Technical Memorandum

2012 Groundwater Monitoring Summary
(Including Fourth Quarter 2012 Groundwater Sampling Event)
National Aeronautics and Space Administration
Jet Propulsion Laboratory, Pasadena, California

Final January 2013

This technical memorandum summarizes the results of the fourth quarter 2012 groundwater sampling event completed as part of the groundwater monitoring program at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL).

INTRODUCTION

During the fourth quarter 2012 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. 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 California Department of Public Health (CDPH). 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 the course of 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 during the most recent four quarters. Table 3 summarizes VOC and perchlorate concentrations in production wells located near the JPL facility during the most recent four quarters. No tentatively identified compounds (TICs) were detected in the samples collected during the fourth quarter of 2012.

Additional figures are included in this technical memorandum summarizing the results from the fourth quarter 2012 sampling event. Figure 2 shows the lateral extent of carbon tetrachloride concentrations in groundwater and Figure 3 includes 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 includes 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 and groundwater flow directions.

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).

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

Well MW-2 has not been sampled during the groundwater monitoring program since it was replaced with well MW-14.

ON-FACILITY SOURCE AREA WELLS

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

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

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2012 sampling event, concentrations of perchlorate in excess of the state maximum contaminant level (MCL) (6.0 micrograms per liter [µg/L]) were reported in samples collected from wells MW-13 (420 µg/L) and MW-24 (Screen 2 [8.7 µg/L]).
- Perchlorate was detected at an estimated concentration (indicated by "J") in MW-7 (1.7J µg/L) below the state MCL of 6.0 µg/L.
- Perchlorate concentrations increased from their respective last sampling date to the fourth quarter 2012 in MW-7 (non-detect to 1.7J µg/L) and MW-13 (110 µg/L to 420 µg/L).
- Perchlorate concentrations decreased from their respective last sampling date to the fourth quarter 2012 in MW-24 (Screens 1 [3.9J µg/L to non-detect] and 2 [14.0 µg/L to 8.7 µg/L]).
- Perchlorate concentrations in MW-16 and MW-24 (Screens 1, 3, 4 and 5) were non-detect during the fourth quarter 2012, with a reporting limit of 4.0 µg/L.
- During the four quarterly sampling events in 2012, perchlorate concentrations exceeded the state MCL in MW-13 (346 µg/L, 349 µg/L, 189 µg/L, and 420 µg/L), and MW-24 (Screen 2 [33.3 µg/L, 20.1 µg/L, 14.0 µg/L, and 8.7 µg/L]).
- During 2012, perchlorate concentrations in MW-7, MW-16, and MW-24 (Screen 1) ranged from non-detect to 3.6J µg/L, non-detect to 2.9 µg/L, and non-detect to 5.8 µg/L, respectively.
- Perchlorate concentrations were not detected in MW-24 (Screens 3 through 5) in 2012.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2012, carbon tetrachloride was detected at the state MCL (0.5 µg/L) in MW-7 (0.5J µg/L) and MW-13 (0.5J µg/L). Carbon tetrachloride was also detected below the state MCL in MW-24 (Screen 2 [0.4J µg/L]).
- In 2012, carbon tetrachloride was detected in excess of the state MCL in MW-7 (fourth quarter), MW-13 (all four quarters) and MW-24 (Screen 2 [first quarter]). Carbon tetrachloride was also detected below the state MCL during 2012 in MW-24 (Screen 2 [third and fourth quarters]). No other detections occurred during 2012.
- During the fourth quarter 2012, TCE was detected below the state and federal MCL of 5.0 µg/L in MW-13 (0.1J µg/L) and MW-24 (Screen 2 [0.1J µg/L]).

- In 2012, TCE was detected below the state MCL (5.0 µg/L) in MW-13 (second, third and fourth quarters) and MW-24 (Screen 2 [third and fourth quarters]).
- During the fourth quarter 2012, PCE was detected below the state and federal MCL of 5.0 µg/L in MW-7 (0.6 µg/L), MW-13 (0.1J µg/L) and MW-24 (Screen 2 [0.2J µg/L]).
- In 2012, PCE was detected below the state MCL in MW-7 (fourth quarter), MW-13 (first, third and fourth quarters) and MW-24 (Screen 2 [third and fourth quarters]). No other detections occurred during 2012.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2012, Cr(VI)[2] was detected below the state MCL of 50.0 µg/L in MW-7 (2.0 µg/L), MW-13 (7.0 µg/L), MW-16 (16.0 µg/L) and MW-24 (Screens 1, 2 and 5 [1.0J µg/L], [2.0 µg/L] and [2.0 µg/L], respectively).
- During the fourth quarter 2012, total chromium was detected below the state MCL of 50.0 µg/L in MW-7 (9.0 µg/L), MW-13 (43.0 µg/L), MW-16 (18.0 µg/L) and MW-24 (Screens 1 through 5 [4.2 µg/L], [2.7J µg/L], [0.5J µg/L], [0.6J µg/L] and [2.9J µg/L], respectively). Historically, the total chromium concentrations in MW-7 and MW-16 have been below the state MCL (50.0 µg/L).
- In 2012, Cr(VI)[2] was detected in MW-7 (fourth quarter), MW-13 (all quarters), MW-16 (third and fourth quarters), MW-24 (Screens 1 [fourth quarter], 2 [third and fourth quarters] and 5 [fourth quarter]); however, concentrations were below the state MCL of 50.0 µg/L.
- During the four quarters of 2012, total chromium was detected in MW-7 [third and fourth quarters], MW-13 [all quarters], MW-16 [third and fourth quarters] and MW-24 (Screens 1 [third and fourth quarter], 2 [third and fourth quarters], 3, 4 and 5 [fourth quarter only]); however, only the detections in MW-7 (73.0 µg/L) and MW-16 (93.0 µg/L) during the third quarter exceeded the state MCL (50.0 µg/L). The total chromium detection of 73.0 µg/L during the third quarter 2012 is the second detection in MW-7 above the state MCL (50.0 µg/L) since it was first sampled during the August/September 1996 monitoring event. The total chromium detection of 93.0 µg/L during the third quarter 2012 is the third detection in MW-16 above the state MCL (50.0 µg/L) since it was first sampled during the August/September 1996 monitoring event. Total chromium results in MW-7 and MW-16 will continue to be closely 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

- Perchlorate was detected in MW-6 (1.4J µg/L) and MW-23 (Screens 1 [2.3J µg/L], 2 [2.5J µg/L] and 3 [1.5J µg/L]); however, all detections were below the state MCL of 6.0 µg/L.
- Perchlorate concentrations decreased slightly from their respective last sampling event to the fourth quarter 2012 in MW-6 (2.4J µg/L to 1.4J µg/L), MW-22 (Screens 1 [2.9J µg/L to non-detect], 2 [2.3J µg/L to non-detect] and 3 [3.8J µg/L to non-detect]) and MW-23 (Screens 1

[2] On July 27, 2011, the Office of Environmental Health Hazard Assessment (OEHHA) established its Public Health Goal (PHG) for Cr(VI) at a concentration of 0.02 µg/L. The PHG represents a *de minimis* lifetime cancer risk from exposure to Cr(VI) in drinking water, based on studies in laboratory animals.

through 4 [4.5 µg/L to 2.3J µg/L], [4.6 µg/L to 2.5J µg/L], [1.9J µg/L to 1.5J µg/L] and [1.2 µg/L to non-detect], respectively).

- Perchlorate was not detected in MW-22 (Screen 1) during the fourth quarter sampling event. This is the first non-detection since the highest detection for this well screen interval (98.7 µg/L in the third quarter 2011). Prior to 2011, the perchlorate concentrations in MW-22 (Screen 1) had been either non-detect or below the state MCL (6.0 µg/L) with only two detections that exceeded the state MCL (third quarter 1998 [6.4 µg/L] and first quarter 1999 [6.4 µg/L]). Perchlorate was detected above the MCL in MW-22 (Screen 1) during all four quarters of 2011 (22.9, 40.1, 98.7, and 85.2 µg/L), and during the four quarters of 2012, the MCL was exceeded once with a concentration of 6.5 µg/L during the second quarter. Perchlorate results in MW-22 (Screen 1) will continue to be closely evaluated during subsequent sampling events. MW-22 is outside the capture zone of the Source Area Treatment System, but within the capture zone of the Monk Hill Treatment System (MHTS).
- The perchlorate concentration of 2.3J µg/L in MW-23 (Screen 1) is only the second detection below the state MCL of 6.0 µg/L since the third quarter 2010. Prior to third quarter 2010, the perchlorate concentrations in MW-23 (Screens 1 through 5) were non-detect with an occasional detection below the state MCL (6.0 µg/L), and some isolated perchlorate detections that exceeded the state MCL in MW-23 (Screens 1, 2 and 5) between 1997 and 2008. The detections of 28.3 µg/L, 30.4J µg/L, 302 µg/L, 97.8 µg/L, 9.7 µg/L, 103 µg/L, 35.5 µg/L and 12.5J (third quarter 2010 through second quarter 2012, respectively) in Screen 1 are the only detections in MW-23 above the state MCL (6.0 µg/L) since the first quarter 2008. Perchlorate results in MW-23 will continue to be closely evaluated during subsequent sampling events. MW-23 is outside the capture zone of the Source Area Treatment System, but within the capture zone of the MHTS.
- During the fourth quarter 2012, perchlorate was not detected in MW-8, MW-11 (Screens 1 through 5), MW-22 (Screens 1 through 5) and MW-23 (Screens 4 and 5) with a reporting limit of 4.0 µg/L.

VOC ANALYTICAL RESULTS

- Carbon tetrachloride was not detected in any of the other on-facility wells during any of the four quarters of 2012 with a reporting limit of 0.5 µg/L.
- During the fourth quarter 2012, TCE was detected below the state and federal MCL of 5.0 µg/L in MW-6 (3.6 µg/L), MW-11 (Screen 3 [0.1J µg/L]), MW-22 (Screens 1 [0.8 µg/L] and 2 [0.2J µg/L]) and MW-23 (Screens 1 [1.0 µg/L] and 2 [0.6 µg/L], respectively).
- Detections of TCE in the other on-facility wells were relatively consistent (low detections or non-detect) in 2012 and remained below the state and federal MCL of 5.0 µg/L.
- PCE was detected below the state and federal MCL for PCE (5.0 µg/L) in MW-6 (1.4 µg/L), MW-22 (Screens 1 [0.4J µg/L] and 2 [0.2J µg/L]) and MW-23 (Screens 1 [0.3J µg/L] and 2 [0.3J µg/L], respectively).
- Detections of PCE in the other on-facility wells were relatively consistent (low detections or non-detect) in 2012 and remained below the state and federal MCL of 5.0 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2012, Cr(VI)[2] was detected below the state MCL of 50 µg/L in MW-6 (1.0J µg/L), MW-8 (1.0J µg/L), MW-22 (Screens 2 [1.0J µg/L], 3 [2.0J µg/L] and 4 [2.0 µg/L]) and MW-23 (Screens 2 [2.0J µg/L], 3 [3.0 µg/L] and 4 [3.0 µg/L], respectively).

- Detections of Cr(VI)[2] in the other on-facility wells were relatively consistent (low detections or non-detect) in 2012 and remained below the state and federal MCL of 50 µg/L.
- During the fourth quarter 2012, total chromium was detected below the state and federal MCL (50 µg/L) in MW-6 (2.5J µg/L), MW-8 (1.5J µg/L), MW-11 (Screen 5 [0.9J µg/L]), MW-22 (Screens 1 through 4 [0.8J µg/L], [1.4J µg/L], [2.3J µg/L] and [2.5J µg/L], respectively) and MW-23 (Screens 1 through 4 [7.5 µg/L], [1.8J µg/L], [2.8J µg/L] and [3.0 µg/L], respectively).
- Detections of total chromium in the other on-facility wells were relatively consistent (low detections or non-detect) in 2012 and remained below the state and federal MCL of 50 µg/L with one exception, MW-6 in the second quarter (83.0 µg/L).

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.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2012 sampling event, concentrations of perchlorate in excess of the state MCL (6.0 µg/L) were reported in samples collected from wells MW-4 (Screen 2 [170 µg/L]) and MW-12 (Screen 2 [6.7 µg/L]).
- Perchlorate was detected below the state MCL of 6.0 µg/L in MW-10 (5.1 µg/L), MW-12 (Screens 3, 4 and 5 [3.5J µg/L, 2.7J µg/L and 1.0J µg/L, respectively]) and MW-14 (Screens 1 through 4 [1.7J µg/L, 1.1J µg/L, 2.5J µg/L and 2.2J µg/L, respectively]).
- Perchlorate concentrations increased slightly from their respective last sampling date to the fourth quarter 2012 in MW-10 (4.7 µg/L to 5.1 µg/L).
- Perchlorate concentrations decreased slightly from their last sampling event to the fourth quarter 2012 in MW-4 (Screen 2 [220 µg/L to 170 µg/L]), MW-12 (Screens 2 through 5 [9.1 µg/L to 6.7 µg/L, 5.1 µg/L to 3.5J µg/L, 4.3 µg/L to 2.7J µg/L and 2.4J µg/L to 1.0J µg/L, respectively]) and MW-14 (Screens 1 through 4 [2.7J µg/L to 1.7J µg/L, 2.9J µg/L to 1.1J, 4.7 µg/L to 2.5J µg/L and 4.4 µg/L to 2.2J µg/L, respectively]).
- The perchlorate concentration of 170 µg/L in MW-4 (Screen 2) is the second highest detection for this well screen interval since it was first analyzed for perchlorate in 1997 (220 µg/L in the third quarter 2012 was the highest detection). Historically, the perchlorate concentrations in MW-4 (Screen 2) have been below the state MCL (6.0 µg/L) since the first quarter 2002 with three exceptions: 6.6 µg/L, 9.0 µg/L and 6.1 µg/L (second and third quarters of 2003 and third quarter 2005, respectively). The detections of 23.0 µg/L (first quarter 2011), 31.7 µg/L (second quarter 2011), 17.6 µg/L (third quarter 2011), 46.8 µg/L (fourth quarter 2011), 157J µg/L (first quarter 2012), 157 µg/L (second quarter 2012), 220 µg/L (third quarter 2012) and 170 µg/L (fourth quarter 2012) are the only detections in MW-4 (Screen 2) above the state MCL (6.0 µg/L) since the third quarter 2005. Perchlorate results in MW-4 will continue to be closely evaluated during subsequent sampling events. MW-4 is within the capture zone of the MHTS.
- The perchlorate concentrations in MW-12 (Screen 2) have been 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) with three exceptions: 5.7 µg/L, 5.4 µg/L and 5.3 µg/L (first and second quarters of 2011 and fourth quarter 2011, respectively). Perchlorate results in MW-12 will continue to be closely evaluated during subsequent sampling events. MW-12 is within the capture zone of the MHTS.

- Perchlorate was not detected in MW-1, MW-3 (Screens 1 through 5), MW-4 (Screens 1, 3, 4 and 5), MW-5, MW-9, MW-12 (Screen 1), MW-14 (Screen 5) and MW-15 with a reporting limit of 4.0 µg/L.

VOC ANALYTICAL RESULTS

- During the fourth quarter 2012, carbon tetrachloride was detected at a concentration above the state MCL (0.5 µg/L) in MW-12 (Screen 3 [0.7 µg/L]) and below the state MCL (Screen 4 [0.4J µg/L]). No other carbon tetrachloride detections occurred in the perimeter off-facility wells during the fourth quarter 2012.
- In 2012, detections of carbon tetrachloride in MW-12 (Screens 3, 4 and 5) remained relatively consistent, ranging from non-detect to 1.3 µg/L.
- During the fourth quarter 2012, TCE was detected in wells MW-4 (Screen 2 [0.2J µg/L]), MW-10 (5.6 µg/L), MW-12 (Screens 3 [0.1J µg/L and 4 [0.2J µg/L]) and MW-14 (Screens 1 through 4 [1.8 µg/L, 4.0 µg/L, 1.3 µg/L and 0.2J µg/L, respectively]); however, only the detection of 5.6 µg/L in MW-10 is above the state and federal MCL (5.0 µg/L). Historically, TCE detections have been present in MW-10 (ranging from non-detect to a high of 38.0 µg/L [third quarter 2006]) and in MW-14 (Screen 2) concentrations have remained above the state and federal MCL (5.0 µg/L) since the third quarter 2007, with the exception of the fourth quarter 2010, the second quarter 2011, and the second, third and fourth quarters 2012. No other TCE detections occurred in the perimeter off-facility wells during the fourth quarter 2012.
- In 2012, detections of TCE in MW-4 (Screen 2), MW-10, MW-12 (Screens 3, 4 and 5) and MW-14 (Screens 1, 2 and 3) remained relatively consistent, ranging from non-detect to 6.7 µg/L.
- During the fourth quarter 2012, PCE was detected below the state and federal MCL (5.0 µg/L) in wells MW-4 (Screen 2 [0.4J µg/L]), MW-10 (0. 7 µg/L) and MW-14 (Screens 1 through 4 [0.2J µg/L, 0.4J µg/L, 0.3J µg/L and 0.1J µg/L, respectively]). No other PCE detections occurred in the perimeter off-facility wells during the fourth quarter 2012.
- In 2012, detections of PCE in MW-4 (Screen 4), MW-10 and MW-14 (Screens 1 through 4) remained relatively consistent, ranging from non-detect to 0.7 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2012, Cr(VI)[2] was detected below the state MCL of 50.0 µg/L in MW-3 (Screens 3 [2.0 µg/L] and 4 [1.0J µg/L]), MW-4 (Screen 3 [1.0J µg/L]), MW-10 (6.0J µg/L), MW-12 (Screens 3 [1.0J µg/L], 4 [1.0J µg/] and 5 [3.0 µg/L]) and MW-14 (Screen 4 [1.0J µg/L]). No other Cr(VI)[2] detections occurred in the perimeter off-facility wells during the fourth quarter 2012.
- In 2012, only two other detections of Cr(VI)[2] occurred: 3.0J µg/L in MW-4 (Screen 3 [third quarter]) and 3.0J µg/L in MW-12 (Screen 1 [second quarter]).
- During the fourth quarter 2012, total chromium was detected below the state MCL of 50.0 µg/L in MW-3 (Screens 3, 4 and 5 [2.1J µg/L, 3.0 µg/L and 9.2 µg/L respectively]), MW-4 (Screens 2, 3 and 4 [4.5 µg/L, 2.1J µg/L and 1.3J µg/L respectively]), MW-5 (1.1J µg/L), MW-9 (0.7J µg/L), MW-10 (21.0 µg/L), MW-12 (Screens 2 [1.0J µg/L] and 5 [2.2J µg/L]), MW-14 (Screen 4 [0.8J µg/L]) and MW-15 (0.9J µg/L) .
- During the four quarters of 2012, total chromium remained relatively consistent and below the state MCL of 50.0 µg/L in the perimeter off-facility wells, ranging from non-detect to 23.0J 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 downgradient 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.

PERCHLORATE ANALYTICAL RESULTS

- During the fourth quarter 2012 sampling event, concentrations of perchlorate in excess of the state MCL (6.0 µg/L) were reported in samples collected from wells MW-17 (Screen 2 [7.8 µg/L]), MW-18 (Screens 3 [54.0 µg/L] and 4 [11.0 µg/L]), and MW-25 (Screens 1 through 3 [6.0 µg/L, 11.0 µg/L and 6.0 µg/L, respectively]).
- Perchlorate was detected below the state MCL of 6.0 µg/L in MW-17 (Screens 3 [5.1 µg/L] and 4 [5.6 µg/L]), MW-19 (Screens 2 through 5 [1.2J µg/L, 1.8J µg/L, 1.4J µg/L and 1.4J µg/L, respectively]), MW-20 (Screen 2 [2.5J µg/L]), MW-21 (Screens 1 through 5 [1.7J µg/L, 1.5J µg/L, 1.6J µg/L, 1.4J µg/L and 1.2J µg/L, respectively]) and MW-25 (Screen 4 [5.6 µg/L]).
- Perchlorate concentrations increased slightly from their respective last sampling date to the fourth quarter 2012 in MW-17 (Screens 2 [non-detect to 7.8 µg/L] and 4 [2.1J µg/L to 5.6 µg/L]) and MW-21 (Screens 1 through 5 [non-detect to 1.7J µg/L, non-detect to 1.5J µg/L, non-detect to 1.6J µg/L, non-detect to 1.4J µg/L and non-detect to 1.2J µg/L, respectively]).
- Perchlorate concentrations decreased from their respective last sampling event to the fourth quarter 2012 in MW-17 (Screen 3 [8.1 µg/L to 5.1 µg/L]), MW-18 (Screens 3 [93.0 µg/L to 54.0 µg/L] and 4 [15.0 µg/L to 11.0 µg/L]), MW-19 (Screens 2 through 5 [5.8 µg/L to 1.2J µg/L, 3.0J µg/L to 1.8J µg/L, 3.6J µg/L to 1.4J µg/L and 2.3J µg/L to 1.4J µg/L, respectively]), MW-20 (Screens 1 [1.6J µg/L to non-detect] and 2 [3.2J µg/L to 2.5J µg/L]), MW-25 (Screens 1 through 4 [12.0 µg/L to 6.0 µg/L], 17.0 µg/L to 11.0 µg/L, 11.0 µg/L to 6.0 µg/L and 9.3 µg/L to 5.6 µg/L, respectively]) and MW-26 (Screen 1 [4.4 µg/L to non-detect]).
- Perchlorate in MW-17 (Screen 2) during 2012 ranged from non-detect (third quarter) to 90.0J µg/L (first quarter). The non-detection in MW-17 (Screen 2) during the third quarter 2012 is the first non-detection since the fourth quarter 2002. Prior to the first quarter 2003, the perchlorate concentrations in MW-17 (Screen 2) were non-detect. From the first quarter 2003 through the fourth quarter 2008, all detections were above the state MCL with the exception of three quarters (first and second quarters 2003 and third quarter 2008). Since the first quarter 2009, perchlorate levels have been below the state MCL (6.0 µg/L) until the detection of 24.1 µg/L during the first quarter 2011. The concentration of 90.1J µg/L during the first quarter 2012 is the highest reported concentration for MW-17 (Screen 2). MW-17 (Screen 2) is within the capture zone of the MHTS.
- Since the third quarter 2005, the perchlorate concentrations in MW-18 (Screen 3) have exceeded the state MCL (6.0 µg/L) with the exception of one quarter (first quarter 2007 [non-detect]). The concentration of 144 µg/L during the third quarter 2011 is the highest reported concentration for MW-18 (Screen 3) since the well was installed. MW-18 (Screen 3) is within the capture zone of the LAWC treatment system.
- Concentrations of perchlorate were not detected in MW-17 (Screens 1 and 5), MW-18 (Screens 1, 2 and 5), MW-19 (Screen 1), MW-20 (Screens 1, 3, 4 and 5), MW-25 (Screen 5) and MW-26 (Screens 1 and 2).

VOC ANALYTICAL RESULTS

- During the fourth quarter 2012, carbon tetrachloride was detected above the state MCL (0.5 µg/L) in MW-18 (Screens 3 [9.4 µg/L] and 4 [1.7 µg/L]) and below the state MCL in MW-17 (Screen 4 [0.3J µg/L]). No other carbon tetrachloride detections occurred in the off-facility wells during the fourth quarter 2012. Since the first quarter 2005, the carbon tetrachloride concentrations in MW-18 (Screen 3) have exceeded the state MCL (0.5 µg/L).
- During the fourth quarter 2012, TCE was detected in MW-17 (Screens 2 through 5), MW-18 (Screens 3 and 4), MW-19 (Screens 2, 4 and 5), MW-20 (Screens 2 and 3), MW-21 (Screens 1 through 4), MW-25 (Screens 1 and 2) and MW-26 (Screen 1); however, no detections exceeded the state and federal MCL (5.0 µg/L).
- In 2012, TCE concentrations in MW-17 (Screens 2 through 5) remained relatively consistent, ranging from non-detect to 0.6 µg/L.
- TCE concentrations in MW-18 (Screens 3 and 4) remained relatively consistent during 2012, ranging from 0.7 µg/L to 2.4 µg/L.
- In 2012, TCE concentrations in MW-19 (Screen 2, 4 and 5) remained relatively consistent, ranging from non-detect to 1.4 µg/L.
- TCE concentrations in MW-20 (Screens 2 and 3) remained relatively consistent during 2012, ranging from non-detect to 1.5 µg/L.
- TCE concentrations in MW-21 (Screens 1 through 4) remained relatively consistent during 2012, ranging from non-detect to 1.3 µg/L.
- In 2012, TCE concentrations in MW-25 (Screen 1) remained relatively consistent, ranging from 1.8 µg/L to 5.3 µg/L.
- During the fourth quarter 2012, PCE was detected in MW-18 (Screens 3 and 4), MW-19 (Screens 2 through 5), MW-20 (Screens 2 and 3), MW-21 (Screens 1 through 5) and MW-26 (Screen 1); however, only the detection of 5.9 µg/L in MW-21 (Screen 3) exceeded the state and federal MCL (5.0 µg/L).
- In 2012, PCE concentrations in MW-18 (Screens 3 and 4) remained relatively consistent, ranging from non-detect to 0.9 µg/L.
- PCE concentrations in MW-19 (Screens 1 through 5) during 2012 ranged from non-detect to 1.7 µg/L.
- PCE concentrations in MW-20 (Screens 2 and 3) during 2012 ranged from non-detect to 0.3J µg/L.
- In 2012, PCE concentrations in MW-21 (Screens 1 through 5) ranged from non-detect to 5.9 µg/L; however, only Screen 3 had a detection that exceeded the state and federal MCL (5.0 µg/L).
- In 2012, PCE concentrations in MW-26 (Screen 1) ranged from non-detect to 1.0 µg/L.

OTHER NOTABLE ANALYTICAL RESULTS

- During the fourth quarter 2012, Cr(VI)[2] was detected below the state MCL of 50.0 µg/L in MW-17 (Screen 4 [2.0J µg/L]), MW-18 (Screens 3 [2.0 µg/L] and 4 [2.0J µg/L), MW-19 (Screens 2 through 5 [2.0J µg/L, 2.0 µg/L, 3.0 µg/L and 1.0J µg/L, respectively]), MW-20 (Screens 3 [1.0J µg/L] and 5 [1.0J µg/L], MW-21 (Screens 1 through 5 [1.0J µg/L, 1.0J µg/L, 2.0J µg/L, 2.0J µg/L and 1.0J µg/L, respectively]), MW-25 (Screens 2 [2.0 µg/L] and 3 [4.0 µg/L and 4 [1.0J µg/L]) and MW-26 (Screen 2 [1.0J µg/L]).
- In 2012, Cr(VI)[2] detections all occurred in the fourth quarter except for MW-18 (Screens 3 and 4 [third quarter]), MW-21 (Screen 5 [third quarter]) and MW-25 (Screens 2 and 3 [third quarter]).

- During the fourth quarter 2012, total chromium was detected below the state MCL of 50.0 µg/L in MW-17 (Screen 4 [1.4J µg/L]), MW-18 (Screens 3 [1.7J µg/L] and 4 [2.1J µg/L]), MW-19 (Screens 2 through 5 [24.0 µg/L, 2.9J µg/L, 2.3J µg/L and 0.8J µg/L]), MW-21 (Screens 1 [0.7J µg/L], 4 [0.8J µg/L] and 5 [0.7J µg/L]), MW-25 (Screens 1 through 4 [5.0 µg/L, 2.8J µg/L, 3.1 µg/L and 1.4J µg/L, respectively]) and MW-26 (Screens 1 [0.5J µg/L] and 2 [0.8J µg/L]). In 2012, total chromium detections remained below the state MCL of 50.0 µg/L.

ALL WELL CATEGORIES (OTHER RESULTS)

- Comparing the third quarter 2012 to the fourth quarter 2012, groundwater levels dropped an average of approximately 9.34 ft.
- Groundwater level measurements collected during the fourth quarter 2012 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 (Summary Sheets)
- Attachment 3: Laboratory Analytical Reports (Summary Sheets)
- 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)

FIGURES

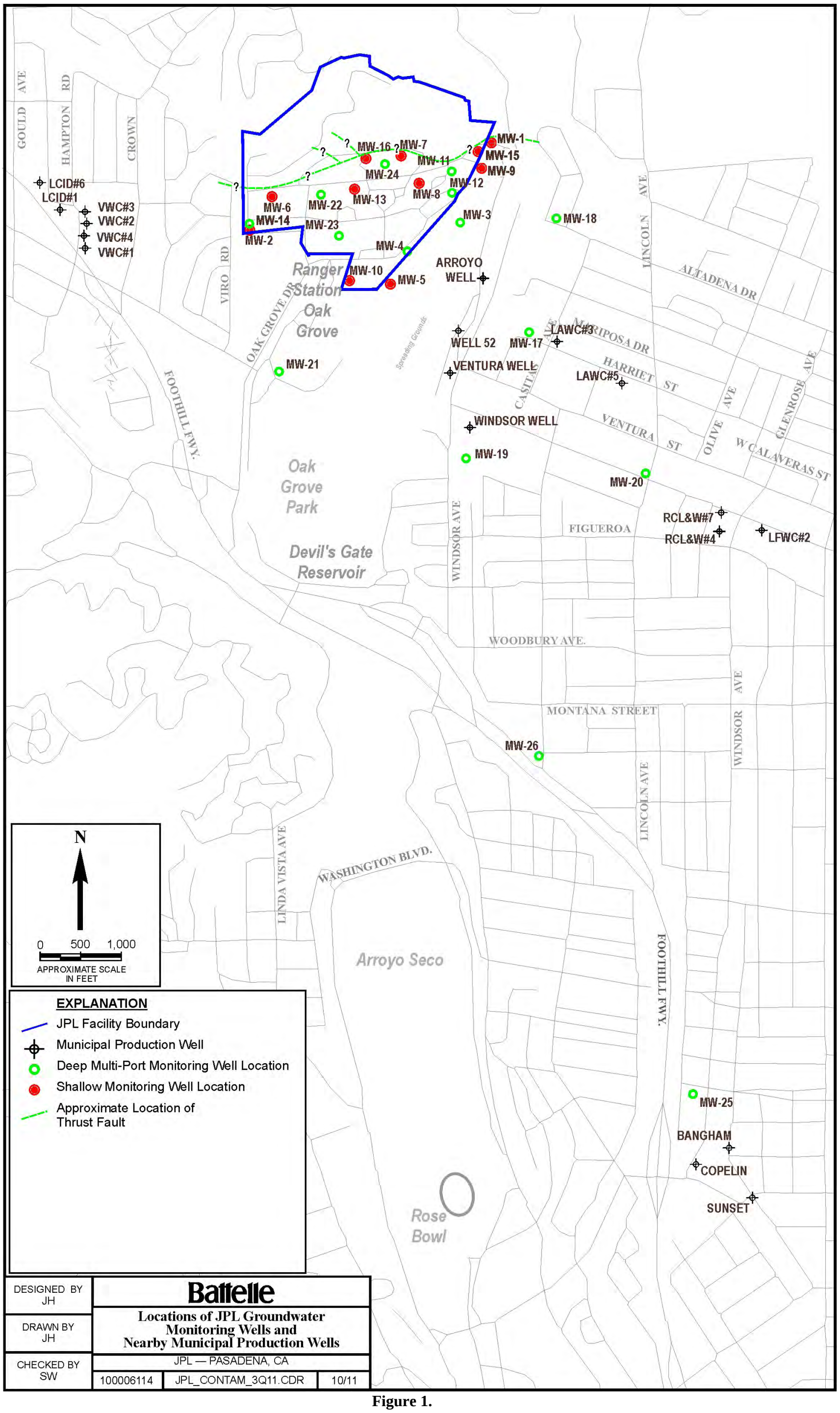
GOULD AVE
HAMPTON RD
CROWN
VIRO RD
OAK GROVE DR
FOOTHILL FWY.
LINCOLN AVE
ALTADENA DR
MARIPOSA DR
HARRIET ST
CASITAS AVE
VENTURA ST
OLIVE AVE
GLENROSE AVE
W CALAVERAS ST
WINDSOR AVE
FIGUEROA
WOODBURY AVE.
MONTANA STREET
WASHINGTON BLVD.
LINDA VISTA AVE
Ranger Station
Oak Grove
Oak Grove Park
Devil's Gate Reservoir
Arroyo Seco
Rose Bowl
Spreading Grounds
LCID#6
LCID#1
VWC#3
VWC#2
VWC#4
VWC#1
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
ARROYO WELL
WELL 52
VENTURA WELL
WINDSOR WELL
LAWC#3
LAWC#5
RCL&W#7
RCL&W#4
LFWC#2
BANGHAM
COPELIN
SUNSET
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Locations of JPL Groundwater Monitoring Wells and Nearby Municipal Production Wells
JPL — PASADENA, CA
100006114
JPL_CONTAM_3Q11.CDR
10/11

Figure 1.

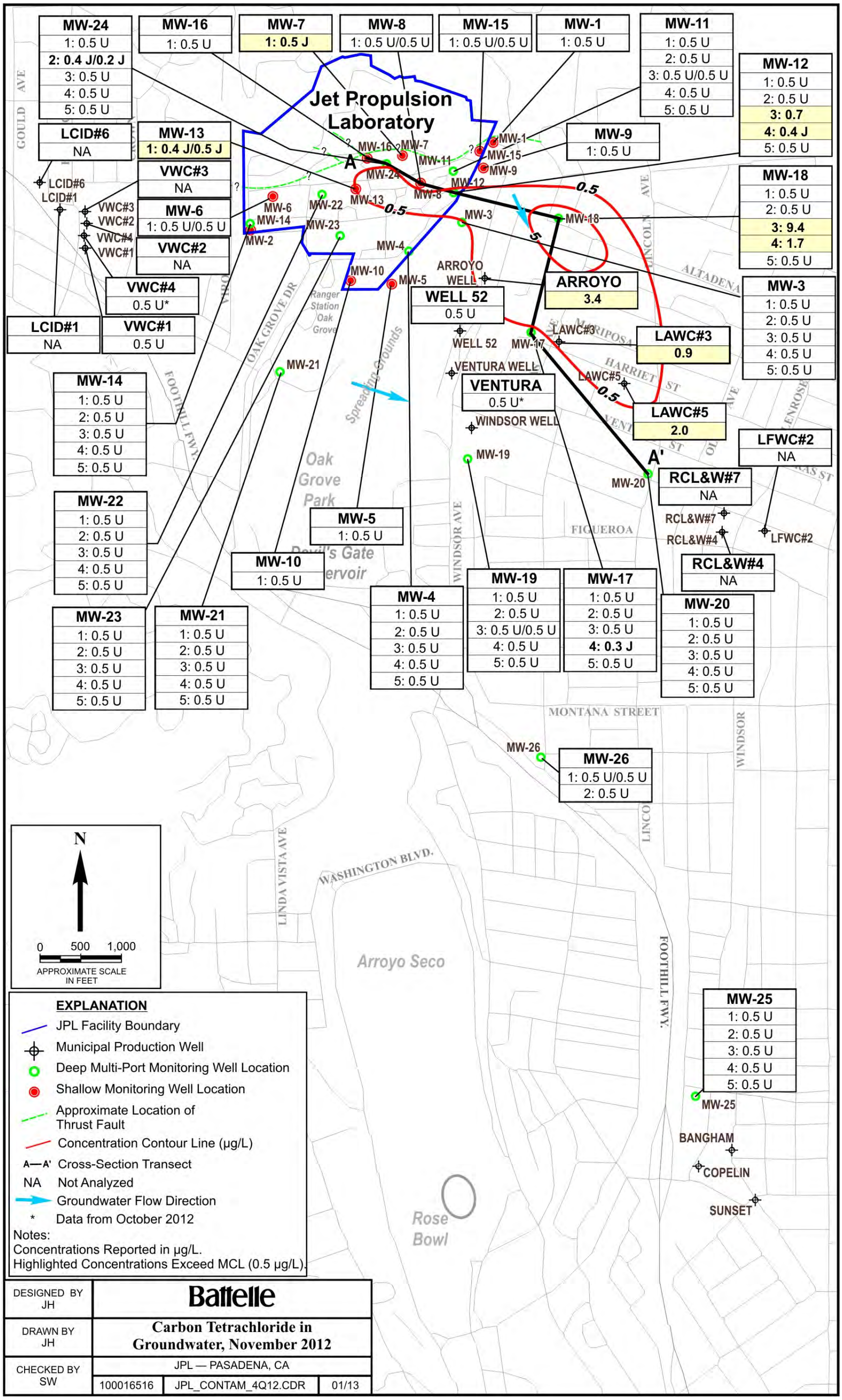
Jet Propulsion Laboratory
MW-24
1: 0.5 U
2: 0.4 J/0.2 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-16
1: 0.5 U
MW-7
1: 0.5 J
MW-8
1: 0.5 U/0.5 U
MW-15
1: 0.5 U/0.5 U
MW-1
1: 0.5 U
MW-11
1: 0.5 U
2: 0.5 U
3: 0.5 U/0.5 U
4: 0.5 U
5: 0.5 U
MW-12
1: 0.5 U
2: 0.5 U
3: 0.7
4: 0.4 J
5: 0.5 U
MW-9
1: 0.5 U
MW-18
1: 0.5 U
2: 0.5 U
3: 9.4
4: 1.7
5: 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
LCID#6
NA
MW-13
1: 0.4 J/0.5 J
VWC#3
NA
MW-6
1: 0.5 U/0.5 U
VWC#2
NA
VWC#4
0.5 U*
VWC#1
0.5 U
LCID#1
NA
ARROYO
3.4
WELL 52
0.5 U
LAWC#3
0.9
LAWC#5
2.0
VENTURA
0.5 U*
LFWC#2
NA
RCL&W#7
NA
RCL&W#4
NA
MW-14
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-22
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-5
1: 0.5 U
MW-10
1: 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-19
1: 0.5 U
2: 0.5 U
3: 0.5 U/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: 0.3 J
5: 0.5 U
MW-20
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-23
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-21
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/0.5 U
2: 0.5 U
MW-25
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
A
A'
0.5
5
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
Concentration Contour Line (µg/L)
A—A' Cross-Section Transect
NA Not Analyzed
Groundwater Flow Direction
* Data from October 2012
Notes:
Concentrations Reported in µg/L.
Highlighted Concentrations Exceed MCL (0.5 µg/L).
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Carbon Tetrachloride in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_CONTAM_4Q12.CDR
01/13
GOULD AVE
OAK GROVE DR
FOOTHILL FWY.
Ranger Station Oak Grove
Spreading Grounds
Oak Grove Park
Devil's Gate Reservoir
WINDSOR AVE
LINCOLN AVE
ALTADENA
MARIPOSA
HARRIET ST
VENTURA ST
OLIVE AVE
ENROSE
FIGUEROA
MONTANA STREET
WINDSOR
LINDA VISTA AVE
WASHINGTON BLVD.
Arroyo Seco
Rose Bowl
BANGHAM
COPELIN
SUNSET

Figure 2.

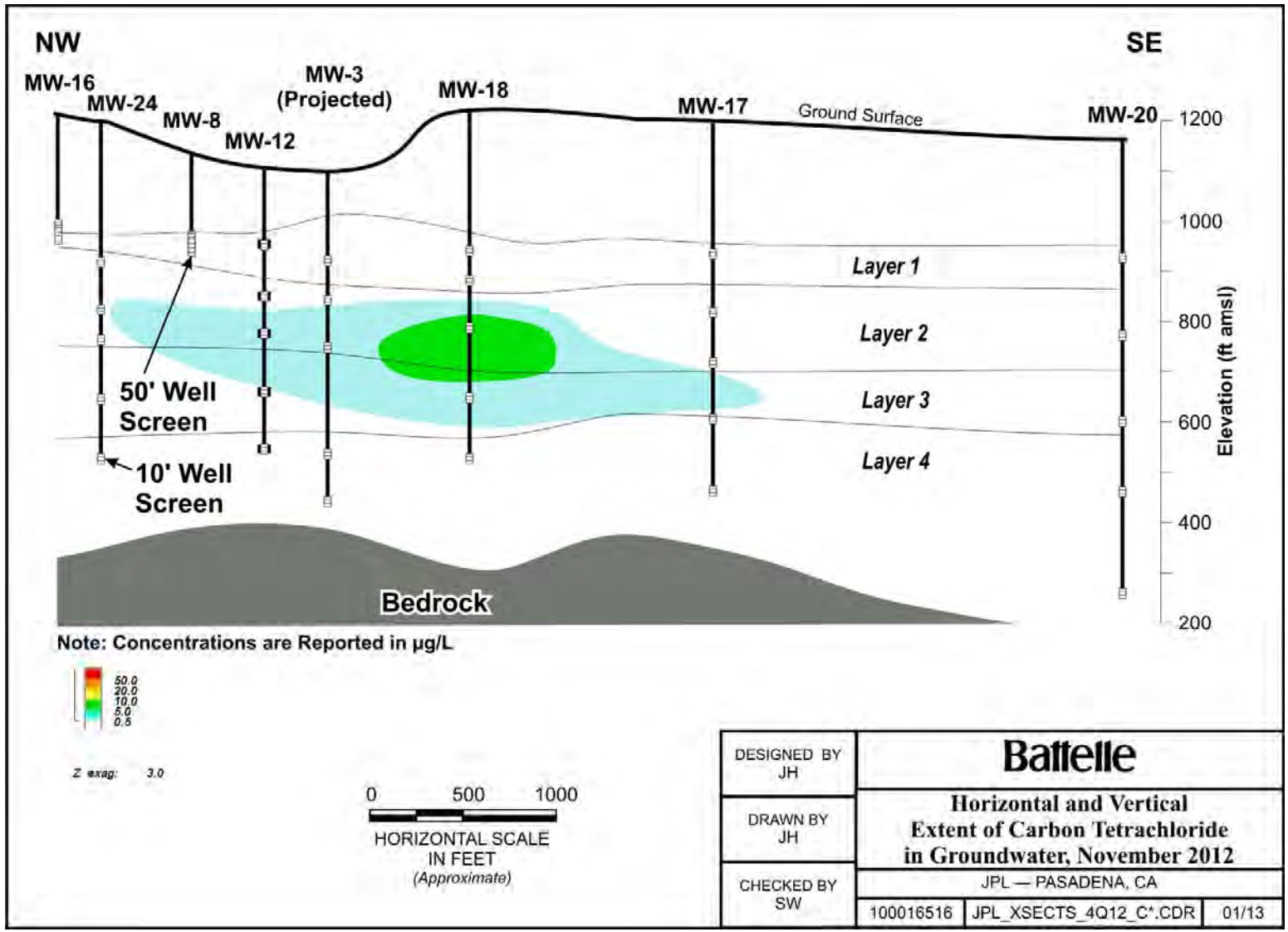
NW
SE
MW-16
MW-24
MW-8
MW-12
MW-3
(Projected)
MW-18
MW-17
Ground Surface
MW-20
1200
1000
800
600
400
200
Elevation (ft amsl)
Layer 1
Layer 2
Layer 3
Layer 4
50' Well
Screen
10' Well
Screen
Bedrock
Note: Concentrations are Reported in µg/L
50.0
20.0
10.0
5.0
0.5
Z exag: 3.0
0
500
1000
HORIZONTAL SCALE
IN FEET
(Approximate)
DESIGNED BY
JH
DRAWN BY
JH
CHECKED BY
SW
Battelle
Horizontal and Vertical
Extent of Carbon Tetrachloride
in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_XSECTS_4Q12_C*.CDR
01/13

Figure 3.

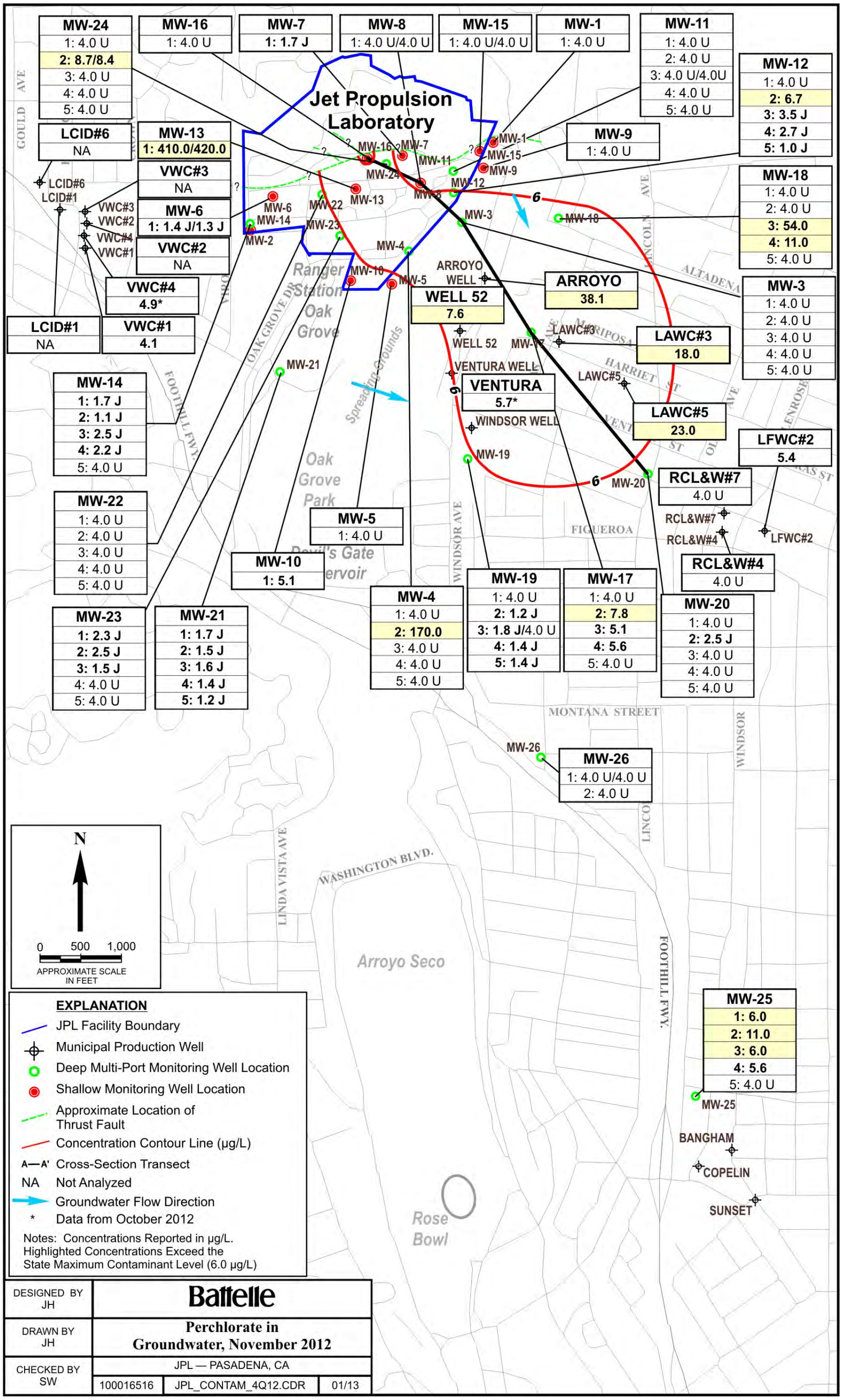
MW-24
1: 4.0 U
2: 8.7/8.4
3: 4.0 U
4: 4.0 U
5: 4.0 U
MW-16
1: 4.0 U
MW-7
1: 1.7 J
MW-8
1: 4.0 U/4.0 U
MW-15
1: 4.0 U/4.0 U
MW-1
1: 4.0 U
MW-11
1: 4.0 U
2: 4.0 U
3: 4.0 U/4.0U
4: 4.0 U
5: 4.0 U
MW-12
1: 4.0 U
2: 6.7
3: 3.5 J
4: 2.7 J
5: 1.0 J
Jet Propulsion Laboratory
LCID#6
NA
MW-13
1: 410.0/420.0
MW-9
1: 4.0 U
VWC#3
NA
MW-6
1: 1.4 J/1.3 J
VWC#2
NA
VWC#4
4.9*
VWC#1
4.1
LCID#1
NA
MW-18
1: 4.0 U
2: 4.0 U
3: 54.0
4: 11.0
5: 4.0 U
MW-3
1: 4.0 U
2: 4.0 U
3: 4.0 U
4: 4.0 U
5: 4.0 U
ARROYO
38.1
WELL 52
7.6
LAWC#3
18.0
VENTURA
5.7*
LAWC#5
23.0
LFWC#2
5.4
RCL&W#7
4.0 U
RCL&W#4
4.0 U
MW-14
1: 1.7 J
2: 1.1 J
3: 2.5 J
4: 2.2 J
5: 4.0 U
MW-22
1: 4.0 U
2: 4.0 U
3: 4.0 U
4: 4.0 U
5: 4.0 U
MW-5
1: 4.0 U
MW-10
1: 5.1
MW-4
1: 4.0 U
2: 170.0
3: 4.0 U
4: 4.0 U
5: 4.0 U
MW-19
1: 4.0 U
2: 1.2 J
3: 1.8 J/4.0 U
4: 1.4 J
5: 1.4 J
MW-17
1: 4.0 U
2: 7.8
3: 5.1
4: 5.6
5: 4.0 U
MW-20
1: 4.0 U
2: 2.5 J
3: 4.0 U
4: 4.0 U
5: 4.0 U
MW-23
1: 2.3 J
2: 2.5 J
3: 1.5 J
4: 4.0 U
5: 4.0 U
MW-21
1: 1.7 J
2: 1.5 J
3: 1.6 J
4: 1.4 J
5: 1.2 J
MW-26
1: 4.0 U/4.0 U
2: 4.0 U
MW-25
1: 6.0
2: 11.0
3: 6.0
4: 5.6
5: 4.0 U
Ranger Station
Oak Grove
Oak Grove Park
Spreading Grounds
Devil's Gate Reservoir
Rose Bowl
Arroyo Seco
GOULD AVE
FOOTHILL FWY.
OAK GROVE DR.
WINDSOR AVE
ALTADENA
LINCOLN AVE
MONTANA STREET
WASHINGTON BLVD.
LINDA VISTA AVE
FIGUEROA
HARRIET ST
BANGHAM
COPELIN
SUNSET
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
Concentration Contour Line (µg/L)
A—A' Cross-Section Transect
NA Not Analyzed
Groundwater Flow Direction
* Data from October 2012
Notes: Concentrations Reported in µg/L.
Highlighted Concentrations Exceed the State Maximum Contaminant Level (6.0 µg/L)
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Perchlorate in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_CONTAM_4Q12.CDR
01/13

Figure 4.

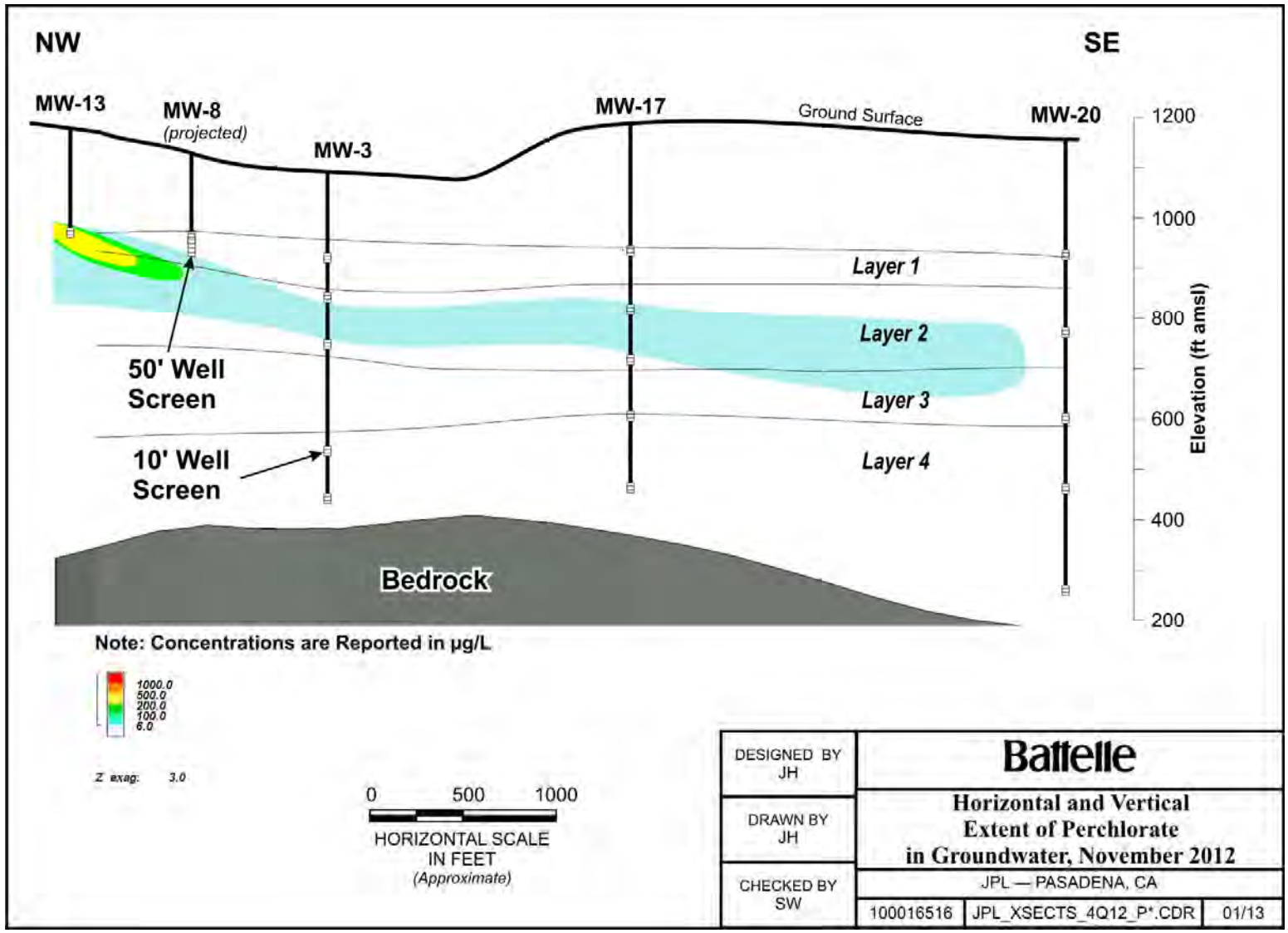
NW
SE
MW-13
MW-8
(projected)
MW-3
MW-17
Ground Surface
MW-20
1200
1000
800
600
400
200
Elevation (ft amsl)
Layer 1
Layer 2
Layer 3
Layer 4
50' Well
Screen
10' Well
Screen
Bedrock
Note: Concentrations are Reported in µg/L
1000.0
500.0
200.0
100.0
6.0
Z exag: 3.0
0
500
1000
HORIZONTAL SCALE
IN FEET
(Approximate)
DESIGNED BY
JH
DRAWN BY
JH
CHECKED BY
SW
Battelle
Horizontal and Vertical
Extent of Perchlorate
in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_XSECTS_4Q12_P*.CDR
01/13

Figure 5.

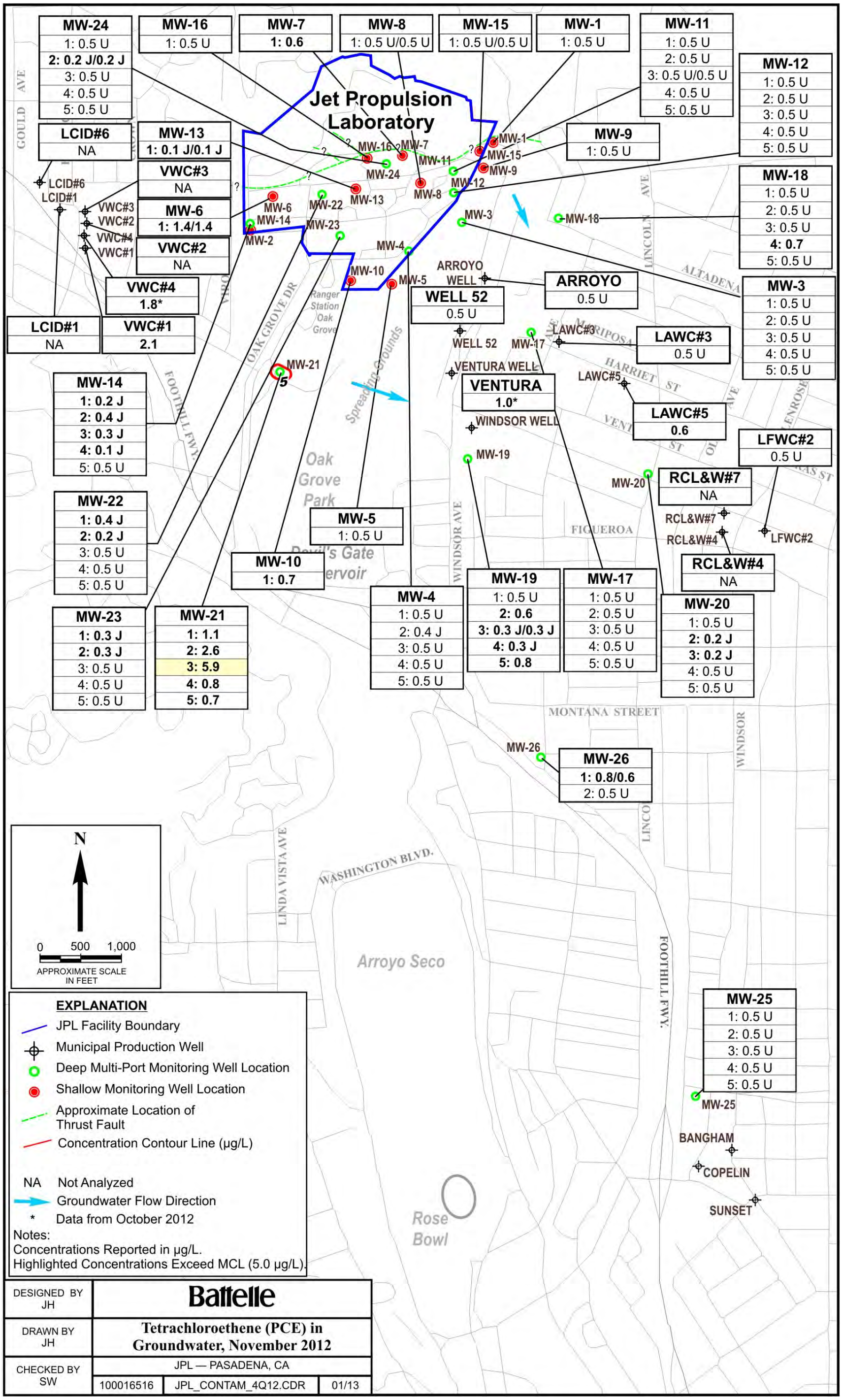
Jet Propulsion Laboratory
MW-24
1: 0.5 U
2: 0.2 J/0.2 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-16
1: 0.5 U
MW-7
1: 0.6
MW-8
1: 0.5 U/0.5 U
MW-15
1: 0.5 U/0.5 U
MW-1
1: 0.5 U
MW-11
1: 0.5 U
2: 0.5 U
3: 0.5 U/0.5 U
4: 0.5 U
5: 0.5 U
MW-12
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-9
1: 0.5 U
MW-18
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.7
5: 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
LCID#6
NA
LCID#1
NA
MW-13
1: 0.1 J/0.1 J
VWC#3
NA
MW-6
1: 1.4/1.4
VWC#2
NA
VWC#4
1.8*
VWC#1
2.1
ARROYO
0.5 U
WELL 52
0.5 U
LAWC#3
0.5 U
VENTURA
1.0*
LAWC#5
0.6
LFWC#2
0.5 U
RCL&W#7
NA
RCL&W#4
NA
MW-14
1: 0.2 J
2: 0.4 J
3: 0.3 J
4: 0.1 J
5: 0.5 U
MW-22
1: 0.4 J
2: 0.2 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-10
1: 0.7
MW-5
1: 0.5 U
MW-4
1: 0.5 U
2: 0.4 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-19
1: 0.5 U
2: 0.6
3: 0.3 J/0.3 J
4: 0.3 J
5: 0.8
MW-17
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-20
1: 0.5 U
2: 0.2 J
3: 0.2 J
4: 0.5 U
5: 0.5 U
MW-23
1: 0.3 J
2: 0.3 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-21
1: 1.1
2: 2.6
3: 5.9
4: 0.8
5: 0.7
MW-26
1: 0.8/0.6
2: 0.5 U
MW-25
1: 0.5 U
2: 0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
LCID#6
LCID#1
VWC#3
VWC#2
VWC#4
VWC#1
MW-6
MW-14
MW-2
MW-22
MW-23
MW-13
MW-24
MW-16
MW-7
MW-11
MW-8
MW-12
MW-1
MW-15
MW-9
MW-3
MW-18
MW-4
MW-10
MW-5
ARROYO WELL
WELL 52
MW-17
LAWC#3
VENTURA WELL
LAWC#5
WINDSOR WELL
MW-19
MW-20
RCL&W#7
RCL&W#4
LFWC#2
MW-21
MW-26
MW-25
GOULD AVE
FOOTHILL FWY.
OAK GROVE DR
Ranger Station Oak Grove
Spreading Grounds
Oak Grove Park
Devil's Gate Reservoir
WINDSOR AVE
LINCOLN AVE
ALTADENA
MONTANA STREET
FIGUEROA
HARRIET ST
VENTURA ST
LINDA VISTA AVE
WASHINGTON BLVD.
Arroyo Seco
Rose Bowl
BANGHAM
COPELIN
SUNSET
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
Concentration Contour Line (µg/L)
NA Not Analyzed
Groundwater Flow Direction
* Data from October 2012
Notes:
Concentrations Reported in µg/L.
Highlighted Concentrations Exceed MCL (5.0 µg/L).
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Tetrachloroethene (PCE) in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_CONTAM_4Q12.CDR
01/13

Figure 6.

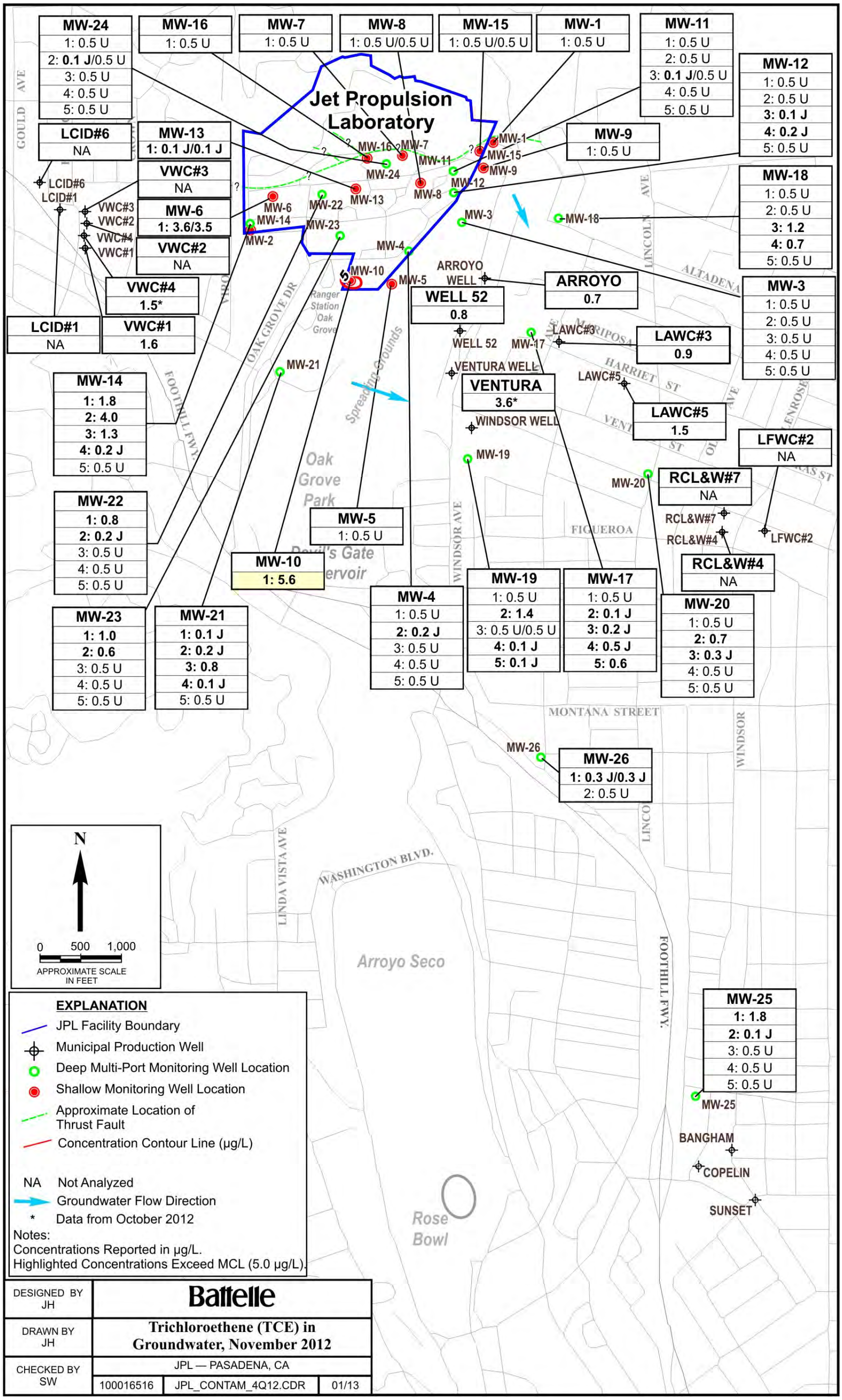
Jet Propulsion Laboratory
MW-24
1: 0.5 U
2: 0.1 J/0.5 U
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-16
1: 0.5 U
MW-7
1: 0.5 U
MW-8
1: 0.5 U/0.5 U
MW-15
1: 0.5 U/0.5 U
MW-1
1: 0.5 U
MW-11
1: 0.5 U
2: 0.5 U
3: 0.1 J/0.5 U
4: 0.5 U
5: 0.5 U
MW-12
1: 0.5 U
2: 0.5 U
3: 0.1 J
4: 0.2 J
5: 0.5 U
MW-9
1: 0.5 U
MW-18
1: 0.5 U
2: 0.5 U
3: 1.2
4: 0.7
5: 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
LCID#6
NA
MW-13
1: 0.1 J/0.1 J
VWC#3
NA
MW-6
1: 3.6/3.5
VWC#2
NA
VWC#4
1.5*
VWC#1
1.6
LCID#1
NA
MW-14
1: 1.8
2: 4.0
3: 1.3
4: 0.2 J
5: 0.5 U
MW-22
1: 0.8
2: 0.2 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-23
1: 1.0
2: 0.6
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-21
1: 0.1 J
2: 0.2 J
3: 0.8
4: 0.1 J
5: 0.5 U
MW-10
1: 5.6
MW-5
1: 0.5 U
MW-4
1: 0.5 U
2: 0.2 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
WELL 52
0.8
ARROYO
0.7
VENTURA
3.6*
MW-19
1: 0.5 U
2: 1.4
3: 0.5 U/0.5 U
4: 0.1 J
5: 0.1 J
MW-17
1: 0.5 U
2: 0.1 J
3: 0.2 J
4: 0.5 J
5: 0.6
LAWC#3
0.9
LAWC#5
1.5
MW-20
1: 0.5 U
2: 0.7
3: 0.3 J
4: 0.5 U
5: 0.5 U
RCL&W#7
NA
RCL&W#4
NA
LFWC#2
NA
MW-26
1: 0.3 J/0.3 J
2: 0.5 U
MW-25
1: 1.8
2: 0.1 J
3: 0.5 U
4: 0.5 U
5: 0.5 U
MW-24
MW-16
MW-7
MW-11
MW-1
MW-15
MW-9
MW-12
MW-8
MW-13
MW-22
MW-6
MW-14
MW-2
MW-23
MW-4
MW-10
MW-5
MW-3
MW-18
ARROYO WELL
WELL 52
MW-17
LAWC#3
VENTURA WELL
LAWC#5
WINDSOR WELL
MW-19
MW-20
RCL&W#7
RCL&W#4
LFWC#2
MW-21
MW-26
MW-25
LCID#6
LCID#1
VWC#3
VWC#2
VWC#4
VWC#1
MW-24
MW-16
MW-7
MW-11
MW-1
MW-15
MW-9
MW-12
MW-8
MW-13
MW-22
MW-6
MW-14
MW-2
MW-23
MW-4
MW-10
MW-5
MW-3
MW-18
ARROYO WELL
WELL 52
MW-17
LAWC#3
VENTURA WELL
LAWC#5
WINDSOR WELL
MW-19
MW-20
RCL&W#7
RCL&W#4
LFWC#2
MW-21
MW-26
MW-25
GOULD AVE
LINCOLN AVE
ALTADENA
OAK GROVE DR
Ranger Station Oak Grove
FOOTHILL FWY.
Spreading Grounds
Oak Grove Park
Devil's Gate Reservoir
WINDSOR AVE
HARRIET ST
VENTURA ST
OLIVE AVE
LENROSE
FIGUEROA
MONTANA STREET
WINDSOR
LINDA VISTA AVE
WASHINGTON BLVD.
Arroyo Seco
Rose Bowl
FOOTHILL FWY.
BANGHAM
COPELIN
SUNSET
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
Concentration Contour Line (µg/L)
NA Not Analyzed
Groundwater Flow Direction
* Data from October 2012
Notes:
Concentrations Reported in µg/L.
Highlighted Concentrations Exceed MCL (5.0 µg/L).
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Trichloroethene (TCE) in Groundwater, November 2012
JPL — PASADENA, CA
100016516
JPL_CONTAM_4Q12.CDR
01/13

Figure 7.

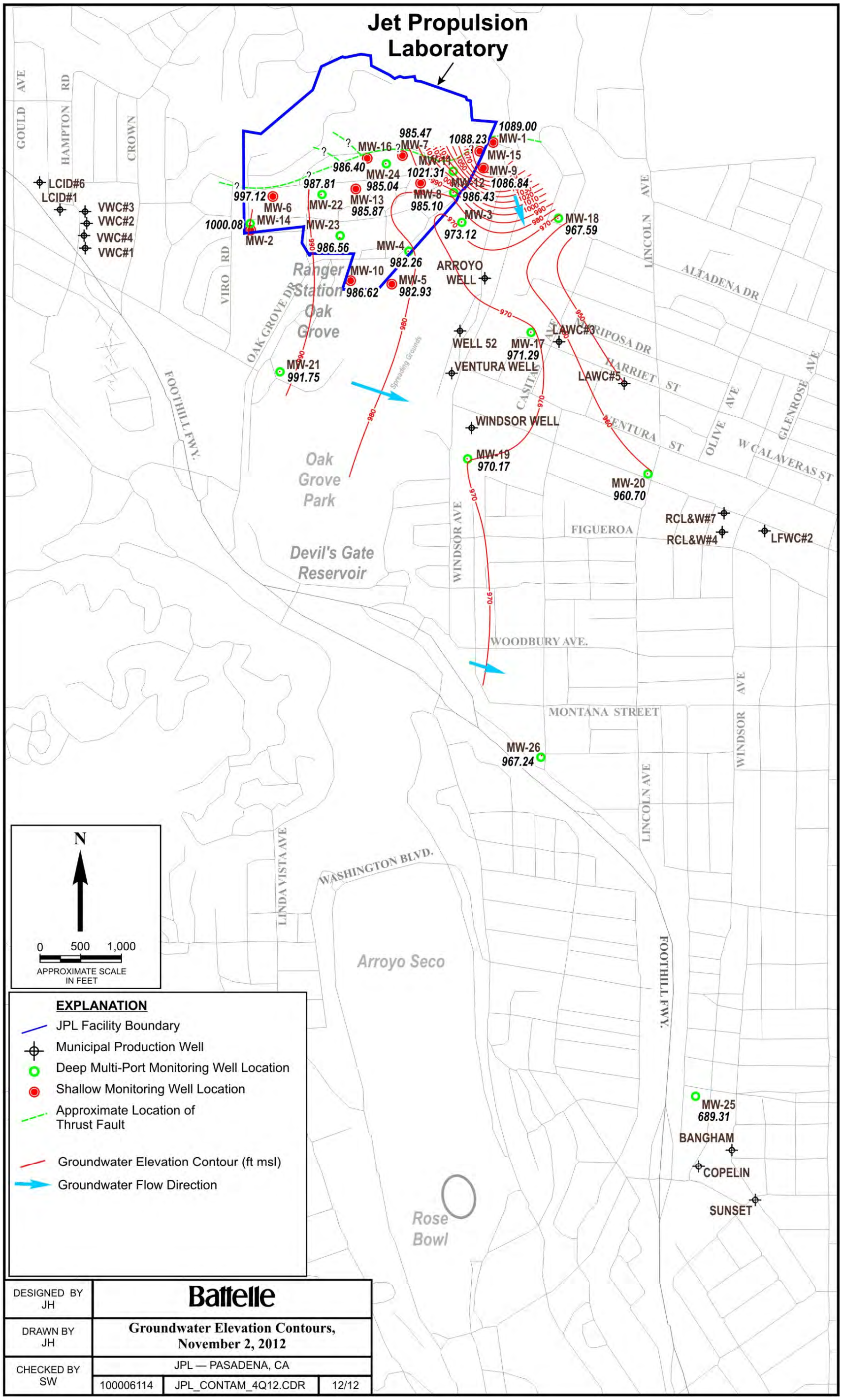
Jet Propulsion Laboratory
MW-1 1089.00
MW-15 1088.23
MW-9
MW-12 1086.84
MW-3 973.12
MW-18 967.59
MW-7 985.47
MW-16
MW-14
MW-24 986.40
MW-13 985.87
MW-8 985.10
MW-22 987.81
MW-6 997.12
MW-2 1000.08
MW-23 986.56
MW-4 982.26
MW-10 986.62
MW-5 982.93
ARROYO WELL
WELL 52
MW-17 971.29
VENTURA WELL
LAWC#3
LAWC#5
WINDSOR WELL
MW-19 970.17
MW-20 960.70
MW-21 991.75
MW-26 967.24
MW-25 689.31
LCID#6
LCID#1
VWC#3
VWC#2
VWC#4
VWC#1
RCL&W#7
RCL&W#4
LFWC#2
BANGHAM
COPELIN
SUNSET
Ranger Station Oak Grove
Oak Grove Park
Devil's Gate Reservoir
Rose Bowl
Arroyo Seco
Spreading Grounds
GOULD AVE
HAMPTON RD
CROWN
VIRO RD
OAK GROVE DR
FOOTHILL FWY.
LINCOLN AVE
ALTADENA DR
MARIPOSA DR
HARRIET ST
CASITA AVE
VENTURA ST
OLIVE AVE
GLENROSE AVE
W CALAVERAS ST
FIGUEROA
WINDSOR AVE
WOODBURY AVE.
MONTANA STREET
LINDA VISTA AVE
WASHINGTON BLVD.
970
980
990
1000
1010
1020
1030
1040
1050
1060
1070
1080
1090
N
0 500 1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
JPL Facility Boundary
Municipal Production Well
Deep Multi-Port Monitoring Well Location
Shallow Monitoring Well Location
Approximate Location of Thrust Fault
Groundwater Elevation Contour (ft msl)
Groundwater Flow Direction
DESIGNED BY JH
DRAWN BY JH
CHECKED BY SW
Battelle
Groundwater Elevation Contours, November 2, 2012
JPL — PASADENA, CA
100006114
JPL_CONTAM_4Q12.CDR
12/12

Figure 8.

TABLES

TABLE 1

SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE DETECTED

DURING THE LAST FOUR 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.)

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	Apr/May 2012	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	1.0 U		
MW-1	Nov 2012	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-3 Screen 1	Apr/May 2012	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	1.0 U		
MW-3 Screen 1	Apr/May 2012	DUPE-4-2Q12	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 U		
MW-3 Screen 1	Nov 2012	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	Jan/Feb 2012	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	1.0 U		
MW-3 Screen 2	Apr/May 2012	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	**1.3**		
MW-3 Screen 2	Aug/Sep 2012	MW-3-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-3 Screen 2	Nov 2012	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	Jan/Feb 2012	MW-3-3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**Ethylbenzene**	**1.2**
MW-3 Screen 3	Apr/May 2012	MW-3-3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**Ethylbenzene**	**0.9**
MW-3 Screen 3	Aug/Sep 2012	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Ethylbenzene** **Styrene** **Toluene**	**1.2** **1.0** **0.2 J**
MW-3 Screen 3	Nov 2012	MW-3-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-3 Screen 4	Jan/Feb 2012	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 U		
MW-3 Screen 4	Apr/May 2012	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 U		
MW-3 Screen 4	Aug/Sep 2012	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	4.0 U	**Ethylbenzene** **Styrene**	**0.1 J** **0.1 J**
MW-3 Screen 4	Nov 2012	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	4.0 U		
MW-3 Screen 5	Apr/May 2012	MW-3-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-3 Screen 5	Nov 2012	MW-3-5	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	**Ethylbenzene** **Styrene**	**0.1 J** **0.1 J**
MW-4 Screen 1	Jan/Feb 2012	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	1.0 U		
MW-4 Screen 1	Apr/May 2012	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	1.0 U		
MW-4 Screen 1	Aug/Sep 2012	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	Nov 2012	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	Jan/Feb 2012	MW-4-2	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**157.0 J**		
MW-4 Screen 2	Apr/May 2012	MW-4-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**157.0**		
MW-4 Screen 2	Aug/Sep 2012	MW-4-2	0.5 U	**0.2 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	**220.0**	**Bromodichloromethane** **Dibromochloromethane**	**1.0** **0.6**
MW-4 Screen 2	Nov 2012	MW-4-2	0.5 U	**0.2 J**	**0.4 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**1.9**	**170.0**	**Bromodichloromethane** **Dibromochloromethane**	**1.3** **2.8**
MW-4 Screen 3	Jan/Feb 2012	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 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-4 Screen 3	Apr/May 2012	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-4 Screen 3	Aug/Sep 2012	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4 Screen 3	Nov 2012	MW-4-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4 Screen 4	Apr/May 2012	MW-4-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-4 Screen 4	Nov 2012	MW-4-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-4 Screen 5	Apr/May 2012	MW-4-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-4 Screen 5	Nov 2012	MW-4-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Styrene**	**0.1 J**
MW-5	Jan/Feb 2012	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	1.0 U		
MW-5	Apr/May 2012	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	1.0 U		
MW-5	Apr/May 2012	DUPE-7-2Q12	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 U		
MW-5	Aug/Sep 2012	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	Nov 2012	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-6	Jan/Feb 2012	MW-6	0.5 U	**2.8**	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.8**		
MW-6	Jan/Feb 2012	DUPE-5-1Q12	0.5 U	**2.5**	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.0**		
MW-6	Apr/May 2012	MW-6	0.5 U	**3.1**	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**3.4**		
MW-6	Aug/Sep 2012	MW-6	0.5 U	**3.1**	**1.2**	**0.3 J**	0.5 U	**0.3 J**	0.5 U	**0.7**	**2.4 J**		
MW-6	Nov 2012	MW-6	0.5 U	**3.6**	**1.4**	**0.3 J**	0.5 U	**0.3 J**	0.5 U	**0.7**	**1.4 J**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-6	Nov 2012	DUPE-5-4Q12	0.5 U	**3.5**	**1.4**	**0.3 J**	0.5 U	**0.3 J**	0.5 U	**0.8**	**1.3 J**	**trans-1,2-Dichloroethene**	**0.2 J**
MW-7	Jan/Feb 2012	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.6 J**		
MW-7	Apr/May 2012	MW-7	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**		
MW-7	Aug/Sep 2012	MW-7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**8.7**	4.0 U	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**11.0** **2.2** **7.1**
MW-7	Nov 2012	MW-7	**0.5 J**	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**7.8**	**1.7 J**	**Bromodichloromethane** **Dibromochloromethane** **Methylene chloride**	**5.4** **2.5** **0.8**
MW-8	Jan/Feb 2012	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	1.0 U		
MW-8	Apr/May 2012	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	1.0 U		
MW-8	Aug/Sep 2012	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		
MW-8	Nov 2012	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**	**0.2 J**
MW-8	Nov 2012	DUPE-8-4Q12	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**	**0.2 J**
MW-9	Apr/May 2012	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	1.0 U		
MW-9	Nov 2012	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	Jan/Feb 2012	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	**1.0**		
MW-10	Apr/May 2012	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	1.0 U		
MW-10	Aug/Sep 2012	MW-10	0.5 U	**1.3**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**4.7**		
MW-10	Nov 2012	MW-10	0.5 U	**5.6**	**0.7**	**0.1 J**	0.5 U	0.5 U	0.5 U	**1.0**	**5.1**		
MW-11 Screen 1	Jan/Feb 2012	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	1.0 U		
MW-11 Screen 1	Apr/May 2012	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	1.0 U		
MW-11 Screen 1	Aug/Sep 2012	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 1	Nov 2012	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 2	Jan/Feb 2012	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	1.0 U		
MW-11 Screen 2	Apr/May 2012	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	1.0 U		
MW-11 Screen 2	Aug/Sep 2012	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	**Styrene**	**0.1 J**
MW-11 Screen 2	Nov 2012	MW-11-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	4.0 U		
MW-11 Screen 3	Jan/Feb 2012	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	1.0 U		
MW-11 Screen 3	Apr/May 2012	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	1.0 U		
MW-11 Screen 3	Aug/Sep 2012	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	**Carbon disulfide** **Styrene**	**0.4 J** **0.2 J**
MW-11 Screen 3	Aug/Sep 2012	DUPE-3-3Q12	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** **Styrene**	**0.4 J** **0.2 J**
MW-11 Screen 3	Nov 2012	MW-11-3	0.5 U	**0.1 J**	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)** **Styrene** **Toluene**	**0.2 J** **0.2 J** **0.1 J**
MW-11 Screen 3	Nov 2012	DUPE-4-4Q12	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)** **Styrene** **Toluene**	**0.2 J** **0.2 J** **0.1 J**
MW-11 Screen 4	Jan/Feb 2012	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	1.0 U		
MW-11 Screen 4	Jan/Feb 2012	DUPE-2-1Q12	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 U		
MW-11 Screen 4	Apr/May 2012	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	1.0 U		
MW-11 Screen 4	Aug/Sep 2012	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	**Carbon disulfide** **Styrene**	**0.8 J** **0.2 J**
MW-11 Screen 4	Nov 2012	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** **Toluene**	**0.4 J** **0.1 J**
MW-11 Screen 5	Apr/May 2012	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	1.0 U		
MW-11 Screen 5	Nov 2012	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**	**0.1 J**
MW-12 Screen 1	Jan/Feb 2012	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	1.0 U		
MW-12 Screen 1	Apr/May 2012	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	1.0 U		
MW-12 Screen 1	Aug/Sep 2012	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	Aug/Sep 2012	DUPE-5-3Q12	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	Nov 2012	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	Jan/Feb 2012	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	**9.3**		
MW-12 Screen 2	Apr/May 2012	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	**10.7**		
MW-12 Screen 2	Aug/Sep 2012	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	**9.1**		
MW-12 Screen 2	Nov 2012	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	**6.7**		
MW-12 Screen 3	Jan/Feb 2012	MW-12-3	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**5.5**		
MW-12 Screen 3	Apr/May 2012	MW-12-3	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**2.1**		
MW-12 Screen 3	Aug/Sep 2012	MW-12-3	**1.0**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**5.1**		
MW-12 Screen 3	Nov 2012	MW-12-3	**0.7**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**3.5 J**		
MW-12 Screen 4	Jan/Feb 2012	MW-12-4	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.6**	**5.2**		

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 4	Apr/May 2012	MW-12-4	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	3.9		
MW-12 Screen 4	Aug/Sep 2012	MW-12-4	1.3	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	4.3		
MW-12 Screen 4	Nov 2012	MW-12-4	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	2.7 J		
MW-12 Screen 5	Jan/Feb 2012	MW-12-5	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1		
MW-12 Screen 5	Apr/May 2012	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4		
MW-12 Screen 5	Aug/Sep 2012	MW-12-5	0.5	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	2.4 J		
MW-12 Screen 5	Nov 2012	MW-12-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 J		
MW-13	Jan/Feb 2012	MW-13	1.5	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	7.1	346.0	Bromodichloromethane Dibromochloromethane	2.6 0.6
MW-13	Jan/Feb 2012	DUPE-6-1Q12	1.5	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	7.1	349.0	Bromodichloromethane Dibromochloromethane	2.6 0.6
MW-13	Apr/May 2012	MW-13	0.9	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.6	189.0	1,4-Dioxane	2.5
MW-13	Aug/Sep 2012	MW-13	0.7	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	4.7	110.0	Bromodichloromethane Dibromochloromethane	1.0 0.2 J
MW-13	Nov 2012	MW-13	0.4 J	0.1 J	0.1 J	0.5 U	0.5 U	0.2 J	0.5 U	8.3	410.0	Bromodichloromethane Methylene chloride	2.1 0.5 J
MW-13	Nov 2012	DUPE-7-4Q12	0.5 J	0.1 J	0.1 J	0.5 U	0.5 U	0.2 J	0.5 U	8.5	420.0	Bromodichloromethane Methylene chloride	2.0 0.5 J
MW-14 Screen 1	Jan/Feb 2012	MW-14-1	0.5 U	2.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.2		
MW-14 Screen 1	Apr/May 2012	MW-14-1	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.6		
MW-14 Screen 1	Aug/Sep 2012	MW-14-1	0.5 U	2.8	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5	2.7 J	cis-1,2-Dichloroethene Methyl-tert-butyl ether (MTBE)	0.1 J 0.6
MW-14 Screen 1	Nov 2012	MW-14-1	0.5 U	1.8	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	1.7 J	cis-1,2-Dichloroethene Methyl-tert-butyl ether (MTBE)	0.1 J 0.9
MW-14 Screen 2	Jan/Feb 2012	MW-14-2	0.5 U	6.7	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.1		
MW-14 Screen 2	Apr/May 2012	MW-14-2	0.5 U	3.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.7		
MW-14 Screen 2	Aug/Sep 2012	MW-14-2	0.5 U	4.2	0.5 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5	2.9 J	cis-1,2-Dichloroethene trans-1,2-Dichloroethene	0.2 J 0.2 J
MW-14 Screen 2	Nov 2012	MW-14-2	0.5 U	4.0	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.6	1.1 J	cis-1,2-Dichloroethene trans-1,2-Dichloroethene	0.2 J 0.2 J
MW-14 Screen 3	Jan/Feb 2012	MW-14-3	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.4		
MW-14 Screen 3	Apr/May 2012	MW-14-3	0.5 U	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.1		
MW-14 Screen 3	Aug/Sep 2012	MW-14-3	0.5 U	2.0	0.6	0.3 J	0.5 U	0.5 U	0.5 U	0.5	4.7	cis-1,2-Dichloroethene	0.1 J
MW-14 Screen 3	Nov 2012	MW-14-3	0.5 U	1.3	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.4 J	2.5 J	cis-1,2-Dichloroethene	0.1 J
MW-14 Screen 4	Jan/Feb 2012	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	5.4		
MW-14 Screen 4	Apr/May 2012	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	5.5		
MW-14 Screen 4	Aug/Sep 2012	MW-14-4	0.5 U	0.3 J	0.3 J	0.2 J	0.5 U	0.5 U	0.5 U	0.3 J	4.4	cis-1,2-Dichloroethene	0.2 J
MW-14 Screen 4	Nov 2012	MW-14-4	0.5 U	0.2 J	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	2.2 J	cis-1,2-Dichloroethene	0.1 J
MW-14 Screen 5	Jan/Feb 2012	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	1.0 U		
MW-14 Screen 5	Apr/May 2012	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	1.0 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-14 Screen 5	Aug/Sep 2012	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	Nov 2012	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-15	Apr/May 2012	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	1.0 U		
MW-15	Nov 2012	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	Nov 2012	DUPE-6-4Q12	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-16	Jan/Feb 2012	MW-16	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 U		
MW-16	Jan/Feb 2012	DUPE-7-1Q12	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 U		
MW-16	Apr/May 2012	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.9**	**1,4-Dioxane** **NDMA**	**0.9 J** **0.0 J**
MW-16	Apr/May 2012	DUPE-8-2Q12	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**	**1,4-Dioxane**	**1.0**
MW-16	Aug/Sep 2012	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.8**	4.0 U	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**7.0** **7.6** **8.8**
MW-16	Nov 2012	MW-16	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**13.0**	4.0 U	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**15.0** **5.0** **10.0**
MW-17 Screen 1	Apr/May 2012	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	1.0 U		
MW-17 Screen 1	Nov 2012	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	Jan/Feb 2012	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	**90.1 J**		
MW-17 Screen 2	Apr/May 2012	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	**13.1**		
MW-17 Screen 2	Aug/Sep 2012	MW-17-2	0.5 U	**0.1 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	4.0 U		
MW-17 Screen 2	Nov 2012	MW-17-2	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**7.8**		
MW-17 Screen 3	Jan/Feb 2012	MW-17-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**7.3 J**		
MW-17 Screen 3	Apr/May 2012	MW-17-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**7.9**		
MW-17 Screen 3	Aug/Sep 2012	MW-17-3	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**8.1**		
MW-17 Screen 3	Nov 2012	MW-17-3	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**5.1**		
MW-17 Screen 4	Jan/Feb 2012	MW-17-4	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.8 J**		
MW-17 Screen 4	Apr/May 2012	MW-17-4	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**		
MW-17 Screen 4	Aug/Sep 2012	MW-17-4	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.1 J**		
MW-17 Screen 4	Nov 2012	MW-17-4	**0.3 J**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**5.6**		
MW-17 Screen 5	Apr/May 2012	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	1.0 U		
MW-17 Screen 5	Nov 2012	MW-17-5	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U		
MW-18 Screen 1	Apr/May 2012	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	1.0 U		
MW-18 Screen 1	Nov 2012	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	4.0 U		
MW-18 Screen 2	Jan/Feb 2012	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	1.0 U		
MW-18 Screen 2	Apr/May 2012	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	1.0 U		
MW-18 Screen 2	Aug/Sep 2012	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	Nov 2012	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	Jan/Feb 2012	MW-18-3	**25.0**	**2.4**	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	**2.8**	**126.0**		
MW-18 Screen 3	Apr/May 2012	MW-18-3	**8.3**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**	**64.4**		

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 3	Aug/Sep 2012	MW-18-3	7.4	1.0	0.2 J	0.5 U	0.5 U	0.5 U	0.2 J	1.6	93.0		
MW-18 Screen 3	Aug/Sep 2012	DUPE-1-3Q12	5.4	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	91.0		
MW-18 Screen 3	Nov 2012	MW-18-3	9.4	1.2	0.1 J	0.5 U	0.5 U	0.5 U	0.2 J	1.7	54.0		
MW-18 Screen 4	Jan/Feb 2012	MW-18-4	1.6	0.7	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	16.5		
MW-18 Screen 4	Apr/May 2012	MW-18-4	4.0	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	47.3		
MW-18 Screen 4	Apr/May 2012	DUPE-6-2Q12	5.1	1.0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	46.2		
MW-18 Screen 4	Aug/Sep 2012	MW-18-4	1.9	0.9	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.8	15.0		
MW-18 Screen 4	Nov 2012	MW-18-4	1.7	0.7	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.6	11.0		
MW-18 Screen 5	Jan/Feb 2012	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	1.0 U		
MW-18 Screen 5	Apr/May 2012	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	1.0 U		
MW-18 Screen 5	Aug/Sep 2012	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	Nov 2012	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	Styrene	0.1 J
MW-19 Screen 1	Jan/Feb 2012	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-19 Screen 1	Apr/May 2012	MW-19-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-19 Screen 1	Aug/Sep 2012	MW-19-1	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-19 Screen 1	Nov 2012	MW-19-1	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-19 Screen 2	Jan/Feb 2012	MW-19-2	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.1		
MW-19 Screen 2	Apr/May 2012	MW-19-2	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.1		
MW-19 Screen 2	Apr/May 2012	DUPE-5-2Q12	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	7.1		
MW-19 Screen 2	Aug/Sep 2012	MW-19-2	0.5 U	1.1	0.6	0.3 J	0.5 U	0.5 U	0.5 U	0.5	5.8	cis-1,2-Dichloroethene	0.3 J
MW-19 Screen 2	Nov 2012	MW-19-2	0.5 U	1.4	0.6	0.2 J	0.5 U	0.5 U	0.5 U	0.5	1.2 J	Bromodichloromethane cis-1,2-Dichloroethene	0.2 J 0.2 J
MW-19 Screen 3	Jan/Feb 2012	MW-19-3	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		
MW-19 Screen 3	Apr/May 2012	MW-19-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.7		
MW-19 Screen 3	Aug/Sep 2012	MW-19-3	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	3.0 J	cis-1,2-Dichloroethene	0.1 J
MW-19 Screen 3	Nov 2012	MW-19-3	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.8 J		
MW-19 Screen 3	Nov 2012	DUPE-1-4Q12	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		
MW-19 Screen 4	Jan/Feb 2012	MW-19-4	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.8		
MW-19 Screen 4	Apr/May 2012	MW-19-4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.9		
MW-19 Screen 4	Aug/Sep 2012	MW-19-4	0.5 U	0.2 J	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	3.6 J	cis-1,2-Dichloroethene	0.1 J
MW-19 Screen 4	Nov 2012	MW-19-4	0.5 U	0.1 J	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.4 J		
MW-19 Screen 5	Jan/Feb 2012	MW-19-5	0.5 U	0.5 U	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1		
MW-19 Screen 5	Apr/May 2012	MW-19-5	0.5 U	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.0		
MW-19 Screen 5	Aug/Sep 2012	MW-19-5	0.5 U	0.2 J	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	2.3 J		
MW-19 Screen 5	Nov 2012	MW-19-5	0.5 U	0.1 J	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1.4 J		
MW-20 Screen 1	Jan/Feb 2012	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	1.7		
MW-20 Screen 1	Apr/May 2012	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	1.0 U		
MW-20 Screen 1	Aug/Sep 2012	MW-20-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1.6 J	Methyl-tert-butyl ether (MTBE)	0.3 J
MW-20 Screen 1	Nov 2012	MW-20-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	4.0 U	Methyl-tert-butyl ether (MTBE)	0.3 J
MW-20 Screen 2	Jan/Feb 2012	MW-20-2	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.2		

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 2	Apr/May 2012	MW-20-2	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**6.4**		
MW-20 Screen 2	Aug/Sep 2012	MW-20-2	0.5 U	**1.1**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**3.2 J**	**Styrene**	**0.1 J**
MW-20 Screen 2	Nov 2012	MW-20-2	0.5 U	**0.7**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.5 J**	**Styrene**	**0.1 J**
MW-20 Screen 3	Jan/Feb 2012	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	**12.6**	**Methyl-tert-butyl ether (MTBE)** **Styrene**	**1.2** **1.7**
MW-20 Screen 3	Apr/May 2012	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	1.0 U		
MW-20 Screen 3	Aug/Sep 2012	MW-20-3	0.5 U	**0.5**	**0.3 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Carbon disulfide** **Styrene**	**2.8 J** **0.6 J** **0.4 J**
MW-20 Screen 3	Nov 2012	MW-20-3	0.5 U	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.0 U	**Acrylonitrile** **Carbon disulfide** **Ethylbenzene** **Styrene**	**2.0 J** **0.6 J** **0.1 J** **0.3 J**
MW-20 Screen 4	Jan/Feb 2012	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	**123.0 J**		
MW-20 Screen 4	Apr/May 2012	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	1.0 U		
MW-20 Screen 4	Aug/Sep 2012	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	Nov 2012	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	**Carbon disulfide**	**0.4 J**
MW-20 Screen 5	Jan/Feb 2012	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	**56.5**		
MW-20 Screen 5	Apr/May 2012	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	1.0 U		
MW-20 Screen 5	Aug/Sep 2012	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	**Carbon disulfide** **Styrene**	**0.8 J** **0.4 J**
MW-20 Screen 5	Nov 2012	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	**Carbon disulfide** **Styrene**	**0.5 J** **0.3 J**
MW-21 Screen 1	Jan/Feb 2012	MW-21-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.0**	**3.4 J**		
MW-21 Screen 1	Apr/May 2012	MW-21-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	**2.8**		
MW-21 Screen 1	Aug/Sep 2012	MW-21-1	0.5 U	**0.1 J**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**1.4**	4.0 U	**cis-1,2-Dichloroethene**	**0.1 J**
MW-21 Screen 1	Nov 2012	MW-21-1	0.5 U	**0.1 J**	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	**1.7 J**	**cis-1,2-Dichloroethene**	**0.2 J**
MW-21 Screen 2	Jan/Feb 2012	MW-21-2	0.5 U	0.5 U	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	**6.1**	**2.7 J**		
MW-21 Screen 2	Jan/Feb 2012	DUPE-1-1Q12	0.5 U	0.5 U	**1.5**	0.5 U	0.5 U	0.5 U	0.5 U	**4.5**	**2.9 J**		
MW-21 Screen 2	Apr/May 2012	MW-21-2	0.5 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	**3.5**	**2.8**		
MW-21 Screen 2	Aug/Sep 2012	MW-21-2	0.5 U	**0.2 J**	**2.0**	0.5 U	0.5 U	0.5 U	0.5 U	**3.7**	4.0 U	**cis-1,2-Dichloroethene** **Methyl-tert-butyl ether (MTBE)**	**0.1 J** **0.2 J**
MW-21 Screen 2	Nov 2012	MW-21-2	0.5 U	**0.2 J**	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	**3.0**	**1.5 J**	**cis-1,2-Dichloroethene** **Methyl-tert-butyl ether (MTBE)**	**0.4 J** **0.2 J**
MW-21 Screen 3	Jan/Feb 2012	MW-21-3	0.5 U	**1.3**	**4.7**	0.5 U	0.5 U	0.5 U	0.5 U	**5.5**	**3.8 J**	**cis-1,2-Dichloroethene**	**0.7**
MW-21 Screen 3	Apr/May 2012	MW-21-3	0.5 U	0.5 U	**2.3**	0.5 U	0.5 U	0.5 U	0.5 U	**3.9**	**3.5**		
MW-21 Screen 3	Aug/Sep 2012	MW-21-3	0.5 U	**0.7**	**3.8**	**0.1 J**	0.5 U	0.5 U	0.5 U	**4.2**	4.0 U	**cis-1,2-Dichloroethene** **Methyl-tert-butyl ether (MTBE)**	**0.7** **0.2 J**
MW-21 Screen 3	Aug/Sep 2012	DUPE-7-3Q12	0.5 U	**0.5**	**2.6**	0.5 U	0.5 U	0.5 U	0.5 U	**3.4**	4.0 U	**cis-1,2-Dichloroethene** **Methyl-tert-butyl ether (MTBE)**	**0.5** **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 3	Nov 2012	MW-21-3	0.5 U	**0.8**	**5.9**	**0.1 J**	0.5 U	0.5 U	0.5 U	**4.0**	**1.6 J**	**cis-1,2-Dichloroethene** **Methyl-tert-butyl ether (MTBE)**	**0.9** **0.2 J**
MW-21 Screen 4	Jan/Feb 2012	MW-21-4	0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	**7.0**	**2.9 J**		
MW-21 Screen 4	Apr/May 2012	MW-21-4	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**4.9**	**2.4**		
MW-21 Screen 4	Aug/Sep 2012	MW-21-4	0.5 U	**0.1 J**	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**6.8**	4.0 U		
MW-21 Screen 4	Nov 2012	MW-21-4	0.5 U	**0.1 J**	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**7.0**	**1.4 J**	**cis-1,2-Dichloroethene**	**0.1 J**
MW-21 Screen 5	Jan/Feb 2012	MW-21-5	0.5 U	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	0.5 U	**5.1**	**3.0 J**		
MW-21 Screen 5	Apr/May 2012	MW-21-5	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**3.7**	**2.6**		
MW-21 Screen 5	Aug/Sep 2012	MW-21-5	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	**6.2**	4.0 U	**cis-1,2-Dichloroethene**	**0.1 J**
MW-21 Screen 5	Nov 2012	MW-21-5	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	**5.2**	**1.2 J**	**cis-1,2-Dichloroethene**	**0.1 J**
MW-22 Screen 1	Jan/Feb 2012	MW-22-1	0.5 U	0.5 U	**1.6**	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U	**4.4**		
MW-22 Screen 1	Apr/May 2012	MW-22-1	0.5 U	0.5 U	**0.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**6.5**		
MW-22 Screen 1	Apr/May 2012	DUPE-1-2Q12	0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**6.5**		
MW-22 Screen 1	Aug/Sep 2012	MW-22-1	0.5 U	**0.5 J**	**0.6**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.9 J**		
MW-22 Screen 1	Nov 2012	MW-22-1	0.5 U	**0.8**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	4.0 U		
MW-22 Screen 2	Jan/Feb 2012	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**		
MW-22 Screen 2	Jan/Feb 2012	DUPE-4-1Q12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**		
MW-22 Screen 2	Apr/May 2012	MW-22-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.2**		
MW-22 Screen 2	Aug/Sep 2012	MW-22-2	0.5 U	**0.2 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.2 J**	**2.3 J**		
MW-22 Screen 2	Nov 2012	MW-22-2	0.5 U	**0.2 J**	**0.2 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.2 J**	4.0 U		
MW-22 Screen 3	Jan/Feb 2012	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	**4.5**		
MW-22 Screen 3	Apr/May 2012	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	**4.1**		
MW-22 Screen 3	Aug/Sep 2012	MW-22-3	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**3.8 J**		
MW-22 Screen 3	Nov 2012	MW-22-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	4.0 U		
MW-22 Screen 4	Apr/May 2012	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	1.0 U		
MW-22 Screen 4	Nov 2012	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	4.0 U		
MW-22 Screen 5	Apr/May 2012	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	1.0 U		
MW-22 Screen 5	Nov 2012	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	Jan/Feb 2012	MW-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**	**35.2**		
MW-23 Screen 1	Jan/Feb 2012	DUPE-3-1Q12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	**35.5**		
MW-23 Screen 1	Apr/May 2012	MW-23-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**11.2**		
MW-23 Screen 1	Apr/May 2012	DUPE-3-2Q12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.8**	**12.5 J**		
MW-23 Screen 1	Aug/Sep 2012	MW-23-1	0.5 U	**0.3 J**	**0.4 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**4.5**		
MW-23 Screen 1	Nov 2012	MW-23-1	0.5 U	**1.0**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**2.3 J**		
MW-23 Screen 2	Jan/Feb 2012	MW-23-2	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.3**		
MW-23 Screen 2	Apr/May 2012	MW-23-2	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**4.9**		
MW-23 Screen 2	Aug/Sep 2012	MW-23-2	0.5 U	**0.7**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**5.7**		
MW-23 Screen 2	Aug/Sep 2012	DUPE-4-3Q12	0.5 U	**0.7**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.5**	**4.6**		
MW-23 Screen 2	Nov 2012	MW-23-2	0.5 U	**0.6**	**0.3 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**2.5 J**		
MW-23 Screen 3	Jan/Feb 2012	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	**2.1**		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-23 Screen 3	Apr/May 2012	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	**1.9**		
MW-23 Screen 3	Aug/Sep 2012	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	**1.9 J**		
MW-23 Screen 3	Nov 2012	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	**1.5 J**		
MW-23 Screen 4	Apr/May 2012	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**		
MW-23 Screen 4	Nov 2012	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	4.0 U		
MW-23 Screen 5	Apr/May 2012	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	1.0 U		
MW-23 Screen 5	Nov 2012	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	**Ethylbenzene** **Styrene**	**0.1 J** **0.3 J**
MW-24 Screen 1	Jan/Feb 2012	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**	**5.8**		
MW-24 Screen 1	Apr/May 2012	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.7**	**3.2**	**1,4-Dioxane**	**0.9 J**
MW-24 Screen 1	Aug/Sep 2012	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.5**	**3.9 J**	**Bromodichloromethane** **Bromoform** **Dibromochloromethane**	**1.2** **0.3 J** **0.9**
MW-24 Screen 1	Nov 2012	MW-24-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**5.1**	4.0 U	**Bromodichloromethane** **Dibromochloromethane**	**4.8** **2.7**
MW-24 Screen 2	Jan/Feb 2012	MW-24-2	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**33.3**		
MW-24 Screen 2	Apr/May 2012	MW-24-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**20.1**		
MW-24 Screen 2	Aug/Sep 2012	MW-24-2	**0.3 J**	**0.1 J**	**0.1 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**14.0**		
MW-24 Screen 2	Nov 2012	MW-24-2	**0.4 J**	**0.1 J**	**0.2 J**	**0.2 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	**8.7**	**Bromodichloromethane**	**0.2 J**
MW-24 Screen 2	Nov 2012	DUPE-3-4Q12	**0.2 J**	0.5 U	**0.2 J**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.3 J**	**8.4**	**Bromodichloromethane**	**0.1 J**
MW-24 Screen 3	Jan/Feb 2012	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	1.0 U		
MW-24 Screen 3	Apr/May 2012	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	1.0 U		
MW-24 Screen 3	Apr/May 2012	DUPE-2-2Q12	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 U		
MW-24 Screen 3	Aug/Sep 2012	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	Aug/Sep 2012	DUPE-6-3Q12	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	Nov 2012	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 4	Apr/May 2012	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	1.0 U		
MW-24 Screen 4	Nov 2012	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	**Ethylbenzene** **Styrene**	**0.1 J** **0.2 J**
MW-24 Screen 5	Apr/May 2012	MW-24-5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-24 Screen 5	Nov 2012	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	Jan/Feb 2012	MW-25-1	0.5 U	**5.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**11.6 J**		
MW-25 Screen 1	Apr/May 2012	MW-25-1	0.5 U	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**10.6**		
MW-25 Screen 1	Aug/Sep 2012	MW-25-1	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**12.0**		
MW-25 Screen 1	Nov 2012	MW-25-1	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5 J**	**6.0**	**Methyl-tert-butyl ether (MTBE)**	**0.2 J**
MW-25 Screen 2	Jan/Feb 2012	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	**16.8 J**		
MW-25 Screen 2	Apr/May 2012	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	**16.6**		
MW-25 Screen 2	Aug/Sep 2012	MW-25-2	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**17.0**		
MW-25 Screen 2	Nov 2012	MW-25-2	0.5 U	**0.1 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.1 J**	**11.0**		
MW-25 Screen 3	Jan/Feb 2012	MW-25-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**11.3 J**		

Sample Location	Sampling Event	Sample Number	Carbon tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Perchlorate	Other Volatile Organic Compounds and 1,4-Dioxane, NDMA, NDPA, 1,2,3-TCP	
MW-25 Screen 3	Apr/May 2012	MW-25-3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**11.6**		
MW-25 Screen 3	Aug/Sep 2012	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**	**11.0**		
MW-25 Screen 3	Aug/Sep 2012	DUPE-2-3Q12	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.4 J**	**11.0**		
MW-25 Screen 3	Nov 2012	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**	**6.0**		
MW-25 Screen 4	Jan/Feb 2012	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	**9.8 J**		
MW-25 Screen 4	Apr/May 2012	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	**10.0**		
MW-25 Screen 4	Aug/Sep 2012	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	**9.3**		
MW-25 Screen 4	Nov 2012	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	**5.6**		
MW-25 Screen 5	Jan/Feb 2012	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	**54.8 J**		
MW-25 Screen 5	Apr/May 2012	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	1.0 U		
MW-25 Screen 5	Aug/Sep 2012	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	Nov 2012	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	Jan/Feb 2012	MW-26-1	0.5 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.9 J**		
MW-26 Screen 1	Apr/May 2012	MW-26-1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.9**		
MW-26 Screen 1	Aug/Sep 2012	MW-26-1	0.5 U	**0.2 J**	**0.4 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	**4.4**		
MW-26 Screen 1	Nov 2012	MW-26-1	0.5 U	**0.3 J**	**0.8**	**0.1 J**	0.5 U	0.5 U	0.5 U	**0.4 J**	4.0 U	**Bromodichloromethane**	**0.2 J**
MW-26 Screen 1	Nov 2012	DUPE-2-4Q12	0.5 U	**0.3 J**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	4.0 U	**Bromodichloromethane**	**0.1 J**
MW-26 Screen 2	Jan/Feb 2012	MW-26-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-26 Screen 2	Apr/May 2012	MW-26-2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U		
MW-26 Screen 2	Aug/Sep 2012	MW-26-2	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-26 Screen 2	Nov 2012	MW-26-2	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		
California Maximum Contaminant Level (MCL)			0.5	5	5	5	0.5	6	1200	TTHM	6.0 *		
EPA Region IX Maximum Contaminant Level			5	5	5	NE	5	7	NE	TTHM	NE		

Notes

DUPE	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 trihalomethanes (Bromodichloromethane, Bromoform, Dibromochloromethane, and Chloroform) as an annual average
*	Interim Action Level - California Department of Public Health
J	Analyte concentration is an estimated value
U	Analyte was analyzed for but not detected at or above the stated limit

TABLE 2
SUMMARY OF METALS DETECTED
DURING THE LAST FOUR SAMPLING EVENTS OF THE LONG-TERM QUARTERLY
GROUNDWATER SAMPLING PROGRAM

(All concentrations reported in µg/L; except for Hexavalent Chromium, which is reported in mg/L.)

(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 (mg/L)
MW-1	Apr/May 2012	MW-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-1	Nov 2012	MW-1	NA	NA	3.0 U	0.002 U
MW-3 Screen 1	Apr/May 2012	MW-3-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-3 Screen 1	Apr/May 2012	DUPE-4-2Q12	2.0 U	5.000 U	5.0 U	0.010 U
MW-3 Screen 1	Nov 2012	MW-3-1	NA	NA	3.0 U	0.002 U
MW-3 Screen 2	Jan/Feb 2012	MW-3-2	NA	NA	5.0 U	0.010 U
MW-3 Screen 2	Apr/May 2012	MW-3-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-3 Screen 2	Aug/Sep 2012	MW-3-2	NA	NA	3.0 U	0.002 U
MW-3 Screen 2	Nov 2012	MW-3-2	NA	NA	3.0 U	0.002 U
MW-3 Screen 3	Jan/Feb 2012	MW-3-3	NA	NA	5.0 U	0.010 U
MW-3 Screen 3	Apr/May 2012	MW-3-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-3 Screen 3	Aug/Sep 2012	MW-3-3	NA	NA	3.0 U	0.002 U
MW-3 Screen 3	Nov 2012	MW-3-3	NA	NA	**2.1 J**	**0.002**
MW-3 Screen 4	Jan/Feb 2012	MW-3-4	NA	NA	5.0 U	0.010 U
MW-3 Screen 4	Apr/May 2012	MW-3-4	**6.3**	5.000 U	5.0 U	0.010 U
MW-3 Screen 4	Aug/Sep 2012	MW-3-4	NA	NA	**0.8 J**	0.002 U
MW-3 Screen 4	Nov 2012	MW-3-4	NA	NA	**3.0**	**0.001 J**
MW-3 Screen 5	Apr/May 2012	MW-3-5	**3.9**	5.000 U	5.0 U	0.010 U
MW-3 Screen 5	Nov 2012	MW-3-5	NA	NA	**9.2**	0.002 U
MW-4 Screen 1	Jan/Feb 2012	MW-4-1	NA	NA	5.0 U	0.010 U
MW-4 Screen 1	Apr/May 2012	MW-4-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-4 Screen 1	Aug/Sep 2012	MW-4-1	NA	NA	3.0 U	0.002 U
MW-4 Screen 1	Nov 2012	MW-4-1	NA	NA	3.0 U	0.002 U
MW-4 Screen 2	Jan/Feb 2012	MW-4-2	NA	NA	5.0 U	0.010 U
MW-4 Screen 2	Apr/May 2012	MW-4-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-4 Screen 2	Aug/Sep 2012	MW-4-2	NA	NA	**2.4 J**	0.002 U
MW-4 Screen 2	Nov 2012	MW-4-2	NA	NA	**4.5**	0.002 U
MW-4 Screen 3	Jan/Feb 2012	MW-4-3	NA	NA	5.0 U	0.010 U
MW-4 Screen 3	Apr/May 2012	MW-4-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-4 Screen 3	Aug/Sep 2012	MW-4-3	NA	NA	3.0 U	**0.003 J**
MW-4 Screen 3	Nov 2012	MW-4-3	NA	NA	**2.1 J**	**0.001 J**
MW-4 Screen 4	Apr/May 2012	MW-4-4	**4.5**	5.000 U	5.0 U	0.010 U
MW-4 Screen 4	Nov 2012	MW-4-4	NA	NA	**1.3 J**	0.002 U
MW-4 Screen 5	Apr/May 2012	MW-4-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-4 Screen 5	Nov 2012	MW-4-5	NA	NA	3.0 U	0.002 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-5	Jan/Feb 2012	MW-5	NA	NA	5.0 U	0.010 U
MW-5	Apr/May 2012	MW-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-5	Apr/May 2012	DUPE-7-2Q12	2.0 U	5.000 U	5.0 U	0.010 U
MW-5	Aug/Sep 2012	MW-5	NA	NA	3.0 U	0.002 U
MW-5	Nov 2012	MW-5	NA	NA	**1.1 J**	0.002 U
MW-6	Jan/Feb 2012	MW-6	NA	NA	5.0 U	0.010 U
MW-6	Jan/Feb 2012	DUPE-5-1Q12	NA	NA	5.0 U	0.010 U
MW-6	Apr/May 2012	MW-6	**2.5**	5.000 U	**83.0**	0.010 U
MW-6	Aug/Sep 2012	MW-6	NA	NA	**2.3 J**	0.002 U
MW-6	Nov 2012	MW-6	NA	NA	**2.2 J**	**0.001 J**
MW-6	Nov 2012	DUPE-5-4Q12	NA	NA	**2.5 J**	**0.001 J**
MW-7	Jan/Feb 2012	MW-7	NA	NA	5.0 U	0.010 U
MW-7	Apr/May 2012	MW-7	2.0 U	5.000 U	5.0 U	0.010 U
MW-7	Aug/Sep 2012	MW-7	NA	NA	**73.0**	0.002 U
MW-7	Nov 2012	MW-7	NA	NA	**9.0**	**0.002 J**
MW-8	Jan/Feb 2012	MW-8	NA	NA	5.0 U	0.010 U
MW-8	Apr/May 2012	MW-8	2.0 U	5.000 U	5.0 U	0.010 U
MW-8	Aug/Sep 2012	MW-8	NA	NA	**3.7**	0.002 U
MW-8	Nov 2012	MW-8	NA	NA	**1.5 J**	**0.001 J**
MW-8	Nov 2012	DUPE-8-4Q12	NA	NA	**1.4 J**	0.002 U
MW-9	Apr/May 2012	MW-9	2.0 U	5.000 U	5.0 U	0.010 U
MW-9	Nov 2012	MW-9	NA	NA	**0.7 J**	0.002 U
MW-10	Jan/Feb 2012	MW-10	NA	NA	5.0 U	0.010 U
MW-10	Apr/May 2012	MW-10	2.0 U	5.000 U	5.0 U	0.010 U
MW-10	Aug/Sep 2012	MW-10	NA	NA	**23.0 J**	0.002 U
MW-10	Nov 2012	MW-10	NA	NA	**21.0**	**0.006 J**
MW-11 Screen 1	Jan/Feb 2012	MW-11-1	NA	NA	5.0 U	0.010 U
MW-11 Screen 1	Apr/May 2012	MW-11-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-11 Screen 1	Aug/Sep 2012	MW-11-1	NA	NA	3.0 U	0.002 U
MW-11 Screen 1	Nov 2012	MW-11-1	NA	NA	3.0 U	0.002 U
MW-11 Screen 2	Jan/Feb 2012	MW-11-2	NA	NA	5.0 U	0.010 U
MW-11 Screen 2	Apr/May 2012	MW-11-2	**3.2**	5.000 U	5.0 U	0.010 U
MW-11 Screen 2	Aug/Sep 2012	MW-11-2	NA	NA	3.0 U	0.002 U
MW-11 Screen 2	Nov 2012	MW-11-2	NA	NA	3.0 U	0.002 U
MW-11 Screen 3	Jan/Feb 2012	MW-11-3	NA	NA	5.0 U	0.010 U
MW-11 Screen 3	Apr/May 2012	MW-11-3	**4.7**	5.000 U	**5.2**	0.010 U
MW-11 Screen 3	Aug/Sep 2012	MW-11-3	NA	NA	3.0 U	0.002 U
MW-11 Screen 3	Aug/Sep 2012	DUPE-3-3Q12	NA	NA	3.0 U	0.002 U
MW-11 Screen 3	Nov 2012	MW-11-3	NA	NA	3.0 U	0.002 U
MW-11 Screen 3	Nov 2012	DUPE-4-4Q12	NA	NA	3.0 U	0.002 U
MW-11 Screen 4	Apr/May 2012	MW-11-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-11 Screen 4	Nov 2012	MW-11-4	NA	NA	3.0 U	0.002 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-11 Screen 5	Apr/May 2012	MW-11-5	**10.0**	5.000 U	**5.7**	0.010 U
MW-11 Screen 5	Nov 2012	MW-11-5	NA	NA	**0.9 J**	0.002 U
MW-12 Screen 1	Jan/Feb 2012	MW-12-1	NA	NA	5.0 U	0.010 U
MW-12 Screen 1	Apr/May 2012	MW-12-1	2.0 U	5.000 U	5.0 U	**0.003 J**
MW-12 Screen 1	Aug/Sep 2012	MW-12-1	NA	NA	3.0 U	0.002 U
MW-12 Screen 1	Aug/Sep 2012	DUPE-5-3Q12	NA	NA	3.0 U	0.002 U
MW-12 Screen 1	Nov 2012	MW-12-1	NA	NA	3.0 U	0.002 U
MW-12 Screen 2	Jan/Feb 2012	MW-12-2	NA	NA	5.0 U	0.010 U
MW-12 Screen 2	Apr/May 2012	MW-12-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-12 Screen 2	Aug/Sep 2012	MW-12-2	NA	NA	**0.6 J**	0.002 U
MW-12 Screen 2	Nov 2012	MW-12-2	NA	NA	**1.0 J**	0.002 U
MW-12 Screen 3	Jan/Feb 2012	MW-12-3	NA	NA	5.0 U	0.010 U
MW-12 Screen 3	Apr/May 2012	MW-12-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-12 Screen 3	Aug/Sep 2012	MW-12-3	NA	NA	3.0 U	0.002 U
MW-12 Screen 3	Nov 2012	MW-12-3	NA	NA	3.0 U	**0.001 J**
MW-12 Screen 4	Apr/May 2012	MW-12-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-12 Screen 4	Nov 2012	MW-12-4	NA	NA	3.0 U	**0.001 J**
MW-12 Screen 5	Apr/May 2012	MW-12-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-12 Screen 5	Nov 2012	MW-12-5	NA	NA	**2.2 J**	**0.003**
MW-13	Jan/Feb 2012	MW-13	NA	NA	**5.8**	**0.007 J**
MW-13	Jan/Feb 2012	DUPE-6-1Q12	NA	NA	**5.6**	**0.008 J**
MW-13	Apr/May 2012	MW-13	2.0 U	5.000 U	**11.0**	**0.008 J**
MW-13	Aug/Sep 2012	MW-13	NA	NA	**11.0**	**0.005**
MW-13	Nov 2012	MW-13	NA	NA	**23.0**	**0.007**
MW-13	Nov 2012	DUPE-7-4Q12	NA	NA	**43.0**	**0.007**
MW-14 Screen 1	Jan/Feb 2012	MW-14-1	NA	NA	5.0 U	0.010 U
MW-14 Screen 1	Apr/May 2012	MW-14-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-14 Screen 1	Aug/Sep 2012	MW-14-1	NA	NA	**0.9 J**	0.002 U
MW-14 Screen 1	Nov 2012	MW-14-1	NA	NA	3.0 U	0.002 U
MW-14 Screen 2	Jan/Feb 2012	MW-14-2	NA	NA	5.0 U	0.010 U
MW-14 Screen 2	Apr/May 2012	MW-14-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-14 Screen 2	Aug/Sep 2012	MW-14-2	NA	NA	**0.7 J**	0.002 U
MW-14 Screen 2	Nov 2012	MW-14-2	NA	NA	3.0 U	0.002 U
MW-14 Screen 3	Jan/Feb 2012	MW-14-3	NA	NA	5.0 U	0.010 U
MW-14 Screen 3	Apr/May 2012	MW-14-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-14 Screen 3	Aug/Sep 2012	MW-14-3	NA	NA	**0.9 J**	0.002 U
MW-14 Screen 3	Nov 2012	MW-14-3	NA	NA	3.0 U	0.002 U
MW-14 Screen 4	Apr/May 2012	MW-14-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-14 Screen 4	Nov 2012	MW-14-4	NA	NA	**0.8 J**	**0.001 J**
MW-14 Screen 5	Apr/May 2012	MW-14-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-14 Screen 5	Nov 2012	MW-14-5	NA	NA	3.0 U	0.002 U
MW-15	Jan/Feb 2012	MW-15	NA	NA	5.0 U	0.010 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-15	Apr/May 2012	MW-15	2.0 U	5.000 U	5.0 U	0.010 U
MW-15	Aug/Sep 2012	MW-15	NA	NA	3.0 U	0.002 U
MW-15	Nov 2012	MW-15	NA	NA	**0.9 J**	0.002 U
MW-15	Nov 2012	DUPE-6-4Q12	NA	NA	3.0 U	0.002 U
MW-16	Jan/Feb 2012	MW-16	NA	NA	5.0 U	0.010 U
MW-16	Jan/Feb 2012	DUPE-7-1Q12	NA	NA	5.0 U	0.010 U
MW-16	Apr/May 2012	MW-16	**6.7**	5.000 U	5.0 U	0.010 U
MW-16	Apr/May 2012	DUPE-8-2Q12	**6.8**	5.000 U	5.0 U	0.010 U
MW-16	Aug/Sep 2012	MW-16	NA	NA	**93.0**	**0.006**
MW-16	Nov 2012	MW-16	NA	NA	**18.0**	**0.016**
MW-17 Screen 1	Apr/May 2012	MW-17-1	5.0 U	5.000 U	5.0 U	0.010 U
MW-17 Screen 1	Nov 2012	MW-17-1	NA	NA	3.0 U	0.002 U
MW-17 Screen 2	Jan/Feb 2012	MW-17-2	NA	NA	5.0 U	0.010 U
MW-17 Screen 2	Apr/May 2012	MW-17-2	5.0 U	5.000 U	5.0 U	0.010 U
MW-17 Screen 2	Aug/Sep 2012	MW-17-2	NA	NA	3.0 U	0.002 U
MW-17 Screen 2	Nov 2012	MW-17-2	NA	NA	3.0 U	0.002 U
MW-17 Screen 3	Jan/Feb 2012	MW-17-3	NA	NA	5.0 U	0.010 U
MW-17 Screen 3	Apr/May 2012	MW-17-3	5.0 U	5.000 U	5.0 U	0.010 U
MW-17 Screen 3	Aug/Sep 2012	MW-17-3	NA	NA	**1.3 J**	0.002 U
MW-17 Screen 3	Nov 2012	MW-17-3	NA	NA	3.0 U	0.002 U
MW-17 Screen 4	Jan/Feb 2012	MW-17-4	NA	NA	5.0 U	0.010 U
MW-17 Screen 4	Apr/May 2012	MW-17-4	5.0 U	5.000 U	5.0 U	0.010 U
MW-17 Screen 4	Aug/Sep 2012	MW-17-4	NA	NA	**0.9 J**	0.002 U
MW-17 Screen 4	Nov 2012	MW-17-4	NA	NA	**1.4 J**	**0.002 J**
MW-17 Screen 5	Apr/May 2012	MW-17-5	5.0 U	5.000 U	5.0 U	0.010 U
MW-17 Screen 5	Nov 2012	MW-17-5	NA	NA	3.0 U	0.002 U
MW-18 Screen 1	Apr/May 2012	MW-18-1	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 1	Nov 2012	MW-18-1	NA	NA	3.0 U	0.002 U
MW-18 Screen 2	Jan/Feb 2012	MW-18-2	NA	NA	5.0 U	0.010 U
MW-18 Screen 2	Apr/May 2012	MW-18-2	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 2	Aug/Sep 2012	MW-18-2	NA	NA	3.0 U	0.002 U
MW-18 Screen 2	Nov 2012	MW-18-2	NA	NA	3.0 U	0.002 U
MW-18 Screen 3	Jan/Feb 2012	MW-18-3	NA	NA	5.0 U	0.010 U
MW-18 Screen 3	Apr/May 2012	MW-18-3	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 3	Aug/Sep 2012	MW-18-3	NA	NA	**2.5 J**	**0.002 J**
MW-18 Screen 3	Aug/Sep 2012	DUPE-1-3Q12	NA	NA	**2.1 J**	**0.002 J**
MW-18 Screen 3	Nov 2012	MW-18-3	NA	NA	**1.7 J**	**0.002**
MW-18 Screen 4	Jan/Feb 2012	MW-18-4	NA	NA	5.0 U	0.010 U
MW-18 Screen 4	Apr/May 2012	MW-18-4	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 4	Apr/May 2012	DUPE-6-2Q12	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 4	Aug/Sep 2012	MW-18-4	NA	NA	**2.8 J**	**0.002 J**
MW-18 Screen 4	Nov 2012	MW-18-4	NA	NA	**2.1 J**	0.002 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-18 Screen 5	Apr/May 2012	MW-18-5	2.0 U	5.000 U	10.0 U	0.010 U
MW-18 Screen 5	Nov 2012	MW-18-5	NA	NA	3.0 U	0.002 U
MW-19 Screen 1	Apr/May 2012	MW-19-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-19 Screen 1	Nov 2012	MW-19-1	NA	NA	3.0 U	0.002 U
MW-19 Screen 2	Apr/May 2012	MW-19-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-19 Screen 2	Apr/May 2012	DUPE-5-2Q12	2.0 U	5.000 U	5.0 U	0.010 U
MW-19 Screen 2	Nov 2012	MW-19-2	NA	NA	**24.0**	**0.002 J**
MW-19 Screen 3	Apr/May 2012	MW-19-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-19 Screen 3	Nov 2012	MW-19-3	NA	NA	**2.4 J**	**0.002**
MW-19 Screen 3	Nov 2012	DUPE-1-4Q12	NA	NA	**2.9 J**	**0.002**
MW-19 Screen 4	Apr/May 2012	MW-19-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-19 Screen 4	Nov 2012	MW-19-4	NA	NA	**2.3 J**	**0.003**
MW-19 Screen 5	Apr/May 2012	MW-19-5	**3.6**	5.000 U	**5.4**	0.010 U
MW-19 Screen 5	Nov 2012	MW-19-5	NA	NA	**0.8 J**	**0.001 J**
MW-20 Screen 1	Jan/Feb 2012	MW-20-1	NA	NA	5.0 U	0.010 U
MW-20 Screen 1	Apr/May 2012	MW-20-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-20 Screen 1	Aug/Sep 2012	MW-20-1	NA	NA	3.0 U	0.002 U
MW-20 Screen 1	Nov 2012	MW-20-1	NA	NA	3.0 U	0.002 U
MW-20 Screen 2	Jan/Feb 2012	MW-20-2	NA	NA	5.0 U	0.010 U
MW-20 Screen 2	Apr/May 2012	MW-20-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-20 Screen 2	Aug/Sep 2012	MW-20-2	NA	NA	3.0 U	0.002 U
MW-20 Screen 2	Nov 2012	MW-20-2	NA	NA	3.0 U	0.002 U
MW-20 Screen 3	Jan/Feb 2012	MW-20-3	NA	NA	5.0 U	0.010 U
MW-20 Screen 3	Apr/May 2012	MW-20-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-20 Screen 3	Aug/Sep 2012	MW-20-3	NA	NA	**0.6 J**	0.002 U
MW-20 Screen 3	Nov 2012	MW-20-3	NA	NA	3.0 U	**0.001 J**
MW-20 Screen 4	Jan/Feb 2012	MW-20-4	NA	NA	5.0 U	0.010 U
MW-20 Screen 4	Apr/May 2012	MW-20-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-20 Screen 4	Aug/Sep 2012	MW-20-4	NA	NA	3.0 U	0.002 U
MW-20 Screen 4	Nov 2012	MW-20-4	NA	NA	3.0 U	0.002 U
MW-20 Screen 5	Jan/Feb 2012	MW-20-5	NA	NA	5.0 U	0.010 U
MW-20 Screen 5	Apr/May 2012	MW-20-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-20 Screen 5	Aug/Sep 2012	MW-20-5	NA	NA	**0.9 J**	0.002 U
MW-20 Screen 5	Nov 2012	MW-20-5	NA	NA	3.0 U	**0.001 J**
MW-21 Screen 1	Jan/Feb 2012	MW-21-1	NA	NA	5.0 U	0.010 U
MW-21 Screen 1	Apr/May 2012	MW-21-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-21 Screen 1	Aug/Sep 2012	MW-21-1	NA	NA	**1.4 J**	0.002 U
MW-21 Screen 1	Nov 2012	MW-21-1	NA	NA	**0.7 J**	**0.001 J**
MW-21 Screen 2	Jan/Feb 2012	MW-21-2	NA	NA	5.0 U	0.010 U
MW-21 Screen 2	Jan/Feb 2012	DUPE-1-1Q12	NA	NA	5.0 U	0.010 U
MW-21 Screen 2	Apr/May 2012	MW-21-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-21 Screen 2	Aug/Sep 2012	MW-21-2	NA	NA	3.0 U	0.002 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-21 Screen 2	Nov 2012	MW-21-2	NA	NA	3.0 U	**0.001 J**
MW-21 Screen 3	Jan/Feb 2012	MW-21-3	NA	NA	5.0 U	0.010 U
MW-21 Screen 3	Apr/May 2012	MW-21-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-21 Screen 3	Aug/Sep 2012	MW-21-3	NA	NA	**0.6 J**	0.002 U
MW-21 Screen 3	Aug/Sep 2012	DUPE-7-3Q12	NA	NA	3.0 U	0.002 U
MW-21 Screen 3	Nov 2012	MW-21-3	NA	NA	3.0 U	**0.002 J**
MW-21 Screen 4	Jan/Feb 2012	MW-21-4	NA	NA	5.0 U	0.010 U
MW-21 Screen 4	Apr/May 2012	MW-21-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-21 Screen 4	Aug/Sep 2012	MW-21-4	NA	NA	**0.7 J**	0.002 U
MW-21 Screen 4	Nov 2012	MW-21-4	NA	NA	**0.8 J**	**0.002 J**
MW-21 Screen 5	Jan/Feb 2012	MW-21-5	NA	NA	5.0 U	0.010 U
MW-21 Screen 5	Apr/May 2012	MW-21-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-21 Screen 5	Aug/Sep 2012	MW-21-5	NA	NA	**0.8 J**	**0.001 J**
MW-21 Screen 5	Nov 2012	MW-21-5	NA	NA	**0.7 J**	**0.001 J**
MW-22 Screen 1	Jan/Feb 2012	MW-22-1	NA	NA	5.0 U	0.010 U
MW-22 Screen 1	Apr/May 2012	MW-22-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 1	Apr/May 2012	DUPE-1-2Q12	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 1	Aug/Sep 2012	MW-22-1	NA	NA	**0.6 J**	0.002 U
MW-22 Screen 1	Nov 2012	MW-22-1	NA	NA	**0.8 J**	0.002 U
MW-22 Screen 2	Jan/Feb 2012	MW-22-2	NA	NA	5.0 U	0.010 U
MW-22 Screen 2	Jan/Feb 2012	DUPE-4-1Q12	NA	NA	5.0 U	0.010 U
MW-22 Screen 2	Apr/May 2012	MW-22-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 2	Aug/Sep 2012	MW-22-2	NA	NA	**1.0 J**	**0.001 J**
MW-22 Screen 2	Nov 2012	MW-22-2	NA	NA	**1.4 J**	**0.001 J**
MW-22 Screen 3	Jan/Feb 2012	MW-22-3	NA	NA	5.0 U	0.010 U
MW-22 Screen 3	Apr/May 2012	MW-22-3	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 3	Aug/Sep 2012	MW-22-3	NA	NA	**0.5 J**	**0.002 J**
MW-22 Screen 3	Nov 2012	MW-22-3	NA	NA	**2.3 J**	**0.002 J**
MW-22 Screen 4	Apr/May 2012	MW-22-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 4	Nov 2012	MW-22-4	NA	NA	**2.5 J**	**0.002**
MW-22 Screen 5	Apr/May 2012	MW-22-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-22 Screen 5	Nov 2012	MW-22-5	NA	NA	3.0 U	0.002 U
MW-23 Screen 1	Jan/Feb 2012	MW-23-1	NA	NA	5.0 U	0.010 U
MW-23 Screen 1	Jan/Feb 2012	DUPE-3-1Q12	NA	NA	5.0 U	0.010 U
MW-23 Screen 1	Apr/May 2012	MW-23-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-23 Screen 1	Apr/May 2012	DUPE-3-2Q12	2.0 U	5.000 U	5.0 U	0.010 U
MW-23 Screen 1	Aug/Sep 2012	MW-23-1	NA	NA	3.0 U	0.002 U
MW-23 Screen 1	Nov 2012	MW-23-1	NA	NA	**7.5**	0.002 U
MW-23 Screen 2	Jan/Feb 2012	MW-23-2	NA	NA	5.0 U	0.010 U
MW-23 Screen 2	Apr/May 2012	MW-23-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-23 Screen 2	Aug/Sep 2012	MW-23-2	NA	NA	3.0 U	0.002 U
MW-23 Screen 2	Aug/Sep 2012	DUPE-4-3Q12	NA	NA	3.0 U	**0.002 J**

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-23 Screen 2	Nov 2012	MW-23-2	NA	NA	**1.8 J**	**0.002 J**
MW-23 Screen 3	Jan/Feb 2012	MW-23-3	NA	NA	5.0 U	0.010 U
MW-23 Screen 3	Apr/May 2012	MW-23-3	2.0 U	5.000 U	**7.8**	0.010 U
MW-23 Screen 3	Aug/Sep 2012	MW-23-3	NA	NA	**2.5 J**	**0.003 J**
MW-23 Screen 3	Nov 2012	MW-23-3	NA	NA	**2.8 J**	**0.003**
MW-23 Screen 4	Jan/Feb 2012	MW-23-4	NA	NA	5.0 U	0.010 U
MW-23 Screen 4	Apr/May 2012	MW-23-4	**3.3**	5.000 U	**7.1**	0.010 U
MW-23 Screen 4	Aug/Sep 2012	MW-23-4	NA	NA	**2.2 J**	**0.003 J**
MW-23 Screen 4	Nov 2012	MW-23-4	NA	NA	**3.0**	**0.003**
MW-23 Screen 5	Apr/May 2012	MW-23-5	2.0 U	5.000 U	**5.4**	0.010 U
MW-23 Screen 5	Nov 2012	MW-23-5	NA	NA	3.0 U	0.002 U
MW-24 Screen 1	Jan/Feb 2012	MW-24-1	NA	NA	5.0 U	0.010 U
MW-24 Screen 1	Apr/May 2012	MW-24-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-24 Screen 1	Aug/Sep 2012	MW-24-1	NA	NA	**2.7 J**	0.002 U
MW-24 Screen 1	Nov 2012	MW-24-1	NA	NA	**4.2**	**0.001 J**
MW-24 Screen 2	Jan/Feb 2012	MW-24-2	NA	NA	5.0 U	0.010 U
MW-24 Screen 2	Apr/May 2012	MW-24-2	**3.0**	5.000 U	5.0 U	0.010 U
MW-24 Screen 2	Aug/Sep 2012	MW-24-2	NA	NA	**1.7 J**	**0.002 J**
MW-24 Screen 2	Nov 2012	MW-24-2	NA	NA	**3.1**	**0.002**
MW-24 Screen 2	Nov 2012	DUPE-3-4Q12	NA	NA	**2.7 J**	**0.002**
MW-24 Screen 3	Jan/Feb 2012	MW-24-3	NA	NA	5.0 U	0.010 U
MW-24 Screen 3	Apr/May 2012	MW-24-3	**5.2**	5.000 U	5.0 U	0.010 U
MW-24 Screen 3	Apr/May 2012	DUPE-2-2Q12	**4.9**	5.000 U	5.0 U	0.010 U
MW-24 Screen 3	Aug/Sep 2012	MW-24-3	NA	NA	3.0 U	0.002 U
MW-24 Screen 3	Aug/Sep 2012	DUPE-6-3Q12	NA	NA	3.0 U	0.002 U
MW-24 Screen 3	Nov 2012	MW-24-3	NA	NA	**0.5 J**	0.002 U
MW-24 Screen 4	Jan/Feb 2012	MW-24-4	NA	NA	5.0 U	0.010 U
MW-24 Screen 4	Apr/May 2012	MW-24-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-24 Screen 4	Aug/Sep 2012	MW-24-4	NA	NA	3.0 U	0.002 U
MW-24 Screen 4	Nov 2012	MW-24-4	NA	NA	**0.6 J**	0.002 U
MW-24 Screen 5	Apr/May 2012	MW-24-5	**2.8**	5.000 U	5.0 U	0.010 U
MW-24 Screen 5	Nov 2012	MW-24-5	NA	NA	**2.9 J**	**0.002**
MW-25 Screen 1	Jan/Feb 2012	MW-25-1	NA	NA	5.0 U	0.010 U
MW-25 Screen 1	Apr/May 2012	MW-25-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-25 Screen 1	Aug/Sep 2012	MW-25-1	NA	NA	**1.5 J**	0.002 U
MW-25 Screen 1	Nov 2012	MW-25-1	NA	NA	**5.0**	0.002 U
MW-25 Screen 2	Jan/Feb 2012	MW-25-2	NA	NA	**5.0**	0.010 U
MW-25 Screen 2	Apr/May 2012	MW-25-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-25 Screen 2	Aug/Sep 2012	MW-25-2	NA	NA	**2.8 J**	**0.002 J**
MW-25 Screen 2	Nov 2012	MW-25-2	NA	NA	**2.8 J**	**0.002**
MW-25 Screen 3	Jan/Feb 2012	MW-25-3	NA	NA	**5.1**	0.010 U
MW-25 Screen 3	Apr/May 2012	MW-25-3	2.0 U	5.000 U	5.0 U	0.010 U

Sample Location	Sampling Event	Sample Number	Arsenic (µg/L)	Lead (µg/L)	Chromium, Total (µg/L)	Chromium, Hexavalent (mg/L)
MW-25 Screen 3	Aug/Sep 2012	MW-25-3	NA	NA	**3.2**	**0.003**
MW-25 Screen 3	Aug/Sep 2012	DUPE-2-3Q12	NA	NA	**3.2**	**0.003**
MW-25 Screen 3	Nov 2012	MW-25-3	NA	NA	**3.1**	**0.004**
MW-25 Screen 4	Jan/Feb 2012	MW-25-4	NA	NA	5.0 U	0.010 U
MW-25 Screen 4	Apr/May 2012	MW-25-4	2.0 U	5.000 U	5.0 U	0.010 U
MW-25 Screen 4	Aug/Sep 2012	MW-25-4	NA	NA	**1.1 J**	0.002 U
MW-25 Screen 4	Nov 2012	MW-25-4	NA	NA	**1.4 J**	**0.001 J**
MW-25 Screen 5	Jan/Feb 2012	MW-25-5	NA	NA	5.0 U	0.010 U
MW-25 Screen 5	Apr/May 2012	MW-25-5	2.0 U	5.000 U	5.0 U	0.010 U
MW-25 Screen 5	Aug/Sep 2012	MW-25-5	NA	NA	3.0 U	0.002 U
MW-25 Screen 5	Nov 2012	MW-25-5	NA	NA	3.0 U	0.002 U
MW-26 Screen 1	Jan/Feb 2012	MW-26-1	NA	NA	5.0 U	0.010 U
MW-26 Screen 1	Apr/May 2012	MW-26-1	2.0 U	5.000 U	5.0 U	0.010 U
MW-26 Screen 1	Aug/Sep 2012	MW-26-1	NA	NA	3.0 U	0.002 U
MW-26 Screen 1	Nov 2012	MW-26-1	NA	NA	3.0 U	0.002 U
MW-26 Screen 1	Nov 2012	DUPE-2-4Q12	NA	NA	**0.5 J**	0.002 U
MW-26 Screen 2	Jan/Feb 2012	MW-26-2	NA	NA	5.0 U	0.010 U
MW-26 Screen 2	Apr/May 2012	MW-26-2	2.0 U	5.000 U	5.0 U	0.010 U
MW-26 Screen 2	Aug/Sep 2012	MW-26-2	NA	NA	3.0 U	0.002 U
MW-26 Screen 2	Nov 2012	MW-26-2	NA	NA	**0.8 J**	**0.001 J**
California Maximum Contaminant Level (MCL)			10	15 *	50	0.05 **
EPA Region IX Maximum Contaminant Level			50	15 *	100	NE

Notes

DUPE	Field Duplicate
NA	Not analyzed
NE	Not established
UNK	PQL value unknown
*	Interim Action Level - California Department of Health Services
**	As of January 6, 2004, hexavalent chromium is regulated under the 50-µg/L MCL for total chromium. DHS will be adopting an MCL that is specific for hexavalent chromium (DHS, 2004). As of December 31, 2010, a draft PHG of 0.02 µg/L has been established by Cal/EPA (e.g., Health and Safety Code requirement to establish the MCL); however, the CDPH (formerly DHS) has not established an MCL.
J	Analyte concentration is an estimated value
U	Analyte was analyzed for but not detected at or above the stated limit

TABLE 3

SUMMARY OF VOLATILE ORGANIC COMPOUNDS AND PERCHLORATE REPORTED IN MUNICIPAL PRODUCTION WELLS NEAR JPL DURING LAST FOUR 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
LINCOLN AVENUE WATER CO.	WELL 03	12/06/11	**26.0**	0.5 U	0.5 U	0.5 U
		12/13/11	**24.0**	NA	NA	NA
		1/05/12	**24.0**	0.5 U	0.5 U	0.5 U
		1/11/12	**24.0**	NA	NA	NA
		1/17/12	**26.0**	NA	NA	NA
		2/03/12	4.0 U	0.5 U	0.5 U	0.5 U
		2/14/12	**18.0**	NA	NA	NA
		3/09/12	**24.0**	0.5 U	0.5 U	0.5 U
		3/16/12	**18.0**	NA	NA	NA
		4/10/12	**14.0**	0.5 U	0.5 U	0.5 U
		5/22/12	**14.0**	NA	NA	NA
		5/30/12	**13.0**	NA	NA	NA
		6/05/12	**16.0**	0.5 U	0.5 U	0.5 U
		6/12/12	**17.0**	NA	NA	NA
		6/19/12	**18.0**	NA	NA	NA
		6/26/12	**19.0**	NA	NA	NA
		7/03/12	**19.0**	**0.5**	0.5 U	**0.6**
		7/10/12	**19.0**	NA	NA	NA
		7/17/12	**19.0**	NA	NA	NA
		7/24/12	**20.0**	NA	NA	NA
		7/31/12	**19.0**	NA	NA	NA
		8/06/12	NA	**0.7**	0.5 U	**0.9**
		8/07/12	**19.0**	**0.7**	0.5 U	**0.8**
		8/14/12	**20.0**	NA	NA	NA
		8/21/12	**20.0**	NA	NA	NA
		8/28/12	**20.0**	NA	NA	NA
		9/18/12	**20.0**	NA	NA	NA
		9/25/12	**22.0**	NA	NA	NA
		10/02/12	**21.0**	**1.0**	0.5 U	**1.3**
		10/09/12	**22.0**	NA	NA	NA
		10/16/12	**20.0**	NA	NA	NA
		10/31/12	**13.0**	NA	NA	NA
		11/07/12	**18.0**	**0.9**	0.5 U	**0.9**
		11/13/12	**18.0**	NA	NA	NA
	WELL 05	12/06/11	**29.0**	**2.4**	**0.7**	**3.0**
		12/13/11	**29.0**	NA	NA	NA
		12/20/11	**32.0**	NA	NA	NA
		12/27/11	**30.0**	NA	NA	NA
		1/03/12	**30.0**	**2.3**	**0.6**	**2.3**
		1/10/12	**29.0**	NA	NA	NA
		1/17/12	**29.0**	NA	NA	NA
		1/24/12	**27.0**	NA	NA	NA
		1/31/12	**28.0**	NA	NA	NA

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
LINCOLN AVENUE WATER CO. (con't)	WELL 05 (con't)	2/06/12	NA	**2.8**	**0.7**	**2.4**
		2/07/12	**27.0**	**2.4**	**0.7**	**2.3**
		2/14/12	**27.0**	NA	NA	NA
		2/21/12	**29.0**	NA	NA	NA
		2/28/12	**27.0**	NA	NA	NA
		3/06/12	**27.0**	**2.3**	**0.6**	**2.1**
		3/13/12	**27.0**	NA	NA	NA
		3/20/12	**28.0**	NA	NA	NA
		3/27/12	**28.0**	NA	NA	NA
		4/03/12	**29.0**	**2.4**	**0.6**	**2.1**
		4/10/12	**29.0**	NA	NA	NA
		4/17/12	**31.0**	NA	NA	NA
		4/24/12	**32.0**	NA	NA	NA
		5/22/12	**30.0**	NA	NA	NA
		5/29/12	**28.0**	NA	NA	NA
		6/05/12	**28.0**	**2.5**	**0.7**	**2.0**
		6/12/12	**27.0**	NA	NA	NA
		6/19/12	**27.0**	NA	NA	NA
		6/26/12	**27.0**	NA	NA	NA
		7/03/12	**27.0**	**2.1**	**0.7**	**1.8**
		7/10/12	**26.0**	NA	NA	NA
		7/17/12	**26.0**	NA	NA	NA
		7/24/12	**26.0**	NA	NA	NA
		7/31/12	**26.0**	NA	NA	NA
		8/07/12	**26.0**	**2.2**	**0.6**	**2.0**
		8/14/12	**26.0**	NA	NA	NA
		8/21/12	**26.0**	NA	NA	NA
		8/28/12	**26.0**	NA	NA	NA
		9/18/12	**24.0**	NA	NA	NA
		9/25/12	**25.0**	NA	NA	NA
		10/02/12	**23.0**	**2.2**	**0.7**	**2.0**
		10/09/12	**23.0**	NA	NA	NA
		10/16/12	**22.0**	NA	NA	NA
		10/23/12	**21.0**	NA	NA	NA
		10/30/12	**21.0**	NA	NA	NA
		11/06/12	**21.0**	**2.0**	**0.6**	**1.5**
		11/13/12	**23.0**	NA	NA	NA
RUBIO CANON LAND & WATER ASSOCIATION	WELL 04	3/19/12	4.0 U	0.5 U	0.5 U	0.5 U
		4/02/12	4.0 U	NA	NA	NA
		4/09/12	4.0 U	NA	NA	NA
		4/16/12	4.0 U	NA	NA	NA
		4/23/12	4.0 U	NA	NA	NA
		5/21/12	4.0 U	NA	NA	NA
		5/29/12	4.0 U	NA	NA	NA
		6/04/12	4.0 U	NA	NA	NA
		6/11/12	4.0 U	NA	NA	NA
		6/18/12	4.0 U	NA	NA	NA
		6/25/12	4.0 U	NA	NA	NA
		7/02/12	4.0 U	NA	NA	NA
		7/09/12	4.0 U	NA	NA	NA

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
RUBIO CANON LAND & WATER ASSOCIATION (con't)	WELL 04 (con't)	7/16/12	4.0 U	NA	NA	NA
		7/23/12	4.0 U	NA	NA	NA
		7/30/12	4.0 U	NA	NA	NA
		8/06/12	4.0 U	NA	NA	NA
		8/13/12	4.0 U	NA	NA	NA
		8/20/12	4.0 U	NA	NA	NA
		8/27/12	4.0 U	NA	NA	NA
		9/17/12	4.0 U	NA	NA	NA
		9/24/12	4.0 U	NA	NA	NA
		10/15/12	4.0 U	NA	NA	NA
		10/29/12	4.0 U	NA	NA	NA
		11/05/12	4.0 U	NA	NA	NA
		11/13/12	4.0 U	NA	NA	NA
		11/19/12	4.0 U	NA	NA	NA
	WELL 07	12/05/11	4.0 U	NA	NA	NA
		12/12/11	4.0 U	NA	NA	NA
		12/19/11	4.0 U	NA	NA	NA
		12/27/11	4.0 U	NA	NA	NA
		1/03/12	4.0 U	NA	0.5 U	NA
		1/09/12	4.0 U	NA	NA	NA
		1/17/12	4.0 U	NA	NA	NA
		1/23/12	4.0 U	NA	NA	NA
		1/30/12	4.0 U	NA	NA	NA
		2/06/12	4.0 U	0.5 U	0.5 U	0.5 U
		2/13/12	4.0 U	NA	NA	NA
		2/21/12	4.0 U	NA	NA	NA
		2/27/12	4.0 U	NA	NA	NA
		3/05/12	4.0 U	NA	NA	NA
		3/12/12	4.0 U	NA	NA	NA
		3/19/12	4.0 U	NA	NA	NA
		3/26/12	4.0 U	NA	NA	NA
		4/02/12	4.0 U	NA	0.5 U	NA
		4/09/12	4.0 U	NA	NA	NA
		4/16/12	4.0 U	NA	NA	NA
		4/23/12	4.0 U	NA	NA	NA
		5/21/12	4.0 U	NA	NA	NA
		5/29/12	4.0 U	NA	NA	NA
		6/04/12	4.0 U	NA	NA	NA
		6/11/12	4.0 U	NA	NA	NA
		6/18/12	4.0 U	NA	NA	NA
		6/25/12	4.0 U	NA	NA	NA
		7/02/12	4.0 U	NA	0.5 U	NA
		7/09/12	4.0 U	NA	NA	NA
		7/16/12	4.0 U	NA	NA	NA
		7/23/12	4.0 U	NA	NA	NA
		7/30/12	4.0 U	NA	NA	NA
		8/06/12	4.0 U	NA	NA	NA
		8/13/12	4.0 U	NA	NA	NA
		8/20/12	4.0 U	NA	NA	NA
		8/27/12	4.0 U	NA	NA	NA

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
RUBIO CANON LAND & WATER ASSOCIATION (con't)	WELL 07 (con't)	9/17/12	4.0 U	NA	NA	NA
		9/24/12	4.0 U	NA	NA	NA
		10/15/12	4.0 U	NA	NA	NA
		10/29/12	4.0 U	NA	NA	NA
		11/05/12	4.0 U	NA	NA	NA
		11/13/12	4.0 U	NA	NA	NA
		11/19/12	4.0 U	NA	NA	NA
LAS FLORES WATER CO.	WELL 02	12/05/11	**5.7**	NA	0.5 U	NA
		12/12/11	**5.7**	NA	0.5 U	NA
		12/19/11	**5.1**	NA	0.5 U	NA
		12/27/11	**5.6**	NA	**0.6**	NA
		1/03/12	**6.0**	NA	0.5 U	NA
		1/09/12	**6.1**	NA	**0.5**	NA
		1/16/12	**5.5**	NA	**0.6**	NA
		1/23/12	**4.9**	NA	**0.5**	NA
		1/30/12	**4.6**	NA	**0.5**	NA
		2/06/12	**4.8**	NA	**0.6**	NA
		2/13/12	**5.0**	NA	0.5 U	NA
		2/21/12	**4.2**	NA	**0.5**	NA
		2/27/12	**4.0**	NA	**0.6**	NA
		3/05/12	**4.9**	NA	**0.6**	NA
		3/12/12	**4.4**	NA	**0.5**	NA
		3/19/12	**5.4**	NA	**0.5**	NA
		3/26/12	**4.5**	NA	**0.5**	NA
		4/02/12	**4.6**	NA	**0.5**	NA
		4/09/12	**4.4**	NA	0.5 U	NA
		4/16/12	**4.0**	NA	**0.5**	NA
		4/23/12	**5.6**	NA	0.5 U	NA
		5/21/12	**4.8**	NA	0.5 U	NA
		5/29/12	**4.9**	NA	0.5 U	NA
		6/04/12	**4.8**	NA	0.5 U	NA
		6/11/12	**4.6**	NA	0.5 U	NA
		6/18/12	**5.5**	NA	0.5 U	NA
		6/25/12	**4.6**	NA	0.5 U	NA
		7/02/12	**4.5**	NA	0.5 U	NA
		7/09/12	**4.2**	NA	0.5 U	NA
		7/16/12	**4.3**	NA	0.5 U	NA
		7/23/12	**4.6**	NA	0.5 U	NA
		7/30/12	**5.5**	NA	0.5 U	NA
		8/06/12	4.0 U	NA	0.5 U	NA
		8/13/12	**5.2**	NA	**0.5**	NA
		8/20/12	**4.3**	NA	0.5 U	NA
		8/27/12	**5.6**	NA	**0.8**	NA
		9/17/12	**4.4**	NA	0.5 U	NA
		9/24/12	4.0 U	NA	0.5 U	NA
		10/01/12	**4.3**	NA	0.5 U	NA
		10/08/12	**4.2**	NA	0.5 U	NA
		10/15/12	4.0 U	NA	0.5 U	NA
		10/22/12	**4.1**	NA	0.5 U	NA
		10/29/12	4.0 U	NA	0.5 U	NA

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
LAS FLORES WATER CO. (con't)	WELL 02 (con't)	11/05/12	4.0 U	NA	0.5 U	NA
		11/12/12	4.0 U	NA	0.5 U	NA
		11/19/12	**5.4**	NA	0.5 U	NA
LA CANADA IRRIGATION DIST.	WELL 01	3/26/12	NA	0.5 U	**0.6**	**1.7**
		5/29/12	4.0 U	NA	NA	NA
		6/30/12	NA	NA	**0.8**	**1.9**
		8/27/12	**4.7**	NA	NA	NA
		9/24/12	NA	NA	**0.8**	**2.2**
	WELL 06	12/05/11	NA	0.5 U	0.5 U	**0.6**
		3/23/12	NA	NA	0.5 U	**0.7**
		6/30/12	NA	NA	0.5 U	**0.9**
		9/24/12	4.0 U	NA	**0.8**	**2.0**
VALLEY WATER CO.	WELL 01	5/23/12	4.0 U	0.5 U	**2.2**	**0.6**
		6/07/12	4.0 U	0.5 U	**2.4**	**1.2**
		7/02/12	**4.2**	NA	NA	NA
		7/05/12	NA	0.5 U	**2.4**	**1.3**
		8/02/12	4.0 U	0.5 U	**1.8**	**1.3**
		10/02/12	**4.3**	0.5 U	**1.9**	**1.4**
		11/08/12	**4.1**	0.5 U	**2.1**	**1.6**
	WELL 02	5/23/12	**4.1**	0.5 U	**4.7**	**0.7**
		6/07/12	**4.0**	0.5 U	**5.6**	**0.7**
		7/05/12	4.0 U	0.5 U	**4.7**	**0.6**
		8/02/12	4.0 U	0.5 U	**4.4**	**0.6**
	WELL 03	5/23/12	**4.7**	0.5 U	**1.9**	**1.0**
		6/07/12	**4.7**	0.5 U	**2.2**	**0.9**
		7/05/12	**4.6**	0.5 U	**1.6**	**0.9**
		8/02/12	**4.6**	0.5 U	**1.5**	**1.0**
	WELL 04	5/23/12	**4.5**	0.5 U	**1.6**	**2.4**
		6/07/12	**4.3**	0.5 U	**2.0**	**1.8**
		7/02/12	**4.5**	NA	NA	NA
		7/05/12	NA	0.5 U	**1.8**	**1.5**
		8/02/12	**4.4**	0.5 U	**2.0**	**1.6**
		10/02/12	**4.9**	0.5 U	**1.8**	**1.5**
PASADENA-CITY, WATER DEPT.	ARROYO	12/06/11	**52.4**	**2.8**	0.5 U	**0.8**
		12/13/11	**50.6**	**2.8**	**0.5**	**0.8**
		12/20/11	**53.3**	**2.9**	**0.5**	**0.8**
		12/27/11	**46.9**	**2.7**	0.5 U	**0.8**
		1/03/12	**47.9**	**2.8**	0.5 U	**0.8**
		1/10/12	**50.3**	**2.6**	0.5 U	**0.8**
		1/17/12	**46.5**	**3.9**	**0.6**	**0.9**
		1/24/12	**51.1**	**2.7**	0.5 U	**0.8**
		1/31/12	**46.1**	**2.7**	0.5 U	**0.8**
		2/07/12	**45.2**	**3.6**	0.5 U	**0.6**
		2/15/12	**41.2**	**3.5**	0.5 U	**0.8**
		2/21/12	NA	**2.8**	0.5 U	**0.6**
		2/28/12	**42.2**	**2.8**	0.5 U	**0.7**
		3/06/12	**43.5**	**3.3**	**0.6**	**0.9**
		3/13/12	**43.9**	**3.2**	**0.6**	**0.9**
		3/20/12	**48.3**	**2.5**	0.5 U	**0.7**
		3/27/12	**44.9**	**3.0**	0.5 U	**0.9**

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
PASADENA-CITY, WATER DEPT. (con't)	ARROYO (con't)	4/12/12	**48.4**	NA	NA	NA
		6/12/12	**41.6**	**2.9**	0.5 U	**0.8**
		6/19/12	**36.5**	**2.7**	0.5 U	**0.8**
		6/26/12	**35.6**	**2.8**	0.5 U	**0.7**
		7/03/12	**41.4**	0.5 U	0.5 U	0.5 U
		7/10/12	**39.8**	**3.2**	0.5 U	**0.7**
		7/17/12	**39.4**	**3.5**	0.5 U	**0.8**
		7/24/12	**38.2**	**3.0**	0.5 U	**0.7**
		8/01/12	NA	**2.8**	0.5 U	**0.6**
		8/07/12	**36.8**	**2.7**	0.5 U	**0.6**
		8/14/12	**36.5**	**3.0**	0.5 U	**0.7**
		8/21/12	**35.1**	**3.0**	0.5 U	**0.6**
		8/28/12	**39.9**	**3.8**	0.5 U	**0.7**
		9/18/12	**37.3**	**3.1**	0.5 U	**0.7**
		9/19/12	**35.0**	NA	NA	NA
		9/25/12	**37.9**	**2.7**	0.5 U	**0.6**
		10/02/12	**37.3**	**3.1**	0.5 U	**0.7**
		10/09/12	**39.0**	**3.0**	0.5 U	**0.7**
		10/17/12	**41.4**	**2.8**	0.5 U	**0.6**
		10/23/12	**39.8**	**3.0**	0.5 U	**0.6**
		10/30/12	**41.5**	**2.8**	0.5 U	**0.6**
		11/06/12	**40.6**	**3.7**	0.5 U	**0.8**
		11/13/12	**38.1**	**3.4**	0.5 U	**0.7**
	VENTURA	12/06/11	**5.4**	0.5 U	**0.8**	**2.4**
		12/13/11	**5.2**	0.5 U	**0.9**	**2.4**
		12/20/11	**5.4**	0.5 U	**0.9**	**2.5**
		12/27/11	**4.8**	0.5 U	**0.9**	**2.4**
		1/03/12	**4.6**	0.5 U	**0.8**	**2.2**
		1/10/12	**5.0**	0.5 U	**0.8**	**2.3**
		1/17/12	**4.9**	0.5 U	**0.9**	**2.4**
		1/24/12	**5.2**	0.5 U	**0.8**	**2.4**
		1/31/12	**4.6**	0.5 U	**0.9**	**2.5**
		2/07/12	**4.6**	0.5 U	**0.8**	**2.6**
		2/15/12	**4.5**	0.5 U	**0.9**	**2.4**
		2/21/12	**4.3**	0.5 U	**1.0**	**2.3**
		2/28/12	**4.4**	0.5 U	**0.7**	**2.1**
		3/06/12	**4.7**	0.5 U	**1.0**	**2.2**
		3/13/12	**4.7**	0.5 U	**1.1**	**2.6**
		3/20/12	**5.3**	0.5 U	**0.8**	**2.2**
		3/27/12	**4.9**	0.5 U	**0.9**	**2.7**
		4/12/12	**5.2**	NA	NA	NA
		6/12/12	**4.4**	0.5 U	**0.8**	**2.7**
		6/19/12	**4.1**	0.5 U	**0.8**	**2.6**
		6/26/12	**4.3**	0.5 U	**0.9**	**2.2**
		7/03/12	**4.5**	0.5 U	**0.9**	**2.5**
		7/10/12	**5.0**	0.5 U	**0.9**	**2.5**
		7/17/12	**4.9**	0.5 U	**0.9**	**2.6**
		7/24/12	**4.9**	0.5 U	**0.8**	**2.5**
		8/01/12	**4.7**	0.5 U	**0.8**	**2.3**
		8/07/12	**4.2**	0.5 U	**0.8**	**2.3**

Purveyor	Well Name	Sample Date	Perchlorate	Carbon Tetrachloride	PCE	TCE
PASADENA-CITY, WATER DEPT. (con't)	VENTURA (con't)	8/14/12	**5.0**	0.5 U	**0.9**	**2.5**
		8/21/12	**4.5**	0.5 U	**0.9**	**2.5**
		8/29/12	**4.7**	0.5 U	**0.9**	**2.5**
		9/18/12	**5.1**	0.5 U	**0.8**	**2.5**
		9/19/12	**5.5**	NA	NA	NA
		9/25/12	**5.1**	0.5 U	**0.9**	**2.6**
		10/30/12	**5.7**	0.5 U	**1.0**	**3.6**
	WELL 52	10/02/12	**6.7**	0.5 U	0.5 U	**0.6**
		10/09/12	**7.2**	0.5 U	0.5 U	**0.6**
		10/11/12	**7.4**	NA	NA	NA
		10/17/12	**6.9**	0.5 U	0.5 U	**0.6**
		10/23/12	**7.8**	0.5 U	0.5 U	**0.6**
		10/30/12	**6.8**	0.5 U	0.5 U	**0.6**
		11/06/12	**8.1**	0.5 U	0.5 U	**0.8**
		11/13/12	**7.6**	0.5 U	0.5 U	**0.8**
California Maximum Contaminant Level (MCL)			6.0 *	0.5	5.0	5.0
EPA Region IX Maximum Contaminant Level			NE	5.0	5.0	5.0

Notes

NA	Not analyzed
NE	Not established
*	Interim Action Level - California Department of Public Health
Source	California Department of Public Health Drinking Water Program, California Drinking Water Data, January 4, 2005
U	Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.