECTED DURING THE LAST FIVE**  
**SAMPLING EVENTS OF THE LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM**  
(Shaded values exceed State or Federal MCLs or action levels.)

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-1</b>						
MW-1	Oct/Nov 2021	MW-1	NA	NA	3.0 U	0.10 UB
MW-1	Oct/Nov 2022	MW-1	NA	NA	3.0 UJ	0.20 U
<b>MW-3-Screen-1</b>						
MW-3-Screen-1	Apr/May 2022	MW-3-1	2.0 U	1.00 U	3.0 U	0.20 U
<b>MW-3-Screen-2</b>						
MW-3-Screen-2	Oct/Nov 2021	MW-3-2	NA	NA	0.5 J	0.79 J
MW-3-Screen-2	Oct/Nov 2021	DUP-1-4Q21	NA	NA	0.7 J	0.74 J
MW-3-Screen-2	Jan/Feb 2022	MW-3-2	NA	NA	1.0 J	0.62
MW-3-Screen-2	Apr/May 2022	MW-3-2	2.0 U	1.00 U	3.0 U	0.36
MW-3-Screen-2	Jul/Aug 2022	MW-3-2	NA	NA	3.0 U	0.20 U
MW-3-Screen-2	Oct/Nov 2022	MW-3-2	NA	NA	0.9 J	0.20 U
<b>MW-3-Screen-3</b>						
MW-3-Screen-3	Oct/Nov 2021	MW-3-3	NA	NA	3.8	0.66 J
MW-3-Screen-3	Jan/Feb 2022	MW-3-3	NA	NA	6.3	0.67
MW-3-Screen-3	Jan/Feb 2022	DUP-6-1Q22	NA	NA	3.1	0.69
MW-3-Screen-3	Apr/May 2022	MW-3-3	1.5 J	1.00 U	0.8 J	0.41
MW-3-Screen-3	Jul/Aug 2022	MW-3-3	NA	NA	2.6 J	0.42 UJ
MW-3-Screen-3	Oct/Nov 2022	MW-3-3	NA	NA	1.1 J	0.53 J
<b>MW-3-Screen-4</b>						
MW-3-Screen-4	Oct/Nov 2021	MW-3-4	NA	NA	31.0	0.59 J
MW-3-Screen-4	Jan/Feb 2022	MW-3-4	NA	NA	61.0	0.61
MW-3-Screen-4	Apr/May 2022	MW-3-4	4.7 J	1.00 UJ	5.9 J	0.39 J
MW-3-Screen-4	Apr/May 2022	DUP-5-2Q22	2.9	1.00 U	4.7	0.33
MW-3-Screen-4	Jul/Aug 2022	MW-3-4	NA	NA	15.0	0.20 U
MW-3-Screen-4	Oct/Nov 2022	MW-3-4	NA	NA	14.0	0.27 UJ
MW-3-Screen-4	Oct/Nov 2022	DUP-6-4Q22	NA	NA	12.0	0.20 U
<b>MW-3-Screen-5</b>						
MW-3-Screen-5	Oct/Nov 2021	MW-3-5	NA	NA	53.0	0.43 UB
MW-3-Screen-5	Apr/May 2022	MW-3-5	1.9 J	1.00 U	5.3	0.34 J
MW-3-Screen-5	Oct/Nov 2022	MW-3-5	NA	NA	42.0	0.20 U
<b>MW-4-Screen-1</b>						
MW-4-Screen-1	Jan/Feb 2022	MW-4-1	NA	NA	3.0 U	0.20
MW-4-Screen-1	Apr/May 2022	MW-4-1	2.0 U	1.00 U	0.7 J	0.20 U
<b>MW-4-Screen-2</b>						
MW-4-Screen-2	Oct/Nov 2021	MW-4-2	NA	NA	3.0 U	0.19 UB
MW-4-Screen-2	Oct/Nov 2021	DUP-3-4Q21	NA	NA	3.0 U	0.19 UB
MW-4-Screen-2	Jan/Feb 2022	MW-4-2	NA	NA	1.9 J	1.60
MW-4-Screen-2	Apr/May 2022	MW-4-2	2.0 U	1.00 U	1.2 J	0.20 U
MW-4-Screen-2	Jul/Aug 2022	MW-4-2	NA	NA	0.5 J	0.22 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-4-Screen-2	Oct/Nov 2022	MW-4-2	NA	NA	0.5 J	0.20 U
<b>MW-4-Screen-3</b>						
MW-4-Screen-3	Oct/Nov 2021	MW-4-3	NA	NA	0.8 UB	0.19 UB
MW-4-Screen-3	Jan/Feb 2022	MW-4-3	NA	NA	0.8 J	0.20 U
MW-4-Screen-3	Apr/May 2022	MW-4-3	1.9 J	1.00 U	1.8 J	0.20 U
MW-4-Screen-3	Jul/Aug 2022	MW-4-3	NA	NA	0.8 J	0.04 J
MW-4-Screen-3	Oct/Nov 2022	MW-4-3	NA	NA	1.0 J	0.20 U
MW-4-Screen-3	Oct/Nov 2022	DUP-7-4Q22	NA	NA	2.4 J	0.20 U
<b>MW-4-Screen-4</b>						
MW-4-Screen-4	May/June 2021	MW-4-4	2.0 U	1.00 U	3.0 U	0.06 UB
MW-4-Screen-4	Oct/Nov 2021	MW-4-4	NA	NA	3.0 U	0.07 UB
MW-4-Screen-4	Apr/May 2022	MW-04-4	3.8	1.00 U	13.0	0.20 UJ
MW-4-Screen-4	Apr/May 2022	DUP-3-2Q22	3.3	1.00 U	10.0	0.20 UJ
MW-4-Screen-4	Oct/Nov 2022	MW-4-4	NA	NA	1.1 J	0.21 UJ
<b>MW-4-Screen-5</b>						
MW-4-Screen-5	May/June 2021	MW-4-5	2.0 U	1.00 U	3.0 U	0.06 UB
MW-4-Screen-5	Oct/Nov 2021	MW-4-5	NA	NA	1.2 UB	0.05 UB
MW-4-Screen-5	Apr/May 2022	MW-04-5	2.0 U	1.00 U	3.0 U	0.20 UJ
MW-4-Screen-5	Oct/Nov 2022	MW-4-5	NA	NA	1.2 J	0.06 UJ
<b>MW-9</b>						
MW-9	May/June 2021	MW-9	0.8 J	1.00 U	3.0	0.46 J
MW-9	Oct/Nov 2021	MW-9	NA	NA	140.0 J	0.58 UB
MW-9	Apr/May 2022	MW-9	1.3 J	1.00 U	28.0	1.50 J
MW-9	Apr/May 2022	DUP-6-2Q22	1.0 J	1.00 U	29.0	1.30 J
MW-9	Oct/Nov 2022	MW-9	NA	NA	620.0 J	1.50
<b>MW-11-Screen-1</b>						
MW-11-Screen-1	July 2021	MW-11-1	NA	NA	3.0 U	0.20 UB
MW-11-Screen-1	Oct/Nov 2021	MW-11-1	NA	NA	3.0 U	0.16 UB
MW-11-Screen-1	Jan/Feb 2022	MW-11-1	NA	NA	3.0 U	0.10 J
MW-11-Screen-1	Jul/Aug 2022	MW-11-1	NA	NA	3.0 U	0.20 U
MW-11-Screen-1	Oct/Nov 2022	MW-11-1	NA	NA	3.0 U	0.20 U
<b>MW-11-Screen-2</b>						
MW-11-Screen-2	Oct/Nov 2021	MW-11-2	NA	NA	3.0 U	0.08 UB
MW-11-Screen-2	Oct/Nov 2021	DUP-7-4Q21	NA	NA	3.0 U	0.12 UB
MW-11-Screen-2	Jan/Feb 2022	MW-11-2	NA	NA	3.0 U	0.08 J
MW-11-Screen-2	Apr/May 2022	MW-11-2	1.0 J	1.00 U	3.0 U	0.20 U
MW-11-Screen-2	Apr/May 2022	DUP-4-2Q22	1.0 J	1.00 U	3.0 U	0.20 U
MW-11-Screen-2	Jul/Aug 2022	MW-11-2	NA	NA	3.0 U	0.16 UJ
MW-11-Screen-2	Oct/Nov 2022	MW-11-2	NA	NA	3.0 U	0.13 UJ
MW-11-Screen-2	Oct/Nov 2022	DUP-8-4Q22	NA	NA	3.0 U	0.08 UJ
<b>MW-11-Screen-3</b>						
MW-11-Screen-3	Oct/Nov 2021	MW-11-3	NA	NA	1.4 UB	0.07 UB
MW-11-Screen-3	Jan/Feb 2022	MW-11-3	NA	NA	0.6 J	0.07 J
MW-11-Screen-3	Apr/May 2022	MW-11-3	3.5	1.00 U	0.7 J	0.20 UJ
MW-11-Screen-3	Jul/Aug 2022	MW-11-3	NA	NA	3.0 U	0.20 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-11-Screen-3	Oct/Nov 2022	MW-11-3	NA	NA	3.0 U	0.07 UJ
<b>MW-11-Screen-4</b>						
MW-11-Screen-4	May/June 2021	MW-11-4	<b>1.4 J</b>	1.00 U	3.0 U	0.14 UB
MW-11-Screen-4	Oct/Nov 2021	MW-11-4	NA	NA	3.0 U	0.11 UB
MW-11-Screen-4	Apr/May 2022	MW-11-4	<b>3.8</b>	1.00 U	3.0 U	0.20 U
MW-11-Screen-4	Oct/Nov 2022	MW-11-4	NA	NA	3.0 U	0.04 UJ
<b>MW-11-Screen-5</b>						
MW-11-Screen-5	May/June 2021	MW-11-5	<b>5.4</b>	<b>0.13 J</b>	0.8 UB	0.28 UB
MW-11-Screen-5	Oct/Nov 2021	MW-11-5	NA	NA	<b>3.4</b>	0.26 UB
MW-11-Screen-5	Apr/May 2022	MW-11-5	<b>6.1</b>	<b>2.40</b>	<b>6.1</b>	0.20 U
MW-11-Screen-5	Oct/Nov 2022	MW-11-5	NA	NA	<b>3.4</b>	<b>0.14 UJ</b>
<b>MW-12-Screen-2</b>						
MW-12-Screen-2	July 2021	MW-12-2	NA	NA	3.0 UB	0.20 UB
MW-12-Screen-2	July 2021	DUP-5-3Q21	NA	NA	3.0 UB	0.20 UB
MW-12-Screen-2	Oct/Nov 2021	MW-12-2	NA	NA	0.8 UB	0.41 UB
MW-12-Screen-2	Oct/Nov 2021	DUP-4-4Q21	NA	NA	0.9 UB	0.41 UB
MW-12-Screen-2	Jul/Aug 2022	MW-12-2	NA	NA	<b>1.4 J</b>	<b>0.21 J</b>
MW-12-Screen-2	Oct/Nov 2022	MW-12-2	NA	NA	<b>1.5 J</b>	0.20 U
<b>MW-12-Screen-3</b>						
MW-12-Screen-3	July 2021	MW-12-3	NA	NA	3.0 UB	0.20 UB
MW-12-Screen-3	Oct/Nov 2021	MW-12-3	NA	NA	3.0 U	0.24 UB
MW-12-Screen-3	Jul/Aug 2022	MW-12-3	NA	NA	3.0 U	<b>0.40 J</b>
MW-12-Screen-3	Jul/Aug 2022	DUP-5-3Q22	NA	NA	3.0 U	<b>0.39 J</b>
MW-12-Screen-3	Oct/Nov 2022	MW-12-3	NA	NA	3.0 U	0.28 UJ
<b>MW-12-Screen-4</b>						
MW-12-Screen-4	Oct/Nov 2021	MW-12-4	NA	NA	1.2 UB	0.43 UB
MW-12-Screen-4	Oct/Nov 2022	MW-12-4	NA	NA	<b>0.5 J</b>	<b>0.59</b>
<b>MW-12-Screen-5</b>						
MW-12-Screen-5	Oct/Nov 2021	MW-12-5	NA	NA	2.0 UB	<b>1.10 J</b>
MW-12-Screen-5	Oct/Nov 2022	MW-12-5	NA	NA	<b>1.1 J</b>	<b>1.10 J</b>
<b>MW-14-Screen-2</b>						
MW-14-Screen-2	Oct/Nov 2021	MW-14-2	NA	NA	<b>0.5 J</b>	0.17 UB
MW-14-Screen-2	Jan/Feb 2022	MW-14-2	NA	NA	<b>0.9 J</b>	0.20 U
MW-14-Screen-2	Apr/May 2022	MW-14-2	2.0 U	<b>0.17 J</b>	3.0 U	<b>1.30</b>
MW-14-Screen-2	Jul/Aug 2022	MW-14-2	NA	NA	3.0 U	0.20 U
MW-14-Screen-2	Oct/Nov 2022	MW-14-2	NA	NA	<b>0.6 J</b>	0.20 U
<b>MW-14-Screen-3</b>						
MW-14-Screen-3	July 2021	MW-14-3	NA	NA	3.0 U	0.20 UB
MW-14-Screen-3	Oct/Nov 2021	MW-14-3	NA	NA	3.0 U	<b>0.58 J</b>
MW-14-Screen-3	Jan/Feb 2022	MW-14-3	NA	NA	<b>0.9 J</b>	<b>0.24</b>
MW-14-Screen-3	Apr/May 2022	MW-14-3	2.0 U	1.00 U	3.0 U	0.20 U
MW-14-Screen-3	Apr/May 2022	DUP-2-2022	2.0 U	1.00 U	3.0 U	0.20 U
MW-14-Screen-3	Jul/Aug 2022	MW-14-3	NA	NA	3.0 U	0.20 U
MW-14-Screen-3	Oct/Nov 2022	MW-14-3	NA	NA	3.0 U	0.20 U
MW-14-Screen-3	Oct/Nov 2022	DUP-2-4Q22	NA	NA	3.0 U	<b>0.43</b>



Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-14-Screen-4</b>						
MW-14-Screen-4	May/June 2021	MW-14-4	2.0 U	1.00 U	3.3 UB	2.00 J
MW-14-Screen-4	Oct/Nov 2021	MW-14-4	NA	NA	2.4 J	2.10 J
MW-14-Screen-4	Apr/May 2022	MW-14-4	2.0 U	1.00 U	2.1 J	0.20 U
MW-14-Screen-4	Oct/Nov 2022	MW-14-4	NA	NA	2.1 J	1.90 J
<b>MW-14-Screen-5</b>						
MW-14-Screen-5	May/June 2021	MW-14-5	1.2 J	1.00 U	0.6 UB	0.30 UB
MW-14-Screen-5	Oct/Nov 2021	MW-14-5	NA	NA	0.7 J	0.30 UB
MW-14-Screen-5	Apr/May 2022	MW-14-5	0.9 J	1.00 U	3.0 U	2.30
MW-14-Screen-5	Oct/Nov 2022	MW-14-5	NA	NA	3.0 U	0.20 U
<b>MW-15</b>						
MW-15	Oct/Nov 2021	MW-15	NA	NA	14.0 J	0.25 UB
MW-15	Jan/Feb 2022	MW-15	NA	NA	3.5 J	0.69
MW-15	Apr/May 2022	MW-15	1.1 J	1.00 U	3.9	0.74 J
MW-15	Apr/May 2022	DUP-7-2Q22	0.8 J	1.00 U	3.4	0.76 J
MW-15	Jul/Aug 2022	MW-15	NA	NA	3.0 U	0.89
MW-15	Oct/Nov 2022	MW-15	NA	NA	18.0 J	0.26
<b>MW-17-Screen-1</b>						
MW-17-Screen-1	Apr/May 2022	MW-17-1	0.7 J	1.00 U	3.0 U	0.20 U
<b>MW-17-Screen-2</b>						
MW-17-Screen-2	Oct/Nov 2021	MW-17-2	NA	NA	3.0 U	0.07 UB
MW-17-Screen-2	Jan/Feb 2022	MW-17-2	NA	NA	3.0 U	0.20 U
MW-17-Screen-2	Jan/Feb 2022	DUP-4-1Q22	NA	NA	3.0 U	0.09 UJ
MW-17-Screen-2	Apr/May 2022	MW-17-2	2.0 U	1.00 U	3.0 U	0.20 U
MW-17-Screen-2	Jul/Aug 2022	MW-17-2	NA	NA	3.0 U	0.20 U
MW-17-Screen-2	Oct/Nov 2022	MW-17-2	NA	NA	3.0 U	0.08 UJ
<b>MW-17-Screen-3</b>						
MW-17-Screen-3	Oct/Nov 2021	MW-17-3	NA	NA	0.6 UB	0.06 UB
MW-17-Screen-3	Oct/Nov 2021	DUP-2-4Q21	NA	NA	3.0 U	0.07 UB
MW-17-Screen-3	Jan/Feb 2022	MW-17-3	NA	NA	1.6 J	0.20 U
MW-17-Screen-3	Apr/May 2022	MW-17-3	2.0 U	1.00 U	3.0 U	0.20 U
MW-17-Screen-3	Jul/Aug 2022	MW-17-3	NA	NA	3.0 U	0.09 UJ
MW-17-Screen-3	Oct/Nov 2022	MW-17-3	NA	NA	3.0 U	0.20 U
<b>MW-17-Screen-4</b>						
MW-17-Screen-4	Oct/Nov 2021	MW-17-4	NA	NA	2.2 J	2.20 J
MW-17-Screen-4	Jan/Feb 2022	MW-17-4	NA	NA	2.4 J	1.50
MW-17-Screen-4	Apr/May 2022	MW-17-4	2.4	1.00 U	1.8 J	2.10 J
MW-17-Screen-4	Jul/Aug 2022	MW-17-4	NA	NA	2.0 J	2.10 J
MW-17-Screen-4	Oct/Nov 2022	MW-17-4	NA	NA	2.4 J	1.70 J
<b>MW-17-Screen-5</b>						
MW-17-Screen-5	May/June 2021	MW-17-5	1.2 J	0.21 J	1.5 J	0.67 J
MW-17-Screen-5	Oct/Nov 2021	MW-17-5	NA	NA	2.2 J	1.50 J
MW-17-Screen-5	Apr/May 2022	MW-17-5	1.8 J	0.13 J	1.4 J	1.30
MW-17-Screen-5	Oct/Nov 2022	MW-17-5	NA	NA	2.7 J	1.70

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-18-Screen-2</b>						
MW-18-Screen-2	Oct/Nov 2021	MW-18-2	NA	NA	3.0 U	0.10 UB
MW-18-Screen-2	Jan/Feb 2022	MW-18-2	NA	NA	3.0 U	<b>0.19 J</b>
MW-18-Screen-2	Apr/May 2022	MW-18-2	<b>1.4 J</b>	1.00 U	3.0 U	0.20 U
MW-18-Screen-2	Jul/Aug 2022	MW-18-2	NA	NA	3.0 U	0.20 U
MW-18-Screen-2	Oct/Nov 2022	MW-18-2	NA	NA	3.0 U	0.15 UJ
<b>MW-18-Screen-3</b>						
MW-18-Screen-3	Oct/Nov 2021	MW-18-3	NA	NA	<b>1.3 J</b>	<b>1.60 J</b>
MW-18-Screen-3	Jan/Feb 2022	MW-18-3	NA	NA	<b>2.0 J</b>	<b>1.80</b>
MW-18-Screen-3	Apr/May 2022	MW-18-3	<b>0.9 J</b>	1.00 U	<b>2.0 J</b>	<b>1.90 J</b>
MW-18-Screen-3	Jul/Aug 2022	MW-18-3	NA	NA	3.0 U	<b>1.90</b>
MW-18-Screen-3	Oct/Nov 2022	MW-18-3	NA	NA	<b>1.8 J</b>	<b>1.60</b>
<b>MW-18-Screen-4</b>						
MW-18-Screen-4	Oct/Nov 2021	MW-18-4	NA	NA	<b>2.5 J</b>	<b>2.30 J</b>
MW-18-Screen-4	Oct/Nov 2021	DUP-6-4Q21	NA	NA	<b>2.6 J</b>	<b>2.20 J</b>
MW-18-Screen-4	Jan/Feb 2022	MW-18-4	NA	NA	<b>7.6</b>	<b>1.60</b>
MW-18-Screen-4	Apr/May 2022	MW-18-4	2.0 U	1.00 U	<b>2.7 J</b>	<b>2.90</b>
MW-18-Screen-4	Jul/Aug 2022	MW-18-4	NA	NA	<b>2.7 J</b>	<b>3.00</b>
MW-18-Screen-4	Oct/Nov 2022	MW-18-4	NA	NA	<b>3.1</b>	<b>2.40 J</b>
<b>MW-18-Screen-5</b>						
MW-18-Screen-5	May/June 2021	MW-18-5	2.0 U	<b>0.10 J</b>	3.0 U	0.14 UB
MW-18-Screen-5	Oct/Nov 2021	MW-18-5	NA	NA	3.0 U	0.12 UB
MW-18-Screen-5	Apr/May 2022	MW-18-5	2.0 U	1.00 U	3.0 U	0.20 U
MW-18-Screen-5	Oct/Nov 2022	MW-18-5	NA	NA	3.0 U	0.20 U
<b>MW-19-Screen-1</b>						
MW-19-Screen-1	May/June 2021	MW-19-1	2.0 U	1.00 U	3.0 U	0.15 UB
MW-19-Screen-1	Oct/Nov 2021	MW-19-1	NA	NA	3.0 U	0.33 UB
MW-19-Screen-1	Apr/May 2022	MW-19-1	2.0 U	1.00 U	3.0 U	<b>0.38 J</b>
MW-19-Screen-1	Oct/Nov 2022	MW-19-1	NA	NA	3.0 U	0.20 U
<b>MW-19-Screen-2</b>						
MW-19-Screen-2	May/June 2021	MW-19-2	2.0 U	1.00 U	2.1 UB	<b>0.87 J</b>
MW-19-Screen-2	Oct/Nov 2021	MW-19-2	NA	NA	<b>1.2 J</b>	0.13 UB
MW-19-Screen-2	Oct/Nov 2021	DUP-8-4Q21	NA	NA	<b>0.9 J</b>	0.13 UB
MW-19-Screen-2	Apr/May 2022	MW-19-2	2.0 U	1.00 U	<b>1.9 J</b>	<b>0.80 J</b>
MW-19-Screen-2	Oct/Nov 2022	MW-19-2	NA	NA	<b>3.4</b>	0.20 U
<b>MW-19-Screen-3</b>						
MW-19-Screen-3	May/June 2021	MW-19-3	<b>1.8 J</b>	1.00 U	<b>2.2 J</b>	<b>0.84 J</b>
MW-19-Screen-3	Oct/Nov 2021	MW-19-3	NA	NA	<b>1.7 J</b>	0.40 UB
MW-19-Screen-3	Apr/May 2022	MW-19-3	2.0 U	1.00 U	<b>1.8 J</b>	<b>1.80</b>
MW-19-Screen-3	Oct/Nov 2022	MW-19-3	NA	NA	<b>2.2 J</b>	<b>1.40 J</b>
<b>MW-19-Screen-4</b>						
MW-19-Screen-4	May/June 2021	MW-19-4	<b>1.2 J</b>	1.00 U	<b>2.5 J</b>	<b>1.30 J</b>
MW-19-Screen-4	Oct/Nov 2021	MW-19-4	NA	NA	<b>2.2 J</b>	<b>2.60 J</b>
MW-19-Screen-4	Apr/May 2022	MW-19-4	<b>0.9 J</b>	1.00 U	<b>2.0 J</b>	<b>2.60 J</b>
MW-19-Screen-4	Oct/Nov 2022	MW-19-4	NA	NA	<b>1.6 J</b>	<b>2.20</b>

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-19-Screen-5</b>						
MW-19-Screen-5	May/June 2021	MW-19-5	1.3 J	1.00 U	2.3 J	1.10 J
MW-19-Screen-5	Oct/Nov 2021	MW-19-5	NA	NA	1.8 J	2.30 J
MW-19-Screen-5	Apr/May 2022	MW-19-5	0.9 J	1.00 U	1.8 J	2.40
MW-19-Screen-5	Oct/Nov 2022	MW-19-5	NA	NA	1.3 J	1.40
<b>MW-20-Screen-2</b>						
MW-20-Screen-2	Oct/Nov 2021	MW-20-2	NA	NA	3.0 U	0.06 UB
MW-20-Screen-2	Jan/Feb 2022	MW-20-2	NA	NA	1.1 J	0.05 J
MW-20-Screen-2	Jan/Feb 2022	DUP-1-1Q22	NA	NA	3.0 U	0.08 J
MW-20-Screen-2	Apr/May 2022	MW-20-2	2.0 U	1.00 U	3.0 U	0.20 UJ
MW-20-Screen-2	Apr/May 2022	DUP-8-2Q22	2.0 U	1.00 U	3.0 U	0.20 UJ
MW-20-Screen-2	Jul/Aug 2022	MW-20-2	NA	NA	0.8 J	0.20 U
MW-20-Screen-2	Oct/Nov 2022	MW-20-2	NA	NA	3.0 U	0.20 U
MW-20-Screen-2	Oct/Nov 2022	DUP-1-4Q22	NA	NA	3.0 U	0.20 U
<b>MW-20-Screen-3</b>						
MW-20-Screen-3	Oct/Nov 2021	MW-20-3	NA	NA	3.0 U	0.09 UB
MW-20-Screen-3	Oct/Nov 2021	DUP-5-4Q21	NA	NA	3.0 U	0.10 UB
MW-20-Screen-3	Jan/Feb 2022	MW-20-3	NA	NA	1.1 J	0.17 J
MW-20-Screen-3	Apr/May 2022	MW-20-3	0.9 J	1.00 U	0.7 J	0.20 UJ
MW-20-Screen-3	Jul/Aug 2022	MW-20-3	NA	NA	3.0 U	0.12 UJ
MW-20-Screen-3	Oct/Nov 2022	MW-20-3	NA	NA	3.0 U	0.03 UJ
<b>MW-20-Screen-4</b>						
MW-20-Screen-4	Oct/Nov 2021	MW-20-4	NA	NA	3.0 U	0.20 UB
MW-20-Screen-4	Jan/Feb 2022	MW-20-4	NA	NA	3.0 U	0.25 J
MW-20-Screen-4	Apr/May 2022	MW-20-4	1.3 J	1.00 U	3.0 U	0.20 U
MW-20-Screen-4	Jul/Aug 2022	MW-20-4	NA	NA	3.0 U	0.20 U
MW-20-Screen-4	Jul/Aug 2022	DUP-1-3Q22	NA	NA	3.0 U	0.20 U
MW-20-Screen-4	Oct/Nov 2022	MW-20-4	NA	NA	3.0 U	0.20 U
<b>MW-20-Screen-5</b>						
MW-20-Screen-5	Oct/Nov 2021	MW-20-5	NA	NA	3.0 U	0.18 UB
MW-20-Screen-5	Jan/Feb 2022	MW-20-5	NA	NA	3.0 U	0.13 J
MW-20-Screen-5	Apr/May 2022	MW-20-5	1.1 J	1.00 U	3.0 U	0.20 U
MW-20-Screen-5	Jul/Aug 2022	MW-20-5	NA	NA	3.0 U	0.20 U
MW-20-Screen-5	Oct/Nov 2022	MW-20-5	NA	NA	3.0 U	0.20 U
<b>MW-21-Screen-2</b>						
MW-21-Screen-2	Oct/Nov 2021	MW-21-2	NA	NA	0.5 UB	0.26 UB
MW-21-Screen-2	Jan/Feb 2022	MW-21-2	NA	NA	3.0 U	0.07 UJ
MW-21-Screen-2	Apr/May 2022	MW-21-2	2.0 U	1.00 U	3.0 U	0.20 U
MW-21-Screen-2	Jul/Aug 2022	MW-21-2	NA	NA	3.0 U	0.20 U
MW-21-Screen-2	Oct/Nov 2022	MW-21-2	NA	NA	3.0 U	0.20 U
<b>MW-21-Screen-3</b>						
MW-21-Screen-3	Oct/Nov 2021	MW-21-3	NA	NA	0.6 UB	0.52 UB
MW-21-Screen-3	Jan/Feb 2022	MW-21-3	NA	NA	3.0 U	0.12 UJ
MW-21-Screen-3	Jan/Feb 2022	DUP-7-1Q22	NA	NA	3.0 U	0.10 UJ
MW-21-Screen-3	Apr/May 2022	MW-21-3	2.0 U	1.00 U	3.0 U	0.20 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-21-Screen-3	Jul/Aug 2022	MW-21-3	NA	NA	3.0 U	0.46 UJ
MW-21-Screen-3	Oct/Nov 2022	MW-21-3	NA	NA	3.0 U	0.20 U
<b>MW-21-Screen-4</b>						
MW-21-Screen-4	Oct/Nov 2021	MW-21-4	NA	NA	1.6 UB	1.10 J
MW-21-Screen-4	Jan/Feb 2022	MW-21-4	NA	NA	1.1 J	1.30 J
MW-21-Screen-4	Apr/May 2022	MW-21-4	2.0 U	1.00 U	1.0 J	0.20 U
MW-21-Screen-4	Jul/Aug 2022	MW-21-4	NA	NA	3.0 U	1.60
MW-21-Screen-4	Jul/Aug 2022	DUP-6-3Q22	NA	NA	3.0 U	1.70
MW-21-Screen-4	Oct/Nov 2022	MW-21-4	NA	NA	3.0 U	1.20 UJ
<b>MW-21-Screen-5</b>						
MW-21-Screen-5	Oct/Nov 2021	MW-21-5	NA	NA	1.5 UB	1.20 J
MW-21-Screen-5	Jan/Feb 2022	MW-21-5	NA	NA	1.5 J	1.20 J
MW-21-Screen-5	Apr/May 2022	MW-21-5	2.0 U	1.00 U	0.6 J	1.50
MW-21-Screen-5	Jul/Aug 2022	MW-21-5	NA	NA	3.0 U	1.40 J
MW-21-Screen-5	Oct/Nov 2022	MW-21-5	NA	NA	3.0 U	0.20 U
<b>MW-22-Screen-1</b>						
MW-22-Screen-1	Mar/Apr 2021	MW-22-1	NA	NA	0.6 J	0.90 J
MW-22-Screen-1	May/June 2021	MW-22-1	2.0 U	1.00 U	0.7 J	0.73
MW-22-Screen-1	Jan/Feb 2022	MW-22-1	NA	NA	1.8 J	0.72
MW-22-Screen-1	Apr/May 2022	MW-22-1	2.0 U	1.00 U	0.7 J	0.20 U
<b>MW-22-Screen-2</b>						
MW-22-Screen-2	Oct/Nov 2021	MW-22-2	NA	NA	1.5 J	2.00 J
MW-22-Screen-2	Jan/Feb 2022	MW-22-2	NA	NA	2.3 J	1.40
MW-22-Screen-2	Apr/May 2022	MW-22-2	2.0 U	1.00 U	1.8 J	2.00
MW-22-Screen-2	Jul/Aug 2022	MW-22-2	NA	NA	2.0 J	2.00
MW-22-Screen-2	Oct/Nov 2022	MW-22-2	NA	NA	3.0 U	2.10
MW-22-Screen-2	Oct/Nov 2022	DUP-4-4Q22	NA	NA	3.0 U	3.40
<b>MW-22-Screen-3</b>						
MW-22-Screen-3	Oct/Nov 2021	MW-22-3	NA	NA	1.4 J	2.20 J
MW-22-Screen-3	Jan/Feb 2022	MW-22-3	NA	NA	2.4 J	2.10
MW-22-Screen-3	Apr/May 2022	MW-22-3	0.9 J	1.00 U	2.1 J	2.20 J
MW-22-Screen-3	Jul/Aug 2022	MW-22-3	NA	NA	1.8 J	2.20
MW-22-Screen-3	Oct/Nov 2022	MW-22-3	NA	NA	3.0 U	1.80
<b>MW-22-Screen-4</b>						
MW-22-Screen-4	May/June 2021	MW-22-4	0.7 J	1.00 U	2.6 J	1.70
MW-22-Screen-4	Oct/Nov 2021	MW-22-4	NA	NA	2.2 J	2.50 J
MW-22-Screen-4	Apr/May 2022	MW-22-4	0.9 J	1.00 U	2.3 J	2.90
MW-22-Screen-4	Oct/Nov 2022	MW-22-4	NA	NA	3.0 J	2.50 J
<b>MW-22-Screen-5</b>						
MW-22-Screen-5	May/June 2021	MW-22-5	2.0 U	0.11 J	3.0 U	0.20
MW-22-Screen-5	Oct/Nov 2021	MW-22-5	NA	NA	3.0 U	0.17 UB
MW-22-Screen-5	Apr/May 2022	MW-22-5	2.0 U	0.20 J	3.0 U	0.20 U
MW-22-Screen-5	Oct/Nov 2022	MW-22-5	NA	NA	3.0 U	0.22 UJ
<b>MW-23-Screen-1</b>						
MW-23-Screen-1	Apr/May 2022	MW-23-1	2.0 U	1.00 U	0.9 J	1.50 J

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-23-Screen-2</b>						
MW-23-Screen-2	Oct/Nov 2021	MW-23-2	NA	NA	1.7 J	1.90 J
MW-23-Screen-2	Jan/Feb 2022	MW-23-2	NA	NA	1.8 J	1.50 J
MW-23-Screen-2	Jan/Feb 2022	DUP-5-1Q22	NA	NA	1.5 J	1.50
MW-23-Screen-2	Apr/May 2022	MW-23-2	1.2 J	1.00 U	1.2 J	1.70 J
MW-23-Screen-2	Apr/May 2022	DUP-1-2022	2.0 U	1.00 U	1.5 J	1.90
MW-23-Screen-2	Jul/Aug 2022	MW-23-2	NA	NA	1.7 J	1.80 J
MW-23-Screen-2	Oct/Nov 2022	MW-23-2	NA	NA	1.9 J	1.90
<b>MW-23-Screen-3</b>						
MW-23-Screen-3	Oct/Nov 2021	MW-23-3	NA	NA	2.9 J	3.30 J
MW-23-Screen-3	Jan/Feb 2022	MW-23-3	NA	NA	3.1	2.80 J
MW-23-Screen-3	Apr/May 2022	MW-23-3	1.1 J	0.18 J	2.8 J	2.80
MW-23-Screen-3	Jul/Aug 2022	MW-23-3	NA	NA	3.3	2.60
MW-23-Screen-3	Oct/Nov 2022	MW-23-3	NA	NA	2.7 J	2.70
<b>MW-23-Screen-4</b>						
MW-23-Screen-4	Oct/Nov 2021	MW-23-4	NA	NA	3.8	4.00 J
MW-23-Screen-4	Jan/Feb 2022	MW-23-4	NA	NA	3.9	4.10
MW-23-Screen-4	Apr/May 2022	MW-23-4	1.7 J	1.00 U	3.5 J	4.20
MW-23-Screen-4	Jul/Aug 2022	MW-23-4	NA	NA	4.6	4.20
MW-23-Screen-4	Oct/Nov 2022	MW-23-4	NA	NA	4.2	4.10
<b>MW-23-Screen-5</b>						
MW-23-Screen-5	May/June 2021	MW-23-5	1.8 J	0.55 J	1.7 J	0.24 UB
MW-23-Screen-5	Oct/Nov 2021	MW-23-5	NA	NA	3.0 U	0.13 UB
MW-23-Screen-5	Apr/May 2022	MW-23-5	2.4	0.20 J	3.0 UJ	0.20 U
MW-23-Screen-5	Oct/Nov 2022	MW-23-5	NA	NA	3.0 U	0.20 U
<b>MW-24-Screen-1</b>						
MW-24-Screen-1	Oct/Nov 2021	MW-24-1	NA	NA	2.6 J	0.22 UB
MW-24-Screen-1	Jan/Feb 2022	MW-24-1	NA	NA	5.6	1.10
MW-24-Screen-1	Apr/May 2022	MW-24-1	1.3 J	1.00 U	3.8	0.20 U
MW-24-Screen-1	Jul/Aug 2022	MW-24-1	NA	NA	2.5 J	0.27
MW-24-Screen-1	Oct/Nov 2022	MW-24-1	NA	NA	9.2	6.00
<b>MW-24-Screen-2</b>						
MW-24-Screen-2	Oct/Nov 2021	MW-24-2	NA	NA	1.1 J	2.10 J
MW-24-Screen-2	Jan/Feb 2022	MW-24-2	NA	NA	0.8 J	0.31
MW-24-Screen-2	Apr/May 2022	MW-24-2	2.0	0.53 J	1.2 J	1.40
MW-24-Screen-2	Jul/Aug 2022	MW-24-2	NA	NA	2.0 J	1.70
MW-24-Screen-2	Jul/Aug 2022	DUP-3-3Q22	NA	NA	1.7 J	1.80
MW-24-Screen-2	Oct/Nov 2022	MW-24-2	NA	NA	3.0 U	1.50
MW-24-Screen-2	Oct/Nov 2022	DUP-5-4Q22	NA	NA	3.0 U	1.50
<b>MW-24-Screen-3</b>						
MW-24-Screen-3	Oct/Nov 2021	MW-24-3	NA	NA	3.0 U	0.04 UB
MW-24-Screen-3	Jan/Feb 2022	MW-24-3	NA	NA	0.9 J	0.20 U
MW-24-Screen-3	Apr/May 2022	MW-24-3	1.7 J	1.00 U	3.0 UJ	0.20 UJ
MW-24-Screen-3	Jul/Aug 2022	MW-24-3	NA	NA	1.1 J	0.20 U
MW-24-Screen-3	Oct/Nov 2022	MW-24-3	NA	NA	3.0 U	0.20 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
<b>MW-24-Screen-4</b>						
MW-24-Screen-4	Oct/Nov 2021	MW-24-4	NA	NA	3.0 U	0.17 UB
MW-24-Screen-4	Jan/Feb 2022	MW-24-4	NA	NA	<b>2.5 J</b>	<b>0.11 J</b>
MW-24-Screen-4	Apr/May 2022	MW-24-4	<b>1.3 J</b>	1.00 U	3.0 UJ	0.20 U
MW-24-Screen-4	Jul/Aug 2022	MW-24-4	NA	NA	3.0 U	<b>0.10 J</b>
MW-24-Screen-4	Oct/Nov 2022	MW-24-4	NA	NA	3.0 U	0.20 U
<b>MW-24-Screen-5</b>						
MW-24-Screen-5	May/June 2021	MW-24-5	<b>2.5</b>	1.00 U	<b>2.4 J</b>	<b>2.60 J</b>
MW-24-Screen-5	Oct/Nov 2021	MW-24-5	NA	NA	<b>2.5 J</b>	<b>2.50 J</b>
MW-24-Screen-5	Apr/May 2022	MW-24-5	<b>2.7</b>	<b>0.45 J</b>	<b>3.5 J</b>	<b>2.30</b>
MW-24-Screen-5	Oct/Nov 2022	MW-24-5	NA	NA	<b>3.6</b>	<b>2.30 J</b>
<b>MW-25-Screen-1</b>						
MW-25-Screen-1	Oct/Nov 2021	MW-25-1	NA	NA	<b>1.8 J</b>	0.24 UB
MW-25-Screen-1	Jan/Feb 2022	MW-25-1	NA	NA	<b>2.3 J</b>	0.17 UJ
MW-25-Screen-1	Apr/May 2022	MW-25-1	2.0 U	1.00 U	<b>1.9 J</b>	<b>0.82 J</b>
MW-25-Screen-1	Jul/Aug 2022	MW-25-1	NA	NA	<b>3.6</b>	0.20 U
MW-25-Screen-1	Oct/Nov 2022	MW-25-1	NA	NA	<b>1.8 J</b>	0.21 UJ
<b>MW-25-Screen-2</b>						
MW-25-Screen-2	Oct/Nov 2021	MW-25-2	NA	NA	<b>2.0 J</b>	<b>1.90 J</b>
MW-25-Screen-2	Jan/Feb 2022	MW-25-2	NA	NA	<b>2.0 J</b>	<b>1.70 J</b>
MW-25-Screen-2	Apr/May 2022	MW-25-2	2.0 U	1.00 U	<b>2.6 J</b>	<b>3.00 J</b>
MW-25-Screen-2	Jul/Aug 2022	MW-25-2	NA	NA	<b>1.8 J</b>	<b>2.70</b>
MW-25-Screen-2	Jul/Aug 2022	DUP-2-3Q22	NA	NA	<b>1.9 J</b>	<b>2.90</b>
MW-25-Screen-2	Oct/Nov 2022	MW-25-2	NA	NA	<b>2.8 J</b>	<b>2.80</b>
MW-25-Screen-2	Oct/Nov 2022	DUP-3-4Q22	NA	NA	<b>3.0</b>	<b>3.00 J</b>
<b>MW-25-Screen-3</b>						
MW-25-Screen-3	Oct/Nov 2021	MW-25-3	NA	NA	<b>3.5</b>	<b>3.10 J</b>
MW-25-Screen-3	Jan/Feb 2022	MW-25-3	NA	NA	<b>2.8 J</b>	<b>1.60 J</b>
MW-25-Screen-3	Apr/May 2022	MW-25-3	2.0 U	1.00 U	<b>3.5</b>	<b>3.80</b>
MW-25-Screen-3	Jul/Aug 2022	MW-25-3	NA	NA	<b>2.2 J</b>	<b>3.50</b>
MW-25-Screen-3	Oct/Nov 2022	MW-25-3	NA	NA	<b>3.4</b>	<b>3.50</b>
<b>MW-25-Screen-4</b>						
MW-25-Screen-4	Oct/Nov 2021	MW-25-4	NA	NA	<b>1.9 J</b>	<b>0.89 J</b>
MW-25-Screen-4	Jan/Feb 2022	MW-25-4	NA	NA	<b>2.1 J</b>	0.25 UJ
MW-25-Screen-4	Apr/May 2022	MW-25-4	<b>1.1 J</b>	1.00 U	<b>1.0 J</b>	<b>1.30</b>
MW-25-Screen-4	Jul/Aug 2022	MW-25-4	NA	NA	3.0 U	<b>1.20</b>
MW-25-Screen-4	Oct/Nov 2022	MW-25-4	NA	NA	<b>1.2 J</b>	<b>1.20</b>
<b>MW-25-Screen-5</b>						
MW-25-Screen-5	Oct/Nov 2021	MW-25-5	NA	NA	3.0 U	0.15 UB
MW-25-Screen-5	Jan/Feb 2022	MW-25-5	NA	NA	<b>1.6 J</b>	0.22 UJ
MW-25-Screen-5	Apr/May 2022	MW-25-5	2.0 U	1.00 U	3.0 U	0.20 U
MW-25-Screen-5	Jul/Aug 2022	MW-25-5	NA	NA	3.0 U	0.20 U
MW-25-Screen-5	Oct/Nov 2022	MW-25-5	NA	NA	3.0 U	0.08 UJ
<b>MW-26-Screen-2</b>						
MW-26-Screen-2	Oct/Nov 2021	MW-26-2	NA	NA	<b>1.0 J</b>	<b>0.84 J</b>

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-26-Screen-2	Jan/Feb 2022	MW-26-2	NA	NA	1.5 J	0.20 U
MW-26-Screen-2	Apr/May 2022	MW-26-2	2.0 U	1.00 U	1.2 J	0.73 J
MW-26-Screen-2	Jul/Aug 2022	MW-26-2	NA	NA	2.5 J	0.80 J
MW-26-Screen-2	Jul/Aug 2022	DUP-4-3Q22	NA	NA	9.1	0.95
MW-26-Screen-2	Oct/Nov 2022	MW-26-2	NA	NA	1.8 J	0.52 J
<b>Analyte concentration exceeds the standard for:</b>						
<b>CA MCL</b>			10.0	15.0*	50.0	50.0**
<b>EPA REGION IX MCL</b>			10.0	15.0*	100.0	NE
<b>Notes</b>						
DUP(E)	Field Duplicate					
NA	Not analyzed					
NE	Not established					
*	Regulatory Action Level					
**	Due to a court ruling, the State Water Resources Control Board adopted a resolution on August 1, 2017 to remove the current maximum contaminant level (MCL[10.0 µg/L]) for CrVI. CrVI is regulated under the 50.0 µg/L MCL for total chromium."					
J	Analyte concentration is an estimated value					
U	Analyte was analyzed for but not detected at or above the stated limit					
UB	Result should be considered "not-detected" because it was detected in a method blank or equipment blank at a similar level.					
UJ	Analyte was analyzed for but not detected; analyte concentration is an estimated value					

**TABLE 3**  
**SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE REPORTED IN MUNICIPAL**  
**PRODUCTION WELLS NEAR JPL DURING THE LAST FIVE SAMPLING EVENTS OF THE**  
**LONG-TERM QUARTERLY GROUNDWATER SAMPLING PROGRAM**

(All concentrations reported in µg/L.)

(Shaded values exceed State or Federal MCLs or action levels.)

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
<b>LAS FLORES WATER CO. WELL 02</b>					
LFWC#2	7/6/2021	4.1	NA	3.1	NA
LFWC#2	7/12/2021	3.8	NA	3.4	NA
LFWC#2	7/19/2021	4.2	NA	4.3	NA
LFWC#2	7/26/2021	3.4	NA	3.9	NA
LFWC#2	8/2/2021	3.4	NA	4.1	NA
LFWC#2	8/10/2021	2.8	NA	5.1	NA
LFWC#2	8/16/2021	3.7	NA	6.8	NA
LFWC#2	8/23/2021	2.8	NA	6.5	NA
LFWC#2	8/30/2021	2.0 U	NA	7.6	NA
LFWC#2	9/7/2021	3.7	NA	9.0	NA
LFWC#2	9/13/2021	3.8	NA	8.0	NA
LFWC#2	9/20/2021	4.3	NA	7.1	NA
LFWC#2	9/27/2021	3.4	NA	9.3	NA
LFWC#2	10/4/2021	3.5	NA	9.3	NA
LFWC#2	10/11/2021	2.4	NA	10.0	NA
LFWC#2	10/18/2021	3.8	NA	8.8	NA
LFWC#2	10/25/2021	3.4	NA	8.1	NA
LFWC#2	11/1/2021	3.1	NA	9.0	NA
LFWC#2	11/8/2021	3.9	NA	7.2	NA
LFWC#2	11/15/2021	3.9	NA	8.6	NA
LFWC#2	11/22/2021	4.2	NA	7.1	NA
LFWC#2	11/29/2021	3.1	NA	9.4	NA
LFWC#2	12/6/2021	3.0	0.5 U	9.2	0.5 U
LFWC#2	12/13/2021	3.5	NA	11.0	NA
LFWC#2	12/27/2021	2.9	NA	8.9	NA
LFWC#2	1/4/2022	3.1	NA	11.0	NA
LFWC#2	1/10/2022	2.9	NA	9.8	NA
LFWC#2	1/17/2022	2.7	NA	10.0	NA
LFWC#2	1/24/2022	3.1	NA	11.0	NA
LFWC#2	1/31/2022	2.9	NA	12.0	NA
LFWC#2	2/7/2022	3.1	NA	11.0	NA
LFWC#2	2/14/2022	2.8	NA	11.0	NA
LFWC#2	2/22/2022	3.5	NA	9.6	NA
LFWC#2	2/28/2022	4.2	NA	9.8	NA
LFWC#2	3/7/2022	3.2	NA	9.2	NA
LFWC#2	3/14/2022	4.3	NA	9.7	NA
LFWC#2	3/21/2022	3.4	NA	9.9	NA
LFWC#2	4/4/2022	3.7	NA	11.0	NA
LFWC#2	4/11/2022	3.9	NA	9.8	NA
LFWC#2	4/18/2022	3.1	NA	11.0	NA
LFWC#2	4/25/2022	2.5	NA	12.0	NA



Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
LFWC#2	5/2/2022	3.3	NA	10.0	NA
LFWC#2	5/9/2022	3.8	NA	11.0	NA
LFWC#2	5/16/2022	3.8	NA	11.0	NA
LFWC#2	5/23/2022	3.7	NA	9.6	NA
LFWC#2	5/31/2022	3.2	NA	9.3	NA
LFWC#2	6/6/2022	2.1	NA	9.3	NA
LFWC#2	6/13/2022	2.4	NA	7.8	NA
LFWC#2	6/20/2022	2.5	NA	7.5	NA
LFWC#2	6/27/2022	2.7	NA	8.1	NA
LFWC#2	7/5/2022	4.0	NA	6.9	NA
LFWC#2	7/25/2022	4.8	NA	6.9	NA
LFWC#2	8/1/2022	4.9	NA	5.4	NA
LFWC#2	8/8/2022	4.5	NA	5.8	NA
LFWC#2	8/15/2022	4.6	NA	4.9	NA
LFWC#2	8/22/2022	4.7	NA	4.5	NA
LFWC#2	8/29/2022	4.8	NA	4.5	NA
LFWC#2	9/12/2022	5.0	NA	3.8	NA
LFWC#2	9/19/2022	5.8	NA	4.0	NA
LFWC#2	9/26/2022	4.7	NA	3.3	NA
<b>LINCOLN AVENUE WATER CO. WELL 05</b>					
LAWC#5	7/6/2021	5.5	NA	NA	NA
LAWC#5	7/7/2021	NA	2.0	0.6	1.0
LAWC#5	7/13/2021	5.6	NA	NA	NA
LAWC#5	7/20/2021	6.0	NA	NA	NA
LAWC#5	7/27/2021	5.8	NA	NA	NA
LAWC#5	8/3/2021	5.9	1.7	0.5	1.0
LAWC#5	8/10/2021	6.8	NA	NA	NA
LAWC#5	3/1/2022	5.7	2.0	0.6	1.0
LAWC#5	3/8/2022	5.4	NA	NA	NA
LAWC#5	3/15/2022	4.7	NA	NA	NA
LAWC#5	3/22/2022	4.7	NA	NA	NA
LAWC#5	3/29/2022	5.4	NA	NA	NA
LAWC#5	4/5/2022	4.5	1.9	0.6	1.4
LAWC#5	4/12/2022	5.4	NA	NA	NA
LAWC#5	4/19/2022	4.7	NA	NA	NA
LAWC#5	4/26/2022	3.5	NA	NA	NA
LAWC#5	5/3/2022	3.6	1.9	0.7	1.3
LAWC#5	5/10/2022	5.5	NA	NA	NA
LAWC#5	5/17/2022	5.8	NA	NA	NA
LAWC#5	5/24/2022	5.6	NA	NA	NA
LAWC#5	5/31/2022	5.5	NA	NA	NA
LAWC#5	6/7/2022	5.4	1.7	0.7	1.2
LAWC#5	6/14/2022	5.3	NA	NA	NA
LAWC#5	6/21/2022	5.5	NA	NA	NA
LAWC#5	6/28/2022	6.0	NA	NA	NA
LAWC#5	7/5/2022	5.4	2.0	0.5	1.0
LAWC#5	7/12/2022	5.6	NA	NA	NA
LAWC#5	7/19/2022	4.6	NA	NA	NA
LAWC#5	8/9/2022	3.9	4.1	0.5 U	0.8

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
LAWC#5	8/16/2022	3.8	NA	NA	NA
LAWC#5	8/23/2022	3.6	NA	NA	NA
LAWC#5	8/30/2022	3.8	NA	NA	NA
LAWC#5	9/6/2022	3.7	3.9	0.5 U	0.7
LAWC#5	9/20/2022	2.1	NA	NA	NA
LAWC#5	9/27/2022	3.3	NA	NA	NA
LAWC#5	10/7/2022	2.0 U	4.9	0.5 U	0.6
LAWC#5	10/14/2022	3.6	NA	NA	NA
LAWC#5	10/18/2022	3.8	NA	NA	NA
LAWC#5	10/25/2022	3.6	NA	NA	NA
LAWC#5	11/22/2022	3.4	6.4	0.5 U	0.5 U
<b>LINCOLN AVENUE WATER CO. WELL #6</b>					
LAWC#6	8/17/2021	5.8	0.8	0.7	1.1
LAWC#6	8/24/2021	5.2	NA	NA	NA
LAWC#6	8/31/2021	3.5	NA	NA	NA
LAWC#6	9/9/2021	5.5	NA	NA	NA
LAWC#6	9/10/2021	NA	1.3	0.6	0.9
LAWC#6	9/14/2021	5.7	NA	NA	NA
LAWC#6	9/21/2021	5.4	NA	NA	NA
LAWC#6	9/28/2021	5.1	NA	NA	NA
LAWC#6	10/5/2021	4.4	1.5	0.5 U	0.8
LAWC#6	10/13/2021	4.9	NA	NA	NA
LAWC#6	10/19/2021	4.6	NA	NA	NA
LAWC#6	10/26/2021	5.1	NA	NA	NA
LAWC#6	11/2/2021	4.3	1.3	0.6	0.9
LAWC#6	11/5/2021	NA	1.8	0.5 U	0.9
LAWC#6	11/9/2021	4.5	NA	NA	NA
LAWC#6	11/16/2021	5.4	NA	NA	NA
LAWC#6	11/22/2021	5.4	NA	NA	NA
LAWC#6	11/30/2021	5.3	NA	NA	NA
LAWC#6	12/7/2021	1.7	5.5	0.7	0.9
LAWC#6	12/14/2021	NA	4.1	NA	NA
LAWC#6	12/21/2021	NA	3.9	NA	NA
LAWC#6	12/28/2021	NA	5.9	NA	NA
LAWC#6	1/4/2022	1.5	4.7	0.5	1.0
LAWC#6	7/19/2022	3.1	0.5 U	0.5 U	0.9
LAWC#6	7/26/2022	5.3	NA	NA	NA
LAWC#6	8/2/2022	2.0 U	1.1	0.6	0.9
LAWC#6	8/9/2022	5.4	NA	NA	NA
LAWC#6	8/16/2022	5.3	NA	NA	NA
LAWC#6	8/23/2022	5.0	NA	NA	NA
LAWC#6	8/30/2022	5.2	NA	NA	NA
LAWC#6	9/6/2022	5.1	0.6	0.7	1.2
LAWC#6	9/13/2022	2.3	NA	NA	NA
LAWC#6	9/20/2022	3.4	NA	NA	NA
LAWC#6	9/27/2022	4.6	NA	NA	NA
LAWC#6	10/4/2022	5.0	0.5	0.6	0.9
LAWC#6	10/11/2022	5.2	NA	NA	NA
LAWC#6	10/18/2022	4.5	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
LAWC#6	10/25/2022	4.9	NA	NA	NA
LAWC#6	11/1/2022	5.1	0.6	0.6	0.8
LAWC#6	11/2/2022	NA	1.0	0.6	1.0
LAWC#6	11/8/2022	4.9	NA	NA	NA
LAWC#6	11/15/2022	4.6	NA	NA	NA
LAWC#6	11/21/2022	4.7	NA	NA	NA
LAWC#6	11/29/2022	5.0	NA	NA	NA
LAWC#6	12/6/2022	4.7	1.6	0.5	0.8
LAWC#6	12/13/2022	4.6	NA	NA	NA
LAWC#6	12/20/2022	4.4	NA	NA	NA
LAWC#6	12/27/2022	4.5	NA	NA	NA
<b>PASADENA-CITY, WATER DEPT. ARROYO</b>					
ARROYO	6/15/2021	9.0	1.2	0.5 U	0.9
ARROYO	6/22/2021	9.7	1.1	0.5 U	1.0
ARROYO	6/29/2021	8.2	1.0	0.5 U	1.0
ARROYO	7/6/2021	9.6	1.1	0.5 U	1.1
ARROYO	7/13/2021	6.6	1.1	0.5 U	1.0
ARROYO	7/20/2021	7.6	1.1	0.5 U	0.9
ARROYO	7/27/2021	8.1	1.1	0.5 U	0.9
ARROYO	8/3/2021	7.9	1.0	0.5 U	1.0
ARROYO	8/10/2021	7.7	1.1	0.5 U	1.0
ARROYO	8/17/2021	8.1	1.1	0.5 U	1.2
ARROYO	8/24/2021	7.2	1.0	0.5 U	1.0
ARROYO	8/31/2021	9.0	0.9	0.5 U	0.9
ARROYO	9/7/2021	7.7	1.1	0.5 U	1.1
ARROYO	9/14/2021	7.5	1.0	0.5 U	1.1
ARROYO	9/21/2021	8.7	0.8	0.5 U	0.9
ARROYO	9/28/2021	7.7	1.0	0.5 U	1.0
ARROYO	10/5/2021	6.9	1.1	0.5 U	1.0
ARROYO	10/11/2021	7.7	NA	NA	NA
ARROYO	10/14/2021	NA	0.8	0.5 U	0.8
ARROYO	10/19/2021	8.0	0.9	0.5 U	0.9
ARROYO	10/26/2021	7.2	0.9	0.5 U	1.0
ARROYO	11/2/2021	7.5	0.8	0.5 U	1.0
ARROYO	11/9/2021	7.3	0.9	0.5 U	1.0
ARROYO	11/16/2021	7.1	0.6	0.5 U	0.7
ARROYO	11/23/2021	7.6	0.6	0.5 U	0.9
ARROYO	11/30/2021	7.3	0.7	0.5 U	0.9
ARROYO	12/7/2021	7.2	0.7	0.5 U	0.9
ARROYO	12/14/2021	7.3	0.9	0.5 U	0.9
ARROYO	12/21/2021	7.7	0.8	0.5 U	0.9
ARROYO	12/28/2021	7.8	0.8	0.5 U	0.9
ARROYO	1/4/2022	8.4	0.7	0.5 U	0.9
ARROYO	1/11/2022	7.7	0.7	0.5 U	0.9
ARROYO	1/18/2022	8.6	0.8	0.5 U	1.0
ARROYO	1/25/2022	7.9	0.9	0.5 U	1.0
ARROYO	2/1/2022	8.0	0.7	0.5 U	0.9
ARROYO	2/8/2022	8.4	0.8	0.5 U	1.0
ARROYO	2/15/2022	8.7	1.0	0.5 U	1.0

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
ARROYO	2/22/2022	7.5	1.0	0.5 U	1.1
ARROYO	3/1/2022	7.9	0.8	0.5 U	0.9
ARROYO	3/8/2022	8.2	0.9	0.5 U	1.1
ARROYO	3/15/2022	8.5	1.0	0.5 U	1.1
ARROYO	3/22/2022	8.7	0.7	0.5 U	0.9
ARROYO	3/29/2022	8.4	0.9	0.5 U	0.9
ARROYO	4/5/2022	8.5	0.8	0.5 U	1.0
ARROYO	4/12/2022	8.6	0.8	0.5 U	0.9
ARROYO	4/18/2022	8.6	0.8	0.5 U	0.9
ARROYO	4/26/2022	8.5	1.0	0.5 U	0.8
ARROYO	5/3/2022	9.1	NA	NA	NA
ARROYO	5/10/2022	9.6	1.0	0.5 U	0.9
ARROYO	5/17/2022	9.2	1.0	0.5 U	1.0
ARROYO	5/24/2022	8.3	0.9	0.5 U	0.9
ARROYO	5/31/2022	6.9	1.0	0.5 U	1.0
ARROYO	6/7/2022	8.3	0.9	0.5	1.1
ARROYO	6/14/2022	7.8	0.8	0.5 U	0.9
ARROYO	6/21/2022	9.3	0.8	0.5 U	0.9
ARROYO	6/28/2022	8.5	0.8	0.5	0.9
ARROYO	7/5/2022	8.2	0.8	0.6	1.2
ARROYO	7/12/2022	8.2	0.9	0.5 U	1.0
ARROYO	7/19/2022	8.6	0.9	0.5 U	0.9
ARROYO	7/26/2022	8.6	1.0	0.5 U	1.0
ARROYO	8/2/2022	7.9	0.7	0.5 U	0.8
ARROYO	8/9/2022	6.3	0.7	0.5 U	0.8
ARROYO	8/16/2022	7.9	0.8	0.5 U	0.9
ARROYO	8/23/2022	8.3	0.8	0.5 U	1.0
ARROYO	8/30/2022	9.6	0.7	0.5 U	0.9
ARROYO	9/6/2022	8.6	0.8	0.5 U	1.0
ARROYO	9/13/2022	9.2	0.9	0.5	1.0
ARROYO	9/20/2022	8.4	0.9	0.5	1.1
ARROYO	9/28/2022	8.2	0.7	0.5 U	0.9
ARROYO	10/4/2022	7.8	0.8	0.5 U	0.9
ARROYO	10/11/2022	9.7	0.7	0.5 U	1.0
ARROYO	10/25/2022	8.8	0.7	0.5 U	0.8
ARROYO	11/1/2022	8.4	0.6	0.5 U	0.9
ARROYO	11/8/2022	8.9	0.8	0.5 U	1.0
ARROYO	11/15/2022	8.6	0.9	0.5 U	0.9
ARROYO	11/22/2022	8.4	0.9	0.5 U	0.9
ARROYO	11/29/2022	8.3	0.9	0.5 U	1.0
ARROYO	12/6/2022	8.2	0.9	0.5 U	0.9
ARROYO	12/13/2022	7.8	0.9	0.5 U	1.0
ARROYO	12/20/2022	8.2	0.9	0.5 U	1.0
ARROYO	12/27/2022	7.5	0.7	0.5 U	0.9
<b>PASADENA-CITY, WATER DEPT. WELL 52</b>					
WELL 52	6/9/2021	4.0 U	0.5 U	0.6	1.8
WELL 52	6/15/2021	4.0 U	0.5 U	0.9	2.1
WELL 52	6/22/2021	4.0 U	0.5 U	0.8	2.0
WELL 52	6/29/2021	4.0 U	0.5 U	0.8	2.1

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
WELL 52	7/6/2021	3.0	0.5 U	0.9	2.1
WELL 52	7/13/2021	3.3	0.5 U	0.7	1.8
WELL 52	7/20/2021	2.8	0.5 U	0.8	1.7
WELL 52	7/27/2021	3.1	0.5 U	0.7	1.9
WELL 52	8/3/2021	3.3	0.5 U	0.8	1.9
WELL 52	8/10/2021	3.1	0.5 U	0.8	2.0
WELL 52	8/17/2021	3.2	0.5 U	0.9	2.1
WELL 52	8/24/2021	3.0	0.5 U	0.7	1.9
WELL 52	8/31/2021	3.8	0.5 U	0.7	1.8
WELL 52	9/7/2021	3.7	0.5 U	0.9	2.0
WELL 52	9/14/2021	3.0	0.5 U	0.9	2.0
WELL 52	9/21/2021	4.2	0.5 U	0.8	1.8
WELL 52	1/11/2022	3.4	0.5 U	0.7	2.4
WELL 52	1/18/2022	3.7	0.5 U	0.6	2.4
WELL 52	1/25/2022	3.4	0.5 U	0.8	2.3
WELL 52	2/1/2022	3.7	0.5 U	0.9	2.2
WELL 52	2/8/2022	3.6	0.5 U	0.9	2.2
WELL 52	2/15/2022	5.3	0.5 U	0.9	2.2
WELL 52	2/22/2022	3.1	0.5 U	0.9	2.2
WELL 52	3/1/2022	3.1	0.5 U	1.0	2.3
WELL 52	3/8/2022	3.2	0.5 U	1.0	2.1
WELL 52	3/15/2022	3.3	0.5 U	1.0	2.2
WELL 52	3/22/2022	3.3	0.5 U	0.8	1.7
WELL 52	3/29/2022	3.7	0.5 U	1.0	1.9
WELL 52	4/5/2022	4.2	0.5 U	0.9	2.0
WELL 52	4/12/2022	3.3	0.5 U	1.0	1.9
WELL 52	4/18/2022	3.5	0.5 U	1.0	1.8
WELL 52	4/26/2022	3.7	0.5 U	0.8	1.7
WELL 52	5/3/2022	3.1	NA	NA	NA
WELL 52	5/10/2022	4.0	0.5 U	0.9	1.8
WELL 52	5/17/2022	6.6	0.5 U	0.9	1.8
WELL 52	5/24/2022	3.3	0.5 U	0.9	1.8
WELL 52	5/31/2022	3.2	0.5 U	1.0	1.9
WELL 52	6/7/2022	4.2	0.5 U	1.0	2.0
WELL 52	6/14/2022	3.3	0.5 U	1.1	1.9
WELL 52	6/21/2022	3.2	0.5 U	1.0	1.9
WELL 52	6/28/2022	3.5	0.5 U	0.9	1.8
WELL 52	7/5/2022	3.4	0.5 U	1.0	2.0
WELL 52	7/12/2022	3.7	0.5 U	1.0	1.9
WELL 52	7/19/2022	3.3	0.5 U	0.9	1.8
WELL 52	7/26/2022	2.4	0.5 U	1.1	2.0
WELL 52	8/2/2022	2.8	0.5 U	0.8	1.6
WELL 52	8/9/2022	3.6	0.5 U	0.8	1.6
WELL 52	8/16/2022	3.2	0.5 U	1.0	1.8
WELL 52	8/23/2022	3.6	0.5 U	0.9	1.8
WELL 52	8/30/2022	3.2	0.5 U	1.0	1.8
WELL 52	9/6/2022	3.4	0.5 U	1.0	1.9
WELL 52	9/13/2022	4.3	0.5 U	1.1	2.0
WELL 52	9/20/2022	4.0	0.5 U	1.2	2.2

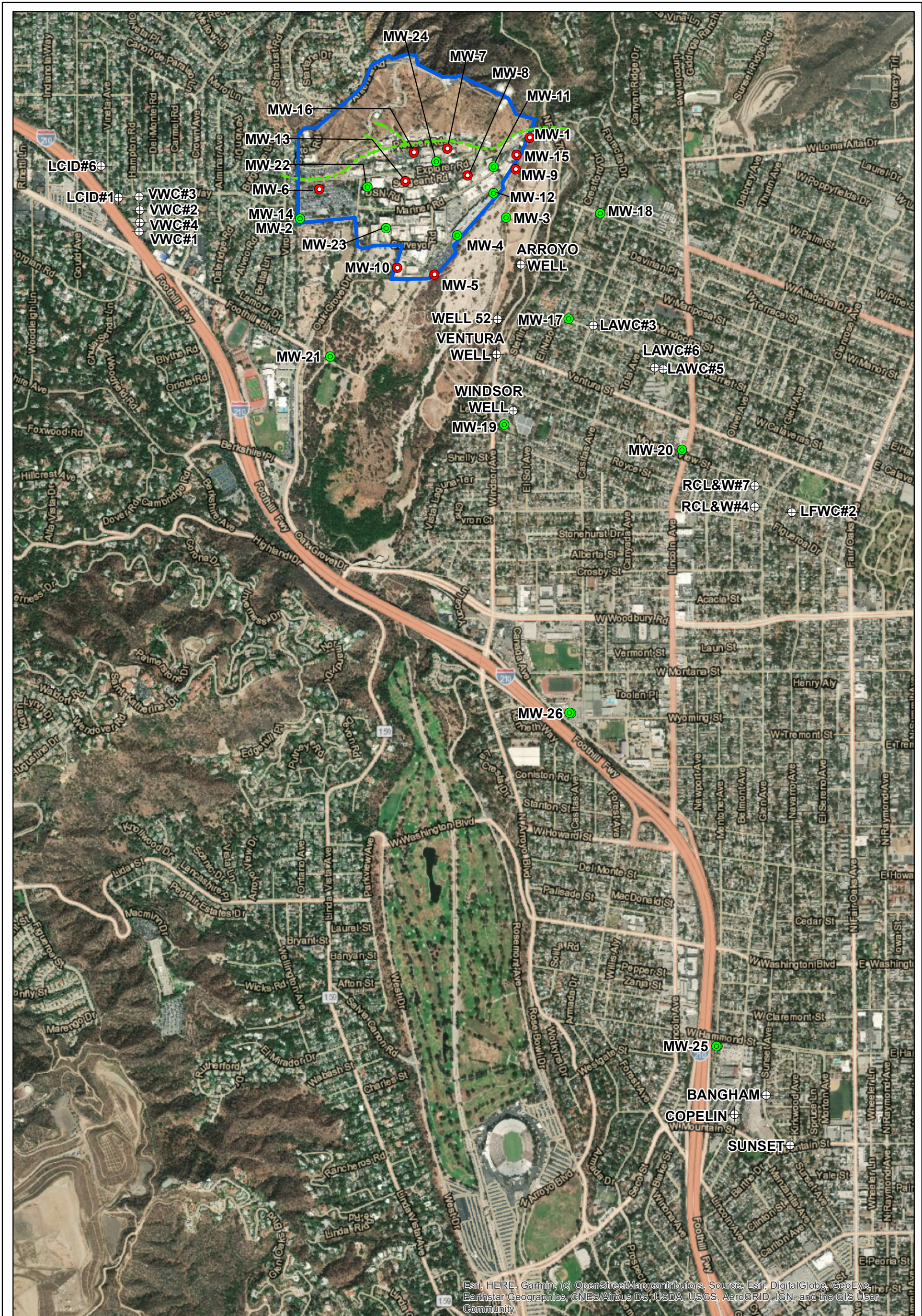
Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
WELL 52	9/28/2022	3.5	0.5 U	0.9	1.7
WELL 52	10/4/2022	3.1	0.5 U	0.9	1.8
WELL 52	10/11/2022	3.0	0.5 U	0.9	1.7
WELL 52	10/25/2022	3.3	0.5 U	0.8	1.9
WELL 52	11/1/2022	3.4	0.5 U	1.0	2.0
WELL 52	11/8/2022	3.7	0.5 U	0.9	1.8
WELL 52	11/15/2022	3.3	0.5 U	1.0	1.9
WELL 52	11/22/2022	3.6	0.5 U	1.0	1.9
WELL 52	11/29/2022	3.4	0.5 U	1.1	2.0
WELL 52	12/6/2022	3.3	0.5 U	1.0	2.0
<b>RUBIO CANON LAND &amp; WATER ASSOCIATION WELL 04</b>					
RCLW#4	4/4/2022	NA	NA	1.0	NA
RCLW#4	5/4/2022	2.0 U	0.5 U	1.2	0.6
RCLW#4	5/9/2022	2.0 U	NA	NA	NA
RCLW#4	5/16/2022	2.0 U	NA	NA	NA
RCLW#4	5/23/2022	2.0 U	NA	NA	NA
RCLW#4	5/31/2022	2.0 U	NA	NA	NA
RCLW#4	6/6/2022	2.0 U	NA	NA	NA
RCLW#4	6/13/2022	2.0 U	NA	NA	NA
RCLW#4	6/20/2022	2.0 U	NA	NA	NA
RCLW#4	6/27/2022	2.0 U	NA	NA	NA
RCLW#4	7/5/2022	2.0 U	NA	11.0	NA
RCLW#4	7/11/2022	2.0	NA	NA	NA
RCLW#4	7/14/2022	NA	NA	7.3	NA
RCLW#4	7/18/2022	2.0 U	NA	NA	NA
RCLW#4	7/25/2022	2.0 U	NA	NA	NA
RCLW#4	8/1/2022	NA	NA	1.7	NA
RCLW#4	8/8/2022	2.0 U	NA	NA	NA
RCLW#4	8/15/2022	2.1	NA	NA	NA
RCLW#4	8/22/2022	2.0 U	NA	NA	NA
RCLW#4	8/29/2022	2.4	NA	NA	NA
RCLW#4	9/6/2022	2.0	NA	2.7	NA
RCLW#4	9/12/2022	2.3	NA	NA	NA
RCLW#4	9/19/2022	2.6	NA	NA	NA
RCLW#4	9/26/2022	2.0 U	NA	NA	NA
RCLW#4	10/3/2022	2.6	NA	3.7	NA
RCLW#4	10/11/2022	2.2	NA	NA	NA
RCLW#4	10/18/2022	2.1	NA	NA	NA
RCLW#4	10/24/2022	2.0 U	NA	NA	NA
RCLW#4	10/31/2022	2.2	NA	NA	NA
RCLW#4	11/7/2022	2.0	NA	1.1	NA
RCLW#4	11/14/2022	2.2	NA	NA	NA
RCLW#4	11/21/2022	2.9	NA	NA	NA
RCLW#4	11/28/2022	2.0 U	NA	NA	NA
RCLW#4	12/5/2022	2.0	NA	1.5	NA
RCLW#4	12/12/2022	2.2	NA	NA	NA
RCLW#4	12/19/2022	2.1	NA	NA	NA
RCLW#4	12/27/2022	2.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
<b>RUBIO CANON LAND &amp; WATER ASSOCIATION WELL 07</b>					
RCLW#7	4/4/2022	NA	NA	1.0	NA
RCLW#7	5/4/2022	2.0 U	0.5 U	1.2	0.6
RCLW#7	5/9/2022	2.0 U	NA	NA	NA
RCLW#7	5/16/2022	2.0 U	NA	NA	NA
RCLW#7	5/23/2022	2.0 U	NA	NA	NA
RCLW#7	5/31/2022	2.0 U	NA	NA	NA
RCLW#7	6/6/2022	2.0 U	NA	NA	NA
RCLW#7	6/13/2022	2.0 U	NA	NA	NA
RCLW#7	6/20/2022	2.0 U	NA	NA	NA
RCLW#7	6/27/2022	2.0 U	NA	NA	NA
RCLW#7	5/4/2022	2.3	0.5 U	2.7	0.5 U
RCLW#7	5/9/2022	2.2	NA	NA	NA
RCLW#7	5/16/2022	2.3	NA	NA	NA
RCLW#7	5/23/2022	2.0 U	NA	NA	NA
RCLW#7	5/31/2022	2.0 U	NA	NA	NA
RCLW#7	6/6/2022	2.0 U	NA	NA	NA
RCLW#7	6/13/2022	2.3	NA	NA	NA
RCLW#7	6/20/2022	2.0 U	NA	NA	NA
RCLW#7	6/27/2022	2.0 U	NA	NA	NA
RCLW#7	7/5/2022	2.3	NA	1.0	NA
RCLW#7	7/11/2022	2.3	NA	NA	NA
RCLW#7	7/18/2022	2.5	NA	NA	NA
RCLW#7	7/25/2022	2.9	NA	NA	NA
RCLW#7	8/8/2022	2.8	NA	NA	NA
RCLW#7	8/15/2022	3.0	NA	NA	NA
RCLW#7	8/22/2022	2.2	NA	NA	NA
RCLW#7	8/29/2022	2.1	NA	NA	NA
RCLW#7	9/6/2022	2.9	NA	NA	NA
RCLW#7	9/12/2022	2.0 U	NA	NA	NA
RCLW#7	9/19/2022	2.4	NA	NA	NA
RCLW#7	9/26/2022	2.0	NA	NA	NA
RCLW#7	10/3/2022	2.0 U	NA	0.8	NA
RCLW#7	10/11/2022	2.7	NA	NA	NA
RCLW#7	10/18/2022	2.1	NA	NA	NA
RCLW#7	10/24/2022	2.1	NA	NA	NA
RCLW#7	10/31/2022	2.6	NA	NA	NA
RCLW#7	11/7/2022	2.8	NA	NA	NA
RCLW#7	11/14/2022	2.6	NA	NA	NA
RCLW#7	11/21/2022	3.0	NA	NA	NA
RCLW#7	11/28/2022	2.7	NA	NA	NA
RCLW#7	12/5/2022	2.6	NA	NA	NA
RCLW#7	12/12/2022	3.0	NA	NA	NA
RCLW#7	12/19/2022	3.0	NA	NA	NA
RCLW#7	12/27/2022	2.6	NA	NA	NA
<b>VALLEY WATER CO. WELL 01</b>					
VWC#1	7/7/2021	2.9	0.5 U	0.9	0.9
VWC#1	8/3/2021	3.4	0.5 U	0.6	0.8
VWC#1	9/8/2021	3.0	0.5 U	0.7	0.9

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
VWC#1	10/6/2021	3.2	0.5 U	0.8	0.9
<b>VALLEY WATER CO. WELL 02</b>					
VWC#2	7/7/2021	3.1	0.5 U	0.6	0.7
VWC#2	8/3/2021	3.7	0.5 U	0.5 U	0.7
VWC#2	9/8/2021	3.3	0.5 U	0.5 U	0.7
VWC#2	10/6/2021	3.0	0.5 U	0.5 U	0.7
VWC#2	3/2/2022	2.0 U	0.5 U	0.5 U	0.5 U
VWC#2	5/5/2022	2.7	NA	NA	NA
VWC#2	5/6/2022	NA	0.5 U	0.8	1.0
VWC#2	6/22/2022	NA	0.5 U	0.6	0.8
VWC#2	7/8/2022	3.5	0.5 U	0.7	1.0
VWC#2	8/3/2022	3.2	0.5 U	0.7	0.9
VWC#2	9/7/2022	2.9	0.5 U	0.6	0.7
VWC#2	10/3/2022	3.7	0.5 U	0.6	0.8
<b>VALLEY WATER CO. WELL 03</b>					
VWC#3	7/7/2021	3.4	0.5 U	1.6	0.8
VWC#3	8/3/2021	3.9	0.5 U	1.3	0.8
VWC#3	3/2/2022	2.0 U	0.5 U	0.5 U	0.5 U
VWC#3	6/22/2022	NA	0.5 U	0.8	0.5 U
VWC#3	7/8/2022	3.3	0.5 U	1.2	0.6
VWC#3	8/3/2022	2.5	0.5 U	1.0	0.5
VWC#3	9/7/2022	2.5	0.5 U	1.3	0.7
<b>VALLEY WATER CO. WELL 04</b>					
VWC#4	7/7/2021	3.3	0.5 U	1.3	1.2
VWC#4	8/3/2021	3.9	0.5 U	1.0	1.4
VWC#4	5/5/2022	3.5	NA	NA	NA
VWC#4	5/6/2022	NA	0.5 U	0.9	1.3
VWC#4	6/22/2022	NA	0.5 U	0.6	1.1
VWC#4	7/8/2022	3.3	0.5 U	0.7	1.1
VWC#4	8/3/2022	3.1	0.5 U	0.7	1.1
VWC#4	9/7/2022	2.7	0.5 U	0.8	1.0
VWC#4	10/3/2022	3.9	0.5 U	0.8	0.9
<b>Analyte concentration exceeds the standard for:</b>					
<b>CA MCL</b>		6.0	0.5	5.0	5.0
<b>EPA REGION IX MCL</b>		NE	5.0	5.0	5.0
<b>Notes</b>					
NA	Not analyzed				
NE	Not established				
Source	State Water Resources Control Board (Division of Drinking Water) Water Quality Index Database				
U	Analyte was analyzed for but not detected at or above the stated limit				



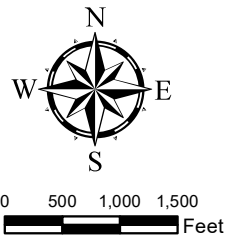
## FIGURES



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

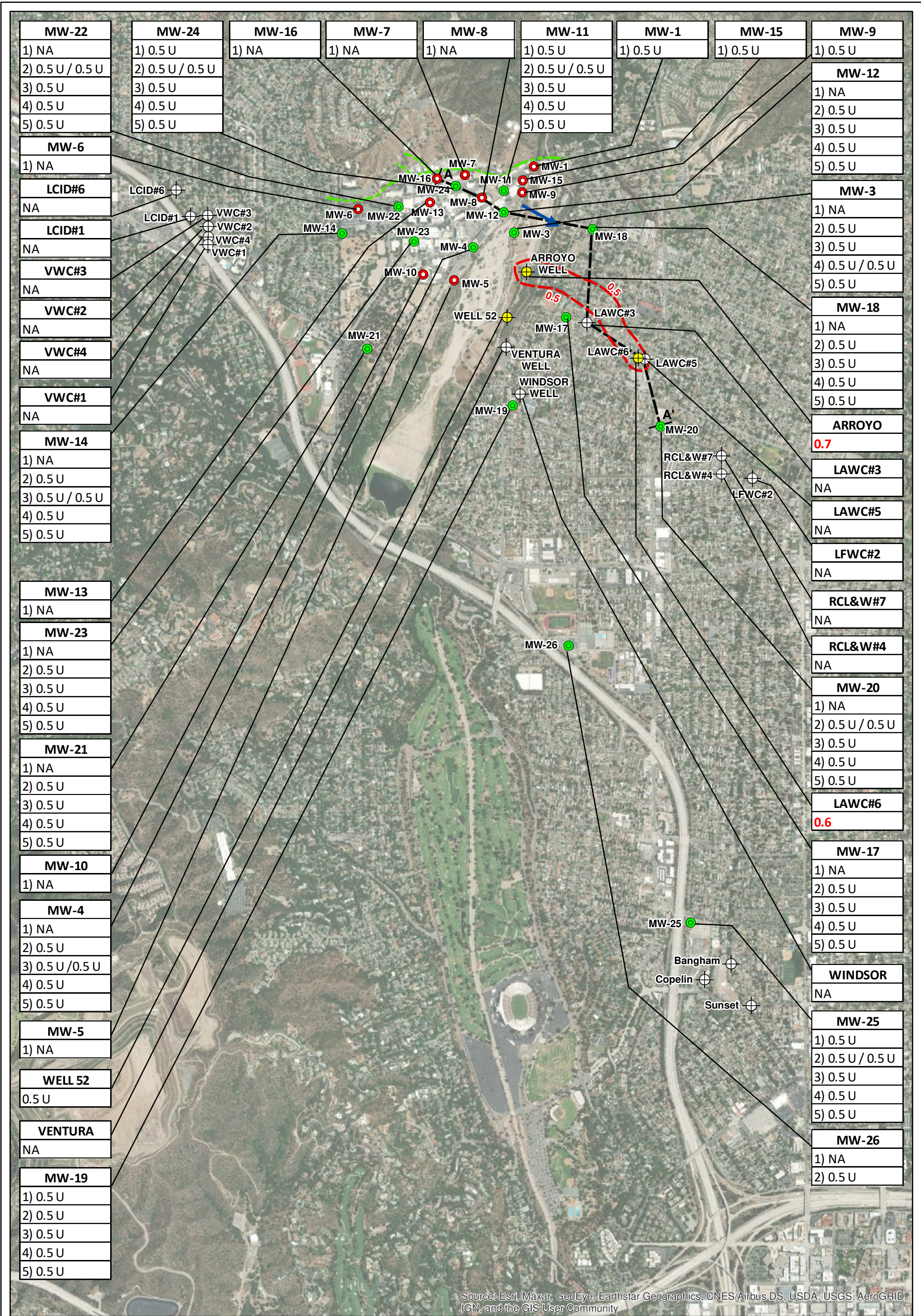
**Legend**

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- ⊕ Municipal Production Well
- Approximate Location of Thrust Fault
- JPL Facility Boundary

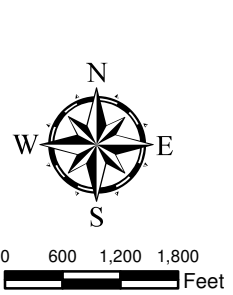


**Locations of JPL Groundwater Monitoring Wells and Nearby Municipal Production Wells**

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 1
DRAWN BY JHG	Contract No: W912PL-13-D-0018 TO 001	Oct 2019
CHECKED BY DC		



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- Legend**
- Deep Multi-Port Monitoring Well Location
  - Shallow Monitoring Well Location
  - Municipal Production Well (Data Not Available)
  - Municipal Production Well (Data From Oct/Nov 2022)
  - Cross-Section Transect A-A'
  - Estimated Isoconcentration Line (0.5 µg/L)
  - JPL Facility Boundary
  - Approximate Location of Thrust Fault
  - Groundwater Flow Direction

**MW-8**  
**1) 0.5 U**

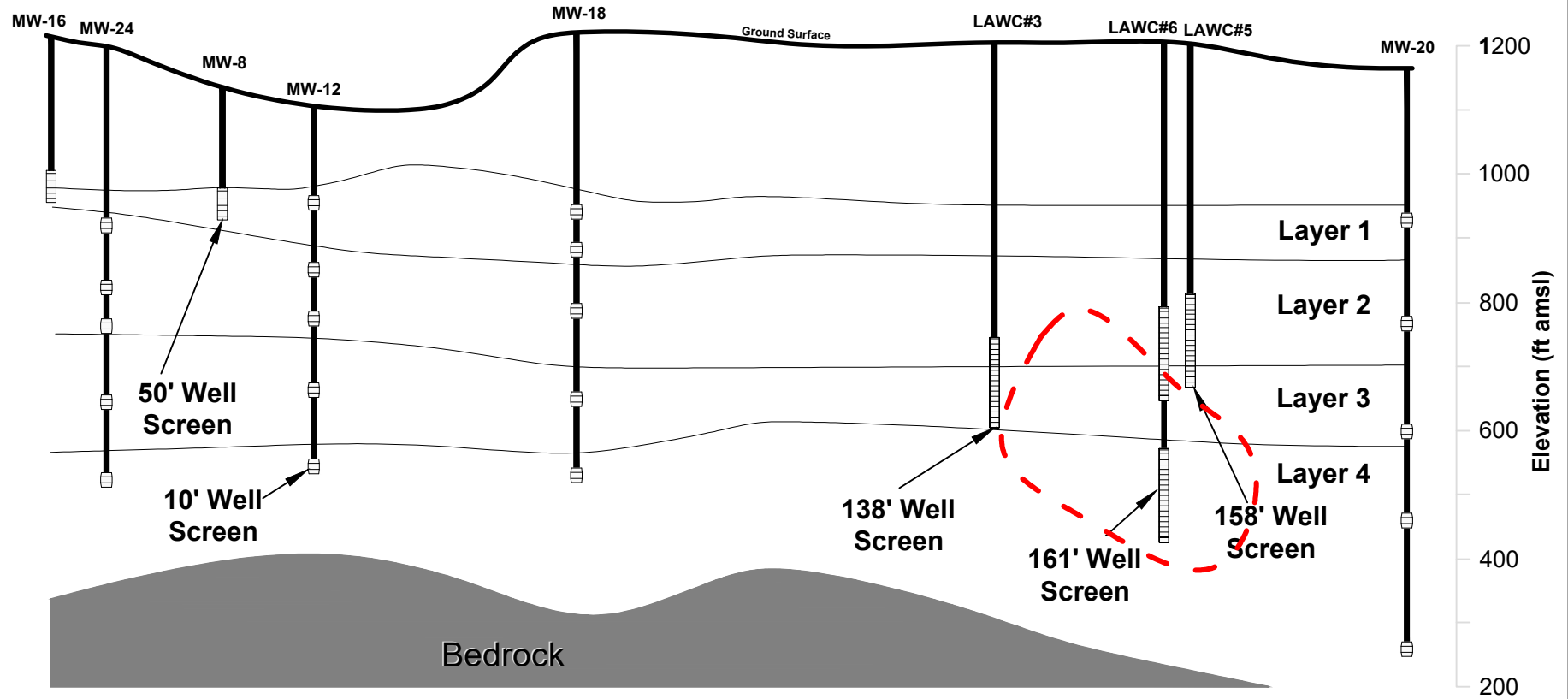
Well ID  
 Screen number  
 Concentration in micrograms per liter  
 J = Detected estimated value  
 U = Not detected estimated value  
 NA = Not Analyzed

Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 0.5 micrograms per liter; red font indicates concentration exceeds MCL.

<b>Carbon Tetrachloride in Groundwater</b> October/November 2022		
DESIGNED BY JHG	JPL - Pasadena, CA	Figure 2
DRAWN BY JHG		May 2023
CHECKED BY DC		Contract No: W912PL22C0003

NW

SE



Note: Concentrations are Reported in  $\mu\text{g/L}$   
 Plume depicted above delineates concentrations  
 exceeding state MLC ( $0.5 \mu\text{g/L}$ )

--- Estimated concentration line ( $0.5 \mu\text{g/L}$ )



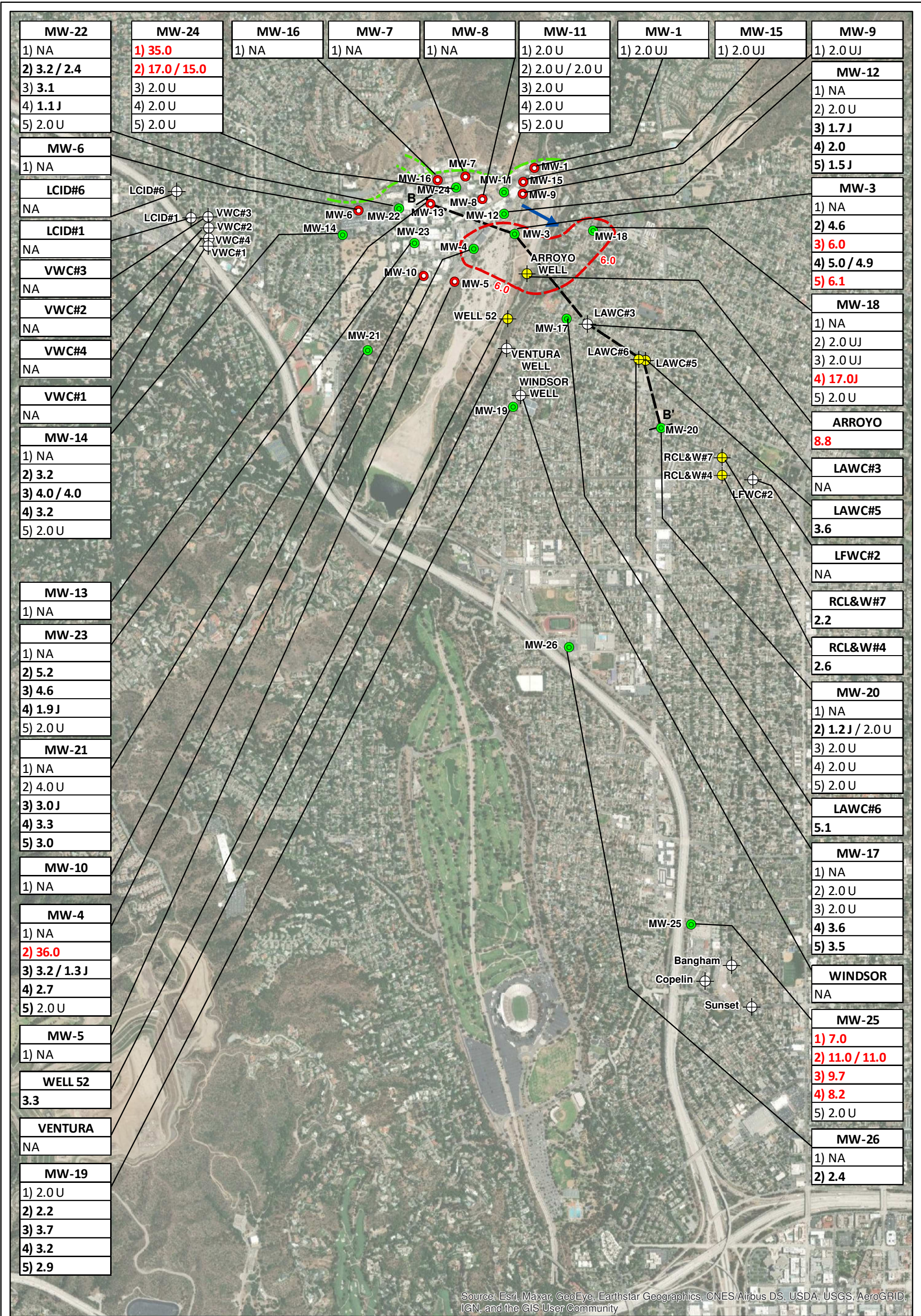
HORIZONTAL SCALE  
 IN FEET  
 (Approximate)

Z exag: 3.0



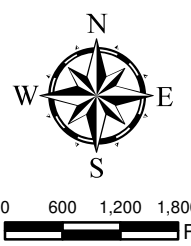
Horizontal and Vertical Extent  
 of Carbon Tetrachloride in Groundwater  
 October/November 2022

DESIGNED BY	JPL - Pasadena, CA	Figure 3
DRAWN BY		
CHECKED BY	Contract No: W912PL22C0003	May 2023
DC		



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**



- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From Oct/Nov 2022)
- Cross-Section Transect B-B'
- Estimated Isoconcentration Line (6 µg/L)
- Approximate Location of Thrust Fault
- JPL Facility Boundary
- Groundwater Flow Direction

**MW-8**  
1) 0.5 U

Well ID  
Screen number  
Concentration in micrograms per liter  
J = Detected estimated value  
U = Not detected estimated value  
NA = Not Analyzed

Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 6 micrograms per liter; red font indicates concentration exceeds MCL.

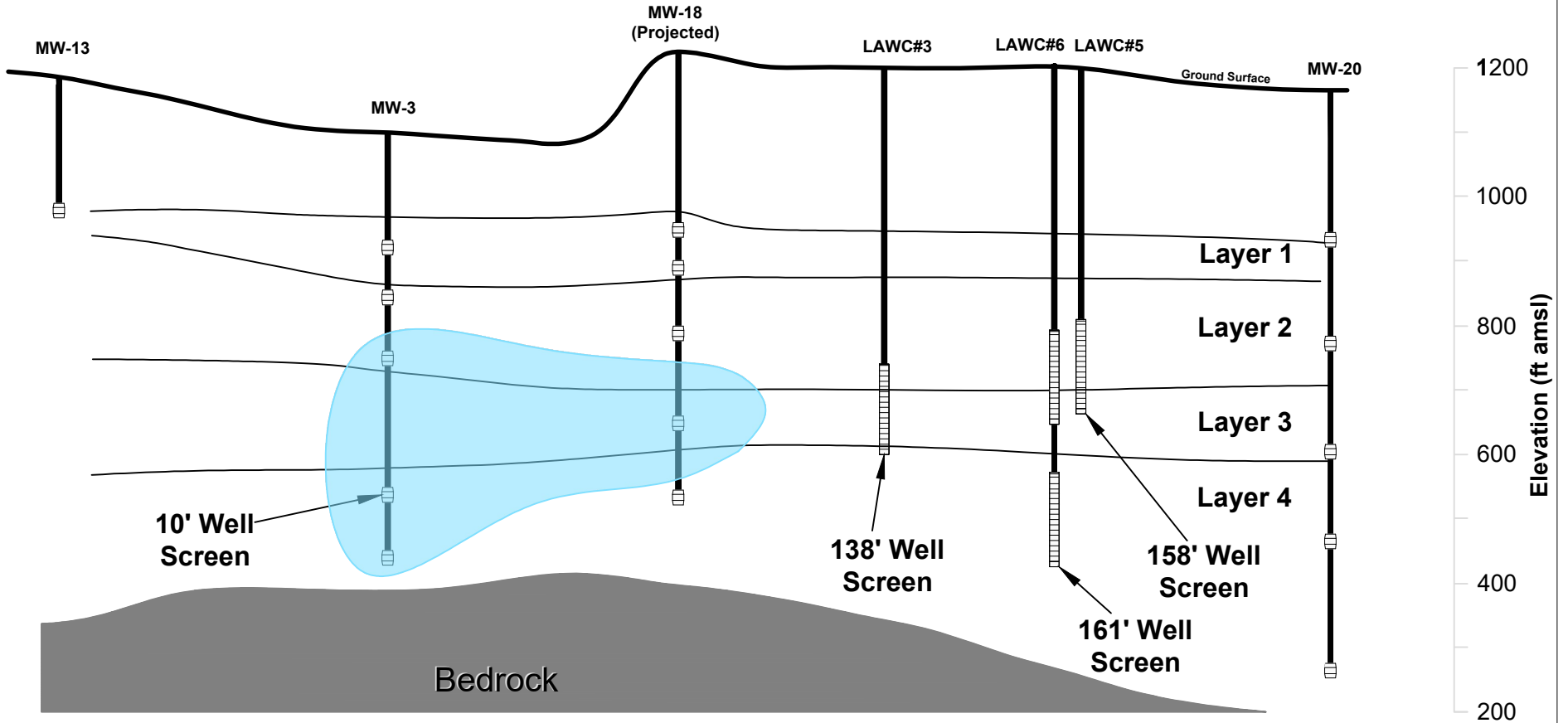


**Perchlorate in Groundwater  
October/November 2022**

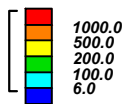
DESIGNED BY JHG	JPL - Pasadena, CA	Figure 4
DRAWN BY JHG		
CHECKED BY DC	Contract No: W912PL22C0003	May 2023

NW

SE



Note: Concentrations are Reported in  $\mu\text{g/L}$   
 Plume depicted above delineates concentrations  
 exceeding state MCL ( $6.0 \mu\text{g/L}$ )



Z exag: 3.0



HORIZONTAL SCALE  
 IN FEET  
 (Approximate)



**TIDEWATER INC**  
ENGINEERS / SCIENTISTS / PROGRAM MANAGERS

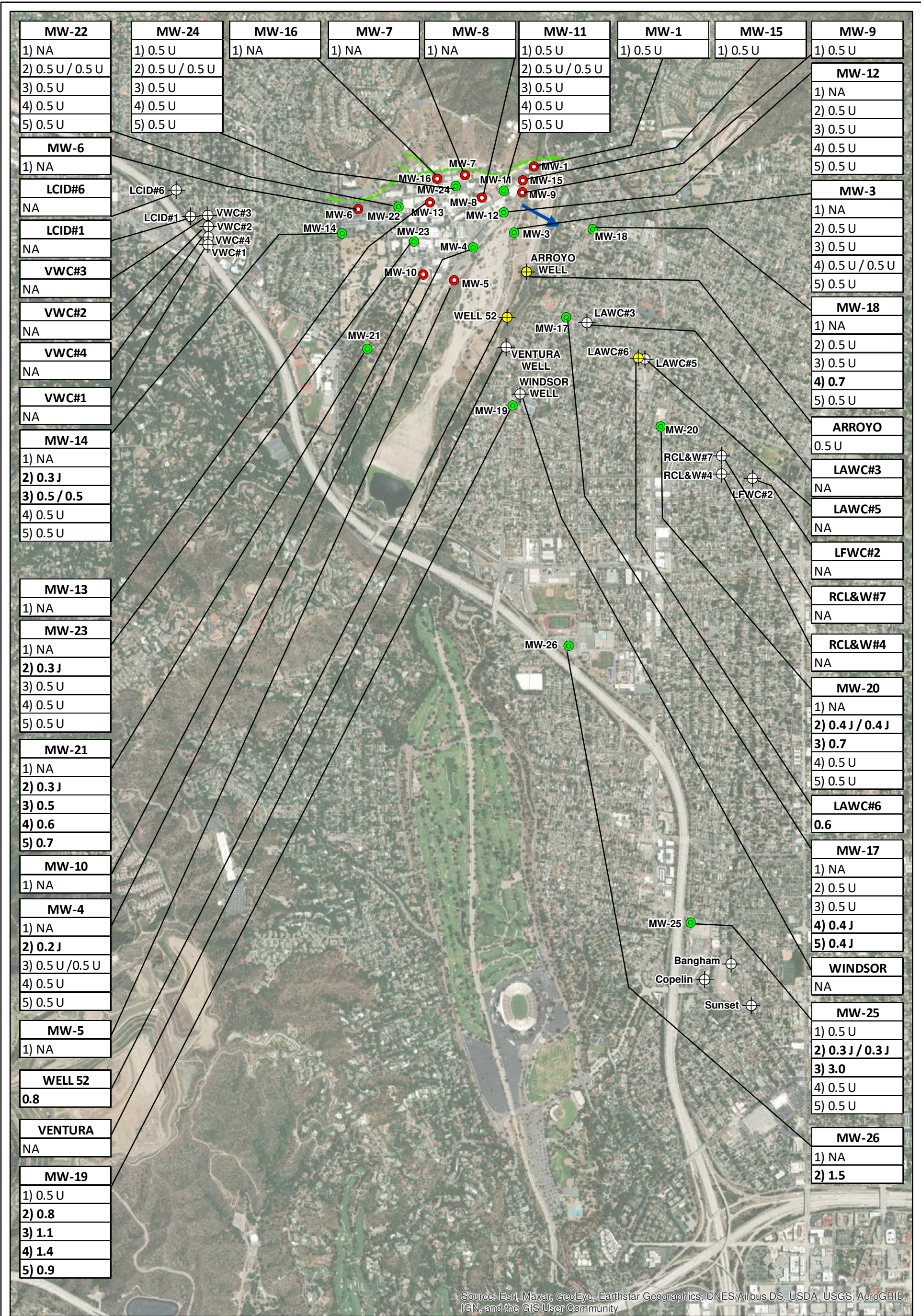
Horizontal and Vertical Extent  
 of Perchlorate in Groundwater  
 October/November 2022

DESIGNED BY	JHG
DRAWN BY	JHG
CHECKED BY	DC

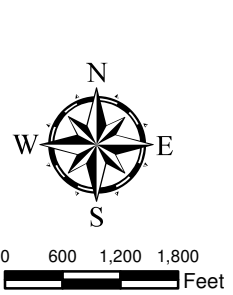
JPL - Pasadena, CA

Contract No:  
 W912PL22C0003

Figure  
 5  
 May  
 2023



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- Legend**
- Deep Multi-Port Monitoring Well Location
  - Shallow Monitoring Well Location
  - Municipal Production Well (Data Not Available)
  - Municipal Production Well (Data From Oct/Nov 2022)
  - Estimated Isoconcentration Line (5 µg/L)
  - JPL Facility Boundary
  - Approximate Location of Thrust Fault
  - Groundwater Flow Direction

**MW-8**  
1) 0.5 U

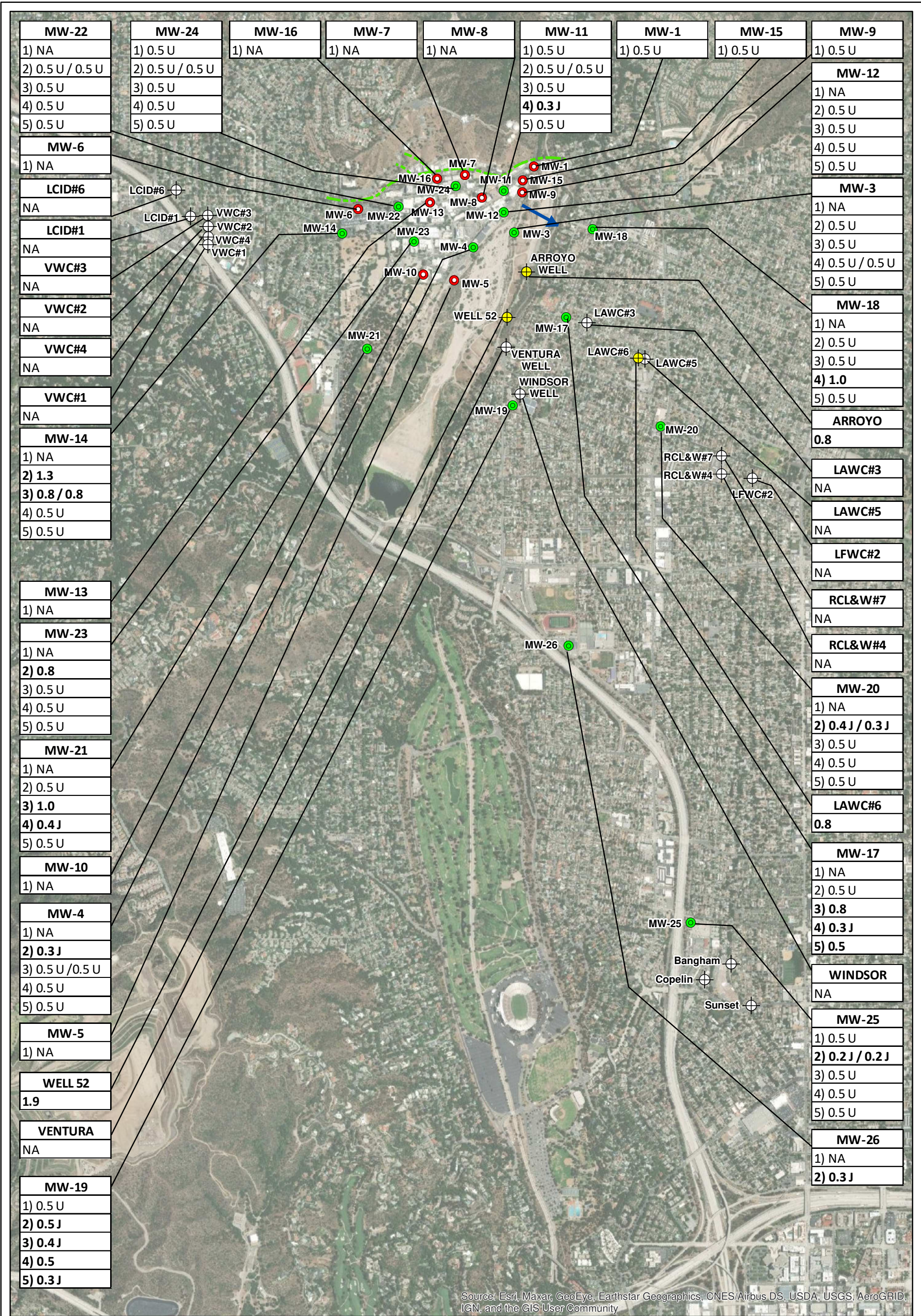
Well ID  
Screen number  
Concentration in micrograms per liter  
J = Detected estimated value  
U = Not detected estimated value  
NA = Not Analyzed

Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.

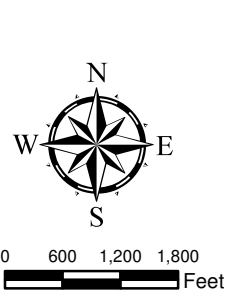


**Tetrachloroethene in Groundwater**  
October/November 2022

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 6
DRAWN BY JHG		
CHECKED BY DC	Contract No: W912PL22C0003	May 2023



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend**

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From Oct/Nov 2022)
- Estimated Isoconcentration Line (5 µg/L)
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- Groundwater Flow Direction

**MW-8**  
**1) 0.5 U**

Well ID  
 Screen number  
 Concentration in micrograms per liter  
 J = Detected estimated value  
 U = Not detected estimated value  
 NA = Not Analyzed

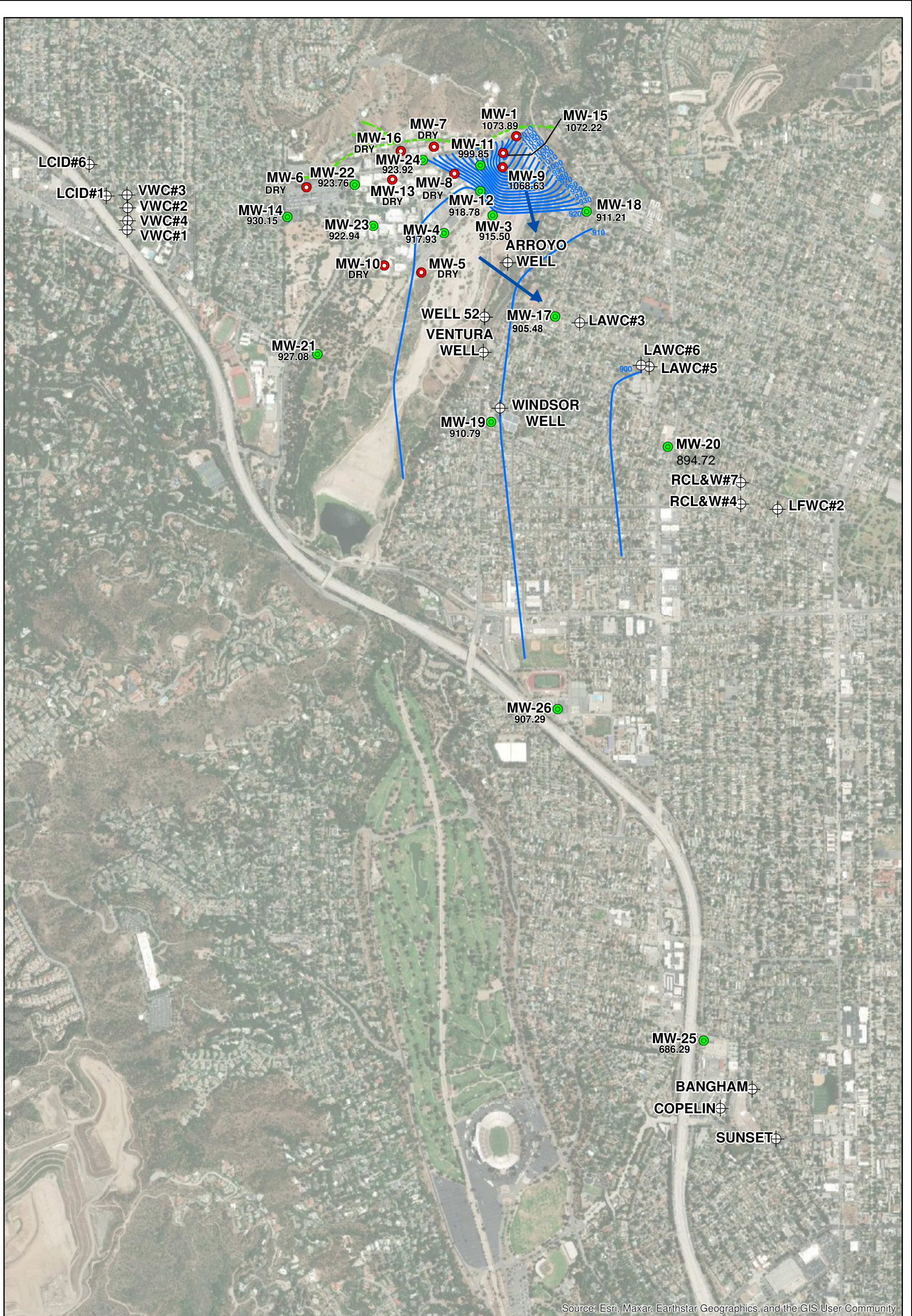
Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.



Trichloroethene in Groundwater  
 October/November 2022

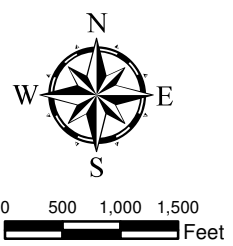
DESIGNED BY JHG	JPL - Pasadena, CA	Figure 7
DRAWN BY JHG		
CHECKED BY DC	Contract No: W912PL22C0003	May 2023





Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Legend**



- Shallow Monitoring Well Location
- Deep Multi-Port Monitoring Well Location
- ⊕ Municipal Production Well
- JPL Facility Boundary
- Approximate Location of Thrust Fault
- ➔ Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)



**Groundwater Elevation Contours  
October 2022**

DESIGNED BY JHG	JPL - Pasadena, CA	Figure 8
DRAWN BY JHG		
CHECKED BY DC	Contract No: W912PL22C0003	May 2023