Technical Memorandum

2017 Groundwater Monitoring Summary
(Including Fourth Quarter 2017 Groundwater Sampling Event)
National Aeronautics and Space Administration
Jet Propulsion Laboratory, Pasadena, California

Final January 2018

This technical memorandum summarizes the results of the fourth quarter 2017 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 2017 groundwater sampling event was conducted from October 13 through October 27, 2017.

INTRODUCTION

During the fourth quarter 2017 sampling event, groundwater samples were collected from 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. Figure 1 shows the locations of the groundwater monitoring wells.

Groundwater samples were shipped to BC Laboratories, Inc., in Bakersfield, California, for chemical analysis. BC Laboratories, Inc. is certified by the State Water Resources Control Board (SWRCB). Sample collection procedures and sample analyses were conducted in accordance with the approved *Work Plan for Performing a Remedial Investigation/Feasibility Study*[1]. No reported data were 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 2017.

Figures summarizing the results from the fourth quarter 2017 sampling event are included in this technical memorandum. Figure 2 shows the lateral extent of carbon tetrachloride concentrations in 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 and Figure 8 shows groundwater elevation contours from the fourth quarter 2017 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, Inc. (LDC). Attachment 3 contains the laboratory analytical reports prepared by BC Laboratories, Inc.

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

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); and
- Off-facility wells (MW-17, MW-18, MW-19, MW-20, MW-21, MW-25 and MW-26).

Well MW-2 has not been sampled 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 these wells are presented below.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2017 sampling event, concentrations of perchlorate above the state maximum contaminant level (MCL) (6.0 micrograms per liter [µg/L]) was reported in the sample collected from well MW-13 (69.0 µg/L).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-7 (4.2 µg/L), MW-16 (0.8J µg/L), and MW-24 (Screens 1 and 2 [3.1J µg/L and 2.2J µg/L, respectively]). 'J' qualifier indicates an estimated concentration. No other perchlorate detections occurred in the remaining on-facility source area wells (MW-24 [Screens 3 through 5]) during the fourth quarter 2017 with a reporting limit of 4.0 µg/L.
- Perchlorate concentrations increased slightly in MW-16 (non-detect to 0.8J µg/L) and MW-24 (Screen 2 [1.9J µg/L to 2.2J µg/L]) from the third quarter 2017 to the fourth quarter 2017.
- Perchlorate concentrations decreased in MW-7 (12.0 µg/L to 4.2 µg/L), MW-13 (230.0 µg/L to 69.0 µg/L), and MW-24 (Screens 1 and 4 [12.0 µg/L to 3.1J µg/L and 2.2J µg/L to non-detect, respectively]) from their respective last sampling event to the fourth quarter 2017.

- Perchlorate concentrations remained the same in MW-24 (Screens 3 through 5 [non-detect]) from their respective last sampling event to the fourth quarter 2017.
- During 2017, perchlorate concentrations ranged from 4.2 µg/L to 50.0 µg/L in MW-7, 69.0 µg/L to 230.0 µg/L in MW-13, non-detect to 3.8J µg/L in MW-16, 3.1J µg/L to 2,000.0 µg/L in MW-24 (Screen 1), 1.4J µg/L to 2.2J µg/L in MW-24 (Screen 2), non-detect only in MW-24 (Screen 3), non-detect to 2.2J µg/L in MW-24 (Screen 4), and non-detect only in MW-24 (Screen 5).

VOC ANALYTICAL RESULTS

- During the fourth quarter 2017 carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-13 (0.4J µg/L). No other carbon tetrachloride detections occurred in the remaining on-facility source area wells.
- In 2017, carbon tetrachloride was not detected above the state MCL (0.5 µg/L) in any of the on-facility source area wells. Carbon tetrachloride was detected below the state MCL in MW-13 (second through fourth quarter) and MW-24 (Screen 1 [first quarter]).
- During the fourth quarter 2017, TCE was not detected in the on-facility source area wells.
- In 2017, TCE was detected below the state MCL (5.0 µg/L) in MW-13 (second [0.4J µg/L] and third [0.3J µg/L] quarter).
- During the fourth quarter 2017, PCE was not detected in the on-facility source area wells.
- In 2017, PCE was detected below the state MCL (5.0 µg/L) in MW-13 (second [0.3J µg/L] and third [0.3J µg/L] quarter) and MW-24 (Screen 1 [first (0.4J µg/L) quarter]).

OTHER NOTABLE ANALYTICAL RESULTS

- In the October 2014 technical memorandum,[2] it was recommended that metals analysis would not be performed on the shallow standpipe wells when there was insufficient water for purging. During the fourth quarter 2017 sampling event, there was sufficient water for metals analysis in the on-facility source area wells.
- During the fourth quarter 2017, Cr(VI)[3] was detected below the state MCL (10.0 µg/L) in MW-7 (1.3J µg/L), MW-13 (3.6 µg/L), MW-16 (1.9J µg/L), and MW-24 (Screens 2 and 4 [1.9J µg/L and 2.5 µg/L, respectively]). All other Cr(VI) results were non-detect in the on-facility source area wells.
- In 2017, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-7 (third [1.1J µg/L] and fourth [1.3J µg/L] quarter), MW-13 (second through fourth quarter [4.0 µg/L, 2.7 µg/L, and 3.6 µg/L. respectively), MW-16 (third [1.6J µg/L] and fourth [1.9 µg/L] quarter), and MW-24 (Screen 2 [first, third, and fourth quarter (0.9J µg/L and 1.8J µg/L)] and Screen 4 [fourth (2.5 µg/L) quarter]).
- During the fourth quarter 2017, total chromium was detected above the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) in MW-7 (1,200.0J µg/L), MW-13 (1,500.0J µg/L), and MW-16

[2] NASA. 2014. *Technical Memorandum Third Quarter 2014 Groundwater Monitoring Summary*, *National Aeronautics and Space Administration Jet Propulsion Laboratory*, *Pasadena*, *California*. October.

[3] On July 1, 2014, the State Water Resources Control Board (SWRCB) adopted an MCL for Cr(VI) of 10.0 µg/L. See http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.shtml.

(1,100.0J µg/L). Total chromium was detected below the state MCL in MW-24 (Screens 1 through 5 [1.1J µg/L, 1.9J µg/L, 0.6J µg/L, 0.5J µg/L, and 3.0 µg/L, respectively]).

- In 2017, total chromium was detected above the state MCL (50.0 µg/L) in MW-7 (second through fourth quarter [64.0J µg/L, 7,400.0 µg/L, and 1,200.0 µg/L, respectively), MW-13 (second through fourth quarter [330.0J µg/L, 1,300.0 µg/L, and 1,500.0J µg/L, respectively), and MW-16 (third [76.0 µg/L] and fourth [1,100.0J µg/L] quarter). Total chromium was detected below the state MCL in MW-16 (second [4.7J µg/L] quarter) and MW-24 (Screen 1 [first (1.1J µg/L), third (4.6 µg/L), and fourth (1.1J µg/L) quarter], Screen 2 [second through fourth quarter (2.6J µg/L, 3.9 µg/L, and 1.9J µg/L, respectively)], Screen 3 [second (1.0J µg/L) and fourth (0.6J µg/L) quarter], Screen 4 [second (1.4J µg/L) and fourth (0.5J µg/L) quarter], and Screen 5 [second (3.8 µg/L) and fourth (3.0 µg/L) quarter]). Total chromium results in the on-facility source area wells will continue to be evaluated during subsequent sampling events.

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.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2017, perchlorate was not detected above the state MCL (6.0 µg/L) in the other on-facility wells.
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-6 (3.3J µg/L), MW-8 (1.2J µg/L), MW-22 (Screens 1 through 4 [3.0J µg/L, 2.7J µg/L, 2.1J µg/L, and 0.6J µg/L, respectively]), and MW-23 (Screens 1 through 4 [3.8J µg/L, 4.2 µg/L, 2.8J µg/L, and 1.2J µg/L, respectively]).
- During the fourth quarter 2017, 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 4.0 µg/L.
- Perchlorate concentrations increased from their respective last sampling event to the fourth quarter 2017 in MW-6 (2.7J µg/L to 3.3J µg/L), MW-8 (non-detect to 1.2J µg/L), and MW-23 (Screens 3 and 4 [2.7J µg/L to 2.8J µg/L and 0.9J µg/L to 1.2J µg/L, respectively]).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2017 in MW-11 (Screens 1 and 4 [0.7J µg/L to non-detect and 0.9J µg/L to non-detect, respectively]), MW-22 (Screens 1, 2 and 4 [5.6 µg/L to 3.0J µg/L, 4.3 µg/L to 2.7J µg/L, and 2.0J µg/L to 0.6J µg/L, respectively]), and MW-23 (Screens 1 and 2 [4.7 µg/L to 4.2 µg/L and 3.9J µg/L to 3.8J µg/L, respectively]).
- The perchlorate concentration in MW-22 (Screen 3) remained unchanged from the third to fourth quarter 2017 sampling event at a concentration of 2.3J µg/L.
- During 2017, perchlorate concentrations were detected above the state MCL (6.0 µg/L) in MW-8 (first quarter [23.0 µg/L]). Perchlorate concentrations in MW-8 ranged from non-detect to 23.0 µg/L in 2017. Since the fourth quarter 2013, perchlorate detections in MW-8 have ranged from non-detect (third quarter 2017) to 180.0 µg/L (third quarter 2014).
- No other perchlorate concentrations were detected above the state MCL in the other on-facility wells during 2017.

VOC Analytical Results

- During the fourth quarter 2017, carbon tetrachloride was not detected in the other on-facility wells with a reporting limit of 0.5 µg/L.
- In 2017, carbon tetrachloride was not detected in the other on-facility wells with a reporting limit of 0.5 µg/L.
- During the fourth quarter 2017, TCE was not detected above the state and federal MCL (5.0 µg/L). TCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (1.8 µg/L), MW-22 (Screen 1 [0.8 µg/L]), and MW-23 (Screens 1 and 2 [3.4 µg/L and 1.1 µg/L, respectively]). No other TCE detections occurred in the remaining other on-facility wells.
- In 2017, TCE was detected above the state and federal MCL (5.0 µg/L) in MW-23 (Screen 1 [second quarter]) at a concentration of 5.3 µg/L.
- In 2017, TCE was detected during the first quarter 2017 in MW-8 (0.2J µg/L), and during all quarters in MW-6 (4.6 µg/L, 4.4 µg/L, 2.7 µg/L, and 1.8 µg/L, respectively), MW-22 (Screen 1 [1.0 µg/L, 1.3 µg/L, 0.7 µg/L, and 0.8 µg/L, respectively), and MW-23 (Screens 1 [1.4 µg/L, 5.3 µg/L, 1.5 µg/L, and 3.4 µg/L, respectively] and 2 [3.2 µg/L, 4.4 µg/L, 4.1 µg/L, and 1.1 µg/L, respectively]). With the exception of MW-23 (Screen 1 [second quarter (5.3 µg/L)]), all TCE detections in the other on-facility wells were below the state and federal MCL (5.0 µg/L).
- During the fourth quarter 2017, PCE was detected below the state and federal MCL (5.0 µg/L) in MW-6 (0.4J µg/L) and MW-23 (Screens 1 and 2 [0.4J µg/L and 0.3J µg/L, respectively]). No other PCE detections occurred in the remaining other on-facility wells during the fourth quarter 2017.
- In 2017, detections of PCE in the other on-facility wells were relatively consistent (low detections or non-detect) and all remained below the state and federal MCL (5.0 µg/L).

Other Notable Analytical Results

- During the fourth quarter 2017, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-6 (1.2J µg/L), MW-22 (Screens 2 through 4 [1.7J µg/L, 2.5 µg/L, and 2.5 µg/L, respectively]), and MW-23 (Screens 2 through 4 [1.0J µg/L, 3.0 µg/L, and 3.5 µg/L, respectively]). No other Cr(VI) detections occurred in the remaining other on-facility wells during the fourth quarter 2017.
- In 2017, 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 10.0 µg/L.
- During the fourth quarter 2017, total chromium was detected above the state MCL (50.0 µg/L) in MW-6 (1,100.0 µg/L). Total chromium was detected below the state MCL (50.0 µg/L) in MW-8 (14.0J µg/L), MW-11 (Screen 5 [1.3J µg/L]), MW-22 (Screens 1 through 4 [0.8J µg/L, 1.6J µg/L, 2.4J µg/L, and 2.4J µg/L, respectively]), and MW-23 (Screens 1 through 4 [0.9J µg/L, 1.1J µg/L, 3.0 µg/L, and 3.2 µg/L, respectively]). Total chromium was not detected in wells MW-11 (Screens 1 through 4), MW-22 (Screen 5), and MW-23 (Screen 5).
- Total chromium in well MW-6 has been detected at or above the state MCL of 50.0 µg/L seventeen times (third quarter 1996 [50.0 µg/L], third quarter 1999 [310.0 µg/L], second quarter 2000 [82.0 µg/L], third quarter 2000 [51.0 µg/L], second quarter 2012 [83.0 µg/L], second

quarter 2014 [190.0 µg/L], fourth quarter 2014 [270.0 µg/L], second quarter 2015 [78.0 µg/L], second quarter 2015 [820.0 µg/L], third quarter 2015 [250.0J µg/L], fourth quarter 2015 [65.0J µg/L], first quarter 2016 [73.0 µg/L], second quarter 2016 [60.0 µg/L], third quarter 2016 [53.0 µg/L], second quarter 2017 [80.0 µg/L], third quarter 2017 [120.0 µg/L], and fourth quarter 2017 [1,100.0 µg/L]) since it was first monitored for total chromium in 1996. Total chromium results in the other on-facility wells will continue to be closely evaluated during subsequent sampling events.

- During the first quarter 2017, total chromium was detected in MW-8 at a concentration of 65.0J µg/L which exceeded the state MCL (50.0 µg/L); however, concentrations of total chromium in MW-8 during the second, third, and fourth quarter of 2017 were below the state MCL (50.0 µg/L) ranging from non-detect to 14.0J µg/L. Total chromium concentrations in MW-8 have exceeded the state MCL on three occasions (i.e., fourth quarter 2015, first quarter 2016, and first quarter 2017) since it was first monitored in 1996.

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 the fourth quarter 2017, MW-12 (Screen 1) and MW-14 (Screen 1) were dry and no samples were collected.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2017, perchlorate was not detected above the state MCL (6.0 µg/L) in the perimeter off-facility wells sampled.
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-3 (Screens 3 through 5 [1.0J µg/L, 1.0J µg/L, and 0.7J µg/L, respectively]), MW-4 (Screen 2 [3.8J µg/L]), MW-10 (2.1J µg/L), MW-12 (Screens 3 through 5 [0.7J µg/L, 2.2J µg/L, and 1.5J µg/L, respectively]), MW-14 (Screens 2 through 4 [3.5J µg/L, 4.5 µg/L, and 4.0 µg/L, respectively]), and MW-15 (0.6J µg/L).
- During the fourth quarter 2017, perchlorate was non-detect in MW-1, MW-3 (Screens 1 and 2), MW-4 (Screens 1, 3, 4, and 5), MW-5, MW-9, MW-12 (Screen 2), and MW-14 (Screen 5).
- Perchlorate concentrations increased slightly from their respective last sampling event to the fourth quarter 2017 in MW-10 (2.0J µg/L to 2.1J µg/L), and MW-14 (Screens 2 and 4 [3.0J µg/L to 3.5J µg/L, and 3.8J µg/L to 4.0 µg/L, respectively]).
- Perchlorate concentrations decreased slightly from their respective last sampling event to the fourth quarter 2017 in MW-3 (Screen 2 [1.2J µg/L to non-detect]), MW-4 (Screen 2 [4.3 µg/L to 3.8J µg/L]), MW-9 (1.3J µg/L to non-detect), MW-12 (Screens 3 through 5 [3.2J µg/L to 0.7J µg/L, 2.6J µg/L to 2.1J µg/L, and 2.7J µg/L to 1.5J µg/L, respectively]), MW-14 (Screen 3 [4.7 µg/L to 4.5 µg/L]) and MW-15 (1.0J µg/L to 0.6J µg/L]).
- Since the second quarter 2014, there have been twelve detections of perchlorate above the state MCL (6.0 µg/L) in MW-3 (Screen 2) ranging from 11.0 µg/L to 68.0 µg/L. MW-3 is within the capture zone of the MHTS.

- The perchlorate concentration of 3.8J µg/L in MW-4 (Screen 2) continues to be down from the high detection of 250.0 µg/L (third quarter 2013). During 2017, perchlorate detections in MW-4 (Screen 2) have ranged from 3.8J µg/L (fourth quarter) to 4.4 µg/L (second quarter). Since the first quarter 2011, concentrations have exceeded the state MCL (6.0 µg/L [ranging from 17.6 µg/L to 250.0 µg/L]) with eleven exceptions: first, third, and fourth quarters of 2015, all quarters of 2016, and all quarters of 2017. MW-4 is within the capture zone of the MHTS.
- Perchlorate concentrations in MW-12 (Screen 2) were detected below the state MCL (6.0 µg/L) from the first quarter 2008 through the third quarter 2010. Since the fourth quarter 2010, the detections have been above the state MCL (6.0 µg/L) during eight of the last 29 sampling events. It should be noted that perchlorate concentrations in MW-12 (Screen 2) have ranged from non-detect to 5.6 µg/L from fourth quarter 2013 to fourth quarter 2017. MW-12 is within the capture zone of the MHTS.
- During 2017, perchlorate concentrations in MW-12 and MW-14 (with the exception of Screen 3 during the first quarter [6.3 µg/L]) remained below the state MCL (6.0 µg/L) for all quarters.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2017, carbon tetrachloride was detected below the state MCL (0.5 µg/L) in MW-12 (Screens 4 and 5 [0.3J µg/L and 0.2J µg/L, respectively]). No other carbon tetrachloride detections occurred in the perimeter off-facility wells during the fourth quarter 2017.
- In 2017, carbon tetrachloride was detected at the state MCL (0.5 µg/L) in MW-12 (Screen 3 [second quarter (0.5 µg/L]) and below the state MCL in MW-12 (Screens 3 [third quarter (0.4J µg/L)], 4 [second (0.3J µg/L), third (0.3J µg/L), and fourth (0.3J µg/L) quarter], and 5 [first (0.4J µg/L), second (0.3J µg/L), and fourth (0.2J µg/L) quarter]).
- During the fourth quarter 2017, TCE was detected below the state and federal MCL (5.0 µg/L) in MW-4 (Screens 2 through 5 [1.3 µg/L, 0.8 µg/L, 0.8 µg/L, and 0.8 µg/L, respectively]), MW-10 (0.3J µg/L), and MW-14 (Screens 2 and 3 [1.3 µg/L and 0.9 µg/L, respectively]). No other TCE detections occurred in the perimeter off-facility wells during the fourth quarter 2017.
- In 2017, TCE was detected above the state and federal MCL (5.0 µg/L) in MW-4 (Screen 2 [second quarter (5.2 µg/L)]), and MW-10 (first quarter [9.4 µg/L]). Detections of TCE in MW-1, MW-3 (Screens 2 and 3), MW-4 (Screens 3 through 5), MW-5, MW-12 (Screens 3 through 5), MW-14 (Screens 1 through 4), and MW-15 remained relatively consistent (non-detect to low concentrations).
- During the fourth quarter 2017, PCE was detected below the state and federal MCL (5.0 µg/L) in wells MW-4 (Screen 2 [0.3J µg/L]), and MW-14 (Screens 2 and 3 [0.4J µg/L and 0.5J µg/L, respectively]). No other PCE detections occurred in the perimeter off-facility wells during the fourth quarter 2017.
- In 2017, PCE was not detected above the state and federal MCL (5.0 µg/L) in the perimeter off-facility wells. Detections of PCE in the perimeter off-facility wells remained relatively consistent ranging from non-detect to 1.3 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2017, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-3 (Screen 3 [2.1 µg/L]), MW-10 (2.0 µg/L), MW-12 (Screens 4 and 5 [0.7J µg/L and 1.0J µg/L, respectively]), and MW-14 (Screen 4 [1.8J µg/L]). No other Cr(VI) detections occurred in the perimeter off-facility wells during the fourth quarter 2017.
- In 2017, detections of Cr(VI) in the perimeter off-facility wells were relatively consistent, ranging from non-detect to 2.9 µg/L and remained below the state MCL (10.0 µg/L).
- During the fourth quarter 2017, total chromium was detected above the state MCL (50.0 µg/L) in MW-4 (Screen 3 [87.0J µg/L]). Total chromium was detected below the state MCL in MW-3 (Screens 3 through 5 [2.4J µg/L, 20.0 µg/L, and 11.0 µg/L, respectively]), MW-4 (Screens 2, 4, and 5 [1.6J µg/L, 0.6J µg/L, and 1.3J µg/L, respectively]), MW-5 (1.2J µg/L), MW-9 (8.9J µg/L), MW-10 (2.6J µg/L), MW-12 (Screens 2, 4, and 5 [0.7J µg/L, 1.0J µg/L, and 1.3J µg/L, respectively]), MW-14 (Screens 4 and 5 [2.3J µg/L and 0.9J µg/L, respectively]), and MW-15 (29.0J µg/L). No other total chromium detections occurred in the perimeter off-facility wells during the fourth quarter 2017.
- In 2017, total chromium remained relatively consistent in the perimeter off-facility wells and below the state MCL (50.0 µg/L) and federal MCL (100.0 µg/L) ranging from non-detect to 38.0 µg/L with two exceptions: second quarter MW-4 (Screen 3 [55.0 µg/L]) and fourth quarter MW-4 (Screen 3 [87.0J µg/L]).

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 system began in July 2004.

It should be noted that during the fourth quarter 2017, MW-18 (Screen 1), MW-20 (Screen 1), and MW-21 (Screen 1) were dry and no samples were collected.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2017 sampling event, concentrations of perchlorate above the state MCL (6.0 µg/L) were reported in samples collected from wells MW-18 (Screen 4 [14.0 µg/L]) and MW-25 (Screens 1 through 4 [7.1 µg/L, 12.0 µg/L, 9.8 µg/L, and 8.1 µg/L, respectively]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screens 3 through 5 [4.9 µg/L, 4.7 µg/L, and 4.3 µg/L, respectively]), MW-18 (Screen 3 [3.8J µg/L]), MW-19 (Screens 2 through 5 [4.1 µg/L, 3.9J µg/L, 3.4J µg/L, and 2.0J µg/L, respectively]), MW-20 (Screen 2 [3.2J µg/L]), MW-21 (Screens 2 through 5 [1.3J µg/L, 2.0J µg/L, 1.4J µg/L, and 1.5J µg/L, respectively]), and MW-26 (Screens 1 and 2 [1.7J µg/L and 2.5J µg/L, respectively]).

- During the fourth quarter 2017, concentrations of perchlorate were not detected in MW-17 (Screens 1 and 2), MW-18 (Screens 2 and 5), MW-19 (Screen 1), MW-20 (Screens 3 through 5), and MW-25 (Screen 5) with a reporting limit of 4.0 µg/L.
- Perchlorate concentrations increased from their respective last sampling event to the fourth quarter 2017 in MW-17 (Screens 4 and 5 [0.9J µg/L to 4.7 µg/L and non-detect to 4.3 µg/L, respectively]), MW-19 (Screens 2 through 5 [2.6J µg/L to 4.1 µg/L, 3.6J µg/L to 3.9J µg/L, 2.9J µg/L to 3.4J µg/L, and 1.7J µg/L to 2.0J µg/L, respectively]), MW-21 (Screen 2 [1.1J µg/L to 1.3J µg/L]), and MW-25 (Screens 3 and 4 [8.4 µg/L to 9.8 µg/L and 7.5 µg/L to 8.1 µg/L, respectively]).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2017 in MW-17 (Screen 3 [5.6 µg/L to 4.9 µg/L]), MW-18 (Screen 3 [4.3 µg/L to 3.8J µg/L), MW-20 (Screen 2 [3.9J µg/L to 3.2J µg/L]), MW-21 (Screens 3 through 5 [3.0J µg/L to 2.0J µg/L, 2.3J µg/L to 1.4J µg/L, and 2.3J µg/L to 1.5J µg/L, respectively]), MW-25 (Screen 1 [7.2 µg/L to 7.1 µg/L]), and MW-26 (Screens 1 and 2 [2.4J µg/L to 1.7J µg/L and 3.9J µg/L to 2.5J µg/L, respectively]).
- Perchlorate was detected below the state MCL (6.0 µg/L) in MW-17 (Screen 3) during the second, third, and fourth quarter of 2017 (5.3 µg/L, 5.6 µg/L, and 4.9 µg/L, respectively), and above the state MCL (6.0 µg/L) during the first quarter of 2017 (6.2 µg/L). Perchlorate concentrations in MW-17 (Screen 3) have remained relatively stable since 2011 with concentrations ranging from non-detect to 8.5 µg/L. MW-17 is located within the capture zone of the LAWC treatment system.
- The perchlorate concentration of 4.7 µg/L in MW-17 (Screen 4) is the eleventh 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 2016 sampling events, perchlorate was detected in MW-17 (Screen 4) at estimated concentrations ranging from 1.2J µg/L (second quarter 2016) to 3.0J µg/L (first quarter 2015). During 2017, perchlorate was detected in MW-17 (Screen 4) at concentrations ranging from non-detect to 4.7 µg/L. 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 was detected at concentrations below the state MCL (6.0 µg/L) in MW-20 (Screen 2) during the second, third, and fourth quarters of 2017 (2.6J µg/L, 3.9J µg/L, and 3.2J µg/L, respectively), and was not detected during the first quarter of 2017. Perchlorate was not detected in MW-20 (Screens 1, 3, 4, and 5) during the four quarters of 2017. MW-20 is located just downgradient of the LAWC system extraction wells.
- 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 third quarter 2008 and first quarter 2012. During the period from second quarter 2012 to fourth quarter 2017 (i.e., twenty-three quarterly sampling events), perchlorate has not been detected in MW-20 (Screen 4).

- 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 six of fifteen sampling events. During this time period, 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 2017 perchlorate concentrations have remained non-detect in MW-20 (Screen 5).
- In 2017, perchlorate concentrations in the off-facility wells ranged from non-detect to 17.0 µg/L.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2017, carbon tetrachloride was detected at or above the state MCL (0.5 µg/L) in MW-18 (Screens 3 and 4 [0.5 µg/L and 4.3 µg/L, respectively]). No other carbon tetrachloride detections occurred in the remaining off-facility wells during the fourth quarter 2017.
- In 2017, carbon tetrachloride was detected above the state MCL (0.5 µg/L) during all four quarters in MW-18 (Screen 3 [0.7 µg/L, 0.8 µg/L, 0.6 µg/L, and 0.5 µg/L, respectively] and Screen 4 [1.1 µg/L, 3.5 µg/L, 1.2 µg/L, and 4.3 µg/L, respectively]); however, no detections exceeded the federal MCL (5.0 µg/L).
- Since the first quarter 2005, the carbon tetrachloride concentrations in MW-18 (Screen 3) have exceeded the state MCL (0.5 µg/L). Carbon tetrachloride detections in MW-18 (Screen 4) have exceeded the state MCL since the third quarter 1996 with one exception (non-detect [fourth quarter 2010]).
- During the fourth quarter 2017, TCE was detected in MW-17 (Screens 3 through 5 [1.3 µg/L, 0.6 µg/L, and 0.9 µg/L, respectively]), MW-18 (Screen 4 [2.2 µg/L]), MW-19 (Screens 2 and 3 [1.0 µg/L and 0.2J µg/L, respectively]), MW-20 (Screen 2 [0.7 µg/L]), MW-21 (Screens 3 and 4 [0.9 µg/L and 0.2J µg/L, respectively]), MW-25 (Screen 1 [0.9 µg/L]), and MW-26 (Screen 1 [0.2J µg/L]); however, no detections exceeded the state and federal MCL (5.0 µg/L). No other TCE detections occurred in the remaining off-facility wells during the fourth quarter 2017.
- In 2017, TCE concentrations in MW-17 (Screens 2 through 5) ranged from non-detect to 1.5 µg/L; TCE concentrations in MW-18 (Screens 3 and 4) ranged from non-detect to 2.2 µg/L; TCE concentrations in MW-19 (Screens 2 and 3) ranged from non-detect to 1.5 µg/L; TCE concentrations in MW-20 (Screen 2) ranged from 0.7 µg/L to 2.3 µg/L; TCE concentrations in MW-21 (Screens 2 through 5) ranged from non-detect to 1.1 µg/L; TCE concentrations in MW-25 (Screens 1 and 2) ranged from non-detect to 1.8 µg/L; and TCE concentrations in MW-26 (Screens 1 and 2) ranged from non-detect to 1.1 µg/L.
- During the fourth quarter 2017, PCE was detected in MW-17 (Screens 3 through 5 [0.3J µg/L, 0.3J µg/L, and 0.3J µg/L, respectively]), MW-18 (Screen 4 [2.0 µg/L]), MW-19 (Screens 2 through 4 [1.7 µg/L, 0.4J µg/L, and 0.3J µg/L, respectively]), MW-20 (Screen 3 [0.3J µg/L]), MW-21 (Screens 2 through 5 [0.8 µg/L, 0.8 µg/L, 1.2 µg/L, and 0.7 µg/L, respectively]), MW-25 (Screen 3 [0.3J µg/L]), and MW-26 (Screens 1 and 2 [0.4J µg/L and 1.5 µg/L, respectively]); 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 2017.

- In 2017, PCE concentrations in MW-17 (Screens 2 through 5) ranged from non-detect to 0.4J µg/L; PCE concentrations in MW-18 (Screens 3 and 4) ranged from non-detect to 2.0 µg/L; PCE concentrations in MW-19 (Screens 2 through 5) ranged from non-detect to 2.5 µg/L; PCE concentrations in MW-20 (Screens 2 and 3) ranged from non-detect to 0.5J µg/L; PCE concentrations in MW-21 (Screens 2 through 5) ranged from 0.5J µg/L to 2.6 µg/L; PCE concentrations in MW-25 (Screen 3) ranged from non-detect to 0.5J µg/L; and PCE concentrations in MW-26 (Screens 1 and 2) ranged from 0.4J µg/L to 3.4 µg/L. PCE was not detected in MW-18 (Screens 2 and 5), MW-19 (Screen 1), MW-20 (Screens 4 and 5), and MW-25 (Screens 1, 2, 4, and 5) during the four quarters of 2017.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2017, Cr(VI) was detected below the state MCL (10.0 µg/L) in MW-17 (Screens 4 and 5 [1.9J µg/L and 1.3J µg/L, respectively]), MW-18 (Screens 3 and 4 [1.9J µg/L and 1.8J µg/L, respectively]), MW-19 (Screens 2 through 5 [0.7J µg/L, 1.2J µg/L, 1.5J µg/L, and 2.0 µg/L, respectively]), MW-21 (Screens 4 and 5 [1.1J µg/L and 1.2J µg/L, respectively]), MW-25 (Screens 2 through 4 [2.7 µg/L, 3.2 µg/L, and 1.6J µg/L, respectively]), and MW-26 (Screen 2 [1.5J µg/L]). Cr(VI) was not detected in the remaining off-facility wells.
- In 2017, detections of Cr(VI) in the off-facility wells ranged from non-detect to 3.3J µg/L.
- During the fourth quarter 2017, total chromium was detected below the state MCL (50.0 µg/L) in MW-17 (Screens 4 and 5 [1.3J µg/L and 1.4J µg/L, respectively]), MW-18 (Screens 3 and 4 [1.5J µg/L and 1.7J µg/L, respectively]), MW-19 (Screens 2 through 5 [2.4J µg/L, 2.5J µg/L, 1.9J µg/L, and 3.7 µg/L, respectively]), MW-20 (Screen 3 [0.7 µg/L]), MW-21 (Screens 4 and 5 [1.0J µg/L and 1.2J µg/L, respectively]), MW-25 (Screens 1 through 4 [1.8J µg/L, 3.0J µg/L, 3.1J µg/L, and 1.7J µg/L, respectively]), and MW-26 (Screen 2 [1.4J µg/L]). Total chromium was not detected in the remaining off-facility wells.
- In 2017, total chromium remained below the state MCL (50.0 µg/L) in the off-facility wells, ranging from non-detect to 4.2 µg/L.

ALL WELL CATEGORIES (OTHER RESULTS)

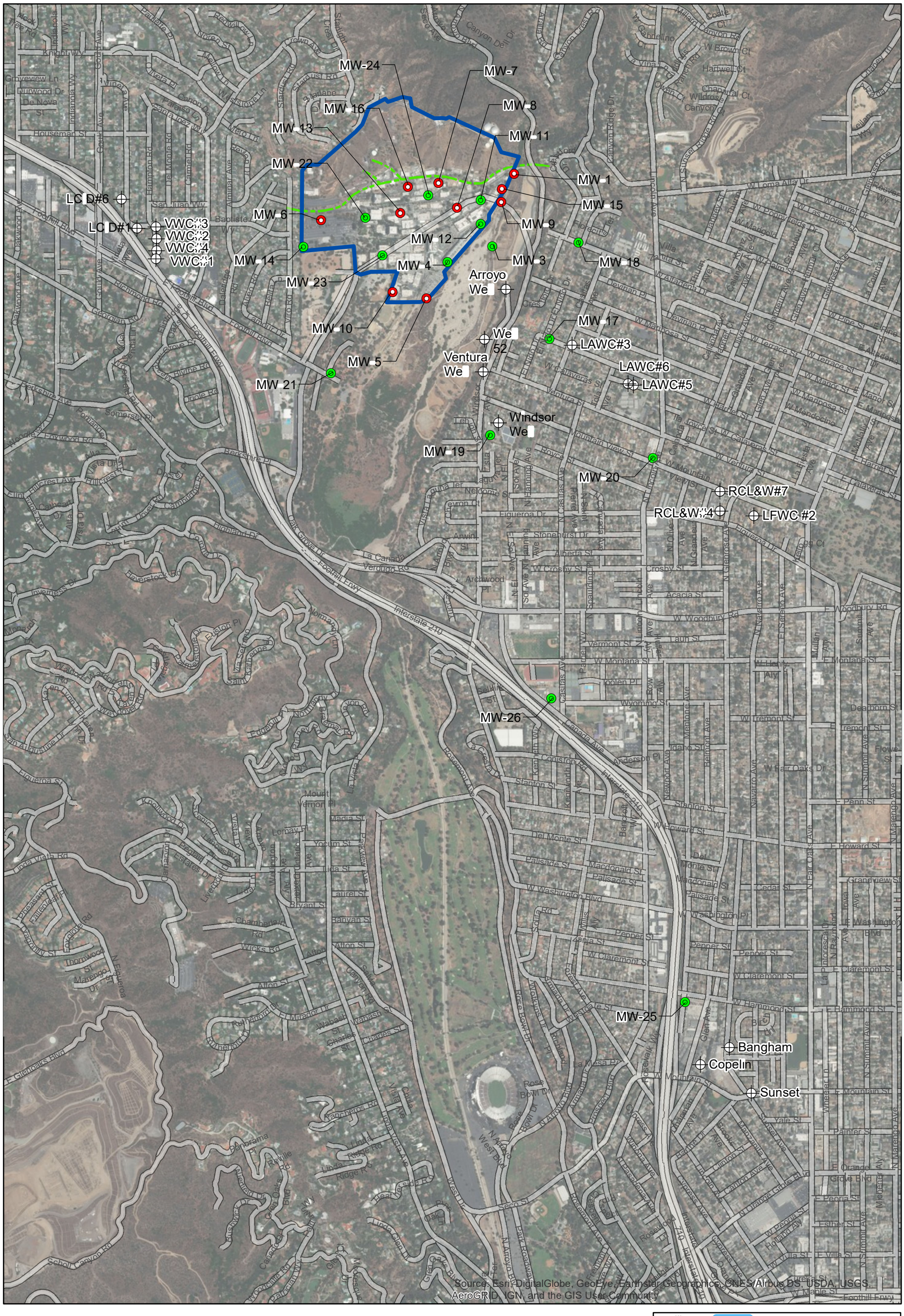
- Comparing the third quarter 2017 to the fourth quarter 2017, groundwater elevations decreased by an average of 10.39 feet.
- Groundwater elevations recorded in the JPL monitoring wells showed a steady decline from the first and second quarters of 2011 through the fourth quarter of 2014, when they approached and/or exceeded historic lows last recorded in 1996 and 1997. As noted above, groundwater elevations decreased by an average of 10.39 feet between the third quarter 2017 and the fourth quarter 2017. Groundwater elevations still remain approximately 67.29 feet below the first and second quarter 2011 elevations. Groundwater elevations will be closely monitored as one of the most severe droughts on record for California (which caused groundwater levels to decline from 2011 through 2016) ended during the 2016/2017 rainy season.
- Groundwater level measurements collected during the fourth quarter 2017 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

FIGURES



N
W E
S

0 750 1,500
Feet

Legend

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

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Locations of JPL Groundwater Monitoring Wells and Nearby Municipal Production Wells

DESIGNED BY SG/AD DRAWN BY SG/AD CHECKED BY DC	JPL - Pasadena, CA Contract No: W912PL-16-C-0006	Figure 1 January 2018

MW-22
1) 0.5 U
2) 0.5 U
3) 0.5 U/ 0.5 U
4) 0.5 U
5) 0.5 U

MW-13
1) 0.4 J

MW-16
1) 0.5 U/ 0.5 U

MW-24
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-7
1) 0.5 U

MW-8
1) 0.5 U

MW-11
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-1
1) 0.5 U/ 0.5 U

MW-15
1) 0.5 U

MW-9
1) 0.5 U

MW-12
1) NA
2) 0.5 U
3) 0.5 U
4) 0.3 J/ 0.3 J
5) 0.2 J

MW-6
1) 0.5 U

MW-18
1) NA
2) 0.5 U
3) 0.5/ 0.5 J
4) 4.3
5) 0.5 U

VWC#3
0.5 U

VWC#2
0.5 U

VWC#4
0.5 U

VWC#1
0.5 U

MW-3
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-14
1) NA
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

LAWC#3
0.5 U

LAWC#5
1.6

LAWC#6
1.9

MW-23
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-20
1) NA
2) 0.5 U
3) 0.5 U/ 0.5 U
4) 0.5 U
5) 0.5 U

MW-4
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-17
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

VENTURA WELL
0.5 U

MW-10
1) 0.5 U

MW-21
1) NA
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-19
1) 0.5 U
2) 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

MW-26
1) 0.5 U
2) 0.5 U

MW-5
1) 0.5 U/ 0.5 U

MW-25
1) 0.5 U
2) 0.5 U/ 0.5 U
3) 0.5 U
4) 0.5 U
5) 0.5 U

ARROYO WELL
0.9

LCID#6, LCID#1, VWC#3, VWC#2, VWC#4, VWC#1, MW-6, MW-22, MW-13, MW-16, A, MW-7, MW-24, MW-8, MW-11, MW-15, MW-1, MW-9, MW-12, MW-14, MW-23, MW-4, MW-10, MW-21, MW-5, MW-18, MW-3, MW-17, LAWC#3, LAWC#5, LAWC#6, A', MW-20, MW-19, MW-26, MW-25, Arroyo Well, Well 52, Ventura Well, Windsor Well, RCL&W#7, RCL&W#4, LFWC #2, Bangham, Copelin, Sunset

s, CNES/Airbus DS, USDA, USGS,

Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From August - October 2017)
- Approximate Location of Thrust Fault
- Cross-Section Transect A-A'
- Groundwater Flow Direction
- Estimated isoconcentration line (0.5 micrograms per liter)
- JPL Facility Boundary

N, W, E, S

0 750 1,500 Feet

MW-8 / 1) 0.5 U — Well ID; Screen number; Concentration in micrograms per liter

J = Detected estimated value

U = Not detected estimated value

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

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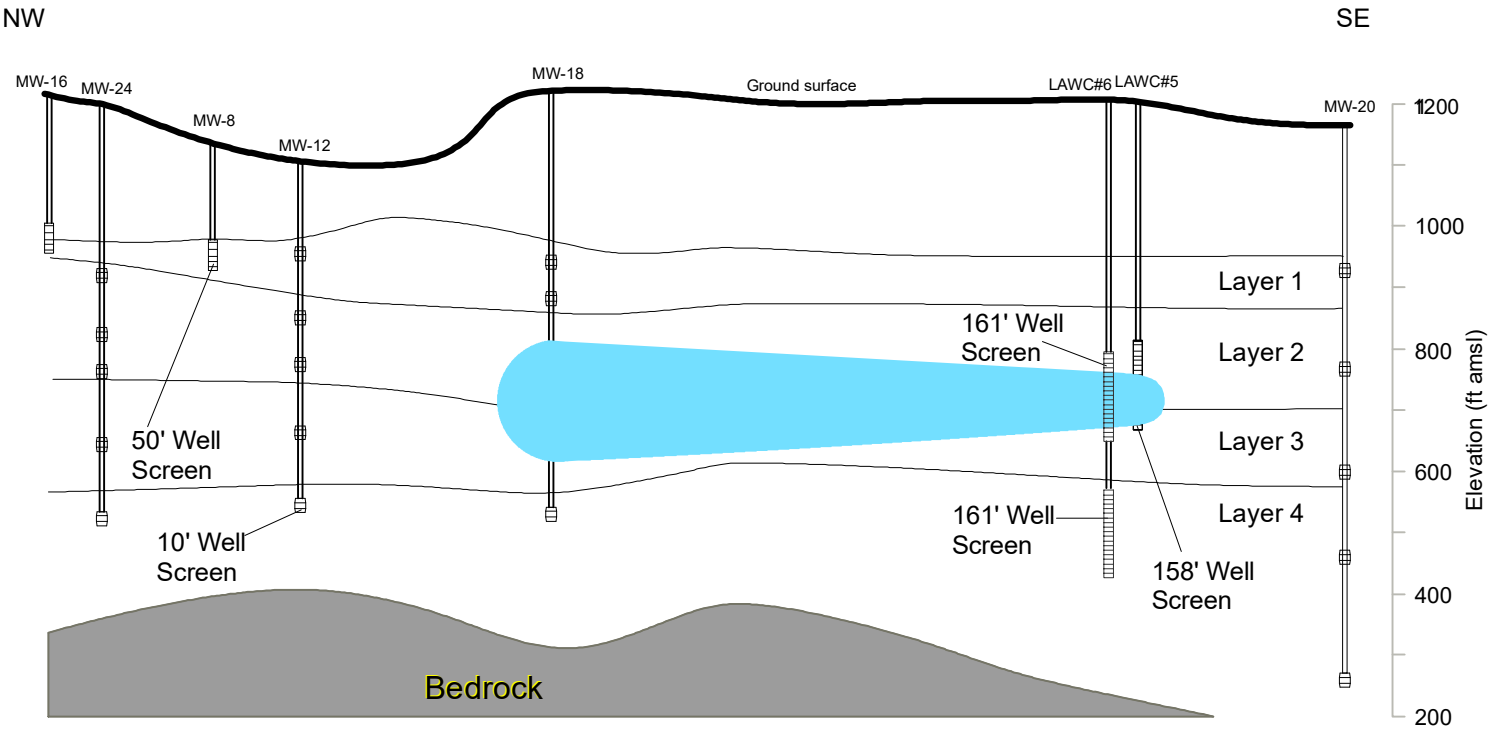
Carbon Tetrachloride in Groundwater October 2017

DESIGNED BY: SG	JPL - Pasadena, CA	Figure 2
DRAWN BY: SG	Contract No: W912PL-16-C-0006	January 2018
CHECKED BY: DC		



Note: Concentrations are Reported in µg/L

50.0
20.0
10.0
5.0
0.5

Z exag: 3.0

0 500 1000

HORIZONTAL SCALE IN FEET (Approximate)

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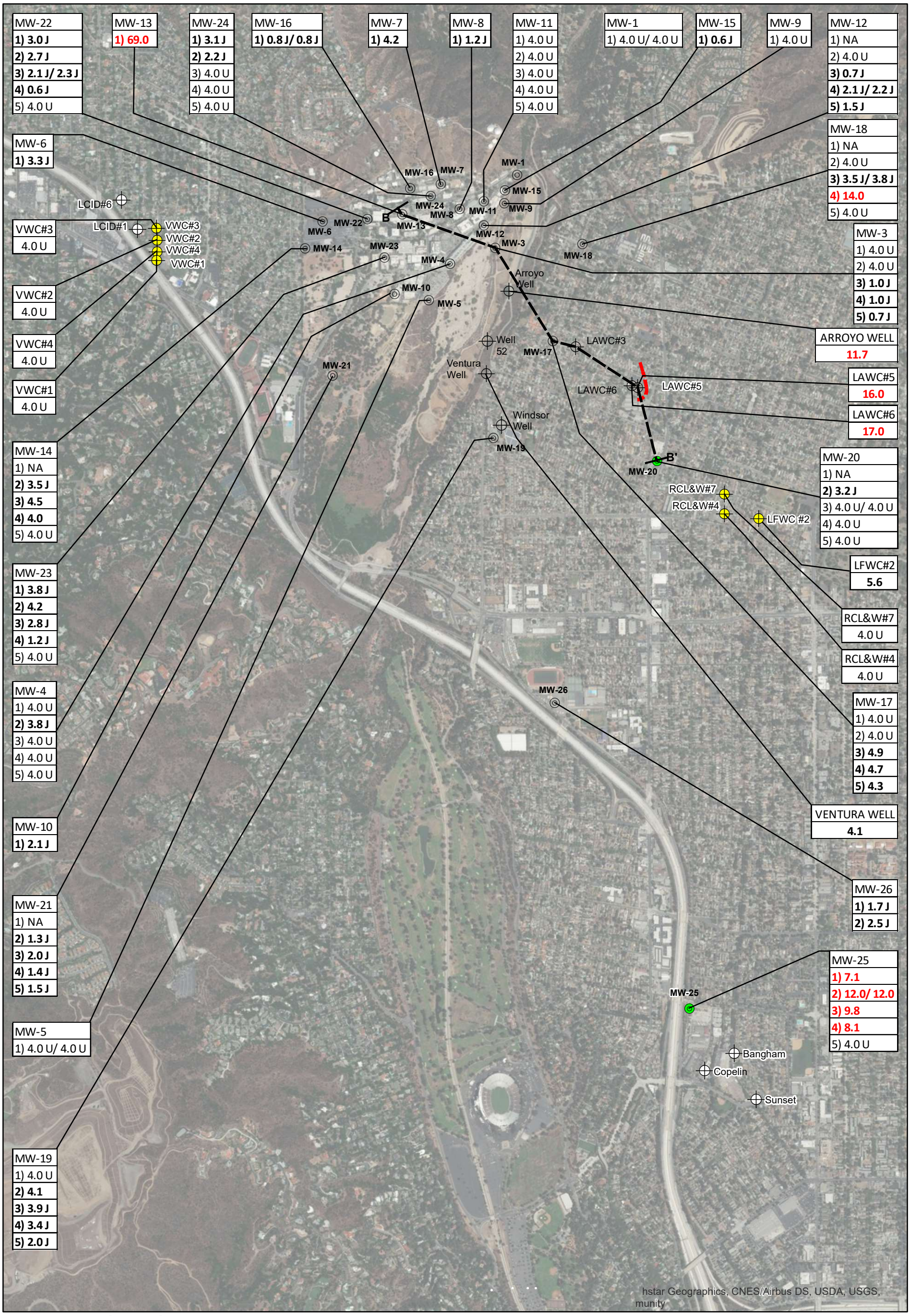
Horizontal and Vertical Extent of Carbon Tetrachloride in Groundwater along section A-A', October 2017

DESIGNED BY AD/SG DRAWN BY AD/SG CHECKED BY DC	JPL - Pasadena, CA	Figure 3
	Contract No: W912PL-16-C-0006	January 2018



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From August - October 2017)
- Approximate Location of Thrust Fault
- Cross-Section Transect B-B'
- Estimated isoconcentration line (6 UG/L)
- Groundwater Flow Direction
- JPL Facility Boundary

N, W, E, S

0 750 1,500 Feet

MW-8
1) 0.5 U

Well ID

Screen number

Concentration in micrograms per liter

J = Detected estimated value

U = Not detected estimated value

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

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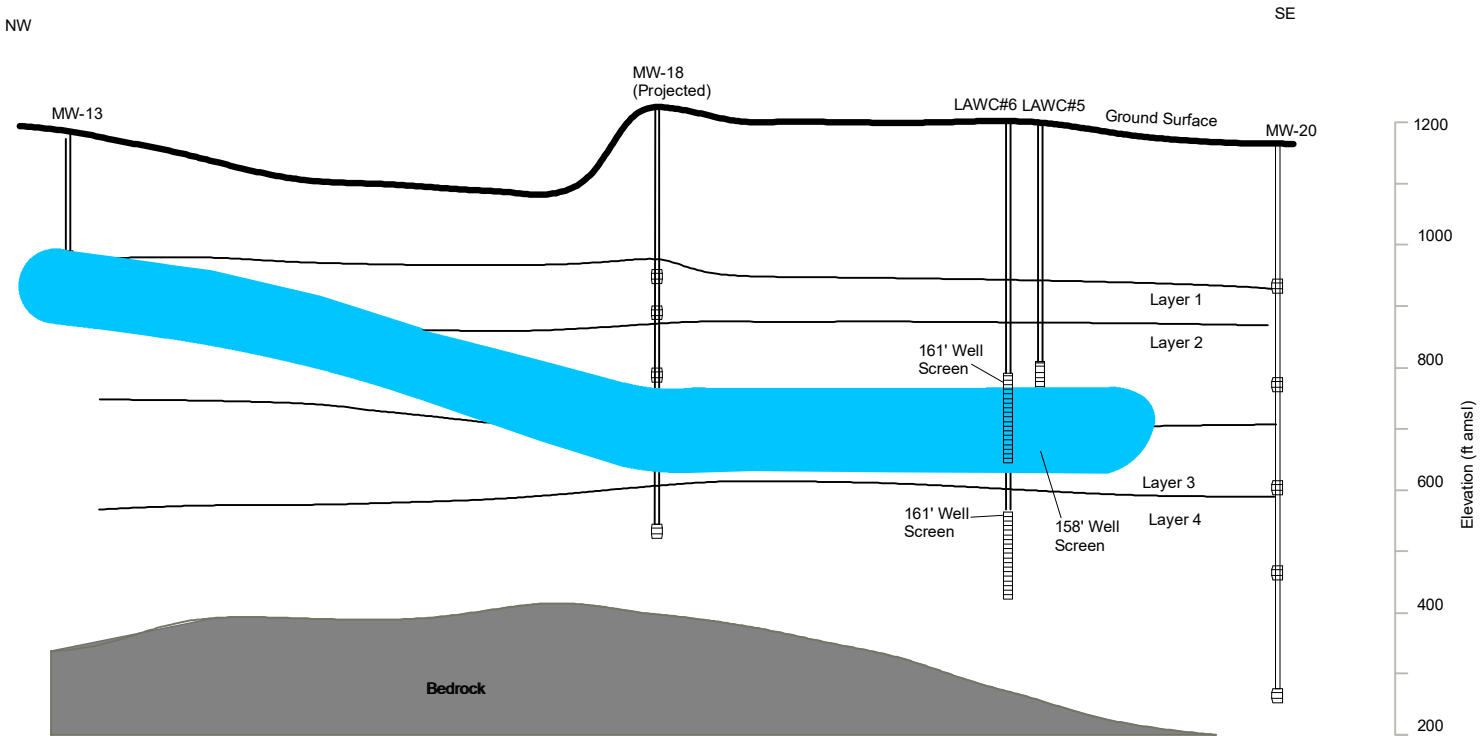
Perchlorate in Groundwater October 2017

DESIGNED BY: SG	JPL - Pasadena, CA	Figure 4
DRAWN BY: SG	Contract No: W912PL-16-C-0006	January 2018
CHECKED BY: DC		



Note: Concentrations are Reported in µg/L

1000.0
500.0
200.0
100.0
6.0
4.0

Z exag: 3.0

0 500 1000

HORIZONTAL SCALE
IN FEET
(Approximate)

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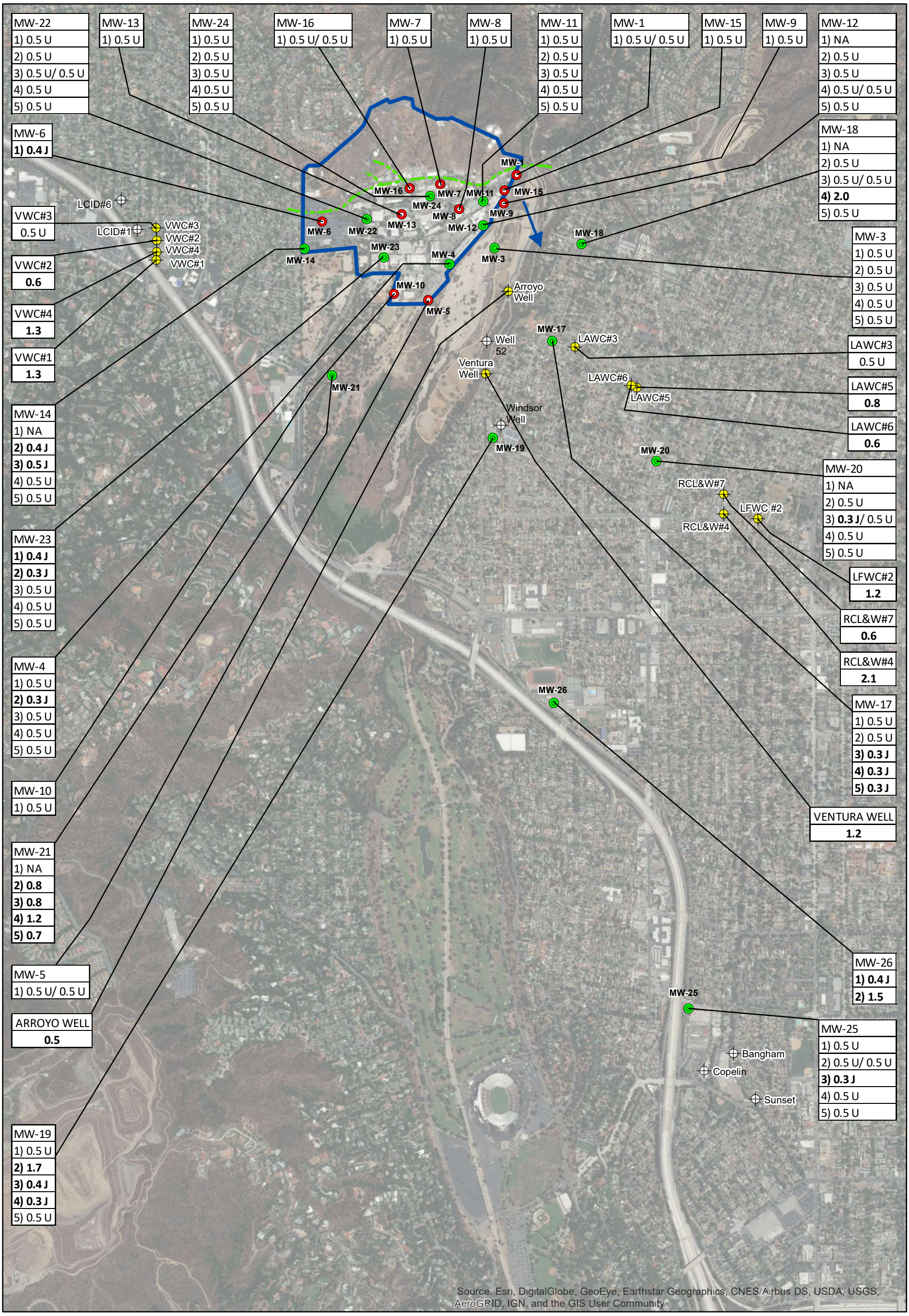
Horizontal and Vertical Extent of Perchlorate in Groundwater along section B-B', October 2017

DESIGNED BY JHG DRAWN BY SG CHECKED BY DC	JPL - Pasadena, CA	Figure 5
	Contract No: W912PL-16-C-0006	January 2018



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From August - October 2017)
- Approximate Location of Thrust Fault
- Groundwater Flow Direction
- Estimated isoconcentration line (5 micrograms per liter)
- JPL Facility Boundary

N W E S

0 750 1,500 Feet

MW-8
1) 0.5 U

Well ID

Screen number

Concentration in micrograms per liter

J = Detected estimated value
U = Not detected estimated value
Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.

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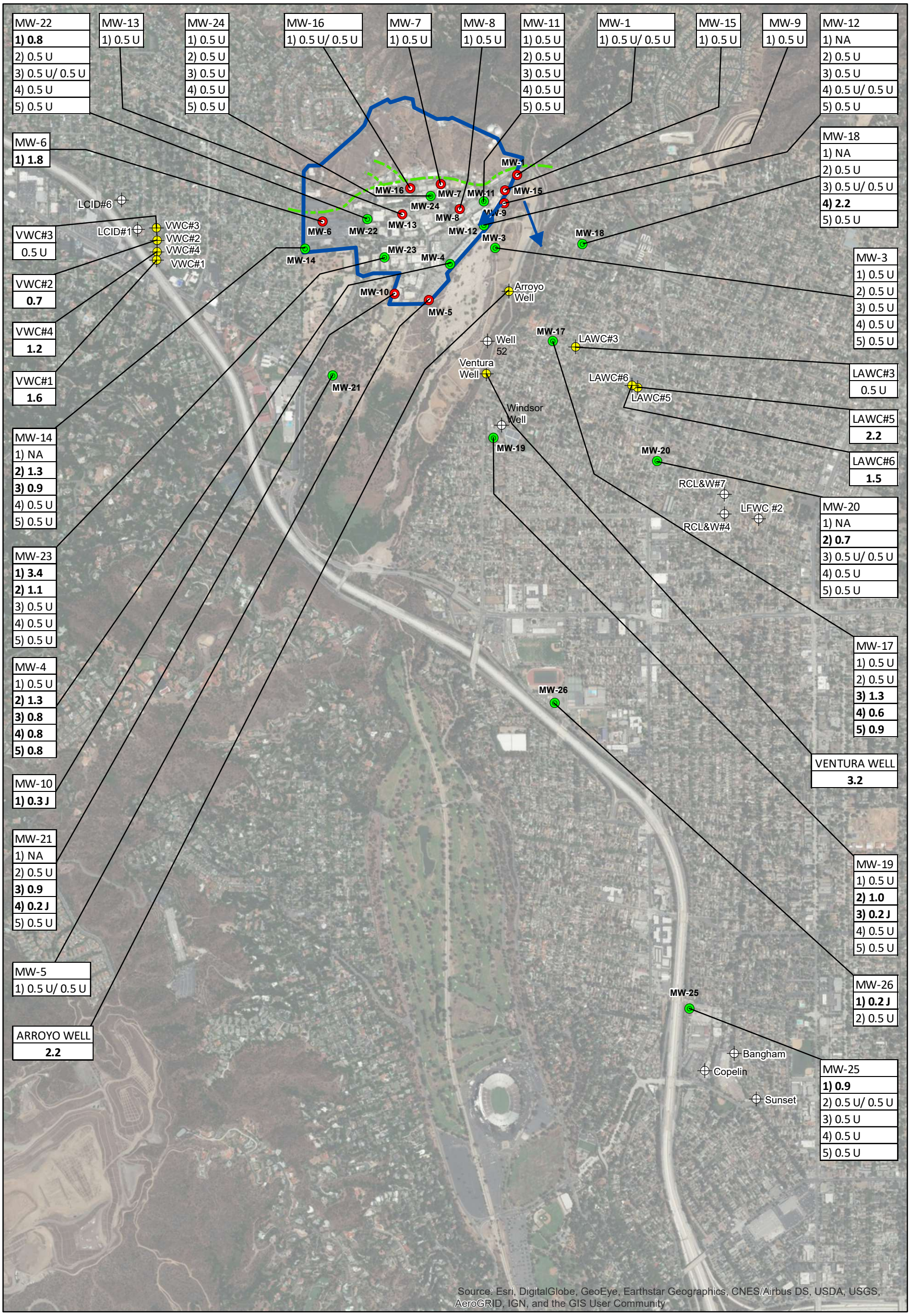
Tetrachloroethene in Groundwater October 2017

DESIGNED BY SG DRAWN BY SG CHECKED BY DC	JPL - Pasadena, CA Contract No: W912PL-16-C-0006	Figure 6 January 2018



Legend

- Deep Multi-Port Monitoring Well Location
- Shallow Monitoring Well Location
- Municipal Production Well (Data Not Available)
- Municipal Production Well (Data From August - October 2017)
- Approximate Location of Thrust Fault
- Estimated isoconcentration line (5 micrograms per liter)
- Groundwater Flow Direction
- JPL Facility Boundary

N W E S

0 750 1,500 Feet

MW-8
1) 0.5 U

Well ID

Screen number

Concentration in micrograms per liter

J = Detected estimated value
U = Not detected estimated value
Bold font indicates detected concentration below the State maximum contaminant level (MCL) of 5 micrograms per liter; red font indicates concentration exceeds MCL.

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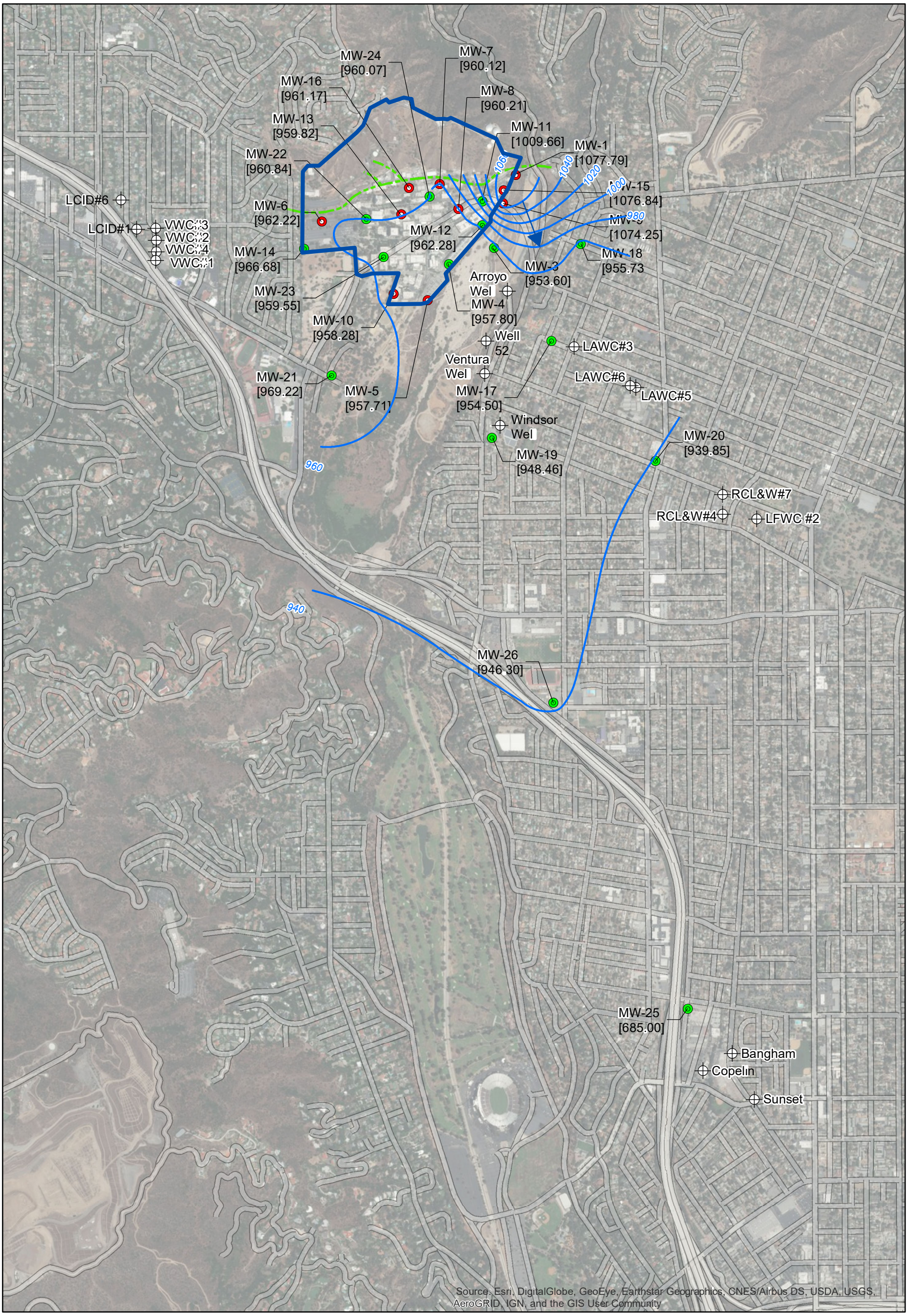
Trichloroethene in Groundwater October 2017

DESIGNED BY: SG DRAWN BY: SG CHECKED BY: DC	JPL - Pasadena, CA Contract No: W912PL-16-C-0006	Figure 7 January 2018



N
W E
S

0 750 1,500
Feet

Legend

- Deep Multi-Port Monitoring Well Location [Groundwater elevation in feet AMSL]
- Shallow Monitoring Well Location
- Municipal Production Well
- Groundwater contour (elevation in feet AMSL)
- Groundwater Flow Direction
- Approximate Location of Thrust Fault
- JPL Facility Boundary

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Groundwater Elevation Contours
October 2017

DESIGNED BY: SG DRAWN BY: SG CHECKED BY: DC	JPL - Pasadena, CA Contract No: W912PL-16-C-0006	Figure 8 January 2018

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	
MW-1													
MW-1	Oct 2016	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	Apr/May 2017	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 2017	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 2017	DUP-8-4Q17	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													
MW-3-Screen-1	Oct 2016	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 2017	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	Oct 2017	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-2													
MW-3-Screen-2	Oct 2016	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 J**	**23.0**		
MW-3-Screen-2	Jan/Feb 2017	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**11.0**		
MW-3-Screen-2	Apr/May 2017	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	**2.7 J**		
MW-3-Screen-2	Jul/Aug 2017	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	**1.2 J**		
MW-3-Screen-2	Oct 2017	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-3													
MW-3-Screen-3	Oct 2016	MW-3-3	0.5 U	**0.1 J**	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3 J**		
MW-3-Screen-3	Jan/Feb 2017	MW-3-3	0.5 U	0.5 U	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-3-Screen-3	Apr/May 2017	MW-3-3	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7 J**		
MW-3-Screen-3	Jul/Aug 2017	MW-3-3	0.5 U	0.5 U	**0.3 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.0 J**		
MW-3-Screen-3	Oct 2017	MW-3-3	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.0 J**		
MW-3-Screen-4													
MW-3-Screen-4	Oct 2016	MW-3-4	0.5 U	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.9 J**		
MW-3-Screen-4	Jan/Feb 2017	MW-3-4	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-3-Screen-4	Jan/Feb 2017	DUP-2-1Q17	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U		
MW-3-Screen-4	Apr/May 2017	MW-3-4	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-3-Screen-4	Jul/Aug 2017	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	**1.0 J**		
MW-3-Screen-4	Oct 2017	MW-3-4	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.0 J**		
MW-3-Screen-5													
MW-3-Screen-5	Oct 2016	MW-3-5	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-3-Screen-5	Apr/May 2017	MW-3-5	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7 J**		
MW-3-Screen-5	Oct 2017	MW-3-5	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7 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-4-Screen-1													
MW-4-Screen-1	Oct 2016	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	Jan/Feb 2017	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		
MW-4-Screen-1	Jan/Feb 2017	DUP-6-1Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8 J**		
MW-4-Screen-1	Apr/May 2017	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	Jul/Aug 2017	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	Oct 2017	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-2													
MW-4-Screen-2	Oct 2016	MW-4-2	0.5 U	**1.1**	**0.4 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**4.6**		
MW-4-Screen-2	Jan/Feb 2017	MW-4-2	0.5 U	**1.6**	**0.3 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.3 J**		
MW-4-Screen-2	Apr/May 2017	MW-4-2	0.5 U	**5.2**	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.9**	**4.4**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-4-Screen-2	Jul/Aug 2017	MW-4-2	0.5 U	**1.3**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.3**		
MW-4-Screen-2	Oct 2017	MW-4-2	0.5 U	**1.3**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.8 J**		
MW-4-Screen-3													
MW-4-Screen-3	Oct 2016	MW-4-3	0.5 U	**0.2 J**	**0.2 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Jan/Feb 2017	MW-4-3	0.5 U	**1.0**	**0.3 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	2.0 UJ		
MW-4-Screen-3	Apr/May 2017	MW-4-3	0.5 U	**1.1**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Jul/Aug 2017	MW-4-3	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-3	Oct 2017	MW-4-3	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-4													
MW-4-Screen-4	Oct 2016	MW-4-4	0.5 U	**0.4 J**	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-4-Screen-4	Oct 2016	DUP-5-4Q16	0.5 U	**0.4 J**	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Styrene**	**0.2 J**
MW-4-Screen-4	Apr/May 2017	MW-4-4	0.5 U	**1.2**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4-Screen-4	Oct 2017	MW-4-4	0.5 U	**0.8**	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-4-Screen-5													
MW-4-Screen-5	Oct 2016	MW-4-5	0.5 U	**1.2**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**cis-1,2-Dichloroethene** **Ethylbenzene** **Styrene**	**0.3 J** **0.6** **0.2 J**
MW-4-Screen-5	Apr/May 2017	MW-4-5	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Ethylbenzene**	**0.2 J**
MW-4-Screen-5	Oct 2017	MW-4-5	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Ethylbenzene** **Styrene**	**0.3 J** **0.2 J**
MW-5													
MW-5	Oct 2016	MW-5	0.5 U	**2.8**	**0.6**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**6.8**		
MW-5	Jan/Feb 2017	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		
MW-5	Apr/May 2017	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	4.0 U		
MW-5	Jul/Aug 2017	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	4.0 U		
MW-5	Oct 2017	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	4.0 U		
MW-5	Oct 2017	DUP-6-4Q17	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-6													
MW-6	Oct 2016	MW-6	0.5 U	**2.2**	**0.5**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.9 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-6	Jan/Feb 2017	MW-6	0.5 U	**4.5**	**1.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.8**	**4.2**	**trans-1,2-Dichloroethene**	**0.3 J**
MW-6	Jan/Feb 2017	DUP-4-1Q17	0.5 U	**4.6**	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**2.3**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-6	Apr/May 2017	MW-6	0.5 U	**4.4**	**0.9**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.8**	**3.0 J**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-6	Jul/Aug 2017	MW-6	0.5 U	**2.6**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**2.7 J**		
MW-6	Jul/Aug 2017	DUP-7-3Q17	0.5 U	**2.7**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**2.3 J**		
MW-6	Oct 2017	MW-6	0.5 U	**1.8**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.3 J**		
MW-7													
MW-7	Apr/May 2017	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.7**	**50.0**	**Bromodichloromethane** **Dibromochloromethane**	**2.1** **0.5 J**
MW-7	Jul/Aug 2017	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	**12.0**	**Bromodichloromethane**	**0.2 J**
MW-7	Oct 2017	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	**4.2**		
MW-8													
MW-8	Oct 2016	MW-8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.0**	**4.2**	**Bromodichloromethane**	**0.2 J**
MW-8	Jan/Feb 2017	MW-8	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.2**	**23.0**	**Bromodichloromethane**	**0.2 J**
MW-8	Jan/Feb 2017	MW-8	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6**	**21.0**		
MW-8	Apr/May 2017	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	**1.2 J**	**Trichlorofluoromethane**	**0.3 J**
MW-8	Jul/Aug 2017	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	4.0 U	**Trichlorofluoromethane**	**0.1 J**
MW-8	Oct 2017	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	**1.2 J**	**Trichlorofluoromethane**	**0.3 J**
MW-9													
MW-9	Oct 2016	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 2016	DUP-7-4Q16	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	Apr/May 2017	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	**1.3 J**		
MW-9	Oct 2017	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-10													
MW-10	Oct 2016	MW-10	0.5 U	**7.7**	**1.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.7**	**3.7 J**	**cis-1,2-Dichloroethene** **trans-1,2-Dichloroethene**	**0.4 J** **0.3 J**
MW-10	Jan/Feb 2017	MW-10	0.5 U	**9.4**	**1.2**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.9**	**2.9**	**cis-1,2-Dichloroethene** **trans-1,2-Dichloroethene**	**0.4 J** **0.5 J**
MW-10	Jan/Feb 2017	DUP-5-1Q17	0.5 U	**8.8**	**1.1**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.9**	**2.2**	**cis-1,2-Dichloroethene** **trans-1,2-Dichloroethene**	**0.5 J** **0.5**
MW-10	Apr/May 2017	MW-10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6 J**		
MW-10	Jul/Aug 2017	MW-10	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-10	Oct 2017	MW-10	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1 J**		
MW-11-Screen-1													
MW-11-Screen-1	Oct 2016	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	Jan/Feb 2017	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 UJ	**Styrene**	**0.2 J**
MW-11-Screen-1	Apr/May 2017	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 2017	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	**0.7 J**		
MW-11-Screen-1	Oct 2017	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		

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-11-Screen-2													
MW-11-Screen-2	Oct 2016	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	Jan/Feb 2017	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 UJ		
MW-11-Screen-2	Apr/May 2017	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	Jul/Aug 2017	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	Jul/Aug 2017	DUP-5-3Q17	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	Oct 2017	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-3													
MW-11-Screen-3	Oct 2016	MW-11-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U	**Styrene**	**0.1 J**
MW-11-Screen-3	Jan/Feb 2017	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 UJ	**Styrene**	**0.1 J**
MW-11-Screen-3	Apr/May 2017	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	4.0 U	**Toluene** **Vinyl Chloride** **Styrene** **Methyl-tert-butyl ether (MTBE)** **Ethylbenzene**	**0.3 J** **0.4 J** **0.8** **0.3 J** **0.2 J**
MW-11-Screen-3	Jul/Aug 2017	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	4.0 U	**Styrene**	**0.1 J**
MW-11-Screen-3	Oct 2017	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	4.0 U		
MW-11-Screen-4													
MW-11-Screen-4	Oct 2016	MW-11-4	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		
MW-11-Screen-4	Oct 2016	DUP-4-4Q16	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	**Styrene**	**0.1 J**
MW-11-Screen-4	Jan/Feb 2017	MW-11-4	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-11-Screen-4	Apr/May 2017	MW-11-4	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**	**0.2 J**
MW-11-Screen-4	Jul/Aug 2017	MW-11-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9 J**		
MW-11-Screen-4	Oct 2017	MW-11-4	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-11-Screen-5													
MW-11-Screen-5	Oct 2016	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	Apr/May 2017	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 2017	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	**Styrene**	**0.2 J**
MW-12-Screen-1													
MW-12-Screen-1	Apr/May 2017	MW-12-1	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-12-Screen-1	Jul/Aug 2017	MW-12-1	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-12-Screen-2													
MW-12-Screen-2	Oct 2016	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	4.0 U		
MW-12-Screen-2	Jan/Feb 2017	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	**0.7 J**		
MW-12-Screen-2	Apr/May 2017	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	4.0 U		
MW-12-Screen-2	Jul/Aug 2017	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	4.0 U		
MW-12-Screen-2	Oct 2017	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	4.0 U		
MW-12-Screen-3													
MW-12-Screen-3	Oct 2016	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
MW-12-Screen-3	Jan/Feb 2017	MW-12-3	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	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	
MW-12-Screen-3	Jan/Feb 2017	DUP-7-1Q17	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	2.0 UJ		
MW-12-Screen-3	Apr/May 2017	MW-12-3	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**4.2**		
MW-12-Screen-3	Jul/Aug 2017	MW-12-3	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**3.2 J**		
MW-12-Screen-3	Jul/Aug 2017	DUP-4-3Q17	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**2.9 J**		
MW-12-Screen-3	Oct 2017	MW-12-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**0.7 J**		
MW-12-Screen-4													
MW-12-Screen-4	Oct 2016	MW-12-4	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.8 J**		
MW-12-Screen-4	Jan/Feb 2017	MW-12-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.4 J**		
MW-12-Screen-4	Apr/May 2017	MW-12-4	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.2 J**		
MW-12-Screen-4	Jul/Aug 2017	MW-12-4	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.6 J**		
MW-12-Screen-4	Oct 2017	MW-12-4	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.1 J**		
MW-12-Screen-4	Oct 2017	DUP-5-4Q17	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.2 J**		
MW-12-Screen-5													
MW-12-Screen-5	Oct 2016	MW-12-5	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.6 J**		
MW-12-Screen-5	Jan/Feb 2017	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**	**3.3 J**		
MW-12-Screen-5	Apr/May 2017	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**	**1.8 J**		
MW-12-Screen-5	Jul/Aug 2017	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.7 J**		
MW-12-Screen-5	Oct 2017	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**	**1.5 J**		
MW-13													
MW-13	Apr/May 2017	MW-13	**0.2 J**	**0.4 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**	**160.0**	**1,4-Dioxane**	**3.7**
MW-13	Jul/Aug 2017	MW-13	**0.3 J**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**2.9**	**220.0**		
MW-13	Jul/Aug 2017	DUP-6-3Q17	**0.3 J**	**0.3 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**2.8**	**230.0**		
MW-13	Oct 2017	MW-13	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.0**	**69.0**	**Bromodichloromethane**	**0.2 J**
MW-14-Screen-1													
MW-14-Screen-1	Apr/May 2017	MW-14-1	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.6 J**		
MW-14-Screen-1	Jul/Aug 2017	MW-14-1	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.7 J**		
MW-14-Screen-2													
MW-14-Screen-2	Oct 2016	MW-14-2	0.5 U	**2.0**	**0.5 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.9**		
MW-14-Screen-2	Jan/Feb 2017	MW-14-2	0.5 U	**1.6**	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**5.1**	**cis-1,2-Dichloroethene**	**0.2 J**
MW-14-Screen-2	Apr/May 2017	MW-14-2	0.5 U	**1.4**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5**	**4.8**		
MW-14-Screen-2	Apr/May 2017	DUP-8-2Q17	0.5 U	**1.4**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.8 J**		
MW-14-Screen-2	Jul/Aug 2017	MW-14-2	0.5 U	**1.7**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.0 J**		
MW-14-Screen-2	Oct 2017	MW-14-2	0.5 U	**1.3**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.5 J**		
MW-14-Screen-3													
MW-14-Screen-3	Oct 2016	MW-14-3	0.5 U	**1.1**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**5.9**		
MW-14-Screen-3	Jan/Feb 2017	MW-14-3	0.5 U	**0.8**	**0.5**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**6.3**		
MW-14-Screen-3	Apr/May 2017	MW-14-3	0.5 U	**1.1**	**0.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**5.0**		
MW-14-Screen-3	Jul/Aug 2017	MW-14-3	0.5 U	**0.9**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.9 J**		
MW-14-Screen-3	Jul/Aug 2017	DUP-2-3Q17	0.5 U	**1.0**	**0.4 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.7**		
MW-14-Screen-3	Oct 2017	MW-14-3	0.5 U	**0.9**	**0.5 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.5**		

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-14-Screen-4													
MW-14-Screen-4	Oct 2016	MW-14-4	0.5 U	**0.3 J**	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.2 J**	**5.1**		
MW-14-Screen-4	Jan/Feb 2017	MW-14-4	0.5 U	**0.2 J**	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.2 J**	2.0 U		
MW-14-Screen-4	Apr/May 2017	MW-14-4	0.5 U	**0.4 J**	**0.5**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.7 J**		
MW-14-Screen-4	Jul/Aug 2017	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**	**3.8 J**		
MW-14-Screen-4	Oct 2017	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	**4.0**		
MW-14-Screen-5													
MW-14-Screen-5	Oct 2016	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	4.0 U		
MW-14-Screen-5	Jan/Feb 2017	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**	2.0 U		
MW-14-Screen-5	Apr/May 2017	MW-14-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	4.0 U		
MW-14-Screen-5	Jul/Aug 2017	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	4.0 U		
MW-14-Screen-5	Oct 2017	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**	4.0 U		
MW-15													
MW-15	Oct 2016	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	Apr/May 2017	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	**0.7 J**		
MW-15	Apr/May 2017	DUP-5-2Q17	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-15	Oct 2017	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	**0.6 J**		
MW-16													
MW-16	Apr/May 2017	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	**3.8 J**	**Bromodichloromethane** **Bromoform** **Dibromochloromethane** **1,4-Dioxane**	**4.2** **1.3** **1.9** **0.9 J**
MW-16	Jul/Aug 2017	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.1**	4.0 U	**Dibromochloromethane** **Bromodichloromethane**	**1.6** **3.8**
MW-16	Oct 2017	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**0.8 J**	**Bromodichloromethane**	**0.4 J**
MW-16	Oct 2017	DUP-7-4Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**0.8 J**	**Bromodichloromethane**	**0.5 J**
MW-17-Screen-1													
MW-17-Screen-1	Apr/May 2017	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	4.0 U		
MW-17-Screen-1	Oct 2017	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	4.0 U		
MW-17-Screen-2													
MW-17-Screen-2	Oct 2016	MW-17-2	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
MW-17-Screen-2	Oct 2016	DUP-1-4Q16	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
MW-17-Screen-2	Jan/Feb 2017	MW-17-2	0.5 U	**0.4 J**	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	Apr/May 2017	MW-17-2	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
MW-17-Screen-2	Jul/Aug 2017	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	4.0 U		
MW-17-Screen-2	Oct 2017	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	4.0 U		
MW-17-Screen-3													
MW-17-Screen-3	Oct 2016	MW-17-3	0.5 U	**1.3**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**6.1**		
MW-17-Screen-3	Jan/Feb 2017	MW-17-3	0.5 U	**1.5**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**6.2**		
MW-17-Screen-3	Apr/May 2017	MW-17-3	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**5.3**		

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-3	Jul/Aug 2017	MW-17-3	0.5 U	**1.4**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**5.6**		
MW-17-Screen-3	Oct 2017	MW-17-3	0.5 U	**1.3**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.9**		
MW-17-Screen-4													
MW-17-Screen-4	Oct 2016	MW-17-4	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.8 J**		
MW-17-Screen-4	Jan/Feb 2017	MW-17-4	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	2.0 U		
MW-17-Screen-4	Apr/May 2017	MW-17-4	0.5 U	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0 J**	**1,4-Dioxane**	**46.0**
MW-17-Screen-4	Jul/Aug 2017	MW-17-4	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**0.9 J**		
MW-17-Screen-4	Oct 2017	MW-17-4	0.5 U	**0.6**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.7**		
MW-17-Screen-5													
MW-17-Screen-5	Oct 2016	MW-17-5	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-17-Screen-5	Apr/May 2017	MW-17-5	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-17-Screen-5	Oct 2017	MW-17-5	0.5 U	**0.9**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.3**		
MW-18-Screen-1													
MW-18-Screen-1	Apr/May 2017	MW-18-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7 J**		
MW-18-Screen-2													
MW-18-Screen-2	Oct 2016	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	4.0 U		
MW-18-Screen-2	Jan/Feb 2017	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	Apr/May 2017	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	4.0 U		
MW-18-Screen-2	Jul/Aug 2017	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	4.0 U		
MW-18-Screen-2	Oct 2017	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	4.0 U		
MW-18-Screen-3													
MW-18-Screen-3	Oct 2016	MW-18-3	**1.9**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**6.8**		
MW-18-Screen-3	Oct 2016	DUP-2-4Q16	**1.9**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**5.7**		
MW-18-Screen-3	Jan/Feb 2017	MW-18-3	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**6.2 J**		
MW-18-Screen-3	Apr/May 2017	MW-18-3	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**6.2**		
MW-18-Screen-3	Jul/Aug 2017	MW-18-3	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**4.3**		
MW-18-Screen-3	Oct 2017	MW-18-3	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.5 J**		
MW-18-Screen-3	Oct 2017	DUP-3-4Q17	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.8 J**		
MW-18-Screen-4													
MW-18-Screen-4	Oct 2016	MW-18-4	**2.6**	**0.9**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**15.0**		
MW-18-Screen-4	Jan/Feb 2017	MW-18-4	**1.1**	**0.8**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**15.0 J**		
MW-18-Screen-4	Apr/May 2017	MW-18-4	**3.5**	**1.1**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**17.0**		
MW-18-Screen-4	Jul/Aug 2017	MW-18-4	**1.2**	**0.7**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**14.0**		
MW-18-Screen-4	Oct 2017	MW-18-4	**4.3**	**2.2**	**2.0**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**14.0**		
MW-18-Screen-5													
MW-18-Screen-5	Oct 2016	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	4.0 U		
MW-18-Screen-5	Jan/Feb 2017	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		

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-18-Screen-5	Apr/May 2017	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	4.0 U	**Methyl-tert-butyl ether (MTBE)** **Ethylbenzene** **Styrene** **Vinyl Chloride** **Acrylonitrile** **Benzene**	**1.0** **0.2 J** **2.3** **0.3 J** **19.0** **0.3 J**
MW-18-Screen-5	Jul/Aug 2017	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	4.0 U		
MW-18-Screen-5	Oct 2017	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	4.0 U		
MW-19-Screen-1													
MW-19-Screen-1	Oct 2016	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.3**	**1.0 J**		
MW-19-Screen-1	Jan/Feb 2017	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.1**	2.0 U		
MW-19-Screen-1	Apr/May 2017	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**0.7 J**		
MW-19-Screen-1	Jul/Aug 2017	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**	4.0 U		
MW-19-Screen-1	Oct 2017	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	4.0 U		
MW-19-Screen-2													
MW-19-Screen-2	Oct 2016	MW-19-2	0.5 U	**1.0**	**0.9**	**0.1 J**	0.5 U	0.5 U	0.5 U	**1.6**	**4.6**	**cis-1,2-Dichloroethene**	**0.2 J**
MW-19-Screen-2	Jan/Feb 2017	MW-19-2	0.5 U	**1.5**	**1.9**	0.5 U	0.5 U	0.5 U	0.5 U	**2.3**	**3.3**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-19-Screen-2	Apr/May 2017	MW-19-2	0.5 U	**1.3**	**1.7**	**0.2 J**	0.5 U	0.5 U	0.5 U	**2.9**	**3.6 J**	**cis-1,2-Dichloroethene**	**0.4 J**
MW-19-Screen-2	Jul/Aug 2017	MW-19-2	0.5 U	**1.3**	**2.5**	**0.2 J**	0.5 U	0.5 U	0.5 U	**2.7**	**2.6 J**	**cis-1,2-Dichloroethene**	**0.4 J**
MW-19-Screen-2	Oct 2017	MW-19-2	0.5 U	**1.0**	**1.7**	**0.2 J**	0.5 U	0.5 U	0.5 U	**2.4**	**4.1**	**cis-1,2-Dichloroethene**	**0.5 J**
MW-19-Screen-3													
MW-19-Screen-3	Oct 2016	MW-19-3	0.5 U	**0.2 J**	**0.4 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.7**	**4.3**		
MW-19-Screen-3	Jan/Feb 2017	MW-19-3	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**4.5**		
MW-19-Screen-3	Apr/May 2017	MW-19-3	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**	**4.3**		
MW-19-Screen-3	Jul/Aug 2017	MW-19-3	0.5 U	**0.2 J**	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**3.6 J**		
MW-19-Screen-3	Oct 2017	MW-19-3	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**3.9 J**		
MW-19-Screen-4													
MW-19-Screen-4	Oct 2016	MW-19-4	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.2 J**		
MW-19-Screen-4	Oct 2016	DUP-6-4Q16	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.6 J**		
MW-19-Screen-4	Jan/Feb 2017	MW-19-4	0.5 U	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**4.0**		
MW-19-Screen-4	Jan/Feb 2017	DUP-1-1Q17	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.7**		
MW-19-Screen-4	Apr/May 2017	MW-19-4	0.5 U	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.4 J**		
MW-19-Screen-4	Jul/Aug 2017	MW-19-4	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**2.9 J**		
MW-19-Screen-4	Oct 2017	MW-19-4	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**3.4 J**		
MW-19-Screen-5													
MW-19-Screen-5	Oct 2016	MW-19-5	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**2.4 J**		
MW-19-Screen-5	Jan/Feb 2017	MW-19-5	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	**2.2**		
MW-19-Screen-5	Apr/May 2017	MW-19-5	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	**2.2 J**		
MW-19-Screen-5	Jul/Aug 2017	MW-19-5	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	**1.7 J**		
MW-19-Screen-5	Oct 2017	MW-19-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.0**	**2.0 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-1													
MW-20-Screen-1	Jul/Aug 2017	MW-20-1	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-20-Screen-2													
MW-20-Screen-2	Oct 2016	MW-20-2	0.5 U	**1.0**	**0.2 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**4.5**		
MW-20-Screen-2	Jan/Feb 2017	MW-20-2	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	2.0 U		
MW-20-Screen-2	Apr/May 2017	MW-20-2	0.5 U	**2.3**	**0.5 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5**	**2.6 J**	**Acetone**	**22.0**
MW-20-Screen-2	Jul/Aug 2017	MW-20-2	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.9 J**		
MW-20-Screen-2	Oct 2017	MW-20-2	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.2 J**	**Carbon disulfide**	**0.6 J**
MW-20-Screen-3													
MW-20-Screen-3	Oct 2016	MW-20-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Styrene**	**0.3 J**
MW-20-Screen-3	Jan/Feb 2017	MW-20-3	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	**Styrene** **Acrylonitrile**	**0.2 J** **2.2 J**
MW-20-Screen-3	Apr/May 2017	MW-20-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Styrene**	**2.2 J** **0.4 J**
MW-20-Screen-3	Apr/May 2017	DUP-2-2Q17	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Styrene**	**1.7 J** **0.4 J**
MW-20-Screen-3	Jul/Aug 2017	MW-20-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Styrene**	**1.8 J** **0.3 J**
MW-20-Screen-3	Jul/Aug 2017	DUP-1-3Q17	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Styrene**	**1.6 J** **0.4 J**
MW-20-Screen-3	Oct 2017	MW-20-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Ethylbenzene** **Styrene** **Acrylonitrile** **Carbon disulfide**	**0.2 J** **0.4 J** **1.6 J** **0.6 J**
MW-20-Screen-3	Oct 2017	DUP-1-4Q17	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** **Acrylonitrile** **Styrene**	**0.7 J** **1.8 J** **0.3 J**
MW-20-Screen-4													
MW-20-Screen-4	Oct 2016	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	4.0 U		
MW-20-Screen-4	Jan/Feb 2017	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	Apr/May 2017	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	4.0 U		
MW-20-Screen-4	Jul/Aug 2017	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	4.0 U		
MW-20-Screen-4	Oct 2017	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	4.0 U		
MW-20-Screen-5													
MW-20-Screen-5	Oct 2016	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	4.0 U	**Styrene**	**0.3 J**
MW-20-Screen-5	Jan/Feb 2017	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**	**0.2 J**
MW-20-Screen-5	Apr/May 2017	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	4.0 U	**Styrene**	**0.2 J**
MW-20-Screen-5	Jul/Aug 2017	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	4.0 U	**Styrene**	**0.3 J**
MW-20-Screen-5	Oct 2017	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	4.0 U	**Styrene**	**0.2 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-21-Screen-1													
MW-21-Screen-1	Apr/May 2017	MW-21-1	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**6.5**		
MW-21-Screen-1	Jul/Aug 2017	MW-21-1	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**7.7**		
MW-21-Screen-2													
MW-21-Screen-2	Oct 2016	MW-21-2	0.5 U	**0.3 J**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.2 J**		
MW-21-Screen-2	Jan/Feb 2017	MW-21-2	0.5 U	**0.2 J**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.6**		
MW-21-Screen-2	Apr/May 2017	MW-21-2	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**1.8 J**		
MW-21-Screen-2	Jul/Aug 2017	MW-21-2	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.1 J**		
MW-21-Screen-2	Oct 2017	MW-21-2	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.3 J**		
MW-21-Screen-3													
MW-21-Screen-3	Oct 2016	MW-21-3	0.5 U	**0.9**	**0.9**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.6 J**		
MW-21-Screen-3	Jan/Feb 2017	MW-21-3	0.5 U	**0.7**	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.4**		
MW-21-Screen-3	Jan/Feb 2017	DUP-3-1Q17	0.5 U	**1.0**	**1.4**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.6**	**3.5**	**cis-1,2-Dichloroethene**	**0.2 J**
MW-21-Screen-3	Apr/May 2017	MW-21-3	0.5 U	**1.0**	**0.9**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**4.0**		
MW-21-Screen-3	Jul/Aug 2017	MW-21-3	0.5 U	**1.1**	**1.1**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.0 J**		
MW-21-Screen-3	Oct 2017	MW-21-3	0.5 U	**0.9**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.0 J**		
MW-21-Screen-4													
MW-21-Screen-4	Oct 2016	MW-21-4	0.5 U	**0.6**	**2.0**	**0.1 J**	0.5 U	0.5 U	0.5 U	**8.8**	**3.1 J**	**cis-1,2-Dichloroethene**	**0.2 J**
MW-21-Screen-4	Jan/Feb 2017	MW-21-4	0.5 U	**0.1 J**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**4.4**	2.0 U		
MW-21-Screen-4	Apr/May 2017	MW-21-4	0.5 U	**0.6**	**2.6**	**0.2 J**	0.5 U	0.5 U	0.5 U	**11.0**	**2.4 J**	**cis-1,2-Dichloroethene**	**0.4 J**
MW-21-Screen-4	Apr/May 2017	DUP-6-2Q17	0.5 U	**0.5 J**	**2.8**	**0.2 J**	0.5 U	0.5 U	0.5 U	**11.0**	**2.6 J**	**cis-1,2-Dichloroethene**	**0.4 J**
MW-21-Screen-4	Jul/Aug 2017	MW-21-4	0.5 U	**0.3 J**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	**5.6**	**2.3 J**		
MW-21-Screen-4	Oct 2017	MW-21-4	0.5 U	**0.2 J**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	**4.6**	**1.4 J**		
MW-21-Screen-5													
MW-21-Screen-5	Oct 2016	MW-21-5	0.5 U	**0.2 J**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**4.6**	**3.0 J**		
MW-21-Screen-5	Jan/Feb 2017	MW-21-5	0.5 U	**0.1 J**	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	**6.9**	2.0 U		
MW-21-Screen-5	Apr/May 2017	MW-21-5	0.5 U	**0.4 J**	**2.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	**11.0**	**2.6 J**		
MW-21-Screen-5	Jul/Aug 2017	MW-21-5	0.5 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**5.9**	**2.3 J**		
MW-21-Screen-5	Oct 2017	MW-21-5	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**5.7**	**1.5 J**		
MW-22-Screen-1													
MW-22-Screen-1	Oct 2016	MW-22-1	0.5 U	**1.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.5 J**		
MW-22-Screen-1	Jan/Feb 2017	MW-22-1	0.5 U	**1.0**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.4**		
MW-22-Screen-1	Apr/May 2017	MW-22-1	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.4 J**		
MW-22-Screen-1	Jul/Aug 2017	MW-22-1	0.5 U	**0.7**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**5.6**		
MW-22-Screen-1	Oct 2017	MW-22-1	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.0 J**		
MW-22-Screen-2													
MW-22-Screen-2	Oct 2016	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 J**		
MW-22-Screen-2	Jan/Feb 2017	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	**4.0**		
MW-22-Screen-2	Apr/May 2017	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	**3.4 J**		
MW-22-Screen-2	Apr/May 2017	DUP-3-2Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.3 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-22-Screen-2	Jul/Aug 2017	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	**4.3**		
MW-22-Screen-2	Oct 2017	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	**2.7 J**		
MW-22-Screen-3													
MW-22-Screen-3	Oct 2016	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	**1.7 J**		
MW-22-Screen-3	Oct 2016	DUP-3-4Q16	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-22-Screen-3	Jan/Feb 2017	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	**2.0**		
MW-22-Screen-3	Apr/May 2017	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	**1.2 J**		
MW-22-Screen-3	Jul/Aug 2017	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	**2.3 J**		
MW-22-Screen-3	Oct 2017	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	**2.1 J**		
MW-22-Screen-3	Oct 2017	DUP-4-4Q17	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-4													
MW-22-Screen-4	Oct 2016	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	**1.3 J**		
MW-22-Screen-4	Apr/May 2017	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	**2.0 J**		
MW-22-Screen-4	Oct 2017	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	**0.6 J**		
MW-22-Screen-5													
MW-22-Screen-5	Oct 2016	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 J**
MW-22-Screen-5	Apr/May 2017	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		
MW-22-Screen-5	Oct 2017	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		
MW-23-Screen-1													
MW-23-Screen-1	Oct 2016	MW-23-1	0.5 U	**1.3**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**3.8 J**		
MW-23-Screen-1	Jan/Feb 2017	MW-23-1	0.5 U	**1.4**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.6**		
MW-23-Screen-1	Apr/May 2017	MW-23-1	0.5 U	**5.3**	**0.8**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.7**	**2.9 J**		
MW-23-Screen-1	Jul/Aug 2017	MW-23-1	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**3.9 J**		
MW-23-Screen-1	Oct 2017	MW-23-1	0.5 U	**3.4**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.9**	**3.8 J**		
MW-23-Screen-2													
MW-23-Screen-2	Oct 2016	MW-23-2	0.5 U	**1.2**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**5.4**		
MW-23-Screen-2	Jan/Feb 2017	MW-23-2	0.5 U	**3.2**	**0.9**	**0.4 J**	0.5 U	0.5 U	0.5 U	**0.8**	**3.2**		
MW-23-Screen-2	Apr/May 2017	MW-23-2	0.5 U	**4.4**	**1.3**	**0.4 J**	0.5 U	0.5 U	0.5 U	**0.8**	**3.6 J**		
MW-23-Screen-2	Jul/Aug 2017	MW-23-2	0.5 U	**4.0**	**0.9**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.8**	**3.9 J**		
MW-23-Screen-2	Jul/Aug 2017	DUP-3-3Q17	0.5 U	**4.1**	**0.8**	**0.3 J**	0.5 U	0.5 U	0.5 U	**0.9**	**4.7**		
MW-23-Screen-2	Oct 2017	MW-23-2	0.5 U	**1.1**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.2**		
MW-23-Screen-3													
MW-23-Screen-3	Oct 2016	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	Jan/Feb 2017	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	**3.4**		
MW-23-Screen-3	Apr/May 2017	MW-23-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.0 J**		
MW-23-Screen-3	Jul/Aug 2017	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	**2.7 J**		
MW-23-Screen-3	Oct 2017	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	**2.8 J**		
MW-23-Screen-4													
MW-23-Screen-4	Oct 2016	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	**1.0 J**		
MW-23-Screen-4	Apr/May 2017	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	**0.9 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-23-Screen-4	Apr/May 2017	DUP-7-2Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7 J**		
MW-23-Screen-4	Oct 2017	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	**1.2 J**		
MW-23-Screen-5													
MW-23-Screen-5	Oct 2016	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**	**0.3 J**
MW-23-Screen-5	Apr/May 2017	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**	**0.4 J**
MW-23-Screen-5	Oct 2017	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**	**0.3 J**
MW-24-Screen-1													
MW-24-Screen-1	Oct 2016	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**30.0**		
MW-24-Screen-1	Jan/Feb 2017	MW-24-1	**0.2 J**	0.5 U	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**2000.0**		
MW-24-Screen-1	Apr/May 2017	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.4**	**58.0**		
MW-24-Screen-1	Jul/Aug 2017	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**12.0**		
MW-24-Screen-1	Oct 2017	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**3.1 J**	**Bromodichloromethane**	**0.3 J**
MW-24-Screen-2													
MW-24-Screen-2	Oct 2016	MW-24-2	0.5 U	0.5 U	**0.2 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.6 J**		
MW-24-Screen-2	Jan/Feb 2017	MW-24-2	0.5 U	0.5 U	0.5 U	**0.1 J**	0.3 J	0.5 U	0.5 U	0.5 U	**1.4 J**		
MW-24-Screen-2	Apr/May 2017	MW-24-2	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.9 J**		
MW-24-Screen-2	Jul/Aug 2017	MW-24-2	0.5 U	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.9 J**		
MW-24-Screen-2	Oct 2017	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.2 J**		
MW-24-Screen-3													
MW-24-Screen-3	Oct 2016	MW-24-3	0.5 U	0.5 U	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-24-Screen-3	Jan/Feb 2017	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	Apr/May 2017	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	4.0 U		
MW-24-Screen-3	Jul/Aug 2017	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	4.0 U		
MW-24-Screen-3	Oct 2017	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	4.0 U		
MW-24-Screen-4													
MW-24-Screen-4	Oct 2016	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		
MW-24-Screen-4	Apr/May 2017	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	**2.2 J**	**Ethylbenzene** **Styrene**	**0.2 J** **0.3 J**
MW-24-Screen-4	Oct 2017	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**	**0.2 J**
MW-24-Screen-5													
MW-24-Screen-5	Oct 2016	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	Apr/May 2017	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 2017	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-25-Screen-1													
MW-25-Screen-1	Oct 2016	MW-25-1	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**8.8**	**Methyl-tert-butyl ether (MTBE)**	**0.4 J**
MW-25-Screen-1	Jan/Feb 2017	MW-25-1	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**9.6**	**Methyl-tert-butyl ether (MTBE)**	**0.5 J**
MW-25-Screen-1	Apr/May 2017	MW-25-1	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**8.8**	**Methyl-tert-butyl ether (MTBE)**	**0.5 J**
MW-25-Screen-1	Jul/Aug 2017	MW-25-1	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**7.2**	**Methyl-tert-butyl ether (MTBE)**	**0.5 J**
MW-25-Screen-1	Oct 2017	MW-25-1	0.5 U	**0.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**7.1**	**Methyl-tert-butyl ether (MTBE)**	**0.5 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-2													
MW-25-Screen-2	Oct 2016	MW-25-2	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**13.0**		
MW-25-Screen-2	Jan/Feb 2017	MW-25-2	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**14.0**		
MW-25-Screen-2	Apr/May 2017	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**13.0**		
MW-25-Screen-2	Apr/May 2017	DUP-1-2Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**12.0**		
MW-25-Screen-2	Jul/Aug 2017	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**12.0**		
MW-25-Screen-2	Oct 2017	MW-25-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**12.0**		
MW-25-Screen-2	Oct 2017	DUP-2-4Q17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**12.0**		
MW-25-Screen-3													
MW-25-Screen-3	Oct 2016	MW-25-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**11.0**		
MW-25-Screen-3	Jan/Feb 2017	MW-25-3	0.5 U	0.5 U	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**11.0**		
MW-25-Screen-3	Apr/May 2017	MW-25-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**9.2**		
MW-25-Screen-3	Jul/Aug 2017	MW-25-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**8.4**		
MW-25-Screen-3	Oct 2017	MW-25-3	0.5 U	0.5 U	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**9.8**		
MW-25-Screen-4													
MW-25-Screen-4	Oct 2016	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	**8.7**		
MW-25-Screen-4	Jan/Feb 2017	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	Apr/May 2017	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**		
MW-25-Screen-4	Jul/Aug 2017	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	**7.5**		
MW-25-Screen-4	Oct 2017	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	**8.1**		
MW-25-Screen-5													
MW-25-Screen-5	Oct 2016	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	4.0 U	**Benzene** **Vinyl Chloride**	**0.1 J** **0.5**
MW-25-Screen-5	Jan/Feb 2017	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**		
MW-25-Screen-5	Apr/May 2017	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	4.0 U		
MW-25-Screen-5	Jul/Aug 2017	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	4.0 U		
MW-25-Screen-5	Oct 2017	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	4.0 U		
MW-26-Screen-1													
MW-26-Screen-1	Oct 2016	MW-26-1	0.5 U	**0.2 J**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.2 J**		
MW-26-Screen-1	Jan/Feb 2017	MW-26-1	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.1**		
MW-26-Screen-1	Apr/May 2017	MW-26-1	0.5 U	**1.1**	**3.4**	**0.2 J**	0.5 U	0.5 U	0.5 U	**1.0**	**1.9 J**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-26-Screen-1	Apr/May 2017	DUP-4-2Q17	0.5 U	**1.2**	**3.8**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.9**	**3.0 J**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-26-Screen-1	Jul/Aug 2017	MW-26-1	0.5 U	**0.2 J**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.4 J**		
MW-26-Screen-1	Oct 2017	MW-26-1	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**1.7 J**		
MW-26-Screen-2													
MW-26-Screen-2	Oct 2016	MW-26-2	0.5 U	**0.4 J**	**2.7**	**0.1 J**	0.5 U	0.5 U	0.5 U	**2.0**	**3.7 J**	**cis-1,2-Dichloroethene** **Bromodichloromethane**	**0.3 J** **0.3 J**
MW-26-Screen-2	Jan/Feb 2017	MW-26-2	0.5 U	**0.3 J**	**2.7**	0.5 U	0.5 U	0.5 U	0.5 U	**1.6**	**2.9**	**cis-1,2-Dichloroethene**	**0.3 J**
MW-26-Screen-2	Apr/May 2017	MW-26-2	0.5 U	**0.3 J**	**2.4**	0.5 U	0.5 U	0.5 U	0.5 U	**1.7**	**3.2 J**	**Bromodichloromethane**	**0.2 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-26-Screen-2	Jul/Aug 2017	MW-26-2	0.5 U	**0.3 J**	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**3.9 J**		
MW-26-Screen-2	Oct 2017	MW-26-2	0.5 U	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**2.5 J**	**cis-1,2-Dichloroethene** **Bromodichloromethane**	**0.3 J** **0.2 J**
Analyte concentration exceeds the standard for:													
CA MCL			0.5	5.0	5.0	5.0	0.5	6.0	1200.0	TTHM	6.0		
EPA REGION IX MCL			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
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)
MW-1						
MW-1	Oct 2016	MW-1	NA	NA	**0.9 J**	2.0 U
MW-1	Apr/May 2017	MW-1	2.0 U	1.0 U	3.0 UJ	**0.8 J**
MW-1	Oct 2017	MW-1	NA	NA	3.0 U	2.0 U
MW-1	Oct 2017	DUP-8-4Q17	NA	NA	3.0 U	2.0 U
MW-3-Screen-1						
MW-3-Screen-1	Oct 2016	MW-3-1	NA	NA	3.0 U	2.0 U
MW-3-Screen-1	Apr/May 2017	MW-3-1	2.0 U	1.0 U	**0.8 J**	2.0 U
MW-3-Screen-1	Oct 2017	MW-3-1	NA	NA	3.0 U	2.0 U
MW-3-Screen-2						
MW-3-Screen-2	Oct 2016	MW-3-2	NA	NA	**1.0 J**	**1.0 J**
MW-3-Screen-2	Jan/Feb 2017	MW-3-2	NA	NA	2.9 U	**0.8 J**
MW-3-Screen-2	Apr/May 2017	MW-3-2	2.0 U	1.0 U	**1.3 J**	2.0 U
MW-3-Screen-2	Jul/Aug 2017	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-2	Oct 2017	MW-3-2	NA	NA	3.0 U	2.0 U
MW-3-Screen-3						
MW-3-Screen-3	Oct 2016	MW-3-3	NA	NA	**3.1**	**1.1 J**
MW-3-Screen-3	Jan/Feb 2017	MW-3-3	NA	NA	**3.6**	2.0 U
MW-3-Screen-3	Apr/May 2017	MW-3-3	**3.8**	1.0 U	**4.8**	2.0 U
MW-3-Screen-3	Jul/Aug 2017	MW-3-3	NA	NA	2.4 U	**1.3 J**
MW-3-Screen-3	Oct 2017	MW-3-3	NA	NA	**2.4 J**	**2.1**
MW-3-Screen-4						
MW-3-Screen-4	Oct 2016	MW-3-4	NA	NA	**13.0**	2.0 U
MW-3-Screen-4	Jan/Feb 2017	MW-3-4	NA	NA	**17.0**	2.0 U
MW-3-Screen-4	Jan/Feb 2017	DUP-2-1Q17	NA	NA	**8.1**	2.0 U
MW-3-Screen-4	Apr/May 2017	MW-3-4	**18.0**	1.0 U	**31.0**	2.0 U
MW-3-Screen-4	Jul/Aug 2017	MW-3-4	NA	NA	**38.0**	2.0 U
MW-3-Screen-4	Oct 2017	MW-3-4	NA	NA	**20.0**	2.0 U
MW-3-Screen-5						
MW-3-Screen-5	Oct 2016	MW-3-5	NA	NA	**0.5 J**	10.0 U
MW-3-Screen-5	Apr/May 2017	MW-3-5	**3.3**	1.0 U	**5.2**	2.0 U
MW-3-Screen-5	Oct 2017	MW-3-5	NA	NA	**11.0**	2.0 U
MW-4-Screen-1						
MW-4-Screen-1	Oct 2016	MW-4-1	NA	NA	**0.8 J**	2.0 U
MW-4-Screen-1	Jan/Feb 2017	MW-4-1	NA	NA	2.2 U	2.0 U
MW-4-Screen-1	Jan/Feb 2017	DUP-6-1Q17	NA	NA	2.4 U	2.0 U
MW-4-Screen-1	Apr/May 2017	MW-4-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-4-Screen-1	Jul/Aug 2017	MW-4-1	NA	NA	1.8 U	2.0 U
MW-4-Screen-1	Oct 2017	MW-4-1	NA	NA	3.0 UJ	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-4-Screen-2						
MW-4-Screen-2	Oct 2016	MW-4-2	NA	NA	**2.2 J**	2.0 U
MW-4-Screen-2	Jan/Feb 2017	MW-4-2	NA	NA	3.1 U	2.0 U
MW-4-Screen-2	Apr/May 2017	MW-4-2	2.0 U	1.0 U	**1.7 J**	2.0 U
MW-4-Screen-2	Jul/Aug 2017	MW-4-2	NA	NA	**4.2**	2.0 U
MW-4-Screen-2	Oct 2017	MW-4-2	NA	NA	**1.6 J**	2.0 U
MW-4-Screen-3						
MW-4-Screen-3	Oct 2016	MW-4-3	NA	NA	**2.8 J**	10.0 U
MW-4-Screen-3	Jan/Feb 2017	MW-4-3	NA	NA	2.6 U	2.0 U
MW-4-Screen-3	Apr/May 2017	MW-4-3	2.0 U	**0.1 J**	**55.0**	2.0 U
MW-4-Screen-3	Jul/Aug 2017	MW-4-3	NA	NA	**8.6**	2.0 U
MW-4-Screen-3	Oct 2017	MW-4-3	NA	NA	**87.0 J**	2.0 U
MW-4-Screen-4						
MW-4-Screen-4	Oct 2016	MW-4-4	NA	NA	**1.4 J**	2.0 U
MW-4-Screen-4	Oct 2016	DUP-5-4Q16	NA	NA	**1.3 J**	2.0 U
MW-4-Screen-4	Apr/May 2017	MW-4-4	2.0 U	1.0 U	3.0 U	2.0 U
MW-4-Screen-4	Oct 2017	MW-4-4	NA	NA	**0.6 J**	2.0 U
MW-4-Screen-5						
MW-4-Screen-5	Oct 2016	MW-4-5	NA	NA	**3.4**	2.0 U
MW-4-Screen-5	Apr/May 2017	MW-4-5	2.0 U	1.0 U	3.0 U	2.0 U
MW-4-Screen-5	Oct 2017	MW-4-5	NA	NA	**1.3 J**	2.0 U
MW-5						
MW-5	Jan/Feb 2017	MW-5	NA	NA	3.0 U	**0.9 J**
MW-5	Apr/May 2017	MW-5	2.0 U	1.0 U	1.0 U	2.0 U
MW-5	Jul/Aug 2017	MW-5	NA	NA	1.2 U	2.0 U
MW-5	Oct 2017	MW-5	NA	NA	**1.0 J**	2.0 U
MW-5	Oct 2017	DUP-6-4Q17	NA	NA	**1.2 J**	2.0 U
MW-6						
MW-6	Jan/Feb 2017	MW-6	NA	NA	**27.0**	2.0 U
MW-6	Jan/Feb 2017	DUP-4-1Q17	NA	NA	**19.0**	2.0 U
MW-6	Apr/May 2017	MW-6	2.0 U	1.0 U	**80.0**	**1.6 J**
MW-6	Jul/Aug 2017	MW-6	NA	NA	**30.0**	2.0 U
MW-6	Jul/Aug 2017	DUP-7-3Q17	NA	NA	**120.0**	**2.0**
MW-6	Oct 2017	MW-6	NA	NA	**1100.0**	**1.2 J**
MW-7						
MW-7	Apr/May 2017	MW-7	2.0 U	1.0 U	**64.0 J**	2.9 U
MW-7	Jul/Aug 2017	MW-7	NA	NA	**7400.0**	**1.1 J**
MW-7	Oct 2017	MW-7	NA	NA	**1200.0 J**	**1.3 J**
MW-8						
MW-8	Oct 2016	MW-8	NA	NA	**35.0 J**	3.3 U
MW-8	Jan/Feb 2017	MW-8	NA	NA	**65.0 J**	**5.3**
MW-8	Jan/Feb 2017	MW-8	NA	NA	NA	NA
MW-8	Apr/May 2017	MW-8	2.0 U	1.0 U	2.3 U	2.0 U
MW-8	Jul/Aug 2017	MW-8	NA	NA	1.9 U	**0.8 J**
MW-8	Oct 2017	MW-8	NA	NA	**14.0 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-9						
MW-9	Oct 2016	MW-9	NA	NA	**100.0**	2.0 U
MW-9	Oct 2016	DUP-7-4Q16	NA	NA	**76.0**	2.0 U
MW-9	Apr/May 2017	MW-9	2.0 U	1.0 U	**19.0 J**	1.4 U
MW-9	Oct 2017	MW-9	NA	NA	**8.9 J**	2.0 U
MW-10						
MW-10	Jan/Feb 2017	MW-10	NA	NA	**18.0**	**0.9 J**
MW-10	Jan/Feb 2017	MW-10	NA	NA	**17.0**	**0.8 J**
MW-10	Apr/May 2017	MW-10	2.0 U	1.0 U	**3.5**	**2.5**
MW-10	Jul/Aug 2017	MW-10	NA	NA	**3.8**	**2.9**
MW-10	Oct 2017	MW-10	NA	NA	**2.6 J**	**2.0**
MW-11-Screen-1						
MW-11-Screen-1	Oct 2016	MW-11-1	NA	NA	**1.2 J**	2.0 U
MW-11-Screen-1	Jan/Feb 2017	MW-11-1	NA	NA	2.4 U	2.0 U
MW-11-Screen-1	Apr/May 2017	MW-11-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-11-Screen-1	Jul/Aug 2017	MW-11-1	NA	NA	2.2 U	2.0 U
MW-11-Screen-1	Oct 2017	MW-11-1	NA	NA	3.0 U	2.0 UJ
MW-11-Screen-2						
MW-11-Screen-2	Oct 2016	MW-11-2	NA	NA	**4.0 J**	**0.9 J**
MW-11-Screen-2	Jan/Feb 2017	MW-11-2	NA	NA	2.4 U	2.0 U
MW-11-Screen-2	Apr/May 2017	MW-11-2	2.0 U	1.0 U	**0.7 J**	1.0 U
MW-11-Screen-2	Jul/Aug 2017	MW-11-2	NA	NA	2.1 U	2.0 U
MW-11-Screen-2	Jul/Aug 2017	DUP-5-3Q17	NA	NA	2.0 U	2.0 U
MW-11-Screen-2	Oct 2017	MW-11-2	NA	NA	3.0 U	2.0 U
MW-11-Screen-3						
MW-11-Screen-3	Oct 2016	MW-11-3	NA	NA	**2.1 J**	**0.7 J**
MW-11-Screen-3	Jan/Feb 2017	MW-11-3	NA	NA	2.5 U	2.0 U
MW-11-Screen-3	Apr/May 2017	MW-11-3	2.0 U	1.0 U	**1.1 J**	2.0 U
MW-11-Screen-3	Jul/Aug 2017	MW-11-3	NA	NA	2.9 U	2.0 U
MW-11-Screen-3	Oct 2017	MW-11-3	NA	NA	3.0 U	2.0 U
MW-11-Screen-4						
MW-11-Screen-4	Oct 2016	MW-11-4	NA	NA	**1.2 J**	2.0 U
MW-11-Screen-4	Oct 2016	DUP-4-4Q16	NA	NA	**1.4 J**	2.0 U
MW-11-Screen-4	Apr/May 2017	MW-11-4	2.0 U	1.0 U	**1.2 J**	2.0 U
MW-11-Screen-4	Oct 2017	MW-11-4	NA	NA	3.0 U	2.0 U
MW-11-Screen-5						
MW-11-Screen-5	Oct 2016	MW-11-5	NA	NA	**3.2**	2.0 U
MW-11-Screen-5	Apr/May 2017	MW-11-5	**6.1**	**0.4 J**	**2.1 J**	2.0 U
MW-11-Screen-5	Oct 2017	MW-11-5	NA	NA	**1.3 J**	2.0 U
MW-12-Screen-1						
MW-12-Screen-1	Jan/Feb 2017	MW-12-1	NA	NA	2.5 U	2.0 U
MW-12-Screen-1	Apr/May 2017	MW-12-1	2.0 U	1.0 U	**1.8 J**	2.0 U
MW-12-Screen-1	Jul/Aug 2017	MW-12-1	NA	NA	2.9 U	2.0 U
MW-12-Screen-2						
MW-12-Screen-2	Oct 2016	MW-12-2	NA	NA	**1.7 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-12-Screen-2	Jan/Feb 2017	MW-12-2	NA	NA	2.1 U	2.0 U
MW-12-Screen-2	Apr/May 2017	MW-12-2	2.0 U	1.0 U	**1.2 J**	2.0 U
MW-12-Screen-2	Jul/Aug 2017	MW-12-2	NA	NA	1.9 U	4.0 U
MW-12-Screen-2	Oct 2017	MW-12-2	NA	NA	**0.7 J**	2.0 U
MW-12-Screen-3						
MW-12-Screen-3	Oct 2016	MW-12-3	NA	NA	**1.2 J**	2.0 U
MW-12-Screen-3	Jan/Feb 2017	MW-12-3	NA	NA	1.6 U	2.0 U
MW-12-Screen-3	Jan/Feb 2017	DUP-7-1Q17	NA	NA	1.5 U	2.0 U
MW-12-Screen-3	Apr/May 2017	MW-12-3	2.0 U	1.0 U	**0.9 J**	**0.8 J**
MW-12-Screen-3	Jul/Aug 2017	MW-12-3	NA	NA	1.8 U	2.0 U
MW-12-Screen-3	Jul/Aug 2017	DUP-4-3Q17	NA	NA	2.4 U	2.0 U
MW-12-Screen-3	Oct 2017	MW-12-3	NA	NA	3.0 UJ	2.0 U
MW-12-Screen-4						
MW-12-Screen-4	Oct 2016	MW-12-4	NA	NA	**1.4 J**	**1.0 J**
MW-12-Screen-4	Apr/May 2017	MW-12-4	**1.4 J**	1.0 U	**1.1 J**	**0.8 J**
MW-12-Screen-4	Oct 2017	MW-12-4	NA	NA	**1.0 J**	2.0 U
MW-12-Screen-4	Oct 2017	DUP-5-4Q17	NA	NA	**0.8 J**	**0.7 J**
MW-12-Screen-5						
MW-12-Screen-5	Oct 2016	MW-12-5	NA	NA	**2.3 J**	**1.8 J**
MW-12-Screen-5	Apr/May 2017	MW-12-5	**1.8 J**	1.0 U	**1.8 J**	**1.5 J**
MW-12-Screen-5	Oct 2017	MW-12-5	NA	NA	**1.3 J**	**1.0 J**
MW-13						
MW-13	Apr/May 2017	MW-13	2.0 U	**0.1 J**	**330.0 J**	**4.0**
MW-13	Jul/Aug 2017	MW-13	NA	NA	**1300.0**	**2.5**
MW-13	Jul/Aug 2017	DUP-6-3Q17	NA	NA	**680.0**	**2.7**
MW-13	Oct 2017	MW-13	NA	NA	**1500.0 J**	**3.6**
MW-14-Screen-1						
MW-14-Screen-1	Apr/May 2017	MW-14-1	2.0 U	1.0 U	**1.2 J**	0.8 U
MW-14-Screen-1	Jul/Aug 2017	MW-14-1	NA	NA	1.8 U	**0.9 J**
MW-14-Screen-2						
MW-14-Screen-2	Oct 2016	MW-14-2	NA	NA	**0.9 J**	**0.8 J**
MW-14-Screen-2	Jan/Feb 2017	MW-14-2	NA	NA	1.2 U	**1.0 J**
MW-14-Screen-2	Apr/May 2017	MW-14-2	2.0 U	1.0 U	**0.6 J**	1.8 U
MW-14-Screen-2	Apr/May 2017	DUP-8-2Q17	2.0 U	1.0 U	**0.7 J**	**1.7 J**
MW-14-Screen-2	Jul/Aug 2017	MW-14-2	NA	NA	1.0 U	**0.9 J**
MW-14-Screen-2	Oct 2017	MW-14-2	NA	NA	3.0 UJ	2.0 U
MW-14-Screen-3						
MW-14-Screen-3	Oct 2016	MW-14-3	NA	NA	**0.6 J**	2.0 U
MW-14-Screen-3	Jan/Feb 2017	MW-14-3	NA	NA	1.4 U	**0.9 J**
MW-14-Screen-3	Apr/May 2017	MW-14-3	2.0 U	1.0 U	**0.7 J**	1.0 U
MW-14-Screen-3	Jul/Aug 2017	MW-14-3	NA	NA	1.0 U	2.0 UJ
MW-14-Screen-3	Jul/Aug 2017	DUP-2-3Q17	NA	NA	0.8 U	2.0 UJ
MW-14-Screen-3	Oct 2017	MW-14-3	NA	NA	3.0 UJ	2.0 U
MW-14-Screen-4						
MW-14-Screen-4	Oct 2016	MW-14-4	NA	NA	**2.2 J**	**2.7**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-14-Screen-4	Apr/May 2017	MW-14-4	2.0 U	1.0 U	**2.0 J**	**1.8 J**
MW-14-Screen-4	Oct 2017	MW-14-4	NA	NA	**2.3 J**	**1.8 J**
MW-14-Screen-5						
MW-14-Screen-5	Oct 2016	MW-14-5	NA	NA	**0.8 J**	2.0 U
MW-14-Screen-5	Apr/May 2017	MW-14-5	2.0 U	1.0 U	**0.9 J**	2.0 U
MW-14-Screen-5	Oct 2017	MW-14-5	NA	NA	**0.9 J**	2.0 U
MW-15						
MW-15	Oct 2016	MW-15	NA	NA	**2.3 J**	0.8 U
MW-15	Jan/Feb 2017	MW-15	NA	NA	6.6 U	**0.8 J**
MW-15	Apr/May 2017	MW-15	**1.1 J**	1.0 U	2.0 U	**0.9 J**
MW-15	Apr/May 2017	DUP-5-2Q17	**1.1 J**	1.0 U	3.2 U	**0.8 J**
MW-15	Jul/Aug 2017	MW-15	NA	NA	**5.9**	2.0 U
MW-15	Oct 2017	MW-15	NA	NA	**29.0 J**	2.0 U
MW-16						
MW-16	Apr/May 2017	MW-16	**3.9**	1.0 U	**4.7 J**	2.7 U
MW-16	Jul/Aug 2017	MW-16	NA	NA	**76.0**	**1.6 J**
MW-16	Oct 2017	MW-16	NA	NA	**490.0 J**	**1.7 J**
MW-16	Oct 2017	DUP-7-4Q17	NA	NA	**1100.0 J**	**1.9 J**
MW-17-Screen-1						
MW-17-Screen-1	Apr/May 2017	MW-17-1	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-1	Oct 2017	MW-17-1	NA	NA	3.0 U	2.0 U
MW-17-Screen-2						
MW-17-Screen-2	Oct 2016	MW-17-2	NA	NA	2.7 U	2.0 U
MW-17-Screen-2	Oct 2016	DUP-1-4Q16	NA	NA	2.6 U	2.0 U
MW-17-Screen-2	Jan/Feb 2017	MW-17-2	NA	NA	1.9 U	2.0 U
MW-17-Screen-2	Apr/May 2017	MW-17-2	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-2	Jul/Aug 2017	MW-17-2	NA	NA	3.0 U	2.0 U
MW-17-Screen-2	Oct 2017	MW-17-2	NA	NA	3.0 U	2.0 U
MW-17-Screen-3						
MW-17-Screen-3	Oct 2016	MW-17-3	NA	NA	2.4 U	2.0 U
MW-17-Screen-3	Jan/Feb 2017	MW-17-3	NA	NA	1.7 U	2.0 U
MW-17-Screen-3	Apr/May 2017	MW-17-3	2.0 U	1.0 U	3.0 U	2.0 U
MW-17-Screen-3	Jul/Aug 2017	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-3	Oct 2017	MW-17-3	NA	NA	3.0 U	2.0 U
MW-17-Screen-4						
MW-17-Screen-4	Oct 2016	MW-17-4	NA	NA	2.3 U	0.9 U
MW-17-Screen-4	Jan/Feb 2017	MW-17-4	NA	NA	2.5 U	2.0 U
MW-17-Screen-4	Apr/May 2017	MW-17-4	**3.0**	1.0 U	**0.7 J**	1.0 U
MW-17-Screen-4	Jul/Aug 2017	MW-17-4	NA	NA	0.5 U	2.0 U
MW-17-Screen-4	Oct 2017	MW-17-4	NA	NA	**1.3 J**	**1.9 J**
MW-17-Screen-5						
MW-17-Screen-5	Oct 2016	MW-17-5	NA	NA	2.6 U	2.0 U
MW-17-Screen-5	Apr/May 2017	MW-17-5	**7.7**	**2.7**	**0.9 J**	0.9 U
MW-17-Screen-5	Oct 2017	MW-17-5	NA	NA	**1.4 J**	**1.3 J**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-18-Screen-1						
MW-18-Screen-1	Apr/May 2017	MW-18-1	2.0 U	1.0 U	**0.8 J**	2.0 U
MW-18-Screen-2						
MW-18-Screen-2	Oct 2016	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-2	Jan/Feb 2017	MW-18-2	NA	NA	1.8 U	2.0 U
MW-18-Screen-2	Apr/May 2017	MW-18-2	2.0 U	1.0 U	**0.6 J**	2.0 U
MW-18-Screen-2	Jul/Aug 2017	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-2	Oct 2017	MW-18-2	NA	NA	3.0 U	2.0 U
MW-18-Screen-3						
MW-18-Screen-3	Oct 2016	MW-18-3	NA	NA	**2.0 J**	**1.3 J**
MW-18-Screen-3	Oct 2016	DUP-2-4Q16	NA	NA	**1.9 J**	**1.8 J**
MW-18-Screen-3	Jan/Feb 2017	MW-18-3	NA	NA	**3.3**	**1.3 J**
MW-18-Screen-3	Apr/May 2017	MW-18-3	**0.9 J**	1.0 U	**2.6 J**	**1.6 J**
MW-18-Screen-3	Jul/Aug 2017	MW-18-3	NA	NA	2.1 U	**1.6 J**
MW-18-Screen-3	Oct 2017	MW-18-3	NA	NA	**1.5 J**	**1.2 J**
MW-18-Screen-3	Oct 2017	DUP-3-4Q17	NA	NA	**1.5 J**	**1.9 J**
MW-18-Screen-4						
MW-18-Screen-4	Oct 2016	MW-18-4	NA	NA	**2.6 J**	**1.9 J**
MW-18-Screen-4	Jan/Feb 2017	MW-18-4	NA	NA	2.5 U	2.0 U
MW-18-Screen-4	Apr/May 2017	MW-18-4	2.0 U	1.0 U	2.5 U	**1.2 J**
MW-18-Screen-4	Jul/Aug 2017	MW-18-4	NA	NA	2.0 U	**1.6 J**
MW-18-Screen-4	Oct 2017	MW-18-4	NA	NA	**1.7 J**	**1.8 J**
MW-18-Screen-5						
MW-18-Screen-5	Oct 2016	MW-18-5	NA	NA	3.0 U	2.0 U
MW-18-Screen-5	Apr/May 2017	MW-18-5	2.0 U	1.0 U	**1.5 J**	2.0 U
MW-18-Screen-5	Oct 2017	MW-18-5	NA	NA	3.0 U	2.0 U
MW-19-Screen-1						
MW-19-Screen-1	Oct 2016	MW-19-1	NA	NA	3.0 U	2.0 U
MW-19-Screen-1	Jan/Feb 2017	MW-19-1	NA	NA	NA	NA
MW-19-Screen-1	Apr/May 2017	MW-19-1	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-19-Screen-1	Oct 2017	MW-19-1	NA	NA	3.0 U	2.0 U
MW-19-Screen-2						
MW-19-Screen-2	Oct 2016	MW-19-2	NA	NA	**1.7 J**	**0.8 J**
MW-19-Screen-2	Jan/Feb 2017	MW-19-2	NA	NA	NA	NA
MW-19-Screen-2	Apr/May 2017	MW-19-2	2.0 U	1.0 U	**2.3 J**	2.0 U
MW-19-Screen-2	Oct 2017	MW-19-2	NA	NA	**2.4 J**	**0.7 J**
MW-19-Screen-3						
MW-19-Screen-3	Oct 2016	MW-19-3	NA	NA	**5.1**	2.0 U
MW-19-Screen-3	Jan/Feb 2017	MW-19-3	NA	NA	NA	NA
MW-19-Screen-3	Apr/May 2017	MW-19-3	2.0 U	1.0 U	**3.1**	**1.3 J**
MW-19-Screen-3	Oct 2017	MW-19-3	NA	NA	**2.5 J**	**1.2 J**
MW-19-Screen-4						
MW-19-Screen-4	Oct 2016	MW-19-4	NA	NA	**3.1**	**1.8 J**
MW-19-Screen-4	Oct 2016	DUP-6-4Q16	NA	NA	**2.5 J**	**1.9 J**
MW-19-Screen-4	Jan/Feb 2017	MW-19-4	NA	NA	NA	NA

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-19-Screen-4	Apr/May 2017	MW-19-4	**0.7 J**	1.0 U	**2.7 J**	**1.5 J**
MW-19-Screen-4	Oct 2017	MW-19-4	NA	NA	**1.9 J**	**1.5 J**
MW-19-Screen-5						
MW-19-Screen-5	Oct 2016	MW-19-5	NA	NA	**1.3 J**	2.0 U
MW-19-Screen-5	Jan/Feb 2017	MW-19-5	NA	NA	NA	NA
MW-19-Screen-5	Apr/May 2017	MW-19-5	**1.1 J**	1.0 U	**1.5 J**	2.0 U
MW-19-Screen-5	Oct 2017	MW-19-5	NA	NA	**3.7**	**2.0**
MW-20-Screen-1						
MW-20-Screen-1	Jul/Aug 2017	MW-20-1	NA	NA	1.7 U	2.0 UJ
MW-20-Screen-2						
MW-20-Screen-2	Oct 2016	MW-20-2	NA	NA	2.1 U	0.9 U
MW-20-Screen-2	Jan/Feb 2017	MW-20-2	NA	NA	1.7 U	2.0 U
MW-20-Screen-2	Apr/May 2017	MW-20-2	2.0 U	1.0 U	3.0 U	2.0 U
MW-20-Screen-2	Jul/Aug 2017	MW-20-2	NA	NA	1.2 U	2.0 UJ
MW-20-Screen-2	Oct 2017	MW-20-2	NA	NA	3.0 U	2.0 U
MW-20-Screen-3						
MW-20-Screen-3	Oct 2016	MW-20-3	NA	NA	2.6 U	0.9 U
MW-20-Screen-3	Jan/Feb 2017	MW-20-3	NA	NA	1.5 U	2.0 U
MW-20-Screen-3	Apr/May 2017	MW-20-3	2.0 U	1.0 U	3.0 U	2.0 U
MW-20-Screen-3	Apr/May 2017	DUP-2-2Q17	2.0 U	1.0 U	**0.5 J**	2.0 U
MW-20-Screen-3	Jul/Aug 2017	MW-20-3	NA	NA	1.2 U	2.0 UJ
MW-20-Screen-3	Jul/Aug 2017	DUP-1-3Q17	NA	NA	1.4 U	2.0 UJ
MW-20-Screen-3	Oct 2017	MW-20-3	NA	NA	3.0 U	2.0 U
MW-20-Screen-3	Oct 2017	DUP-1-4Q17	NA	NA	**0.7 J**	2.0 U
MW-20-Screen-4						
MW-20-Screen-4	Oct 2016	MW-20-4	NA	NA	2.0 U	0.8 U
MW-20-Screen-4	Jan/Feb 2017	MW-20-4	NA	NA	1.0 U	10.0 UJ
MW-20-Screen-4	Apr/May 2017	MW-20-4	**1.1 J**	1.0 U	**0.7 J**	2.0 U
MW-20-Screen-4	Jul/Aug 2017	MW-20-4	NA	NA	1.7 U	2.0 UJ
MW-20-Screen-4	Oct 2017	MW-20-4	NA	NA	3.0 U	2.0 U
MW-20-Screen-5						
MW-20-Screen-5	Oct 2016	MW-20-5	NA	NA	2.4 U	2.0 U
MW-20-Screen-5	Jan/Feb 2017	MW-20-5	NA	NA	1.3 U	2.0 U
MW-20-Screen-5	Apr/May 2017	MW-20-5	2.0 U	1.0 U	**0.6 J**	2.0 U
MW-20-Screen-5	Jul/Aug 2017	MW-20-5	NA	NA	1.3 U	2.0 UJ
MW-20-Screen-5	Oct 2017	MW-20-5	NA	NA	3.0 U	2.0 U
MW-21-Screen-1						
MW-21-Screen-1	Apr/May 2017	MW-21-1	2.0 U	1.0 U	3.0 U	**1.4 J**
MW-21-Screen-1	Jul/Aug 2017	MW-21-1	NA	NA	3.1 U	**1.8 J**
MW-21-Screen-2						
MW-21-Screen-2	Oct 2016	MW-21-2	NA	NA	**1.6 J**	2.0 U
MW-21-Screen-2	Jan/Feb 2017	MW-21-2	NA	NA	1.4 U	**0.7 J**
MW-21-Screen-2	Apr/May 2017	MW-21-2	2.0 U	1.0 U	3.0 U	**1.0 J**
MW-21-Screen-2	Jul/Aug 2017	MW-21-2	NA	NA	1.8 U	2.0 U
MW-21-Screen-2	Oct 2017	MW-21-2	NA	NA	3.0 U	2.0 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						
MW-21-Screen-3	Oct 2016	MW-21-3	NA	NA	**1.7 J**	2.0 U
MW-21-Screen-3	Jan/Feb 2017	MW-21-3	NA	NA	1.3 U	2.0 U
MW-21-Screen-3	Jan/Feb 2017	DUP-3-1Q17	NA	NA	1.1 U	2.0 U
MW-21-Screen-3	Apr/May 2017	MW-21-3	2.0 U	1.0 U	3.0 U	**0.8 J**
MW-21-Screen-3	Jul/Aug 2017	MW-21-3	NA	NA	**4.2**	2.0 U
MW-21-Screen-3	Oct 2017	MW-21-3	NA	NA	3.0 U	2.0 U
MW-21-Screen-4						
MW-21-Screen-4	Oct 2016	MW-21-4	NA	NA	**3.6**	**1.2 J**
MW-21-Screen-4	Jan/Feb 2017	MW-21-4	NA	NA	2.6 U	**1.4 J**
MW-21-Screen-4	Apr/May 2017	MW-21-4	2.0 U	1.0 U	**1.8 J**	1.1 U
MW-21-Screen-4	Apr/May 2017	DUP-6-2Q17	2.0 U	1.0 U	**1.8 J**	1.2 U
MW-21-Screen-4	Jul/Aug 2017	MW-21-4	NA	NA	3.0 U	**1.3 J**
MW-21-Screen-4	Oct 2017	MW-21-4	NA	NA	**1.0 J**	**1.1 J**
MW-21-Screen-5						
MW-21-Screen-5	Oct 2016	MW-21-5	NA	NA	**1.6 J**	**1.6 J**
MW-21-Screen-5	Jan/Feb 2017	MW-21-5	NA	NA	2.5 U	**1.6 J**
MW-21-Screen-5	Apr/May 2017	MW-21-5	2.0 U	1.0 U	3.0 U	**1.8 J**
MW-21-Screen-5	Jul/Aug 2017	MW-21-5	NA	NA	2.6 U	**1.4 J**
MW-21-Screen-5	Oct 2017	MW-21-5	NA	NA	**1.2 J**	**1.2 J**
MW-22-Screen-1						
MW-22-Screen-1	Oct 2016	MW-22-1	NA	NA	**2.3 J**	2.0 U
MW-22-Screen-1	Jan/Feb 2017	MW-22-1	NA	NA	3.0 U	2.0 U
MW-22-Screen-1	Apr/May 2017	MW-22-1	2.0 U	1.0 U	**1.2 J**	1.3 U
MW-22-Screen-1	Jul/Aug 2017	MW-22-1	NA	NA	2.5 U	2.0 U
MW-22-Screen-1	Oct 2017	MW-22-1	NA	NA	**0.8 J**	2.0 U
MW-22-Screen-2						
MW-22-Screen-2	Oct 2016	MW-22-2	NA	NA	**4.9**	**1.7 J**
MW-22-Screen-2	Jan/Feb 2017	MW-22-2	NA	NA	**2.2 J**	**1.5 J**
MW-22-Screen-2	Apr/May 2017	MW-22-2	2.0 U	1.0 U	**1.2 J**	1.1 U
MW-22-Screen-2	Apr/May 2017	DUP-3-2Q17	2.0 U	1.0 U	**1.4 J**	1.1 U
MW-22-Screen-2	Jul/Aug 2017	MW-22-2	NA	NA	**3.2**	**1.3 J**
MW-22-Screen-2	Oct 2017	MW-22-2	NA	NA	**1.6 J**	**1.7 J**
MW-22-Screen-3						
MW-22-Screen-3	Oct 2016	MW-22-3	NA	NA	**8.2**	**3.1**
MW-22-Screen-3	Oct 2016	DUP-3-4Q16	NA	NA	**3.3**	**2.7**
MW-22-Screen-3	Jan/Feb 2017	MW-22-3	NA	NA	**1.7 J**	**1.9 J**
MW-22-Screen-3	Apr/May 2017	MW-22-3	**1.2 J**	1.0 U	**2.7 J**	2.8 U
MW-22-Screen-3	Jul/Aug 2017	MW-22-3	NA	NA	**3.1**	**2.3**
MW-22-Screen-3	Oct 2017	MW-22-3	NA	NA	**2.4 J**	**2.4**
MW-22-Screen-3	Oct 2017	DUP-4-4Q17	NA	NA	**2.4 J**	**2.5**
MW-22-Screen-4						
MW-22-Screen-4	Oct 2016	MW-22-4	NA	NA	**3.5**	**2.9**
MW-22-Screen-4	Apr/May 2017	MW-22-4	**0.8 J**	1.0 U	**2.9 J**	2.9 U
MW-22-Screen-4	Oct 2017	MW-22-4	NA	NA	**2.4 J**	**2.5**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-22-Screen-5						
MW-22-Screen-5	Oct 2016	MW-22-5	NA	NA	**1.9 J**	2.0 U
MW-22-Screen-5	Apr/May 2017	MW-22-5	2.0 U	1.0 U	**0.7 J**	2.0 U
MW-22-Screen-5	Oct 2017	MW-22-5	NA	NA	3.0 U	2.0 U
MW-23-Screen-1						
MW-23-Screen-1	Oct 2016	MW-23-1	NA	NA	**2.1 J**	**1.1 J**
MW-23-Screen-1	Jan/Feb 2017	MW-23-1	NA	NA	3.8 U	2.0 U
MW-23-Screen-1	Apr/May 2017	MW-23-1	2.0 U	1.0 U	**1.6 J**	2.0 U
MW-23-Screen-1	Jul/Aug 2017	MW-23-1	NA	NA	**2.0 J**	2.0 U
MW-23-Screen-1	Oct 2017	MW-23-1	NA	NA	**0.9 J**	2.0 U
MW-23-Screen-2						
MW-23-Screen-2	Oct 2016	MW-23-2	NA	NA	**2.7 J**	**1.6 J**
MW-23-Screen-2	Jan/Feb 2017	MW-23-2	NA	NA	2.6 U	1.1 U
MW-23-Screen-2	Apr/May 2017	MW-23-2	2.0 U	1.0 U	**1.7 J**	1.4 U
MW-23-Screen-2	Jul/Aug 2017	MW-23-2	NA	NA	**2.2 J**	**1.1 J**
MW-23-Screen-2	Jul/Aug 2017	DUP-3-3Q17	NA	NA	**2.2 J**	**1.0 J**
MW-23-Screen-2	Oct 2017	MW-23-2	NA	NA	**1.1 J**	**1.0 J**
MW-23-Screen-3						
MW-23-Screen-3	Oct 2016	MW-23-2	NA	NA	**3.9**	**3.6**
MW-23-Screen-3	Jan/Feb 2017	MW-23-2	NA	NA	4.7 U	2.5 U
MW-23-Screen-3	Apr/May 2017	MW-23-3	2.0 U	1.0 U	**3.2**	2.9 U
MW-23-Screen-3	Jul/Aug 2017	MW-23-3	NA	NA	**3.8**	**2.9**
MW-23-Screen-3	Oct 2017	MW-23-3	NA	NA	**3.0**	**3.0**
MW-23-Screen-4						
MW-23-Screen-4	Oct 2016	MW-23-4	NA	NA	**4.6**	**2.9**
MW-23-Screen-4	Jan/Feb 2017	MW-23-4	NA	NA	4.2 U	2.3 U
MW-23-Screen-4	Apr/May 2017	MW-23-4	**1.1 J**	1.0 U	**3.1**	3.2 U
MW-23-Screen-4	Apr/May 2017	DUP-7-2Q17	**1.2 J**	1.0 U	**3.0**	3.6 U
MW-23-Screen-4	Jul/Aug 2017	MW-23-4	NA	NA	**3.7**	**3.1**
MW-23-Screen-4	Oct 2017	MW-23-4	NA	NA	**3.2**	**3.5**
MW-23-Screen-5						
MW-23-Screen-5	Oct 2016	MW-23-5	NA	NA	**1.6 J**	2.0 U
MW-23-Screen-5	Apr/May 2017	MW-23-5	**2.6**	**0.3 J**	**0.6 J**	2.0 U
MW-23-Screen-5	Oct 2017	MW-23-5	NA	NA	3.0 UJ	2.0 U
MW-24-Screen-1						
MW-24-Screen-1	Oct 2016	MW-24-1	NA	NA	**2.3 J**	2.0 U
MW-24-Screen-1	Jan/Feb 2017	MW-24-1	NA	NA	**1.1 J**	2.0 U
MW-24-Screen-1	Apr/May 2017	MW-24-1	**0.9 J**	1.0 U	4.7 U	1.0 U
MW-24-Screen-1	Jul/Aug 2017	MW-24-1	NA	NA	**4.6**	2.0 U
MW-24-Screen-1	Oct 2017	MW-24-1	NA	NA	**1.1 J**	2.0 U
MW-24-Screen-2						
MW-24-Screen-2	Oct 2016	MW-24-2	NA	NA	**3.1**	**2.2**
MW-24-Screen-2	Jan/Feb 2017	MW-24-2	NA	NA	3.0 U	**0.9 J**
MW-24-Screen-2	Apr/May 2017	MW-24-2	**1.5 J**	1.0 U	**2.6 J**	2.3 U
MW-24-Screen-2	Jul/Aug 2017	MW-24-2	NA	NA	**3.9**	**1.8 J**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-24-Screen-2	Oct 2017	MW-24-2	NA	NA	**1.9 J**	**1.9 J**
MW-24-Screen-3						
MW-24-Screen-3	Oct 2016	MW-24-3	NA	NA	**2.5 J**	2.0 U
MW-24-Screen-3	Jan/Feb 2017	MW-24-3	NA	NA	3.0 U	2.0 U
MW-24-Screen-3	Apr/May 2017	MW-24-3	**1.7 J**	1.0 U	**1.0 J**	2.0 U
MW-24-Screen-3	Jul/Aug 2017	MW-24-3	NA	NA	2.3 U	2.0 U
MW-24-Screen-3	Oct 2017	MW-24-3	NA	NA	**0.6 J**	2.0 U
MW-24-Screen-4						
MW-24-Screen-4	Oct 2016	MW-24-4	NA	NA	**1.4 J**	2.0 UJ
MW-24-Screen-4	Jan/Feb 2017	MW-24-4	NA	NA	2.4 U	2.0 U
MW-24-Screen-4	Apr/May 2017	MW-24-4	**0.7 J**	1.0 U	**1.4 J**	2.0 U
MW-24-Screen-4	Jul/Aug 2017	MW-24-4	NA	NA	2.2 U	2.0 U
MW-24-Screen-4	Oct 2017	MW-24-4	NA	NA	**0.5 J**	**2.5**
MW-24-Screen-5						
MW-24-Screen-5	Oct 2016	MW-24-5	NA	NA	**4.5**	**3.0**
MW-24-Screen-5	Apr/May 2017	MW-24-5	**1.8 J**	1.0 U	**3.8**	2.2 U
MW-24-Screen-5	Oct 2017	MW-24-5	NA	NA	**3.0**	2.0 U
MW-25-Screen-1						
MW-25-Screen-1	Oct 2016	MW-25-1	NA	NA	**2.5 J**	2.0 U
MW-25-Screen-1	Jan/Feb 2017	MW-25-1	NA	NA	1.9 U	2.0 U
MW-25-Screen-1	Apr/May 2017	MW-25-1	2.0 U	1.0 U	2.6 U	2.0 U
MW-25-Screen-1	Jul/Aug 2017	MW-25-1	NA	NA	**3.1**	2.0 UJ
MW-25-Screen-1	Oct 2017	MW-25-1	NA	NA	**1.8 J**	2.0 U
MW-25-Screen-2						
MW-25-Screen-2	Oct 2016	MW-25-2	NA	NA	**2.6 J**	**2.1**
MW-25-Screen-2	Jan/Feb 2017	MW-25-2	NA	NA	**2.2 J**	**1.1 J**
MW-25-Screen-2	Apr/May 2017	MW-25-2	2.0 U	1.0 U	3.9 U	**2.9**
MW-25-Screen-2	Apr/May 2017	DUP-1-2Q17	2.0 U	1.0 U	3.9 U	**2.8**
MW-25-Screen-2	Jul/Aug 2017	MW-25-2	NA	NA	**4.2**	**3.1 J**
MW-25-Screen-2	Oct 2017	MW-25-2	NA	NA	**3.0 J**	**2.7**
MW-25-Screen-2	Oct 2017	DUP-2-4Q17	NA	NA	**2.6 J**	**2.1**
MW-25-Screen-3						
MW-25-Screen-3	Oct 2016	MW-25-3	NA	NA	**2.8 J**	**2.5**
MW-25-Screen-3	Jan/Feb 2017	MW-25-3	NA	NA	**2.5 J**	**1.6 J**
MW-25-Screen-3	Apr/May 2017	MW-25-3	2.0 U	1.0 U	4.9 U	**2.9**
MW-25-Screen-3	Jul/Aug 2017	MW-25-3	NA	NA	**4.1**	**3.3 J**
MW-25-Screen-3	Oct 2017	MW-25-3	NA	NA	**3.1 J**	**3.2**
MW-25-Screen-4						
MW-25-Screen-4	Oct 2016	MW-25-4	NA	NA	**2.5 J**	**1.0 J**
MW-25-Screen-4	Jan/Feb 2017	MW-25-4	NA	NA	**1.8 J**	2.0 U
MW-25-Screen-4	Apr/May 2017	MW-25-4	2.0 U	1.0 U	2.7 U	**0.7 J**
MW-25-Screen-4	Jul/Aug 2017	MW-25-4	NA	NA	2.3 U	**1.1 J**
MW-25-Screen-4	Oct 2017	MW-25-4	NA	NA	**1.7 J**	**1.6 J**
MW-25-Screen-5						
MW-25-Screen-5	Oct 2016	MW-25-5	NA	NA	**1.5 J**	2.0 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (µg/L)
MW-25-Screen-5	Jan/Feb 2017	MW-25-5	NA	NA	**1.1 J**	2.0 U
MW-25-Screen-5	Apr/May 2017	MW-25-5	**0.8 J**	1.0 U	1.3 U	2.0 U
MW-25-Screen-5	Jul/Aug 2017	MW-25-5	NA	NA	0.8 U	2.0 UJ
MW-25-Screen-5	Oct 2017	MW-25-5	NA	NA	3.0 UJ	2.0 U
MW-26-Screen-1						
MW-26-Screen-1	Oct 2016	MW-26-1	NA	NA	3.0 U	**0.7 J**
MW-26-Screen-1	Jan/Feb 2017	MW-26-1	NA	NA	1.9 U	2.0 U
MW-26-Screen-1	Apr/May 2017	MW-26-1	2.0 U	1.0 U	**1.0 J**	2.0 U
MW-26-Screen-1	Apr/May 2017	DUP-4-2Q17	2.0 U	1.0 U	0.9 U	**0.9 J**
MW-26-Screen-1	Jul/Aug 2017	MW-26-1	NA	NA	**1.6 J**	2.0 U
MW-26-Screen-1	Oct 2017	MW-26-1	NA	NA	3.0 U	2.0 U
MW-26-Screen-2						
MW-26-Screen-2	Oct 2016	MW-26-2	NA	NA	**3.2**	**1.4 J**
MW-26-Screen-2	Jan/Feb 2017	MW-26-2	NA	NA	2.3 U	2.0 U
MW-26-Screen-2	Apr/May 2017	MW-26-2	2.0 U	1.0 U	**1.2 J**	1.7 U
MW-26-Screen-2	Jul/Aug 2017	MW-26-2	NA	NA	**3.0**	1.3 J
MW-26-Screen-2	Oct 2017	MW-26-2	NA	NA	**1.4 J**	**1.5 J**
Analyte concentration exceeds the standard for:						
CA MCL			10.0	15.0*	50.0	10.0**
EPA REGION IX MCL			10.0	15.0*	100.0	NE

Notes

DUP(E)	Field Duplicate
NA	Not analyzed
NE	Not established
*	Regulatory Action Level
**	On July 1, 2014 the State Water Resources Control board (SWRCB) adopted an MCL for Cr(VI) of 10.0 µg/L
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 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
LA CANADA IRRIGATION DIST. WELL 01					
	9/6/2016	NA	NA	**0.8**	**1.2**
LA CANADA IRRIGATION DIST. WELL 06					
	9/12/2016	NA	NA	**0.7**	**1.4**
	12/12/2016	NA	0.5 U	**0.6**	**1.1**
	3/12/2017	4.0 U	NA	0.5 U	**0.9**
	6/5/2017	NA	NA	**0.5**	**1.1**
LAS FLORES WATER CO. WELL 02					
	8/1/2016	**4.5**	NA	**0.7**	NA
	8/8/2016	**4.0**	NA	0.5 U	NA
	8/15/2016	4.0 U	NA	0.5 U	NA
	8/22/2016	**4.3**	NA	0.5 U	NA
	8/29/2016	**4.8**	NA	0.5 U	NA
	9/6/2016	**4.6**	NA	0.5 U	NA
	9/12/2016	**4.5**	NA	**0.9**	NA
	9/19/2016	**4.1**	NA	**0.6**	NA
	9/26/2016	**5.3**	NA	**0.5**	NA
	10/3/2016	**4.6**	NA	**1.0**	NA
	10/10/2016	**4.1**	NA	**0.8**	NA
	10/17/2016	**5.2**	NA	**0.9**	NA
	10/24/2016	**4.8**	NA	**1.8**	NA
	11/7/2016	**4.7**	NA	**1.2**	NA
	11/14/2016	**4.5**	NA	**1.0**	NA
	11/21/2016	**4.9**	NA	**1.3**	NA
	11/28/2016	**4.0**	NA	**1.7**	NA
	12/5/2016	**4.2**	NA	**2.1**	NA
	12/12/2016	**4.6**	NA	**1.9**	NA
	12/19/2016	4.0 U	NA	**1.1**	NA
	12/27/2016	4.0 U	NA	0.5 U	NA
	1/3/2017	**4.0**	NA	0.5 U	NA
	1/9/2017	**4.5**	NA	**0.9**	NA
	1/16/2017	**4.8**	NA	**1.2**	NA
	1/23/2017	4.0 U	NA	**0.5**	NA
	2/6/2017	4.0 U	NA	**0.6**	NA
	4/17/2017	**5.1**	NA	**0.9**	NA
	4/24/2017	**5.1**	NA	**1.3**	NA
	5/8/2017	**4.7**	NA	**0.6**	NA
	5/15/2017	**4.9**	NA	**0.6**	NA
	5/22/2017	**4.9**	NA	**1.1**	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	5/30/2017	**4.4**	NA	**1.0**	NA
	6/5/2017	**4.7**	NA	**1.2**	NA
	6/12/2017	**5.4**	NA	**1.1**	NA
	6/19/2017	**5.0**	NA	**1.0**	NA
	6/26/2017	**4.5**	NA	**1.3**	NA
	7/3/2017	**5.2**	NA	**1.3**	NA
	7/10/2017	**4.7**	NA	**1.2**	NA
	7/17/2017	**4.6**	NA	**1.2**	NA
	7/24/2017	**4.3**	NA	**1.3**	NA
	8/7/2017	**6.0**	NA	**1.8**	NA
	8/14/2017	**4.1**	NA	**1.7**	NA
	8/21/2017	**5.2**	NA	**0.9**	NA
	8/28/2017	**5.5**	NA	**1.1**	NA
	9/5/2017	**4.8**	NA	**1.4**	NA
	9/11/2017	**5.1**	NA	**0.8**	NA
	9/18/2017	**5.2**	NA	**1.2**	NA
	9/25/2017	**4.8**	NA	**1.3**	NA
	10/2/2017	**5.1**	NA	**1.3**	NA
	10/9/2017	**4.9**	NA	**1.3**	NA
	10/16/2017	**5.3**	NA	**1.1**	NA
	10/23/2017	**5.0**	NA	**1.6**	NA
	10/30/2017	**5.6**	NA	**1.2**	NA
LINCOLN AVENUE WATER CO.	**WELL 03**				
	8/2/2016	**7.8**	**1.0**	0.5 U	**1.6**
	8/8/2016	NA	**1.3**	0.5 U	**1.6**
	8/9/2016	**6.7**	NA	NA	NA
	8/16/2016	**7.6**	NA	NA	NA
	8/23/2016	**8.4**	NA	NA	NA
	8/30/2016	**9.0**	NA	NA	NA
	9/6/2016	**9.2**	**1.2**	0.5 U	**1.6**
	9/13/2016	4.0 U	NA	NA	NA
	9/20/2016	**8.0**	NA	NA	NA
	9/27/2016	**9.0**	NA	NA	NA
	10/4/2016	**7.9**	**1.7**	**0.7**	**2.5**
	10/11/2016	**8.6**	NA	NA	NA
	10/18/2016	**8.2**	NA	NA	NA
	10/25/2016	**7.8**	NA	NA	NA
	11/8/2016	**7.9**	NA	NA	NA
	11/15/2016	**7.3**	NA	NA	NA
	11/22/2016	**14.0**	NA	NA	NA
	11/29/2016	**7.2**	NA	NA	NA
	12/6/2016	**6.9**	**1.2**	0.5 U	**1.5**
	12/13/2016	**8.0**	NA	NA	NA
	12/20/2016	**7.4**	NA	NA	NA
	12/27/2016	**7.3**	NA	NA	NA
	1/3/2017	**7.9**	**0.9**	0.5 U	**1.5**
	1/10/2017	**7.9**	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	1/17/2017	**7.3**	NA	NA	NA
	1/24/2017	**7.0**	NA	NA	NA
	2/7/2017	**5.2**	**0.6**	0.5 U	**1.3**
	2/14/2017	**5.7**	NA	NA	NA
	2/21/2017	**5.1**	NA	NA	NA
	2/28/2017	**4.9**	NA	NA	NA
	3/7/2017	4.0 U	0.5 U	0.5 U	**1.3**
	3/14/2017	**4.0**	NA	NA	NA
	3/21/2017	4.0 U	NA	NA	NA
	3/28/2017	4.0 U	NA	NA	NA
	4/4/2017	4.0 U	0.5 U	0.5 U	**1.1**
	4/11/2017	4.0 U	NA	NA	NA
	4/18/2017	4.0 U	NA	NA	NA
	4/25/2017	4.0 U	NA	NA	NA
	5/2/2017	4.0 U	0.5 U	0.5 U	**1.0**
	5/9/2017	4.0 U	NA	NA	NA
	5/16/2017	4.0 U	NA	NA	NA
	5/23/2017	4.0 U	NA	NA	NA
	5/30/2017	4.0 U	NA	NA	NA
	6/6/2017	4.0 U	0.5 U	0.5 U	**1.0**
	6/13/2017	4.0 U	NA	NA	NA
	6/20/2017	4.0 U	NA	NA	NA
	6/27/2017	4.0 U	NA	NA	NA
	7/3/2017	4.0 U	0.5 U	0.5 U	**1.0**
	7/11/2017	4.0 U	NA	NA	NA
	8/8/2017	NA	0.5 U	0.5 U	0.5 U
LINCOLN AVENUE WATER CO. WELL 05					
	8/2/2016	**13.0**	**2.0**	**0.6**	**1.4**
	8/9/2016	**12.0**	NA	NA	NA
	8/16/2016	**12.0**	NA	NA	NA
	8/23/2016	**13.0**	NA	NA	NA
	8/30/2016	**14.0**	NA	NA	NA
	9/6/2016	**13.0**	**2.1**	**0.6**	**1.4**
	9/13/2016	**13.0**	NA	NA	NA
	9/20/2016	**14.0**	NA	NA	NA
	9/27/2016	**14.0**	NA	NA	NA
	10/4/2016	**12.0**	**2.9**	**0.8**	**2.1**
	10/11/2016	**14.0**	NA	NA	NA
	10/18/2016	**13.0**	NA	NA	NA
	10/25/2016	**13.0**	NA	NA	NA
	11/8/2016	**13.0**	NA	NA	NA
	11/15/2016	**12.0**	NA	NA	NA
	11/22/2016	**7.8**	NA	NA	NA
	11/29/2016	**13.0**	NA	NA	NA
	12/6/2016	**12.0**	**2.8**	**0.6**	**1.5**
	12/13/2016	**14.0**	NA	NA	NA
	12/20/2016	**13.0**	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	12/27/2016	**13.0**	NA	NA	NA
	1/5/2017	**13.0**	**1.6**	0.5 U	**0.9**
	1/17/2017	**13.0**	NA	NA	NA
	2/7/2017	**13.0**	**1.7**	**0.5**	**1.5**
	7/11/2017	**8.8**	**0.5**	**0.8**	**2.0**
	7/18/2017	**17.0**	NA	NA	NA
	7/25/2017	**18.0**	NA	NA	NA
	8/8/2017	**16.0**	**1.6**	**0.8**	**2.2**
LINCOLN AVENUE WATER CO. WELL 06					
	9/5/2017	**17.0**	**2.1**	**0.8**	**1.9**
	9/12/2017	**18.0**	**1.9**	**0.8**	**1.8**
	9/19/2017	**17.0**	NA	NA	NA
	9/26/2017	**17.0**	NA	NA	NA
	10/3/2017	**18.0**	**1.9**	**0.6**	**1.5**
	10/10/2017	**18.0**	NA	NA	NA
	10/17/2017	**16.0**	NA	NA	NA
	10/24/2017	**17.0**	NA	NA	NA
PASADENA-CITY, WATER DEPT. ARROYO					
	8/2/2016	**12.3**	**0.7**	0.5 U	**1.8**
	8/9/2016	**12.4**	**0.9**	**0.6**	**2.3**
	8/16/2016	**11.6**	0.5 U	0.5 U	**1.3**
	8/23/2016	**11.7**	**0.8**	**0.5**	**1.9**
	8/30/2016	**11.7**	**0.8**	**0.6**	**2**
	9/6/2016	**12.2**	**1.0**	**0.6**	**2.1**
	9/13/2016	**11.4**	**0.9**	**0.6**	**2.1**
	9/20/2016	**11.9**	**0.9**	**0.6**	**2.2**
	9/27/2016	**11.2**	**0.8**	**0.5**	**1.8**
	10/4/2016	**11.5**	**0.8**	**0.6**	**2.1**
	10/11/2016	**11.2**	**0.8**	**0.6**	**2.2**
	10/18/2016	**11.2**	**0.8**	**0.5**	**1.9**
	10/25/2016	**11.1**	**0.8**	**0.5**	**1.9**
	11/8/2016	**10.9**	**0.6**	0.5 U	**1.4**
	11/15/2016	**11.1**	**0.6**	0.5 U	**1.5**
	11/22/2016	**10.8**	**0.6**	0.5 U	**1.4**
	11/29/2016	**11.7**	**0.9**	**0.5**	**1.9**
	12/6/2016	**11.6**	**1.0**	**0.6**	**2.1**
	12/13/2016	**11.3**	**1.0**	**0.6**	**2.1**
	12/20/2016	**11.4**	**1.0**	**0.6**	**2.1**
	12/27/2016	**11.7**	**1.1**	**0.6**	**2.2**
	1/3/2017	**10.6**	**0.9**	**0.5**	**2**
	1/10/2017	**11.2**	**0.8**	**0.6**	**2**
	1/17/2017	**11.2**	**0.9**	**0.5**	**2.1**
	1/24/2017	**11.0**	**0.9**	**0.6**	**2.1**
	2/7/2017	**10.9**	**0.9**	**0.6**	**2.2**
	2/14/2017	**10.7**	**0.7**	**0.6**	**2.0**
	2/21/2017	**11.6**	**0.8**	**0.5**	**1.9**
	2/28/2017	**11.4**	**0.7**	0.5 U	**1.9**

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	3/7/2017	12.2	0.7	0.6	1.9
	3/14/2017	10.0	0.6	0.6	1.9
	3/21/2017	10.0	0.8	0.6	2.1
	3/28/2017	8.5	0.8	0.6	2.1
	4/4/2017	11.4	0.6	0.5	2.0
	4/11/2017	9.7	0.6	0.6	2.0
	4/18/2017	10.3	0.7	0.5	1.9
	4/25/2017	10.6	0.8	0.6	2.1
	5/2/2017	10.5	0.7	0.6	2.2
	5/9/2017	10.3	0.7	0.6	2.1
	5/16/2017	10.4	0.7	0.6	2.1
	5/23/2017	10.5	0.9	0.6	2.3
	5/30/2017	10.3	0.6	0.5 U	1.6
	6/6/2017	11.0	0.6	0.5	2.2
	6/13/2017	10.8	0.7	0.5	2.1
	6/20/2017	10.3	0.8	0.5	2.0
	6/27/2017	10.6	0.8	0.6	2.2
	7/5/2017	9.6	2.1	0.5	2.0
	7/11/2017	9.7	0.9	0.6	2.2
	7/18/2017	9.8	0.9	0.6	2.3
	7/25/2017	9.9	0.8	0.6	2.1
	8/8/2017	10.7	0.7	0.5 U	2.1
	8/15/2017	10.0	0.8	0.5 U	2.2
	8/22/2017	10.6	0.8	0.5	2.1
	8/29/2017	10.0	0.8	0.5	2.1
	9/5/2017	10.8	0.8	0.5 U	2.1
	9/12/2017	10.9	0.9	0.5	2.2
	9/26/2017	10.1	1.0	0.7	2.3
	10/3/2017	10.6	0.8	0.6	2.3
	10/10/2017	11.5	0.8	0.5 U	1.9
	10/17/2017	11.6	0.9	0.6	2.4
	10/24/2017	11.7	0.9	0.5	2.2
PASADENA-CITY, WATER DEPT. VENTURA					
	9/13/2016	4.5	0.5 U	1.5	3.6
	10/4/2016	4.0	0.5 U	1.4	3.2
	12/6/2016	4.2	0.5 U	1.4	3.2
	12/13/2016	4.5	0.5 U	1.5	3.3
	1/10/2017	4.6	0.5 U	1.4	3.0
	2/7/2017	4.0 U	0.5 U	1.4	3.4
	3/7/2017	4.0 U	0.5 U	1.3	3.1
	4/4/2017	4.0 U	0.5 U	1.3	3.2
	4/11/2017	4.0 U	0.5 U	1.3	3.0
	8/8/2017	4.1	0.5 U	1.2	3.2
PASADENA-CITY, WATER DEPT. WELL 52					
	8/2/2016	5.0	0.5 U	0.8	5.6

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
RUBIO CANON LAND & WATER ASSOCIATION WELL 04					
	8/1/2016	4.0 U	NA	NA	NA
	8/8/2016	4.0 U	NA	NA	NA
	8/15/2016	4.0 U	NA	NA	NA
	8/22/2016	4.0 U	NA	NA	NA
	8/29/2016	4.0 U	NA	NA	NA
	9/7/2016	4.0 U	NA	NA	NA
	9/12/2016	4.0 U	NA	NA	NA
	9/19/2016	4.0 U	NA	NA	NA
	9/26/2016	4.0 U	NA	NA	NA
	10/3/2016	4.0 U	NA	NA	NA
	10/10/2016	4.0 U	NA	NA	NA
	10/17/2016	4.0 U	NA	NA	NA
	10/24/2016	4.0 U	NA	NA	NA
	11/7/2016	4.0 U	NA	NA	NA
	11/14/2016	4.0 U	NA	NA	NA
	11/21/2016	4.0 U	NA	NA	NA
	11/28/2016	4.0 U	NA	NA	NA
	12/5/2016	4.0 U	NA	NA	NA
	12/12/2016	4.0 U	NA	NA	NA
	12/19/2016	4.0 U	NA	NA	NA
	12/27/2016	4.0 U	NA	**3.6**	NA
	1/3/2017	4.0 U	NA	NA	NA
	1/9/2017	4.0 U	NA	NA	NA
	1/10/2017	NA	NA	**2.6**	NA
	1/17/2017	4.0 U	NA	NA	NA
	1/23/2017	4.0 U	NA	NA	NA
	1/30/2017	4.0 U	NA	NA	NA
	2/6/2017	4.0 U	0.5 U	**2.6**	0.5 U
	2/13/2017	4.0 U	NA	NA	NA
	2/21/2017	4.0 U	NA	NA	NA
	2/27/2017	4.0 U	NA	NA	NA
	3/6/2017	4.0 U	NA	NA	NA
	3/13/2017	4.0 U	NA	NA	NA
	3/20/2017	4.0 U	NA	NA	NA
	3/27/2017	4.0 U	NA	NA	NA
	4/3/2017	4.0 U	NA	**2.3**	NA
	4/10/2017	4.0 U	NA	NA	NA
	4/17/2017	4.0 U	NA	NA	NA
	4/24/2017	4.0 U	NA	NA	NA
	5/8/2017	4.0 U	NA	NA	NA
	5/15/2017	4.0 U	NA	NA	NA
	5/22/2017	4.0 U	NA	NA	NA
	5/30/2017	4.0 U	NA	NA	NA
	6/5/2017	4.0 U	NA	NA	NA
	6/12/2017	4.0 U	NA	NA	NA
	6/19/2017	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	6/26/2017	4.0 U	NA	NA	NA
	7/5/2017	4.0 U	NA	**1.5**	NA
	7/10/2017	4.0 U	NA	NA	NA
	7/17/2017	4.0 U	NA	NA	NA
	7/24/2017	4.0 U	NA	NA	NA
	8/7/2017	4.0 U	NA	NA	NA
	8/14/2017	4.0 U	NA	NA	NA
	8/21/2017	4.0 U	NA	NA	NA
	8/28/2017	4.0 U	NA	NA	NA
	9/6/2017	4.0 U	NA	NA	NA
	9/11/2017	4.0 U	NA	NA	NA
	9/18/2017	4.0 U	NA	NA	NA
	9/25/2017	4.0 U	NA	NA	NA
	10/2/2017	4.0 U	NA	NA	NA
	10/10/2017	4.0 U	NA	**2.1**	NA
	10/17/2017	4.0 U	NA	NA	NA
	10/23/2017	4.0 U	NA	NA	NA
RUBIO CANON LAND & WATER ASSOCIATION WELL 07					
	8/1/2016	4.0 U	NA	NA	NA
	8/8/2016	4.0 U	NA	NA	NA
	8/15/2016	4.0 U	NA	NA	NA
	8/22/2016	4.0 U	NA	NA	NA
	8/29/2016	4.0 U	NA	NA	NA
	9/7/2016	4.0 U	NA	NA	NA
	9/12/2016	4.0 U	NA	NA	NA
	9/19/2016	4.0 U	NA	NA	NA
	9/26/2016	4.0 U	NA	NA	NA
	10/3/2016	4.0 U	NA	**0.6**	NA
	10/10/2016	4.0 U	NA	NA	NA
	10/17/2016	4.0 U	NA	NA	NA
	10/24/2016	4.0 U	NA	NA	NA
	11/7/2016	4.0 U	NA	NA	NA
	11/14/2016	4.0 U	NA	NA	NA
	11/21/2016	4.0 U	NA	NA	NA
	11/28/2016	4.0 U	NA	NA	NA
	12/5/2016	4.0 U	NA	NA	NA
	12/12/2016	4.0 U	NA	NA	NA
	12/19/2016	4.0 U	NA	NA	NA
	12/27/2016	4.0 U	NA	NA	NA
	1/3/2017	4.0 U	NA	NA	NA
	1/9/2017	4.0 U	NA	NA	NA
	1/10/2017	NA	NA	0.5 U	NA
	1/17/2017	4.0 U	NA	NA	NA
	1/23/2017	4.0 U	NA	NA	NA
	1/30/2017	4.0 U	NA	NA	NA
	2/6/2017	4.0 U	0.5 U	**0.6**	0.5 U
	2/13/2017	4.0 U	NA	NA	NA

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
	2/21/2017	4.0 U	NA	NA	NA
	2/27/2017	4.0 U	NA	NA	NA
	3/6/2017	4.0 U	NA	NA	NA
	3/13/2017	4.0 U	NA	NA	NA
	3/20/2017	4.0 U	NA	NA	NA
	3/27/2017	4.0 U	NA	NA	NA
	4/3/2017	4.0 U	NA	**0.8**	NA
	4/10/2017	4.0 U	NA	NA	NA
	4/17/2017	4.0 U	NA	NA	NA
	4/24/2017	4.0 U	NA	NA	NA
	5/8/2017	4.0 U	NA	NA	NA
	5/15/2017	4.0 U	NA	NA	NA
	5/22/2017	4.0 U	NA	NA	NA
	5/30/2017	4.0 U	NA	NA	NA
	6/5/2017	4.0 U	NA	NA	NA
	6/12/2017	4.0 U	NA	NA	NA
	6/19/2017	4.0 U	NA	NA	NA
	6/26/2017	4.0 U	NA	NA	NA
	7/5/2017	4.0 U	NA	0.5 U	NA
	7/10/2017	4.0 U	NA	NA	NA
	7/17/2017	4.0 U	NA	NA	NA
	7/24/2017	4.0 U	NA	NA	NA
	8/7/2017	4.0 U	NA	NA	NA
	8/14/2017	4.0 U	NA	NA	NA
	8/21/2017	4.0 U	NA	NA	NA
	8/28/2017	4.0 U	NA	NA	NA
	9/6/2017	4.0 U	NA	NA	NA
	9/11/2017	4.0 U	NA	NA	NA
	9/18/2017	4.0 U	NA	NA	NA
	9/25/2017	4.0 U	NA	NA	NA
	10/2/2017	4.0 U	NA	NA	NA
	10/10/2017	4.0 U	NA	**0.6**	NA
	10/17/2017	4.0 U	NA	NA	NA
	10/23/2017	4.0 U	NA	NA	NA
VALLEY WATER CO. WELL 01					
	8/3/2016	4.0 U	0.5 U	**1.1**	**1.4**
	10/4/2016	4.0 U	NA	NA	NA
	10/18/2016	NA	0.5 U	**1.9**	**2.1**
	11/8/2016	**4.1**	NA	NA	NA
	5/2/2017	4.0 U	NA	NA	NA
	5/17/2017	NA	0.5 U	**1.4**	**1.0**
	6/2/2017	NA	0.5 U	**1.4**	**1.8**
	7/11/2017	4.0 U	0.5 U	**1.2**	**1.5**
	8/2/2017	4.0 U	0.5 U	**1.3**	**1.8**
	9/6/2017	4.0 U	NA	NA	NA
	9/28/2017	NA	0.5 U	**1.2**	**1.6**
	10/3/2017	4.0 U	0.5 U	**1.3**	**1.6**

Purveyor, Well Name	Sample Date	Perchlorate	Carbon tetrachloride	PCE	TCE
VALLEY WATER CO. WELL 02					
	8/3/2016	4.0 U	0.5 U	**0.9**	**0.8**
	10/4/2016	4.0 U	NA	NA	NA
	10/18/2016	NA	0.5 U	**0.8**	**0.8**
	11/8/2016	4.0 U	NA	NA	NA
	5/2/2017	4.0 U	NA	NA	NA
	5/17/2017	NA	0.5 U	**0.8**	**0.6**
	6/2/2017	NA	0.5 U	**0.8**	**0.7**
	7/11/2017	4.0 U	0.5 U	**0.8**	**0.8**
	8/2/2017	4.0 U	0.5 U	**0.7**	**0.9**
	9/6/2017	4.0 U	NA	NA	NA
	9/28/2017	NA	0.5 U	**0.7**	**0.9**
	10/3/2017	4.0 U	0.5 U	**0.6**	**0.7**
VALLEY WATER CO. WELL 03					
	8/3/2016	4.0 U	0.5 U	**1.4**	**0.8**
	11/8/2016	**4.2**	NA	NA	NA
	5/2/2017	4.0 U	NA	NA	NA
	5/17/2017	NA	0.5 U	**1.2**	0.7
	6/2/2017	NA	0.5 U	**0.5**	0.5 U
	7/13/2017	4.0 U	0.5 U	0.5 U	0.5 U
	8/2/2017	4.0 U	0.5 U	0.5 U	0.5 U
	9/6/2017	4.0 U	NA	NA	NA
VALLEY WATER CO. WELL 04					
	8/3/2016	4.0 U	0.5 U	**0.9**	**0.8**
	11/8/2016	**4.3**	NA	NA	NA
	5/2/2017	4.0 U	NA	NA	NA
	5/17/2017	NA	0.5 U	**0.9**	**0.9**
	6/2/2017	NA	0.5 U	**0.9**	**0.7**
	7/11/2017	4.0 U	0.5 U	**1.0**	**0.8**
	8/2/2017	4.0 U	0.5 U	**1.3**	**1.2**
	9/6/2017	4.0 U	NA	NA	NA
Analyte concentration exceeds the standard for:					
CA MCL		6.0	0.5	5.0	5.0
EPA REGION IX MCL		NE	5.0	5.0	5.0

Notes

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

TABLE 4

TENTATIVELY IDENTIFIED COMPOUNDS

IN SAMPLES COLLECTED DURING THE 4th QUARTER 2017 SAMPLING EVENT

(All concentrations reported in µg/L)

Sampling Location	Sample Type	Tentatively Identified Compound	Concentration
No Tentatively Identified Compounds were reported during the subject period.			