

Third Quarter 2015 Groundwater Monitoring and Sampling Report

Maryland Square PCE Site
3661 South Maryland Parkway
Las Vegas, Nevada
Facility ID: H-000086

Cardno ATC Project No. LV20915008



Prepared for
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October 28, 2015

Executive Summary

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707 Wilshire Boulevard, 45th Floor
Los Angeles, California 90017

Re: Third Quarter 2015 Groundwater Monitoring and Sampling Report
Maryland Square PCE Site
3661 South Maryland Parkway
Las Vegas, Nevada
NDEP Facility ID No. H-000086

Dear Mr. Vandenberg:

Cardno ATC is submitting this report documenting the results of a recent quarterly groundwater monitoring event conducted at the Maryland Square PCE Site (site). The groundwater monitoring was conducted to evaluate dissolved chlorinated ethenes, specifically tetrachloroethene (PCE), detected in the soil and groundwater in the vicinity of the above referenced site in accordance with requests from the Nevada Division of Environmental Protection (NDEP).

Work Performed Third Quarter 2015

Cardno ATC performed quarterly monitoring and sampling activities at 32 of the 59 site groundwater monitoring wells.

Current Phase of Project:	<u>Monitoring and Sampling</u>
Frequency of Sampling:	<u>Groundwater: Select Wells Quarterly (Semi-annual or Annual for 2015)</u>
Frequency of Monitoring:	<u>Groundwater: Select Wells Quarterly (Semi-annual or Annual for 2015)</u>
Purge Water Removed This Quarter:	<u>40.3 gallons</u>
Approximate Depth to Groundwater:	<u>20.74 ft btoc</u>
Groundwater Gradient:	<u>Site Monitoring Network: 0.013 feet/foot</u>
Groundwater Flow Direction:	<u>Site Monitoring Network: East</u>
Groundwater Analytical Methods:	<u>Select VOCs by EPA 8260B, metals by EPA 6020, and hexavalent chromium (Cr(VI)) by EPA 218.6</u>
Monitoring Wells Sampled with PCE Concentrations Greater than 5.0 µg/L:	<u>27 of 32 monitoring points</u>
Maximum PCE Concentration (µg/L):	<u>9,300 (MW-14I)</u>
Monitoring Wells Sampled with PCE Concentrations Greater than 5.0 µg/L Previous Quarter:	<u>13 of 18 monitoring points</u>
Maximum PCE Concentration Previous Quarter (µg/L):	<u>9,600 (MW-14I)</u>

Historical groundwater elevation data and analytical results are summarized in Table A-1. Current groundwater elevation data and analytical results are summarized in Table A-2. Site figures and groundwater analytical isoconcentration maps, are included as Figures 1 and 2. Groundwater field sampling forms and laboratory analytical reports are included in Appendix A and B, respectively. Mann-Kendall Trend Tests for Plume Stability are included in Appendix C.

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1 Background

The source area for the Maryland Square tetrachloroethene (PCE) Site is located at 3661 South Maryland Parkway in Las Vegas, Nevada. The source area is the location of a former dry cleaner (Al Phillips the Cleaner) that was contained within the former Maryland Square Shopping Center. Al Phillips the Cleaner operated at the site from 1969 through 2000.

The parent parcel for the former shopping center is located at the northwest corner of Maryland Parkway and Twain Avenue, and lies within the Southeast $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ of Section 15, Township 21 South, Range 61 East. This parcel is designated as assessor's parcel number (APN) 162-15-602-009 and is a 6.57-acre tract of land. The parcel lies northwest of the corner of South Maryland Parkway and East Twain Avenue.

Properties surrounding the former Maryland Square Shopping Center consist primarily of commercial developments, as well as some residential areas. The Boulevard Mall lies directly east of the source area, across South Maryland Parkway. A residential neighborhood and a golf course are located east of The Boulevard Mall.

The initial spill report for PCE in groundwater was reported to NDEP in November 2000. The contamination was discovered during environmental investigations being performed for a property transaction. A soil boring installed during the initial environmental investigation at the former shopping center was converted into a monitoring well (MW-1). Analysis of the groundwater sample collected from MW-1 found 2,300 micrograms per liter ($\mu\text{g/L}$) or parts per billion (ppb) of PCE in groundwater. This concentration of PCE exceeded Nevada's action level of 5 $\mu\text{g/L}$, as defined in NAC445A.2273.5(1)(c), which adopts the primary maximum contamination level (MCL) of 5 $\mu\text{g/L}$ for PCE in drinking water, as defined by the U.S. Environmental Protection Agency (EPA).

From 2000 through 2004, additional soil borings and monitoring wells were installed at the former Maryland Square Shopping Center and to the east on the Boulevard Mall property in an attempt to find the eastern extent of the PCE plume. In February, the parent company (DCI) of the former dry cleaners accepted responsibility for the PCE contamination and assumed control of assessment activities, using URS Corporation (URS) to perform additional characterization and groundwater monitoring.

In March 2005, after not finding the eastern extent of the PCE plume on mall property, URS installed five monitoring wells within the residential neighborhood east of the Boulevard Mall (see: http://ndep.nv.gov/pce/graphic/2012_Map_Well_History.pdf). Concentrations of PCE exceeded the action level (5 $\mu\text{g/L}$) in groundwater samples collected from three of these five wells, with the highest concentration at 1,430 $\mu\text{g/L}$. In 2006, two additional wells were installed farther east in the neighborhood, and groundwater samples from the wells confirmed the presence of the PCE plume in groundwater beneath the neighborhood.

In early 2007, the NDEP performed vapor transport modeling using the analytical data for wells within the neighborhood. The results of modeling indicated the potential for unacceptable level of PCE vapors in indoor air, via the process of vapor intrusion. In response to a NDEP requirement to sample soil gas for PCE, URS conducted a soil vapor study in March 2007. Soil borings were installed along three transects across the inferred extent of the PCE plume; one transect in the eastern parking lot of the Boulevard Mall, and two within the residential neighborhood east of the mall. Soil gas samples were collected at multiple depths within each boring. The concentrations of PCE in soil vapor samples ranged from not detected to 170,000 micrograms per cubic meter ($\mu\text{g/m}^3$), with the maximum concentration measured for a vapor sample collected at 20 feet bgs from boring SVB-14.

The dry cleaner's parent company (DCI) declared bankruptcy in July 2008, and URS discontinued work at the site. Converse, on behalf of the Trust, resumed quarterly monitoring as required by the NDEP. Converse continued with monitoring until July 2010, when field activities and responsibilities were transferred from Converse to Tetra Tech EM Inc. (Tetra Tech) during the second quarter of 2010. Groundwater monitoring

protocol and procedures used by Converse and accepted by NDEP were continued to maintain data consistency.

On December 27, 2010, the U.S District Court issued a Permanent Injunction that dictated the schedule for remediation of source-area soils and PCE-contaminated groundwater across the site. The injunction also decreed that groundwater monitoring should continue based on the schedule previously defined by the NDEP.

Responsibilities for groundwater monitoring and sampling were transferred from Tetra Tech to Cardno ATC (formerly ATC Associates) in the fourth quarter of 2011. Tetra Tech continued to provide the Trust with support for indoor air testing and performed field pilot testing for groundwater remedies in early 2013. Pilot testing focused on in situ chemical oxidation (ISCO).

Based on the 2007 NDEP vapor transport modeling, NDEP has instituted an indoor air sampling program for residents within the plume that are potentially affected by vapor intrusion within their homes. Rounds of testing were performed in 2007/2008, 2012, 2014, and 2015. Indoor air sampling has shown that the largest potential for vapor intrusion concerns are those residents that are within the 100 µg/L boundary of the PCE plume. Residents with home PCE indoor air concentrations exceeding the interim-action level of 32 µg/m³ were offered sub-slab depressurization systems (SSD) to mitigate the vapor intrusion concerns. To date, there have been 17 SSDs installed within homes.

As of the date of this quarterly report, there are 59 monitoring wells (some of which include nested and multi-depth wells) located across the site. The site spans approximately 6,000 feet in length, from the source area to the terminus of the plume, as defined by the 5 µg/L boundary.

Additional information, including the full administrative record detailing correspondence with NDEP can be found at http://ndep.nv.gov/pce/maryland_square.htm and clicking on the Administrative Record link.

2 Groundwater Monitoring and Sampling

NDEP has directed monitoring of the site-related groundwater monitoring well network as outlined in its response letter to the Converse report titled "Groundwater Monitoring Report, 3rd Quarter 2009, Maryland Square Shopping Center," dated December 22, 2009.

Select monitoring wells are sampled in 2015 on a quarterly, semi-annual, or annual basis as per agreement with NDEP. The sampling schedule is based on the relative PCE concentrations detected in individual monitoring wells in addition to the proximity of a monitoring well to the ascertained plume area. The 2015 sampling schedule has been modified and approved by NDEP.

The NDEP modified the sampling schedule in response to Cardno ATC's request in the "Fourth Quarter 2013 Groundwater Monitoring and Sampling Report," dated January 28, 2014. The letter proposed that the 2014 monitoring be revised to include all site wells as the annual sampling event. The NDEP concurred with Cardno ATC's recommended sampling schedule, with minor changes, in the response letter dated February 21, 2014. The sampling schedule is expected to continue in 2015.

The NDEP approved annual sampling schedule for monitoring wells in the groundwater monitoring program is as follows:

- First Quarter – MW-1 through MW-3, MW-5 through MW-39, MW-40 (all depths), MW-41, MW-42, MW-43 MW-14I, MW-19I, MW-6D1, MW-6D2, MW-6D3, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D2, and MW-20D3.
- Second Quarter – MW-1, MW-5, MW-6, MW-18, MW-38, MW-41, MW-42, MW-43, MW-14I, MW-19I, MW-6D1, MW-19D1, MW-19D2, MW-19D3, MW-20D2, MW-40 CMT-30, MW-40 CMT-45, and MW-40 CMT-60 (plus any newly installed wells).
- Third Quarter – MW-1, MW-5, MW-6, MW-7, MW-9, MW-13, MW-14, MW-18, MW-19, MW-23, MW-25, MW-26, MW-27, MW-32, MW-38, MW-41, MW-42, MW-43, MW-14I, MW-19I, MW-6D1, MW-6D3, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D2, MW-20D3, MW-40 CMT-30, MW-40 CMT-45, and MW-40 CMT-60 (plus any newly installed wells).
- Fourth Quarter – MW-1, MW-5, MW-6, MW-18, MW-38, MW-41, MW-42, MW-43, MW-14I, MW-19I, MW-6D1, MW-19D1, MW-19D2, MW-19D3, MW-20D2, MW-40 CMT-30, MW-40 CMT-45, and MW-40 CMT-60 (plus any newly installed wells).

The groundwater monitoring procedures are consistent with the protocol presented by URS in its August 2007 letter and accepted by NDEP in its September 10, 2007 letter. The prescribed groundwater monitoring protocol used at the site was revised to employ the ASTM D6771-02 method in the fourth quarter of 2007. This sampling method relies on low flow pumping that moderates the velocity of water entering the pump intake from the formation pore water surrounding the well. Minimized stress and turbulence within the water-bearing unit during pumping allows collection of groundwater samples generally considered more representative of water quality in the formation than the conventional method, which calls for evacuation of three well volumes of groundwater using downhole pumps or bailers.

Cardno ATC reviewed prior field notes to determine a consistent sampling depth in each well within the monitoring network. The depth chosen was based on the PCE results taken over time. The representative depth was placed on each sampling sheet along with a marking on the dedicated hose in each well casing, and will be carried over for each sampling event, irrespective of the depth to water and total depth measurements. Based on the results of the Third Quarter 2015 sampling event, Cardno ATC will continue to utilize the depths used this quarter going forward.

Groundwater parameters (i.e., pH, temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), and electrical conductivity) were measured to evaluate the entrance of actual formation water into the well. Cardno

ATC placed the inlet of the pump at the pre-determined depth that will be consistently used at each particular well. Groundwater was pumped at a flow rate of 0.25 L/min. The pump rate was lowered following the stabilization of groundwater parameters to minimize turbulence, and groundwater was transferred to clean laboratory-supplied 40-milliliter glass volatile organic analysis vials (VOAs), sealed, labeled, and placed in a cool environment for transport to an NDEP-certified laboratory for analysis.

The groundwater monitoring procedure for MW-40 CMT wells had to be modified due to the well construction of MW-40 CMT. CMT is a product manufactured by Solinst that stands for continuous multichannel tubing, meaning that there are multiple tubings set at different depths in one borehole. The benefits of a CMT well is that each channel of tubing allows for discrete sampling at a particular depth which in turn gives a three dimensional view of contamination through the entire range of sampling depths, rather than an average of the entire well length. The method used for groundwater sampling all depths of MW-40 CMT was a 3/8 inch Model 408M Micro Double Valve Pump. The double-valve pump is a pneumatic pump which was set to the bottom of each well depth, and pumped at each depth until groundwater parameters stabilized, and then groundwater was transferred to clean laboratory-supplied 40-milliliter glass volatile organic analysis vials (VOAs), sealed, labeled, and placed in a cool environment for transport to an NDEP-certified laboratory for analysis.

Decontamination procedures were performed throughout sampling. The pump, water level meter, and field meter probe were decontaminated after sampling each well. Purge water generated during the sampling of the monitoring wells was containerized in properly labeled steel 55-gallon drums and stored onsite pending off-site disposal.

Cardno ATC submitted the collected groundwater samples to an NDEP-certified analytical laboratory for the analysis of volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (EPA) Method 8260B. The analysis of metals (arsenic, chromium, and manganese) using EPA method 6020 for wells MW-19I and MW-40 CMT-60, and the analysis of hexavalent chromium using EPA method 218.6 for wells MW-19I and MW-40 CMT-60 was also performed.

Groundwater data collected during this sampling event are summarized in Table 1 and Table A-1. Monitoring and sampling field sheets are included in Appendix A.

2.1 Deviations

Trip, field, and equipment blanks were sent to the lab along with the groundwater samples collected at each monitoring well in order to insure quality control. Cardno ATC also collected a duplicate groundwater sample from monitoring well MW-1.

Laboratory analysis of each groundwater sample produced quantitative data within quality assurance standards, with the exception of the analysis for hexavalent chromium from MW-19I and four comments made about sample issues. The sample for MW-19I was purple, most likely due to continued saturation from the prior nearby potassium permanganate pilot test, and therefore the analysis could not be performed.

With the exception of the above mentioned comment, no laboratory quality control data were flagged outside of established tolerances. The analytical data on water quality for the third quarter were accepted as representative of actual site conditions.

2.2 Groundwater Conditions

Groundwater elevations for this sampling event are summarized in Table 1, while historical groundwater data are summarized in Table A-1. Depths to groundwater in the wells sampled during this quarterly event ranged from 13.74 feet bgs (MW-18) to 30.86 feet bgs (MW-20D3). The average groundwater elevation of monitored wells (excluding MW-40 CMT-35 through CMT-60) was 21.32 feet bgs. There was a 0.68 foot decrease when comparing depth to water of similar monitoring wells that had groundwater measurements for both the Second Quarter 2015 and Third Quarter 2015. Based on the third quarter results, the local hydraulic gradient across the site is generally toward the east.

DO readings for across the site ranged from 0.04 to 6.19 milligrams per liter (mg/L). ORP readings from across the site ranged from -155.40 to 616.20 millivolts (mV).

2.2.1 Vertical Gradient Assessment

Cardno ATC utilized measured groundwater elevations to determine vertical gradients within two of the five sets of clustered wells at the site (MW-19D and MW-40 CMT). Vertical gradients are measured to determine the upward or downward flow of groundwater. Clustered wells measured will have a deep and shallow well that are screened at different lengths which shows the vertical movement of the water within the adjacent geologic units. The EPA On-Line Vertical Gradient Calculator (<http://www3.epa.gov/ceampubl/learn2model/part-two/onsite/vgradient02.html>) was used to determine the vertical gradient at the various well clusters.

Table 2-1 Vertical Gradient Calculation, 3rd Quarter 2015

Clustered/ Nested Well	Surface Elevation (feet asml)	Depth to Well Screen (feet bgs)	Screen Length (feet)	Depth to Water (feet bgs)	Magnitude (Screen mid-point value)	Flow Direction
MW-6D1 MW-6D3	MW-6D1: 1988.72 MW-6D3: 1988.72	MW-6D1: 50 MW-6D3: 100	MW-6D1: 10 MW-6D3: 10	MW-6D1: 20.41 MW-6D3: 25.36	0.099	Down
MW-19D1 MW-19D2	MW-19D1: 1952.51 MW-19D2: 1952.16	MW-19D1: 31 MW-19D2: 60	MW-19D1: 20 MW-19D2: 10	MW-19D1: 26.74 MW-19D2: 27.12	0.02998	Down
MW-19D2 MW-19D3	MW-19D2: 1952.16 MW-19D3: 1950.68	MW-19D1: 60 MW-19D3: 92	MW-19D1: 10 MW-19D3: 10	MW-19D2: 27.12 MW-19D3: 28.64	0.08961	Down
MW-19D1 MW-19D3	MW-19D1: 1952.51 MW-19D3: 1950.68	MW-19D1: 31 MW-19D3: 92	MW-19D1: 20 MW-19D3: 10	MW-19D1: 26.74 MW-19D3: 28.64	0.06450	Down
MW-40 CMT-30 MW-40 CMT-45	MW-40 CMT-30: 1952.24 MW-40 CMT-45: 1952.24	MW-40 CMT-30: 30 MW-40 CMT-45: 45	MW-40 CMT-30: 0.6 MW-40 CMT-45: 0.6	MW-40 CMT-30: 26.25 MW-40 CMT-45: 26.25	0	Down
MW-40 CMT-45 MW-40 CMT-60	MW-40 CMT-45: 1952.24 MW-40 CMT-60: 1952.29	MW-40 CMT-45: 45 MW-40 CMT-60: 60	MW-40 CMT-45: 0.6 MW-40 CMT-60: 0.6	MW-40 CMT-45: 26.25 MW-40 CMT-60: 26.20	0.006689	Up
MW-40 CMT-30 MW-40 CMT-60	MW-40 CMT-30: 1952.24 MW-40 CMT-60: 1952.29	MW-40 CMT-30: 30 MW-40 CMT-60: 60	MW-40 CMT-30: 0.6 MW-40 CMT-60: 0.6	MW-40 CMT-30: 26.25 MW-40 CMT-60: 26.20	0.003339	Up

Bold: Direction change from previous quarter measured

2.3 Groundwater Analytical Results

Cardno ATC collected groundwater samples on September 18th through September 24th, 2015 from the existing groundwater monitoring wells (MW-1, MW-5, MW-6, MW-6D1, MW-6D3, MW-7, MW-9, MW-13, MW-14I, MW-18, MW-19I, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D3, MW-23, MW-25, MW-26, MW-27, MW-32,

MW-38, MW-40 CMT 30 through MW-40 CMT 60, MW-41, MW-42, and MW-43.) over the vicinity of the site (Figure 2).

Groundwater samples were submitted to Asset Laboratories of Las Vegas, Nevada, an NDEP-certified laboratory, for the analysis of VOCs using EPA method 8260B for samples collected, the analysis of metals (arsenic, chromium, and manganese) using EPA method 6020 for wells MW-19I and MW-40 CMT-60, and the analysis of hexavalent chromium using EPA method 218.6 for wells MW-19I and MW-40 CMT-60.

The laboratory analytical results compared with qualitative changes in groundwater elevation and concentrations are summarized in Table 1. Laboratory analytical reports are provided in Appendix B.

Table 2-2 Groundwater Elevations, Current PCE/TCE Concentrations, and PCE Plume Stability Test

Well ID	Depth to GW Level (feet)	Groundwater Elevation (feet amsl)	PCE (µg/L)	TCE (µg/L)	Mann-Kendall Trend (Since Well Installation)
MW-1	19.68	1972.33	230	<0.50	Decreasing
MW-2	NM	NM	NM	NM	Decreasing
MW-3	NM	NM	NM	NM	Prob. Increasing
MW-5	18.83	1969.86	500	2.1	Increasing
MW-6	19.68	1968.44	3,400	11	Increasing
MW-6D1	20.41	1968.31	39	<0.50	No Trend
MW-6D2	NM	NM	NM	NM	No Trend
MW-6D3	25.36	1964.36	30	0.68	Increasing
MW-7	17.76	1973.02	11	<0.50	Increasing
MW-8	NM	NM	NM	NM	Decreasing
MW-9	19.89	1972.36	4.0	<0.50	Decreasing
MW-10	NM	NM	NM	NM	No Trend
MW-11	NM	NM	NM	NM	NM
MW-12	NM	NM	NM	NM	No Trend
MW-13	18.20	1965.11	770	4.1	Decreasing
MW-14	NM	NM	NM	NM	Decreasing
MW-14I	19.21	1968.33	9,300	23	No Trend (Prob. Increasing 2 nd Quarter 2015)
MW-15	NM	NM	NM	NM	Stable
MW-16	NM	NM	NM	NM	NM
MW-17	NM	NM	NM	NM	Decreasing
MW-18	13.74	1949.16	1,000	2.6	Decreasing
MW-19	27.51	1952.62	NM	NM	Prob. Decreasing
MW-19I	26.49	1951.88	<0.50	<0.50	No Trend
MW-19D1	26.74	1952.51	820	5.3	No Trend (Stable 2 nd Quarter 2015)
MW-19D2	27.12	1952.16	110	0.9	Increasing
MW-19D3	28.64	1950.68	590	4.6	No Trend
MW-20	NM	NM	NM	NM	Decreasing
MW-20D1	26.50	1953.31	550	2.0	Increasing (No Trend 1 st Quarter 2015)
MW-20D2	NM	NM	NM	NM	Increasing
MW-20D3	30.86	1947.83	8.3	<0.50	No Trend
MW-21	NM	NM	NM	NM	Decreasing
MW-22	NM	NM	NM	NM	NM
MW-23	17.40	1945.05	730	1.6	Decreasing

Well ID	Depth to GW Level (feet)	Groundwater Elevation (feet amsl)	PCE (µg/L)	TCE (µg/L)	Mann-Kendall Trend (Since Well Installation)
MW-24	NM	NM	NM	NM	Decreasing
MW-25	21.11	1938.18	520	0.70	Decreasing
MW-26	19.37	1935.08	670	0.54	Decreasing
MW-27	20.13	1924.02	370	1.0	No Trend
MW-28	NM	NM	NM	NM	Decreasing
MW-29	NM	NM	NM	NM	Decreasing
MW-30	NM	NM	NM	NM	Stable
MW-31	NM	NM	NM	NM	Prob. Increasing
MW-32	21.06	1931.84	590	1.4	Decreasing
MW-33	NM	NM	NM	NM	Decreasing
MW-34	NM	NM	NM	NM	Decreasing
MW-35	NM	NM	NM	NM	Decreasing
MW-36	NM	NM	NM	NM	Stable
MW-37	NM	NM	NM	NM	No Trend
MW-38	15.11	1893.27	8.1	<0.50	Prob. Increasing (No Trend 2 nd Quarter 2015)
MW-39	NM	NM	NM	NM	Prob. Decreasing
MW-40 CMT-30	26.25	1952.24	5.3	<0.50	No Trend
MW-40 CMT-35	34.21	1944.28	19	1.5	No Trend
MW-40 CMT-40	26.24	1952.25	280	5.9	Stable
MW-40 CMT-45	26.25	1952.24	310	2.8	Stable
MW-40 CMT-50	26.14	1953.35	280	10	Stable
MW-40 CMT-55	26.20	1952.29	520	5.1	No Trend (Stable 1 st Quarter 2015)
MW-40 CMT-60	26.20	1952.29	690	12	Decreasing (Stable 4 th Quarter 2014)
MW-41	17.80	1894.09	3.5	<0.50	Increasing
MW-42	16.48	1893.83	<0.50	<0.50	No Trend (Prob. Increasing 2 nd Quarter 2015)
MW-43	17.32	1941.01	<0.50	<0.50	Stable

Notes: ¹Mann-Kendall Trend Test was not utilized on MW-11, MW-16, and MW-22 because they had historically been reported under laboratory detection limits
 NM = Not sampled and depth to groundwater level measurements not taken
 AMSL: Above Mean Sea Level
Bold: Trend change from previous quarter

The groundwater locations selected for quarterly monitoring represent the wells that cover the groundwater conditions at the Maryland Square site. The range of groundwater elevations spanned from 1893.27 feet above mean sea level (AMSL) (MW-38) to 1973.02 feet AMSL (MW-1). Groundwater elevations are summarized in Tables 1, A-1, and A-2.

Groundwater elevations increased in the groundwater monitoring wells located on the Maryland Square property by 0.77 feet compared with levels in similar wells during Second Quarter 2015 event. Groundwater elevations decrease in the groundwater monitoring wells on Boulevard Mall property by an average of 0.48 feet compared with levels in similar wells during Second Quarter 2015 event. Groundwater elevations decreased in groundwater monitoring wells located on the surrounding streets and golf course area by 0.56 feet compared with levels in similar wells during Second Quarter 2015 event. Application of a large volume of irrigation water at the golf course, especially during summer months, may influence water elevation in shallow groundwater measured in the monitoring wells. This influence is historically observed in MW-27, MW-28, MW-30, MW-31, MW-32, and MW-33.

PCE was detected in all groundwater samples collected from the project monitoring wells except for MW-19I, MW-42, MW-43. PCE was detected at concentrations ranging from 3.5 µg/L (MW-41) to 9,300 µg/L (MW-14I). Reported PCE concentrations in the groundwater samples exceeded the maximum contaminant levels (MCL) for PCE in groundwater of 5 µg/L in 27 of 32 wells.

Due to the heterogeneous soil conditions present across the site, it is possible that the pump depth could have been placed in a higher or lower permeability zone that led to varying PCE results in previous quarters. In addition, vertical gradients have changed direction in some of the nested wells indicating that PCE may be also migrating vertically and that concentrations may vary with depth or length of the screen; regarding variability resulting from screen length, screen with greater than 10 feet may impact the effectiveness of low flow sampling. Based on previous pumping depths that had yielded consistent results, Cardno ATC designated pump depths that would be used at each monitoring well at the site. The designated pump depth was placed on to the sampling sheets before sampling occurred, so that the pumping depth would remain consistent from quarter to quarter. The dedicated hose present in each well was measured and marked to the proper depth, to ensure consistency for future sampling events. This method produced PCE concentrations during Third Quarter 2015 that were consistent with expected values for PCE based on recent historical averages.

Additionally, Cardno ATC incorporated a system of custody seals on the site monitoring wells using zip ties. The zip ties were placed in a fashion so cap is secure but if the cap is removed, the zip tie system will come apart and show if any tampering occurred between monitoring events.

Additional sampling was recommended by NDEP at well MW-19D following pilot testing activities utilizing potassium permanganate. Pilot testing activities seemed to have unintended consequences in the movement of contamination due to the injection that warranted further investigation. The following table shows the results of testing following pilot testing activities that occurred in March 2013.

Table 2-3 Summary of MW-19D Groundwater Testing, 1st Quarter 2013 to 3rd Quarter 2015

Well ID	Date	PCE (µg/L)	TCE (µg/L)
MW-19D1	03/08/13	300	2.9
	06/13/13	690	4.2
	09/09/13	990	4.2
	11/08/13	620	3.5
	01/27/14	490	2.4
	02/19/14	210	1.1
	03/12/14	3.7	<0.50
	06/11/14	730	4.2
	09/19/14	240	1.5
	11/18/14	1,000	5.9
	03/15/15	210	1.3
	06/03/15	720	4.6
09/21/15	820	5.3	
MW-19D2	03/08/13	170	1.5
	06/13/13	<0.50	<0.50
	09/09/13	<0.50	<0.50
	11/08/13	<0.50	<0.50
	01/27/14	<0.50	<0.50
	02/19/14	<0.50	<0.50
	03/12/14	0.53	<0.50
	06/11/14	6.0	<0.50
	09/19/14	10	<0.50
	11/18/14	39	<0.50
	03/15/15	44	<0.50
	06/03/15	73	<0.50
09/21/15	110	0.94	
MW-19D3	03/08/13	0.50	<0.50
	06/13/13	0.68	<0.50
	09/09/13	710	4.8
	11/08/13	160	0.75
	01/27/14	32	<0.50
	02/19/14	36	<0.50
	03/12/14	17	<0.50
	06/11/14	40	<0.50
	09/19/14	710	4.7
	11/28/14	190	3.2
	03/15/15	41	<0.50
	06/03/15	21	<0.50
09/21/15	590	4.6	

Shaded row represents results prior to pilot testing

Grey text represents First Quarter 2014 sampling event, not deemed representative of site conditions.

After potassium permanganate pilot testing, by the Third Quarter 2013 sampling event, PCE concentrations had increased significantly at MW-19D1 and MW-19D3 while decreasing significantly at MW-19D2. After monthly and quarterly monitoring of MW-19D1, it appeared that PCE concentrations had either stabilized or were decreasing from the high points observed during the Third Quarter 2013 sampling at MW-19D2 and MW-19D3, but may still have been increasing at MW-19D1. After the Third Quarter 2014 sampling however, a large increase in PCE concentration occurred in MW-19D3 with a corresponding decrease in MW-19D1. The primary concern from the Third Quarter 2014 sampling event was the substantial increase in PCE concentration noted at MW-19D3, which was previously thought to have stabilized. When the initial spike happened in Third Quarter 2013, it was assumed that the nearby injection of large volumes of potassium permanganate had displaced the existing PCE

contamination in the area and caused the PCE plume to travel deeper where it was not formerly thought to exist. Cardno ATC notes that spikes have occurred during the third quarter of the year for the third time during Third Quarter 2015. Cardno ATC assessed the vertical gradients between MW-19D1 and MW-19D3 for each quarter from First Quarter 2013 to Third Quarter 2014. The vertical gradient between the two wells was “up” every quarter monitored, except for Third Quarter 2013 and Third Quarter 2014 when the vertical gradient was “down”. The same downward trend has been observed again during Third Quarter 2015. Groundwater extraction planned for this area next year should control vertical and horizontal gradients.

A duplicate sample was collected from MW-1. MW-1 PCE concentrations were measured at 230 µg/L and 220 µg/L, a relative percent difference (RPD) of 4.44%. The duplicate sample result did not show significant statistical variation based on the levels of the concentrations.

Trichloroethene (TCE) was detected at concentrations ranging from 0.54 µg/L to 23 µg/L in the groundwater samples collected from 21 of the 32 site monitoring wells. The detected concentrations were below the MCL for TCE in groundwater of 5 µg/L, with the exception of MW-6 (11 µg/L), MW-14I (23 µg/L), MW-19D1 (5.3 µg/L), MW-40 CMT-40 (5.9 µg/L), MW-40 CMT-50 (10 µg/L), MW-40 CMT-55 (5.1 µg/L), and MW-40 CMT-60 (12 µg/L).

Cis-1,2-dichloroethene (DCE) was detected in monitoring wells at concentrations ranging from 0.90 µg/L to 8.3 µg/L in 6 of the 32 site monitoring wells. The detected concentrations were below the MCL for DCE in groundwater of 70 µg/L.

Vinyl chloride (VC) was not detected at concentrations in excess of laboratory detection levels (0.50 µg/L). The presence of trace amounts of TCE and cis-1,2 DCE suggests that reductive dechlorination is not significant at the site.

Metals and hexavalent chromium were also analyzed this quarter, to compare with concentrations obtained by Tetra Tech after pilot tests were conducted using potassium permanganate (KMnO₄) and PulseOx in early 2013. The following table shows Tetra Tech data along with concentrations detected during Cardno ATC’s successive sampling events.

Table 2-3 Summary of Metals Concentrations in Select Wells, 1st Quarter 2013 to 3rd Quarter 2015

Well ID	Date	PCE (µg/L)	Arsenic (µg/L)	Manganese (µg/L)	Chromium (µg/L)	Hexavalent Chromium (µg/L)
MW-19 (KMnO ₄ Pilot Test, upgradient)	03/08/13	520	7.4	170	17	NA
	03/12/13	390	2	120,000	25	NA
	03/27/13	14	0.33	43,000	130	NA
	04/04/13	110	2	7,100	79	NA
	04/11/13	220	1.8	5,400	44	NA
	05/02/13	810	2.7	460	9.7	NA
	06/14/13	530	2.3	68	4.6	2.5
	09/09/13	840	4.0	<0.50	1.8	1.9
	11/07/13	440	3.3	<0.50	1.3	1.7
	03/07/14	910	3.2	<0.50	1.7	2.0
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/04/15	930	3.8	<0.50	1.4	1.7
06/02/15	NS	NS	NS	NS	NS	
09/18/15	NS	NS	NS	NS	NS	
MW-19I (KMnO ₄ Pilot Test, downgradient)	03/08/13	710	2.0	ND	1.6	NA
	03/12/13	280	1.7	2,700	14	NA
	03/26/13	9.4	0.93	27,000	44	NA
	04/04/13	3.5	3	4,700	170	NA
	04/11/13	1.7	0.19	9,400	52	NA
	05/02/13	0.61	1.2	20,000	43	NA

Well ID	Date	PCE (µg/L)	Arsenic (µg/L)	Manganese (µg/L)	Chromium (µg/L)	Hexavalent Chromium (µg/L)
	06/12/13	<0.50	0.34	62,000	87	NA*
	09/09/13	<0.50	0.24	26,000	12	NA*
	11/08/13	<0.50	1.1	48,000	290	NA*
	03/12/14	<0.50	<0.10	51,000	300	NA*
	06/11/14	<0.50	0.97	260,000	370	NA*
	09/18/14	<0.50	<0.10	14,000	260	NA*
	11/18/14	<0.50	<2.5	94,000	260	NA*
	03/04/15	0.62	1.0	54,000	160	NA*
	06/02/15	1.9	0.69	25,000	140	NA*
	09/18/15	<0.50	0.71	6,300	170	NA*
MW-20 (PulseOx Pilot Test, upgradient)	03/26/13	290	4.7	NA	4.3	NA
	04/10/13	480	5.6	NA	9.7	NA
	04/23/13	850	6.1	NA	8.8	NA
	05/02/13	470	4	NA	2.7	NA
	06/12/13	660	2.4	<0.50	1.6	1.1
	09/09/13	570	3.2	<0.50	1.1	1.2
	11/07/13	530	2.6	<0.50	<1.0	1.3
	03/12/14	170	3.6	64	5.1	3.5
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/11/15	680	1.3	<0.50	<1.0	1.5
06/02/15	NS	NS	NS	NS	NS	
09/18/15	NS	NS	NS	NS	NS	
MW-40 CMT-30 (PulseOx Pilot Test, downgradient)	03/25/13	4.7	4	NA	ND	NA
	04/10/13	0.86	7.2	NA	65	NA
	04/23/13	8.8	4.6	NA	180	NA
	05/01/13	1.2	5.9	NA	210	NA
	06/14/13	10	3.9	<0.50	140	140
	09/04/13	2.1	2.3	43	55	120
	11/06/13	1.3	3.6	77	110	110
	03/06/14	4.5	3.6	83	15	17
	06/10/14	3.2	3.6	25	5.0	5.5
	09/18/14	4.6	4.3	70	1.6	1.1
	11/19/14	35	3.7	22	1.5	1.4
	03/05/15	14	3.6	28	<1.0	0.88
	06/02/15	18	NS	NS	NS	NS
09/23/15	5.3	NS	NS	NS	NS	
MW-40 CMT-35 (PulseOx Pilot Test, downgradient)	03/25/13	14	14	NA	ND	NA
	04/10/13	6.9	6.9	NA	ND	NA
	04/23/13	2.6	2.6	NA	5.7	NA
	05/01/13	3.5	3.5	NA	25	NA
	06/14/13	3.6	4	250	2.9	1.1
	09/04/13	9.6	9.6	450	<1.0	0.23
	11/06/13	12	7.8	430	<1.0	<0.20
	03/06/14	2.6	4.6	370	<1.0	0.31
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/05/15	13	3.3	370	<1.0	0.25
06/02/15	NS	NS	NS	NS	NS	
09/23/15	19	NS	NS	NS	NS	
MW-40 CMT-40	03/25/13	270	2.5	NA	3.2	NA
	04/10/13	94	2.5	NA	6.6	NA

Well ID	Date	PCE (µg/L)	Arsenic (µg/L)	Manganese (µg/L)	Chromium (µg/L)	Hexavalent Chromium (µg/L)
(PulseOx Pilot Test, downgradient)	04/23/13	150	2.4	NA	20	NA
	05/01/13	96	3.3	NA	38	NA
	06/14/13	53	3.0	26	9.8	22
	09/04/13	37	2.7	100	22	25
	11/06/13	51	1.9	61	14	15
	03/06/14	27	1.9	360	1.3	2.0
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/05/15	100	1.9	33	<1.0	0.71
	06/02/15	NS	NS	NS	NS	NS
09/23/15	280	NS	NS	NS	NS	
MW-40 CMT-45 (PulseOx Pilot Test, downgradient)	03/25/13	310	2.4	NA	ND	NA
	04/10/13	120	2.0	NA	15	NA
	04/23/13	100	1.8	NA	41	NA
	05/01/13	78	2.7	NA	47	NA
	06/17/13	47	1.6	<0.50	39	43
	09/04/13	110	2.4	100	7.6	8.3
	11/06/13	77	1.5	110	6.0	6.1
	03/06/14	24	1.8	160	4.0	5.1
	06/10/14	250	1.6	250	<1.0	0.85
	09/18/14	240	1.5	70	<1.0	<0.20
	11/19/14	150	1.5	7.7	1.9	2.0
	03/05/15	120	1.9	15	<1.0	0.53
	06/02/15	36	NS	NS	NS	NS
09/23/15	310	NS	NS	NS	NS	
MW-40 CMT-50 (PulseOx Pilot Test, downgradient)	03/25/13	280	4.1	NA	ND	NA
	04/10/13	110	2.2	NA	14	NA
	04/23/13	120	2	NA	38	NA
	05/01/13	79	3.1	NA	41	NA
	06/17/13	64	2.2	<0.50	8.2	8.9
	09/11/13	24	4.3	43	<1.0	0.39
	11/06/13	120	1.9	250	<1.0	0.35
	03/06/14	72	2.0	120	<1.0	0.25
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/05/15	160	2.5	15	<1.0	0.40
	06/02/15	NS	NS	NS	NS	NS
09/23/15	280	NS	NS	NS	NS	
MW-40 CMT-55 (PulseOx Pilot Test, downgradient)	03/25/13	390	1.5	NA	ND	NA
	04/10/13	570	1.6	NA	3.9	NA
	04/23/13	510	1.5	NA	10	NA
	05/01/13	430	2.7	NA	12	NA
	06/17/13	200	1.6	<0.50	26	27
	09/11/13	38	3.4	38	<1.0	0.49
	11/06/13	110	2.4	69	20	11
	03/06/14	130	1.2	380	4.7	5.1
	06/09/14	NS	NS	NS	NS	NS
	09/15/14	NS	NS	NS	NS	NS
	11/17/14	NS	NS	NS	NS	NS
	03/05/15	430	1.8	12	21	22
	06/02/15	NS	NS	NS	NS	NS
09/23/15	520	NS	NS	NS	NS	

Well ID	Date	PCE (µg/L)	Arsenic (µg/L)	Manganese (µg/L)	Chromium (µg/L)	Hexavalent Chromium (µg/L)
MW-40 CMT-60 (PulseOx Pilot Test, upgradient)	03/25/13	1,200	1.8	NA	ND	NA
	04/10/13	1,200	1.7	NA	ND	NA
	04/23/13	1,400	1.5	NA	1.1	NA
	05/01/13	1,200	2.7	NA	2	NA
	06/17/13	1,000	1.4	<0.50	5.7	6.6
	09/11/13	20	2.5	18	<1.0	0.92
	11/06/13	190	0.96	43	3.2	3.7
	03/06/14	360	1.3	470	4.4	1.3
	06/10/14	750	1.2	140	31	18
	09/18/14	700	1.3	290	52	12
	11/19/14	1,000	1.3	<0.50	110	120
	03/05/15	190	1.3	23	61	56
	06/03/15	140	1.1	69	88	80
09/23/15	690	0.96	9.8	130	130	

Notes: NA=Not Analyzed NS= Not Sampled
 ND=Non Detect
 Shaded row represents baseline test
 Grey text represents First Quarter 2014 sampling event, not deemed representative of site conditions.
 *=Sample could not be analyzed for Cr(VI) because sample was saturated with potassium permanganate

The primary metal of concern was the effects of the oxidant on trivalent and hexavalent chromium concentrations in groundwater. Cardno ATC performed groundwater testing after the completion of the pilot testing and found elevated levels of chromium in the tested wells, except for MW-19 and MW-20, compared to before pilot testing. Both MW-19 and MW-20 are located upgradient from the pilot testing. Cardno ATC also performed analysis of hexavalent chromium (Cr(VI)), because the oxidizing effect of the two treatments has the potential to change the non-toxic, non- mobile Cr(III) into the acutely toxic, mobile Cr(VI). Monitoring well MW-40 CMT-60 showed a concentration of hexavalent chromium of 130 µg/L. Chromium concentrations from wells MW-19I and MW-40 CMT-60 were 170 µg/L and 130 µg/L, respectively. Monitoring wells MW-19I and MW-40 CMT-60 exceeded the MCL of 100 µg/L for total chromium in groundwater. No MCL has been established for CR(VI), but NDEP has set a basic comparison level (BCL) of 100 µg/L in groundwater, which MW-40 CMT-60 exceeded. Literature suggests that the increase of chromium levels may be a temporary condition. Analysis of metals in MW-40 CMT-55 was not able to be performed due to insufficient sample volume. MW-40 CMT-55 will be sampled and analyzed for metals along with MW-19I and MW-40 CMT-60 during the next quarterly monitoring event.

The potassium permanganate pilot test led to an expected increase of manganese at MW-19 and MW-19I due to the injection of the solution containing manganese into the groundwater. Manganese levels in MW-19 have steadily decreased to below laboratory detection limits; however monitoring well MW-19I had reported levels of manganese at 6,300 µg/L, which still equivalent to the manganese levels observed in the well shortly after the pilot test was conducted. However, this was the fourth consecutive quarter of decreasing manganese levels in the well. Manganese has persisted within MW-19I longer than initially anticipated. Chromium concentrations have remained elevated within MW-19I. This condition will continue to be monitored in the future.

PCE concentrations appear to have undergone some rebound in the MW-40 CMT wells, even though there is some residual manganese left from the pilot testing. The MW-40 CMT wells exhibited increases in PCE concentrations compared with the previous sampling events at each depth, with the exception of MW-40 CMT-30. Manganese continues to persist within and near MW-19I, and the monitoring well continues to exhibit a PCE concentration below laboratory reporting limits. Although the timeframe of the manganese within the wells lasted significantly longer than previously anticipated, rebound should be expected, especially in the deeper wells that proved difficult to effectively administer the potassium permanganate injection.

2.4 Mann-Kendall Trend Test for Plume Stability

The Mann-Kendall Trend Test for Plume Stability was used to determine whether the plume is increasing, probably increasing, decreasing, probably decreasing, stable, or showing no trend at each particular well. At least four quarters of sampling data is needed for the test to determine whether the plume is increasing or decreasing at a well. A confidence factor greater than 95% was needed to state whether PCE concentrations at a given well are increasing or decreasing. A confidence factor between 90% and 95% was needed to state PCE concentrations at a given well are increasing or decreasing. Past sample data was gathered for each well. Results of the Mann-Kendall Test indicated that the PCE plume was decreasing at twenty-one wells and increasing at eight wells. The Mann-Kendall Test also showed that the plume was probably decreasing at two wells, probably increasing at three wells, stable at seven wells, and showed no trend at fifteen wells (eight-teen including MW-11, MW-16, and MW-22 which weren't analyzed due to historically low readings). Many wells have just reached or are close to the minimum amount of sampling data necessary for the Mann-Kendall Trend Test to give an output and therefore many currently show no trend.

Eight wells currently are increasing according to the trend test at the site (MW-5, MW-6, MW-7, MW-20D2, MW-41, MW-6D3, and MW-19D2).

Concentrations at MW-7 fluctuate between 1 and 11 µg/L over the span of twelve years. The low concentrations of PCE and small range of concentrations of MW-7 represent a low concern at the site, however the continued PCE results from the well could show that some residual source material still remains at the Maryland Square property.

Concentrations at MW-41 have fluctuated between 1.7 and 3.7 µg/L over the span of eight quarters, and although the Mann-Kendall test now shows an "increasing" trend, the PCE concentration noted within the well has not increased from the high point of 3.7 µg/L over the past three quarters. The PCE concentrations remain low at MW-41, however Second Quarter 2015 was the first time that MW-42 also showed a probably increasing trend. During Third Quarter 2015, the PCE concentration fell to below laboratory detection limits for the first time. These two wells along with MW-38 (probably increasing) represent the current lateral extents of the plume. As stated by NDEP in their First Quarter 2015 response letter, these wells represent "sentinel wells" and if the increasing trend continues it may represent the continuing movement of the plume to the east.

Although concentrations are also low at MW-6D3, ranging from less than the laboratory detection limit to 32 µg/L, MW-6D3 is screened from 100 feet to 110 feet below ground surface and could demonstrate that PCE contamination is deeper than originally thought or is migrating downward. The vertical gradient analysis between MW-6D1 and MW-6D3 showed a downward movement between the two wells. However, only seven sampling events (not including non-detects) are used in the Mann-Kendall model currently so the model lacks precision at this time.

Results at MW-19D2 may have been affected by the pilot testing that occurred during First Quarter 2013. Only one sampling event was taken before pilot testing was conducted nearby, followed by a decrease in PCE concentration from 170 µg/L to below laboratory detection limits for three consecutive quarters. The four most recent monitoring events have experienced increasing concentrations that may be indicative of some rebound at the well however the most recent increase was minor. There has also been hypothesized movement of PCE due to vertical gradients in the vicinity of MW-19D over multiple quarters. The condition will continue to be monitored.

Wells MW-5, MW-6 both have higher PCE concentrations (approximately 800 µg/L in MW-5 and approximately 3,000 µg/L in MW-6). MW-6 is located directly along the centerline of the plume and MW-5 is south of MW-6 by approximately 90 feet. The two wells have exhibited the increasing trend over the span of fourteen years. Based on their location, to the east of Maryland Parkway, it is possible that additional source material remains under the road and is continuing to contribute to the plume. Mann Kendall analysis during First Quarter 2015 also showed MW-14I has an increasing trend for the first time. Monitor well MW-14I has consistently had the highest PCE concentration across the entire site, averaging around 10,000 µg/L. Well MW-14I is also located near MW-5 and MW-6, approximately 100 feet north of MW-6, and on the east side of Maryland Parkway. The future remediation plan for the site should address the possibility of source material being present under Maryland Parkway and be prepared for the possible migration on to the Boulevard Mall Property.

Second Quarter 2015 was the first time MW-20D2 showed an increasing trend at the site. MW-20D2 is located to the east of the Boulevard Mall building. Concentrations at MW-20D1 also reached an increasing trend during Third Quarter 2015. These wells will continue to be monitored.

3 Summary

Cardno ATC provides the following summary based on the results of the Third Quarter 2015 groundwater sampling event:

- Tetrachloroethene (PCE) was detected at concentrations ranging from 3.5 µg/L to 9,300 µg/L. The MCL for PCE in groundwater is 5 µg/L. PCE concentrations are summarized in the following table:

Table 3-1 Summary of PCE Concentrations in Monitoring Wells across the Site, 2nd Quarter 2015

Non Detect (<0.50 µg/L)	>0.50 µg/L to <5.0 µg/L	5.0 µg/L to 9,300 µg/L	
MW-19I	MW-9	MW-1	MW-23
MW-42	MW-41	MW-5	MW-25
MW-43		MW-6	MW-26
		MW-6D1	MW-27
		MW-6D3	MW-32
		MW-7	MW-38
		MW-13	MW-40 CMT-30
		MW-14I	MW-40 CMT-35
		MW-18	MW-40 CMT-40
		MW-19D1	MW-40 CMT-45
		MW-19D2	MW-40 CMT-50
		MW-19D3	MW-40 CMT-55
		MW-20D1	MW-40 CMT-60
		MW-20D3	

- Trichloroethene (TCE) was detected at concentrations ranging from 0.54 µg/L to 23 µg/L. The MCL for TCE in groundwater is 5 µg/L. TCE concentrations are summarized in the following table:

Table 3-2 Summary of TCE Concentrations in Monitoring Wells across the Site, 3rd Quarter 2015

Non Detect (<0.50 µg/L)		≥0.5 µg/L to <5.0 µg/L		5.0 µg/L to 23 µg/L
MW-1	MW-40 CMT-30	MW-5	MW-23	MW-6
MW-6D1	MW-41	MW-6D3	MW-25	MW-14I
MW-7	MW-42	MW-13	MW-26	MW-19D1
MW-9	MW-43	MW-18	MW-27	MW-40 CMT-40
MW-19I		MW-19D2	MW-32	MW-40 CMT-50
MW-20D3		MW-19D3	MW-40 CMT-35	MW-40 CMT-55
MW-38		MW-20D1	MW-40 CMT-45	MW-40 CMT-60

- Cis-1,2-dichloroethene (DCE) was detected in monitoring wells at concentrations ranging from 0.90 µg/L to 8.3 µg/L in 6 of the 32 site monitoring wells. The detected concentrations were below the MCL for DCE in groundwater of 70 µg/L.
- Chromium concentrations from wells MW-19I and MW-40 CMT-60 were 170 µg/L and 130 µg/L, respectively. Monitoring wells MW-19I and MW-40 CMT-60 exceeded the MCL of 100 µg/L for total chromium in groundwater. Monitoring well MW-40 CMT-60 showed a concentration of hexavalent chromium of 130 µg/L. No MCL has been established for CR(VI), but NDEP has set a basic comparison

level (BCL) of 100 µg/L in groundwater, which MW-40 CMT-60 exceeded. MW-19I was not able to be analyzed for hexavalent chromium content due to the color of the groundwater sample.

- Cardno ATC incorporated a system of custody seals on the site monitoring wells using zip ties. The zip ties were placed in a fashion so cap is secure but if the cap is removed, the zip tie system will come apart and show if any tampering occurred between monitoring events, results of these custody seals will be updated in the next quarterly report. The addition of custody seals was requested by NDEP due to uncharacteristically low PCE concentrations during First Quarter 2014. However, testing since that time shows that the low concentrations appear to have been related to variable pump depth placement, not due to outside interference. Zip tie custody seals will continue to be used at the site.

3.2 Recommendations

Cardno ATC recommends continuing monitoring and sampling of the site monitoring wells in accordance with the NDEP approved 2014 schedule for 2015, with the exception that metals testing be reduced to only MW-19I MW-40 CMT-55, and MW-40 CMT-60.

A copy of this report has been forwarded to the NDEP case officer for review.

3.3 Limitations

This report has been prepared for the exclusive use of Herman Kishner Trust, as it pertains to Maryland Square PCE Site located at 3661 South Maryland Parkway, in Las Vegas, Nevada. Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. This company is not responsible for the independent conclusions, opinions, or recommendations made by others based on the records review, site inspection, field exploration, and laboratory test data presented in this report.

It should be noted that all surficial environmental assessments are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and site evaluation. For these types of evaluations, it is often necessary to use information prepared by others and Cardno ATC cannot be responsible for the accuracy of such information. In addition, the passage of time may result in a change in the environmental characteristics at this site and surrounding properties. This report does not warrant against future operations or conditions, nor does it warrant operations or conditions present of a type or at a location not investigated. This report is not a regulatory compliance audit and is not intended to satisfy the requirements of any state, federal, or local real estate transfer laws.

It must be noted that no investigation can absolutely rule out the existence of any hazardous materials at a given site. This assessment has been based upon prior site history, observable conditions, and the subsurface soil sampling described in this report. Existing hazardous materials and contaminants can escape detection using these methods.

4 Environmental Certification Jurat

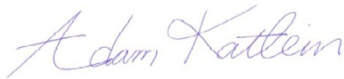
This Third Quarter 2015 Groundwater Monitoring and Sampling Report for Maryland Square PCE Site located at 3661 South Maryland Parkway, Las Vegas, Nevada, has been prepared in accordance with Nevada Administrative Code (NAC), Chapter 459, Section 9717.

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable Federal, State and local statutes, regulations and ordinances.

If you have any questions or require additional information, please feel free to contact the undersigned at (702) 990-9300.

Sincerely,

Cardno ATC



Adam Katlein
Project Manager



James Jimenez, CEM
Staff Geologist
Nevada Certified Environmental Manager
No. EM-2201 (Expires 04/14/17)



Gabe Stivala
Senior Project Manager

cc: Dr. Mary Siders, Nevada Division of Environmental Protection-Carson City, Nevada

Maryland Square PCE Site

TABLES

**Table A-1: Current Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date of Well Installation	Date of Sampling	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	Screen Interval (feet bgs)	Dissolved Oxygen (mg/L)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)
Project Monitoring Wells Located on Maryland Square Property												
MW-1	Aug 00	Sep 15	1992.01	19.68	1972.33	10-30	1.37	2.1	296.1	230	<0.50	<0.50
MW-7	Sep 02	Sep 15	1990.78	17.76	1973.02	10-30	2.13	2.0	412.7	11	<0.50	<0.50
MW-8	Sep 02	Sep 15	1991.71	NM	NM	10-30	NM	NM	NM	NS	NS	NS
MW-9	Sep 02	Sep 15	1992.25	19.89	1972.36	48.5-50	0.94	0.8	350.1	4.0	<0.50	<0.50
MW-12	Sep 02	Sep 15	1995.95	NM	NM	13.5-33.5	NM	NM	NM	NS	NS	NS
MW-17	Nov 03	Sep 15	1991.04	NM	NM	15-30	NM	NM	NM	NS	NS	NS
MW-34	Dec 11	Sep 15	1993.88	NM	NM	--	NM	NM	NM	NS	NS	NS
MW-35	Dec 11	Sep 15	1991.37	NM	NM	--	NM	NM	NM	NS	NS	NS
Project Monitoring Wells Located on Boulevard Mall Property												
MW-2	Oct 00	Sep 15	1983.53	NM	NM	10-32	NM	NM	NM	NS	NS	NS
MW-3	Oct 00	Sep 15	1983.81	NM	NM	10-31	NM	NM	NM	NS	NS	NS
MW-5	Oct 00	Sep 15	1988.69	18.83	1969.86	10-32	4.25	1.8	122.2	500	2.1	0.90
MW-6	Oct 00	Sep 15	1988.12	19.68	1968.44	10-32	2.46	1.9	237.3	3,400	11	2.5
MW-6D1	Jan 13	Sep 15	1988.72	20.41	1968.31	50-60	2.53	0.5	154.4	39	<0.50	<0.50
MW-6D2	Jan 13	Sep 15	1989.72	NM	NM	80-90	NM	NM	NM	NS	NS	NS

**Table A-1: Current Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date of Well Installation	Date of Sampling	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	Screen Interval (feet bgs)	Dissolved Oxygen (mg/L)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)
Project Monitoring Wells Located on Boulevard Mall Property												
MW-6D3	Jan 13	Sep 15	1988.72	25.36	1964.36	100-110	3.59	0.3	146.3	30	0.68	<0.50
MW-10	Sep 02	Sep 15	1983.28	NM	NM	10-30	NM	NM	NM	NS	NS	NS
MW-11	Sep 02	Sep 15	1979.87	NM	NM	13.5-33.5	NM	NM	NM	NS	NS	NS
MW-13	May 03	Sep 15	1983.31	18.20	1965.11	9-29	1.68	2.0	122.7	770	4.1	<0.50
MW-14	Nov 03	Sep 15	1987.33	NM	NM	15-40	NM	NM	NM	NS	NS	NS
MW-14I	Jul 12	Sep 15	1987.54	19.21	1968.33	40-55	2.67	0.8	191.7	9,300	23	8.3
MW-15	Nov 03	Sep 15	1982.74	NM	NM	15-32	NM	NM	NM	NS	NS	NS
MW-16	Nov 03	Sep 15	June 2, 1905	NM	NM	19-32	NM	NM	NM	NS	NS	NS
MW-19	Nov 03	Sep 15	1980.13	27.51	1952.62	19-35	NM	NM	NM	NS	NS	NS
MW-19D1	Jan 13	Sep 15	1979.25	26.74	1952.51	31-51	2.22	1.7	108.2	820	5.3	<0.50
MW-19D2	Jan 13	Sep 15	1979.28	27.12	1952.16	60-70	0.80	1.2	91.1	110	0.94	<0.50
MW-19D3	Jan 13	Sep 15	1979.32	28.64	1950.68	92-102	2.30	1.6	134.7	590	4.6	<0.50
MW-19I	Jul 12	Sep 15	1978.37	26.49	1951.88	34-54	2.30	1.8	616.2	<0.50	<0.50	<0.50
MW-20	Nov 03	Sep 15	1979.82	NM	NM	19-35	NM	NM	NM	NS	NS	NS
MW-20D1	Jan 13	Sep 15	1979.81	26.50	1953.31	25-45	3.17	1.9	145.8	550	2.0	<0.50

**Table A-1: Current Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date of Well Installation	Date of Sampling	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	Screen Interval (feet bgs)	Dissolved Oxygen (mg/L)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)
Project Monitoring Wells Located on Boulevard Mall Property												
MW-20D2	Jan 13	Sep 15	1978.66	NM	NM	55-65	NM	NM	NM	NS	NS	NS
MW-20D3	Jan 13	Sep 15	1978.69	30.86	1947.83	90-100	2.15	0.4	137.2	8.3	<0.50	<0.50
MW-21	Nov 03	Sep 15	1979.25	NM	NM	19-36	NM	NM	NM	NS	NS	NS
MW-40 CMT-30	Jul 12	Sep 15	1978.49	26.25	1952.24	30-30.6	3.13	1.7	13.1	5.3	<0.50	<0.50
MW-40 CMT-35	Jul 12	Sep 15	1978.49	34.21	1944.28	35-35.6	0.04	1.7	61.3	19	1.5	<0.50
MW-40 CMT-40	Jul 12	Sep 15	1978.49	26.24	1952.25	40-40.7	2.70	1.7	-96.8	280	5.9	<0.50
MW-40 CMT-45	Jul 12	Sep 15	1978.49	26.25	1952.24	45-45.6	2.37	1.7	42.4	310	2.8	<0.50
MW-40 CMT-50	Jul 12	Sep 15	1978.49	26.14	1953.35	50-50.6	2.03	1.4	-155.4	280	10	1.2
MW-40 CMT-55	Jul 12	Sep 15	1978.49	26.20	1952.29	55-55.6	4.68	1.6	-153.2	520	5.1	1.2
MW-40 CMT-60	Jul 12	Sep 15	1978.49	26.20	1952.29	60-60.6	6.19	1.7	-109.1	690	12	2.7
Project Monitoring Wells Located on Surrounding Streets and Golf Course												
MW-18	Nov 03	Sep 15	1962.90	13.74	1949.16	5-26	2.05	1.9	98.2	1,000	2.6	<0.50
MW-22	Mar 05	Sep 15	1975.19	NM	NM	15-36	NM	NM	NM	NS	NS	NS
MW-23	Mar 05	Sep 15	1962.45	17.40	1945.05	5-26	1.22	1.8	104.0	730	1.6	<0.50
MW-24	Mar 05	Sep 15	1960.82	NM	NM	5-26	NM	NM	NM	NS	NS	NS
MW-25	Mar 05	Sep 15	1959.29	21.11	1938.18	5-26	1.89	2.1	92.1	520	0.70	<0.50

**Table A-1: Current Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date of Well Installation	Date of Sampling	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	Screen Interval (feet bgs)	Dissolved Oxygen (mg/L)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)
Project Monitoring Wells Located on Surrounding Streets and Golf Course												
MW-26	Mar 06	Sep 15	1953.45	19.37	1935.08	10-36	1.30	2.0	96.3	670	0.54	<0.50
MW-27	Mar 06	Sep 15	1944.15	20.13	1924.02	10-36	1.67	2.1	95.9	370	1.0	<0.50
MW-28	Oct 07	Sep 15	1943.07	NM	NM	15-36	NM	NM	NM	NS	NS	NS
MW-29	Oct 07	Sep 15	1932.35	NM	NM	15-36	NM	NM	NM	NS	NS	NS
MW-30	Oct 07	Sep 15	1940.59	NM	NM	20-41	NM	NM	NM	NS	NS	NS
MW-31	Mar 08	Sep 15	1937.66	NM	NM	13.5-33.6	NM	NM	NM	NS	NS	NS
MW-32	Mar 08	Sep 15	1952.90	21.06	1931.84	13.5-33.7	1.88	1.9	103.2	590	1.4	<0.50
MW-33	Mar 08	Sep 15	1950.98	NM	NM	13.5-33.8	NM	NM	NM	NS	NS	NS
MW-36	Jan 12	Sep 15	1955.30	NM	NM	17-38	NM	NM	NM	NS	NS	NS
MW-37	Jan 12	Sep 15	1929.98	NM	NM	17-38	NM	NM	NM	NS	NS	NS
MW-38	Apr 12	Sep 15	1908.38	15.11	1893.27	15-36	2.41	2.2	125.3	8.1	<0.50	<0.50
MW-39	Apr 12	Sep 15	1967.55	NM	NM	15-36	NM	NM	NM	NS	NS	NS
MW-41	Aug 13	Sep 15	1908.89	14.80	1894.09	10-35	1.32	2.0	135.8	3.5	<0.50	<0.50
MW-42	Sep 13	Sep 15	1910.31	16.48	1893.83	10-35	1.72	2.2	159.0	<0.50	<0.50	<0.50
MW-43	Sep 13	Sep 15	1958.33	17.32	1941.01	10-35	1.92	1.8	118.3	<0.50	<0.50	<0.50

Notes:

NM = Not Measured
msl = mean sea level
ND = Non Detect
NS = Not Sampled

°C = degrees Celsius
g/L = gallons per liter
mg/L = milligrams per liter
mS/cm = milli Siemens per centimeter

Bold value indicates concentration that exceeds regulatory standard.

µg/L = micrograms per liter mV = millivolts
NTU = Nephelometric Turbidity Units

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-1	Aug 00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	2,300	ND	ND	ND
	Oct 00	1991.81	17.54	1974.27	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 02	1992.04	17.9	1974.14	NM	NM	NM	NM	NM	NM	NM	2,000	ND	ND	ND
	May 03	1992.04	18.7	1973.34	NM	NM	NM	NM	NM	NM	NM	870	ND	ND	ND
	Sep 03	1992.04	18.97	1973.07	NM	NM	NM	NM	NM	NM	NM	2,300	ND	ND	ND
	Jan 04	1992.04	19.3	1972.74	7.0	3.5	NM	0.9	22.50	NM	NM	1,700	ND	ND	ND
	May 05	1992.04	15.24	1976.8	7.0	4.0	441.0	5.4	26.00	NM	110	3,500	ND	ND	ND
	Sep 05	1992.04	16.74	1975.3	7.1	4.2	64.0	7.0	27.50	2.7	129	1700	ND	ND	ND
	Dec 05	1992.04	17.61	1974.43	7.0	5.1	290.0	2.0	26.90	3.2	404	820	ND	ND	ND
	Mar 06	1992.04	18.42	1973.62	NM	5.6	>999	NM	23.10	3.7	545	420	ND	ND	ND
	Jun 06	1992.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 06	1992.04	18.3	1973.74	6.3	3.7	81.0	4.6	26.70	2.4	129	1100	ND	ND	ND
	Dec 06	1992.04	18.88	1973.16	6.7	4.4	>999	5.1	26.90	2.8	111	1300	ND	ND	ND
	Mar 07	1992.04	20.08	1971.96	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1992.04	19.81	1972.23	7.0	2.3	611.0	6.2	25.70	1.4	468	450	ND	ND	ND
	Sep 07	1992.04	18.39	1973.65	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1992.04	19.01	1973.03	6.4	3.9	15.0	5.5	22.20	2.5	223	710	ND	ND	ND
	Mar 08	1992.04	20.03	1972.01	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1992.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	260	ND	ND	ND
	Oct 08	1992.01	19.82	1972.19	6.6	3.7	62.4	1.1	27.10	2.4	130	460	ND	ND	ND
	Feb 09	1992.01	19.65	1972.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1992.01	19.88	1972.13	7.1	3.7	39.6	1.6	26.20	2.4	101	NS	NS	NS	NS
	Jul 09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	590	ND	ND	ND
	Sep 09	1992.01	19.9	1970.11	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1992.01	20.33	1971.68	6.3	3.4	-10.0	1.5	26.90	2.2	126	390	ND	ND	ND
	Feb 10	1992.01	20.04	1971.97	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1992.01	19.98	1972.03	7.0	3.3	0.0	3.2	26.13	NM	NM	400	ND	ND	ND
	Oct 10	1992.01	19.44	1972.57	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1992.01	19.54	1972.47	6.7	3.5	1.2	1.4	27.56	NM	212	430	ND	ND	ND
	Mar 11	1992.01	20.1	1971.91	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1992.01	20.18	1971.83	7.2	3.6	0.0	1.7	25.58	NM	259	460	ND	ND	ND
	Sep 11	1992.01	19.85	1972.16	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1992.01	19.65	1972.36	7.0	3.4	NM	1.3	25.97	2.2	266	410	ND	ND	ND
	Mar 12	1992.01	20.41	1971.6	7.2	3.5	5.4	1.3	25.48	2.3	-70	370	NS	NS	NS
	Jun 12	1992.01	19.18	1972.83	7.3	3.5	15.9	3.0	25.97	2.3	90	410	ND	ND	ND
	Sep 12	1992.01	19.97	1972.04	7.6	3.6	NM	1.2	27.28	2.3	98	390	ND	ND	ND
	Nov 12	1992.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1992.01	20.35	1971.66	6.97	3.9	NM	0.90	24.80	2.5	59	260	<0.50	<0.50	<0.50
	Jun 13	1992.01	20.69	1971.32	7.16	3.9	NM	1.72	25.43	2.5	78	240	<0.50	<0.50	<0.50
	Sep 13	1992.01	20.52	1971.49	7.06	3.8	NM	0.76	26.95	2.4	-14	240	<0.50	<0.50	<0.50
	Nov 13	1992.01	20.31	1971.70	5.97	3.5	2.9	0.31	25.51	2.2	166	270	<0.50	<0.50	<0.50
	Mar 14	1992.01	20.10	1971.91	7.23	3.3	28.7	1.71	24.14	2.2	1	350	<0.50	<0.50	<0.50
	Jun 14	1992.01	20.29	1971.72	6.94	3.3	28.7	2.61	28.57	2.4	133	350	<0.50	<0.50	<0.50
	Sep 14	1992.01	20.15	1971.86	7.68	3.6	10.6	6.41	29.16	2.3	66	96	<0.50	<0.50	<0.50
	Nov 14	1992.01	20.42	1971.59	7.05	3.8	9.3	2.12	25.08	2.4	-39	240	<0.50	<0.50	<0.50
	Mar 15	1992.01	20.15	1971.86	6.43	3.7	4.8	1.34	25.49	2.4	85	210	<0.50	<0.50	<0.50
	Jun 15	1992.01	20.45	1971.56	7.23	3.7	16.9	1.60	26.93	2.2	117	230	<0.50	<0.50	<0.50
	Sep 15	1992.01	19.68	1972.33	7.46	3.2	17.5	1.37	27.97	2.1	296	230	<0.50	<0.50	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-2	Oct 00	1983.79	15.52	1968.27	NM	NM	NM	NM	NM	NM	NM	3,000	18.0	18.0	ND
	Sep 02	1983.99	16.62	1967.37	NM	NM	NM	NM	NM	NM	NM	3,000	13.0	13.0	ND
	May 03	1983.99	17.15	1966.84	NM	NM	NM	NM	NM	NM	NM	1,400	ND	ND	ND
	Sep 03	1983.97	17.70	1966.27	NM	NM	NM	NM	NM	NM	NM	1,700	ND	ND	ND
	Jan 04	1983.97	18.25	1965.72	7.1	3.1	NM	1.1	23.20	NM	NM	1,700	ND	ND	ND
	May 05	1983.97	14.65	1969.32	6.9	3.5	698.0	4.8	23.40	NM	193	2,050	17.0	9.7	ND
	Dec 05	1983.97	16.00	1967.97	6.6	4.8	360.0	2.7	25.40	3.1	264	2,900	ND	ND	ND
	Mar 06	1983.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1983.97	17.55	1966.42	NM	3.7	728.0	7.0	24.90	2.4	116	1,600	ND	ND	ND
	Oct 06	1983.97	17.25	1966.72	6.1	3.5	20.0	5.1	24.40	2.2	161	1,900	ND	ND	ND
	Dec 06	1983.97	17.60	1966.37	6.8	4.2	28.0	4.9	24.50	2.7	241	1,300	ND	ND	ND
	Mar 07	1983.97	18.84	1965.13	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1983.97	19.01	1964.96	7.0	3.5	539.0	5.7	24.40	2.3	305	1,400	ND	ND	ND
	Sep 07	1983.97	17.94	1966.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1983.97	18.04	1965.93	6.3	3.6	144.0	6.9	21.80	2.3	314	1,000	ND	ND	ND
	Mar 08	1983.97	18.82	1965.15	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1983.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	900	ND	ND	ND
	Oct 08	1983.97	18.54	1965.43	6.9	3.5	44.7	3.4	24.80	2.3	103	960	3.4	1.2	ND
	Feb 09	1983.97	18.68	1965.29	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1983.97	18.95	1965.02	7.0	3.7	15.4	1.9	24.50	2.4	116	880	3.2	1.1	ND
	Sep 09	1983.97	18.95	1965.02	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1983.97	19.32	1964.65	5.6	3.3	280.0	1.9	24.40	2.1	155	530	2.4	ND	ND
	Feb 10	1983.97	19.68	1964.29	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1983.97	19.08	1964.89	7.0	3.1	14.8	3.5	24.19	NM	NM	570	2.1	0.8	ND
	Oct 10	1983.97	18.76	1965.21	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1983.97	18.78	1965.19	6.9	3.4	32.8	3.0	24.11	NM	92	560	2.4	0.7	ND
	Mar 11	1983.97	19.19	1964.78	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1983.97	19.50	1964.47	7.2	3.4	25.9	2.6	24.47	NM	273	680	2.2	0.6	ND
	Sep 11	1983.97	19.11	1964.86	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1983.97	19.08	1964.89	7.0	3.3	NM	2.7	23.55	2.1	168	610	2.1	0.66	NS
	Mar 12	1983.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1983.53	19.11	1964.42	7.2	3.3	57.1	2.6	23.57	2.2	87	490	2	0.6	ND
Sep 12	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 12	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1983.53	19.29	1964.24	7.1	3.5	NM	2.7	23.24	2.3	205	580	2.5	1	<0.50	
Jun 13	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1983.53	19.27	1964.26	7.3	3.7	36.9	2.0	24.28	2.4	83	720	2.3	0.91	<0.50	
Mar 14	1983.53	19.15	1964.38	7.3	3.1	39.2	1.6	23.05	2.0	-65	340	1.8	<0.50	<0.50	
Jun 14	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1983.53	19.17	1964.36	6.44	3.38	19.21	1.75	23.35	2.20	197.00	550	2.3	0.61	<0.50	
Jun 15	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1983.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-3	Oct 00	1984.19	15.95	1968.24	NM	NM	NM	NM	NM	NM	NM	98	ND	ND	ND
	Sep 02	1984.46	17.20	1967.26	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	May 03	1984.46	17.70	1966.76	NM	NM	NM	NM	NM	NM	NM	6.9	ND	ND	ND
	Sep 03	1984.46	18.35	1966.08	NM	NM	NM	NM	NM	NM	NM	12	ND	ND	ND
	Jan 04	1984.46	19.25	1965.18	6.9	2.9	NM	1.0	22.40	NM	NM	6.7	ND	ND	ND
	May 05	1984.46	15.22	1969.21	7.0	2.9	NM	2.5	26.00	NM	149	ND	ND	ND	ND
	Dec 05	1984.46	16.45	1967.98	6.6	4.7	100.0	0.9	27.30	3.0	33	ND	ND	ND	ND
	Mar 06	1984.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1984.46	18.38	1966.05	NM	3.8	285.0	5.6	26.40	2.4	-32	ND	ND	ND	ND
	Oct 06	1984.46	17.88	1966.55	5.9	3.9	26.0	2.0	26.70	2.5	279	ND	ND	ND	ND
	Dec 06	1984.46	18.26	1966.17	6.7	4.8	272.0	2.9	26.70	3.1	9	1.2	ND	ND	ND
	Mar 07	1984.46	19.86	1964.57	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1984.46	20.23	1964.2	7.1	3.7	605.0	3.6	25.90	2.4	43	ND	ND	ND	ND
	Sep 07	1984.46	18.99	1965.44	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1984.46	18.99	1965.44	6.1	3.9	55.1	2.2	21.90	2.5	135	1.4	ND	ND	ND
	Mar 08	1984.46	19.94	1964.49	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1984.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1984.41	19.46	1964.95	6.7	3.8	44.2	0.4	27.50	2.4	99	6.5	ND	ND	ND
	Feb 09	1984.41	19.80	1964.61	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1984.41	20.20	1964.21	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1984.41	20.16	1964.25	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1984.41	20.48	1963.93	6.0	3.8	180.0	1.3	26.60	2.4	143	5.1	ND	ND	ND
	Feb 10	1984.41	21.07	1963.34	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1984.41	13.91	1970.50	6.8	3.5	2.2	2.0	27.36	NM	NM	NS	NS	NS	NS
	Oct 10	1984.41	19.95	1964.46	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1984.41	19.91	1964.50	6.7	3.9	12.5	0.6	27.29	NM	106	5.8	ND	ND	ND
	Mar 11	1984.41	20.47	1963.94	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1984.41	20.86	1963.55	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1984.41	20.45	1963.96	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1984.41	20.35	1964.06	6.7	4.5	NM	3.3	26.17	NM	-38	16	ND	ND	NS
	Mar 12	1984.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1983.81	20.43	1963.38	7.0	4.0	102.0	2.6	25.50	2.6	122	25	ND	ND	ND
Sep 12	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 12	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1983.81	20.37	1963.44	6.9	4.5	NM	1.7	25.15	2.9	153	12	<0.50	<0.50	<0.50	
Jun 13	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 14	1983.81	20.25	1963.56	7.2	4.3	107.0	2.0	24.79	2.8	149	11	<0.50	<0.50	<0.50	
Jun 14	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1983.81	20.02	1963.79	6.18	4.28	11.14	0.65	25.52	2.78	218.50	13	<0.50	<0.50	<0.50	
Jun 15	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-4	Oct 00	1989.68	16.95	1972.73	NM	NM	NM	NM	NM	NM	NM	14	ND	ND	ND
	Sep 02	1989.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	25	ND	ND	ND
	May 03	1989.87	18.71	1971.16	NM	NM	NM	NM	NM	NM	NM	24	ND	ND	ND
	Sep 03	1989.85	19.05	1970.8	NM	NM	NM	NM	NM	NM	NM	100	ND	ND	ND
	Jan 04	1989.85	19.86	1969.99	7.0	2.7	NM	1.2	22.00	NM	NM	220	ND	ND	ND
	May 05	1989.85	15.83	1974.02	6.8	3.7	664.0	3.7	24.20	NM	160	25	ND	ND	ND
	Dec 05	1989.85	17.62	1972.23	6.7	4.9	670.0	3.2	25.90	3.1	219	15	ND	ND	ND
	Mar 06	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1989.85	18.36	1971.49	NM	NM	NM	NM	NM	NM	NM	27	ND	ND	ND
	Oct 06	1989.85	18.34	1971.51	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 06	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 07	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 07	1989.85	18.96	1970.89	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 08	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1989.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Feb 09	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1989.86	Dry	Dry	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1989.86	Dry	Dry	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1989.86	Dry	Dry	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Feb 10	1989.86	Dry	Dry	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 11	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 12	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 14	1989.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

Abandoned June 4, 2012

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-5	Oct 00	1988.93	16.20	1972.73	NM	NM	NM	NM	NM	NM	NM	100	ND	ND	ND
	Sep 02	1989.18	17.00	1972.18	NM	NM	NM	NM	NM	NM	NM	110	ND	ND	ND
	May 03	1989.18	17.80	1971.38	NM	NM	NM	NM	NM	NM	NM	240	ND	ND	ND
	Sep 03	1989.18	18.07	1971.11	NM	NM	NM	NM	NM	NM	NM	220	ND	ND	ND
	Jan 04	1989.18	18.65	1970.53	6.7	2.6	NM	1.2	22.30	NM	NM	370	ND	ND	ND
	May 05	1989.18	14.87	1974.31	7.1	2.6	NM	4.6	25.40	NM	184	146	ND	ND	ND
	Dec 05	1989.18	16.80	1972.38	6.8	5.3	>999	1.5	26.80	3.3	377	93	ND	ND	ND
	Mar 06	1989.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1989.18	17.40	1971.78	NM	3.8	>999	6.9	26.60	2.4	126	220	ND	ND	ND
	Oct 06	1989.18	17.46	1971.72	6.2	3.5	21.0	4.8	26.70	2.2	99	67	ND	ND	ND
	Dec 06	1989.18	18.01	1971.17	6.8	4.5	134.0	5.4	26.50	2.9	93	130	ND	ND	ND
	Mar 07	1989.18	19.30	1969.88	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1989.18	19.12	1970.06	7.0	3.4	375.0	6.5	25.20	2.2	460	550	ND	ND	ND
	Sep 07	1989.18	17.85	1971.33	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1989.18	18.33	1970.85	6.3	3.8	28.3	5.7	24.40	2.4	159	170	ND	ND	ND
	Mar 08	1989.18	19.31	1969.87	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1989.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	400	ND	ND	ND
	Oct 08	1989.15	18.99	1970.16	6.8	3.5	21.4	4.8	27.40	2.3	119	340	2.7	1.2	ND
	Feb 09	1989.15	18.99	1970.16	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1989.15	19.17	1969.98	7.0	3.6	0.0	5.6	26.20	2.3	125	700	4.6	1.3	ND
	Sep 09	1989.15	19.14	1970.01	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1989.15	19.55	1969.6	5.8	3.2	-6.0	3.8	27.10	2.1	132	520	3.9	1.4	ND
	Feb 10	1989.15	19.57	1969.58	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1989.15	19.21	1969.94	7.1	3.1	7.0	6.7	25.60	NM	273	550	2.9	1.3	ND
	Oct 10	1989.15	18.67	1970.48	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1989.15	18.85	1970.30	7.0	5.4	2.0	4.7	25.64	NM	104	360	2.4	1.0	ND
	Mar 11	1989.15	19.41	1969.74	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1989.15	19.50	1969.65	6.9	3.5	14.0	4.9	26.58	NM	412	670	2.7	1.1	ND
	Sep 11	1989.15	19.19	1969.96	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1989.15	19.22	1969.93	6.9	4.0	NM	3.8	25.54	NM	-30	540	2.5	1.1	ND
	Mar 12	1989.15	19.74	1969.41	7.2	3.3	123.0	5.6	23.51	2.4	-38	800	NS	NS	NS
	Jun 12	1988.69	19.25	1969.44	7.3	3.3	50.1	6.0	25.30	2.1	106	520	2.5	1.2	ND
Sep 12	1988.69	18.25	1970.44	7.3	3.3	NM	5.3	26.25	2.2	129	340	2.2	0.95	ND	
Nov 12	1988.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1988.69	19.69	1969.00	7.1	3.6	NM	4.4	25.23	2.3	134	530	2.3	0.67	<0.50	
Jun 13	1988.69	20.00	1968.69	7.2	3.5	NM	4.7	27.60	2.3	126	600	2.9	0.95	<0.50	
Sep 13	1988.69	19.60	1969.09	7.0	3.4	NM	4.3	26.63	2.2	167	830	3.7	1.3	<0.50	
Nov 13	1988.69	19.52	1969.17	7.8	3.6	9.7	4.1	25.37	2.3	90	690	2.8	1.2	<0.50	
Mar 14	1988.69	19.37	1969.32	7.3	3.1	18.3	5.1	24.90	2.0	-85	440	2.2	<0.50	<0.50	
Jun 14	1988.69	19.68	1969.01	7.0	3.4	37.4	5.1	27.98	2.2	87	780	2.6	1.1	<0.50	
Sep 14	1988.69	19.08	1969.61	7.5	3.4	4.2	6.6	28.41	2.2	70	350	0.94	<0.50	<0.50	
Nov 14	1988.69	19.55	1969.14	7.1	3.6	4.5	4.2	25.89	2.3	59	740	3.9	1.5	<0.50	
Mar 15	1988.69	19.35	1969.34	6.4	3.5	12.2	2.8	24.02	2.2	205	790	3.7	1.2	<0.50	
Jun 15	1988.69	19.60	1969.09	7.2	3.4	11.9	2.5	25.60	2.2	106	660	3	0.95	<0.50	
Sep 15	1988.69	18.83	1969.86	7.6	2.7	21.2	4.3	27.19	1.8	122	500	2.1	0.9	<0.50	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-6	Oct 00	1988.72	17.41	1971.31	NM	NM	NM	NM	NM	NM	NM	2200	13.0	8.1	ND
	Sep 02	1989.01	18.26	1970.75	NM	NM	NM	NM	NM	nM	NM	1000	41.0	14.0	ND
	May 03	1989.01	18.87	1970.14	NM	NM	NM	NM	NM	NM	NM	710	22.0	ND	ND
	Sep 03	1989.01	19.25	1969.76	NM	NM	NM	NM	NM	NM	NM	1300	ND	ND	ND
	Jan 04	1989.01	19.74	1969.27	7.0	2.3	NM	1.2	22.40	NM	NM	2400	ND	ND	ND
	May 05	1989.01	16.21	1972.8	6.9	2.4	NM	2.8	25.90	NM	123	2090	13.0	11.0	ND
	Sep 05	1989.01	17.26	1971.75	7.0	4.0	34.0	6.2	26.90	2.3	-119	890	13.0	23.0	ND
	Dec 05	1989.01	17.88	1971.13	6.8	4.9	220.0	1.1	26.50	3.2	163	530	41.0	21.0	ND
	Mar 06	1989.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1989.01	18.80	1970.21	NM	4.0	707.0	6.3	26.70	2.4	172	1100	ND	ND	ND
	Oct 06	1989.01	18.73	1970.28	6.3	3.6	7.0	4.1	26.50	2.3	61	1300	ND	ND	ND
	Dec 06	1989.01	19.18	1969.83	6.7	4.2	96.0	4.4	26.20	2.7	239	810	9.9	8.9	ND
	Mar 07	1989.01	20.40	1968.61	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1989.01	20.28	1968.73	7.1	3.5	352.0	5.6	24.90	2.2	241	1300	ND	ND	ND
	Sep 07	1989.01	19.00	1970.01	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1989.01	19.29	1969.72	6.2	3.8	4.3	5.4	24.80	2.4	277	1500	ND	ND	ND
	Mar 08	1989.01	20.26	1968.75	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1989.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,900	ND	ND	ND
	Oct 08	1989.03	20.00	1969.03	6.8	3.5	46.3	3.3	26.30	2.3	117	2,000	13.0	3.9	ND
	Feb 09	1989.03	20.03	1969	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1989.03	20.20	1968.83	7.0	3.5	76.3	2.8	26.70	2.2	121	2,800	14.0	4.1	ND
	Sep 09	1989.03	20.27	1968.76	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1989.03	20.66	1968.37	5.9	3.1	87.0	2.5	26.30	1.9	132	2,100	14.0	6.4	ND
	Feb 10	1989.03	20.77	1968.26	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1989.03	20.38	1968.65	7.0	3.0	23.2	4.1	26.32	NM	NM	2,500	13.0	6.2	NS
	Oct 10	1989.03	19.94	1969.09	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1989.03	20.02	1969.01	6.9	3.3	7.0	3.5	25.26	NM	86	2,300	13.0	8.2	ND
	Mar 11	1989.03	20.49	1968.54	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1989.03	20.66	1968.37	7.0	3.3	8.2	3.7	26.52	NM	365	2,400	10.0	3.7	ND
	Sep 11	1989.03	20.30	1968.73	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1989.03	20.30	1968.73	7.0	3.2	NM	3.4	25.16	2.1	113	2,900	12	5.6	ND
	Mar 12	1989.03	20.84	1968.19	7.3	3.2	107.0	4.4	24.30	2.1	-44	3,500	NS	NS	NS
	Jun 12	1988.12	19.71	1968.41	7.6	3.1	57.1	7.5	27.25	2.0	114	1,700	8.5	5.4	ND
Sep 12	1988.12	19.23	1968.89	7.3	3.1	NM	3.7	26.27	2.0	122	3,000	17	8.1	ND	
Nov 12	1988.12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1988.12	20.23	1967.89	7.1	3.4	NM	3.3	24.83	2.2	100	2,600	10	2.2	<0.50	
Jun 13	1988.12	20.58	1967.54	7.3	3.4	NM	3.6	30.62	2.2	130	2,400	7.7	1.3	<0.50	
Sep 13	1988.12	20.25	1967.87	7.0	3.3	NM	3.0	29.86	2.2	90	2,500	11	11	<0.50	
Nov 13	1988.12	20.14	1967.98	7.8	3.5	16.2	3.1	25.27	2.3	97	3,100	12	3.5	<0.50	
Mar 14	1988.12	20.00	1968.12	7.2	2.9	152.0	4.8	24.30	1.9	-108	2,700	11	2.3	<0.50	
Jun 14	1988.12	20.30	1967.82	7.2	3.2	21.3	6.7	26.43	2.1	158	3,000	8.7	2.6	<0.50	
Sep 14	1988.12	19.27	1968.85	7.4	3.2	56.6	6.5	32.77	2.1	64	700	4.0	1.2	<0.50	
Nov 14	1988.12	20.09	1968.03	6.9	3.5	5.0	3.3	24.83	2.3	79	3,300	12.0	3.1	<0.50	
Mar 15	1988.12	19.96	1968.16	6.4	3.4	11.6	2.3	25.06	2.2	99	3,300	9.3	2.3	<0.50	
Jun 15	1988.12	20.23	1967.89	7.3	3.4	14.3	2.6	26.80	2.2	93	3,400	10	2.1	<0.50	
Sep 15	1988.12	19.68	1968.44	7.3	3.0	9.1	2.5	28.00	1.9	237	3,400	11	2.5	<0.50	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-6D1	Mar 13	1988.72	16.29	1972.43	7.6	0.6	NM	5.7	23.48	0.4	86	<0.50	<0.50	<0.50	<0.50
	Jun 13	1988.72	20.20	1968.52	7.5	0.7	NM	5.2	25.82	0.4	280	<0.50	<0.50	<0.50	<0.50
	Sep 13	1988.72	21.40	1967.32	7.4	0.9	NM	4.4	27.20	0.6	61	58	<0.50	<0.50	<0.50
	Nov 13	1988.72	19.24	1969.48	6.9	0.6	49.3	5.0	23.81	0.4	84	3.2	<0.50	<0.50	<0.50
	Mar 14	1988.72	16.20	1972.52	7.4	0.5	62.4	4.3	26.16	0.3	87	1.2	<0.50	<0.50	<0.50
	Jun 14	1988.72	19.60	1969.12	7.3	0.6	47.4	5.8	26.70	0.4	200	0.67	<0.50	<0.50	<0.50
	Sep 14	1988.72	20.40	1968.32	7.2	0.8	51.3	4.2	25.75	0.5	120	120	<0.50	<0.50	<0.50
	Nov 14	1988.72	18.40	1970.32	7.4	0.7	6.7	6.1	23.50	0.4	40	21	<0.50	<0.50	<0.50
	Mar 15	1988.72	15.41	1973.31	6.8	0.6	19.3	3.4	26.20	0.4	102	3.0	<0.50	<0.50	<0.50
	Jun 15	1988.72	18.50	1970.22	7.2	0.3	49.1	3.9	25.02	0.3	127	0.52	<0.50	<0.50	<0.50
Sep 15	1988.72	20.41	1968.31	7.6	0.7	11.2	2.5	26.83	0.5	154	39	<0.50	<0.50	<0.50	
MW-6D2	Mar 13	1988.72	14.94	1973.78	7.6	0.6	NM	4.3	22.93	0.4	55	<0.50	<0.50	<0.50	<0.50
	Jun 13	1988.72	20.40	1968.32	7.5	0.7	NM	5.9	25.49	0.4	142	<0.50	<0.50	<0.50	<0.50
	Sep 13	1988.72	21.61	1967.11	7.4	0.7	NM	5.0	26.61	0.5	58	33	<0.50	<0.50	<0.50
	Nov 13	1988.72	18.94	1969.78	7.5	0.6	18.0	NM	23.22	0.4	24	3.3	<0.50	<0.50	<0.50
	Mar 14	1988.72	15.90	1972.82	7.3	0.5	52.3	4.4	24.76	0.3	88	1.6	<0.50	<0.50	<0.50
	Jun 14	1988.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1988.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1989.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1990.72	15.35	1975.37	6.8	0.6	58.6	3.7	24.31	0.4	113	3.2	<0.50	<0.50	<0.50
	Jun 15	1990.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1990.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
MW-6D3	Mar 13	1988.72	14.04	1974.68	7.6	0.5	NM	0.7	22.18	0.3	29	<0.50	<0.50	<0.50	<0.50
	Jun 13	1988.72	24.40	1964.32	7.7	0.5	NM	2.8	31.09	0.4	155	<0.50	<0.50	<0.50	<0.50
	Sep 13	1988.72	24.89	1963.83	7.2	0.6	NM	2.2	28.92	0.4	112	2.0	<0.50	<0.50	<0.50
	Nov 13	1988.72	22.16	1966.56	6.9	0.5	43.6	5.7	23.58	0.3	78	3.0	<0.50	<0.50	<0.50
	Mar 14	1988.72	16.70	1972.02	7.3	0.5	86.4	5.4	24.62	0.3	61	1.9	<0.50	<0.50	<0.50
	Jun 14	1988.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1988.72	26.93	1961.79	7.42	0.49	67.50	6.17	27.28	0.32	65.40	10	<0.50	<0.50	<0.50
	Nov 14	1988.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1989.72	15.47	1974.25	6.8	0.5	99.1	3.9	25.30	0.3	107	32	0.50	<0.50	<0.50
	Jun 15	1989.72	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1989.72	25.36	1964.36	7.59	0.45	8.10	3.59	26.83	0.29	146	30	0.68	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-7	Sep 02	1990.28	18.27	1972.01	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	May 03	1990.28	16.60	1973.68	NM	NM	NM	NM	NM	NM	NM	1.7	ND	ND	ND
	Sep 03	1990.25	16.79	1973.46	NM	NM	NM	NM	NM	NM	NM	2	ND	ND	ND
	Jan 04	1990.25	17.32	1972.93	7.0	2.2	NM	0.9	22.40	NM	NM	11	ND	ND	ND
	May 05	1990.25	13.86	1976.39	7.1	1.8	NM	4.0	24.80	NM	129	ND	ND	ND	ND
	Sep 05	1990.25	14.97	1975.28	7.0	4.6	140.0	6.2	26.60	3.0	144	3.3	ND	ND	ND
	Dec 05	1990.25	15.45	1974.80	6.7	5.3	5.0	1.8	23.80	3.4	472	1.2	ND	ND	ND
	Mar 06	1990.25	16.41	1973.84	4.7	6.7	428.0	NM	22.40	4.2	634	1.5	ND	ND	ND
	Jun 06	1990.25	16.50	1973.75	NM	4.1	>999	6.6	26.20	2.6	-14	2.2	ND	ND	ND
	Oct 06	1990.25	16.50	1973.75	6.2	3.7	>999	4.4	25.00	2.3	92	2.9	ND	ND	ND
	Dec 06	1990.25	16.87	1973.38	6.9	4.8	>999	5.7	25.10	3.0	65	2.1	ND	ND	ND
	Mar 07	1990.25	18.19	1972.06	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1990.25	18.08	1972.17	7.1	3.6	450.0	6.3	25.10	2.2	129	1.1	ND	ND	ND
	Sep 07	1990.25	16.31	1973.94	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1990.25	16.60	1973.65	6.2	4.0	0.0	2.3	22.50	2.6	161	1.3	ND	ND	ND
	Mar 08	1990.25	17.93	1972.32	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1990.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1990.22	17.57	1972.65	6.6	3.8	204.0	3.5	26.70	2.4	134	2.5	ND	ND	ND
	Feb 09	1990.22	17.52	1972.70	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1990.22	17.92	1972.30	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1990.22	18.13	1972.09	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1990.22	18.50	1971.72	5.8	3.4	46.0	3.2	26.70	2.2	160	7.9	ND	ND	ND
	Feb 10	1990.22	18.36	1971.86	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1990.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1990.22	17.54	1972.68	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1990.22	17.65	1972.57	6.9	3.7	230.8	4.9	26.17	NM	98	2.0	ND	ND	ND
	Mar 11	1990.22	18.19	1972.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1990.22	18.40	1971.82	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1990.22	18.02	1972.20	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1990.22	17.86	1972.36	7.0	3.5	NM	3.7	25.20	2.2	302	8.9	ND	ND	ND
	Mar 12	1990.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1989.78	17.78	1972.00	7.3	3.5	8.0	4.8	27.56	2.3	-42	10	ND	ND	ND
Sep 12	1989.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 12	1989.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1989.78	18.47	1971.31	7.0	3.8	NM	3.4	25.22	2.5	70	10	<0.50	<0.50	<0.50	
Jun 13	1989.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1989.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1990.78	18.40	1972.38	6.1	3.4	53.0	1.64	26.34	2.17	165	8.4	<0.50	<0.50	<0.50	
Mar 14	1990.78	18.12	1972.66	7.3	3.3	39.0	4.18	24.49	2.11	90	1.3	<0.50	<0.50	<0.50	
Jun 14	1990.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1990.78	18.23	1972.55	7.42	3.48	59.40	6.32	28.59	2.25	108	4.7	<0.50	<0.50	<0.50	
Nov 14	1990.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1990.78	18.20	1972.58	6.5	3.6	11.5	2.3	26.60	2.4	206	17	<0.50	<0.50	<0.50	
Jun 15	1990.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1990.78	17.76	1973.02	7.51	3.05	17.20	2.13	28.28	1.98	413	11	<0.50	<0.50	<0.50	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-8	Sep 02	1994.25	18.55	1975.70	NM	NM	NM	NM	NM	NM	NM	5.4	ND	ND	ND
	May 03	1994.25	19.50	1974.75	NM	NM	NM	NM	NM	NM	NM	3.2	ND	ND	ND
	Sep 03	1994.23	19.55	1974.68	NM	NM	NM	NM	NM	NM	NM	3.7	ND	ND	ND
	Jan 04	1994.23	19.91	1974.32	7.0	2.2	NM	1.0	22.00	NM	NM	4.7	ND	ND	ND
	May 05	1994.23	15.51	1978.72	7.0	1.8	NM	3.6	27.70	NM	107	5.6	5.6	ND	ND
	Dec 05	1994.23	18.48	1975.75	6.7	4.2	>999	2.1	24.10	2.7	483	3.6	ND	ND	ND
	Mar 06	1994.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1994.23	18.89	1975.34	NM	3.7	>999	6.9	27.40	2.3	185	2.6	ND	ND	ND
	Oct 06	1994.23	19.12	1975.11	6.2	3.4	>999	5.9	26.70	2.2	108	3.4	ND	ND	ND
	Dec 06	1994.23	19.60	1974.63	6.2	3.4	>999	5.9	26.70	2.2	108	4.3	ND	ND	ND
	Mar 07	1994.23	20.56	1973.67	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1994.23	20.31	1973.92	7.1	3.5	259.0	7.3	27.30	2.3	287	2.8	ND	ND	ND
	Sep 07	1994.23	19.14	1975.09	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1994.23	19.81	1974.42	6.5	3.7	0.0	3.5	25.50	2.4	158	2.8	ND	ND	ND
	Mar 08	1994.23	20.61	1973.62	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1994.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1994.22	20.79	1973.43	6.8	3.5	421.0	5.2	26.90	2.2	154	3.7	ND	ND	ND
	Feb 09	1994.22	20.29	1973.93	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1994.22	20.44	1973.78	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1994.22	20.41	1973.81	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1994.22	20.71	1973.51	6.7	3.2	450.0	5.0	26.80	2.0	133	2.8	ND	ND	ND
	Feb 10	1994.22	20.86	1973.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1994.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1994.22	19.68	1974.54	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1994.22	19.94	1974.28	7.0	3.5	39.5	5.3	26.65	NM	98	4	ND	ND	ND
	Mar 11	1994.22	20.41	1973.81	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1994.22	20.50	1973.72	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1994.22	20.27	1973.95	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 12	1994.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1991.71	19.32	1972.39	7.4	3.2	93.1	6.6	27.55	2.1	17	3.5	ND	ND	ND
	Sep 12	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Mar 13	1991.71	20.65	1971.06	7.0	3.5	NM	5.0	25.97	2.3	78	1.5	<0.50	<0.50	<0.50	
Jun 13	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1991.71	20.60	1971.11	6.1	3.2	95.0	2.3	26.12	2.1	194	2.2	<0.50	<0.50	<0.50	
Mar 14	1991.71	20.45	1971.26	7.3	3.1	92.9	5.4	24.07	2.0	89	1.6	<0.50	<0.50	<0.50	
Jun 14	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1991.71	20.55	1971.16	6.3	3.4	18.7	1.0	26.64	2.2	201	2.4	<0.50	<0.50	<0.50	
Jun 15	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1991.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

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Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-9	Sep 02	1992.26	18.46	1973.80	NM	NM	NM	NM	NM	NM	NM	670	ND	ND	ND
	May 03	1992.26	19.15	1973.11	NM	NM	NM	NM	NM	NM	NM	59	ND	ND	ND
	Sep 03	1992.26	19.02	1973.24	NM	NM	NM	NM	NM	NM	NM	9.2	ND	ND	ND
	Jan 04	1992.26	19.05	1973.21	7.0	2.5	NM	1.2	22.60	NM	NM	10	ND	ND	ND
	May 05	1992.26	15.36	1976.90	7.1	2.7	296.0	7.6	26.10	NM	130	353	ND	ND	ND
	Sep 05	1992.26	17.85	1974.41	7.2	1.8	4.0	6.6	27.10	1.2	111	64	ND	ND	ND
	Dec 05	1992.26	17.68	1974.58	6.9	2.5	33.0	2.5	26.60	1.6	123	190	ND	ND	ND
	Mar 06	1992.26	18.55	1973.71	5.1	2.1	>999	NM	25.90	1.3	496	ND	ND	ND	ND
	Jun 06	1992.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 06	1992.26	18.40	1973.86	6.3	2.4	0.0	4.1	25.70	1.5	86	160	ND	ND	ND
	Dec 06	1992.26	19.00	1973.26	6.8	3.0	0.0	5.1	25.50	1.9	233	45	ND	ND	ND
	Mar 07	1992.26	20.19	1972.07	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1992.26	19.95	1972.31	7.1	2.5	0.0	5.6	26.10	1.6	428	170	ND	ND	ND
	Sep 07	1992.26	18.51	1973.75	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1992.26	19.20	1973.06	NM	NM	NM	NM	NM	NM	NM	110	ND	ND	ND
	Mar 08	1992.26	20.16	1972.10	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1992.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1992.25	19.87	1972.38	7.0	1.4	162.0	4.7	26.60	0.9	58	12	ND	ND	ND
	Feb 09	1992.25	19.76	1972.49	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1992.25	20.00	1972.25	7.5	1.4	>-5.0	4.0	26.50	0.8	-9	13	ND	ND	ND
	Sep 09	1992.25	20.20	1972.05	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1992.25	20.45	1971.80	7.0	1.1	-10.0	4.0	26.40	0.7	-157	5.5	ND	ND	ND
	Feb 10	1992.25	20.21	1972.04	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1992.25	20.10	1972.15	7.3	1.2	12.0	5.1	27.67	NM	NM	6.6	ND	ND	ND
	Oct 10	1992.25	19.44	1972.81	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1992.25	19.63	1972.62	7.1	1.2	7.0	3.5	27.31	NM	50	3.7	ND	ND	ND
	Mar 11	1992.25	20.13	1972.12	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1992.25	20.40	1971.85	7.1	1.2	0.4	0.5	31.96	NM	286	2.3	ND	ND	ND
	Sep 11	1992.25	19.99	1972.26	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1992.25	19.91	1972.34	7.3	1.2	NM	2.2	24.70	0.8	265	5.6	ND	ND	ND
	Mar 12	1992.25	20.50	1971.75	7.5	1.2	17.8	1.7	26.86	0.8	-79	5.2	NS	NS	NS
	Jun 12	1992.25	19.45	1972.80	7.6	1.0	13.4	4.7	30.27	0.8	-8	5.7	ND	ND	ND
	Sep 12	1992.25	19.07	1973.18	7.7	1.2	NM	2.2	27.57	0.8	118	3.7	ND	ND	ND
Nov 12	1992.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1992.25	20.56	1971.69	7.2	1.4	NM	0.6	25.53	0.9	-0.1	6.6	<0.50	<0.50	<0.50	
Jun 13	1992.25	20.91	1971.34	7.2	1.4	NM	2.3	25.44	0.9	110	9.8	<0.50	<0.50	<0.50	
Sep 13	1992.25	20.69	1971.56	7.3	1.4	NM	2.4	27.88	0.9	-81	6.6	<0.50	<0.50	<0.50	
Nov 13	1992.25	20.53	1971.72	6.4	1.3	35.3	0.6	25.32	0.8	56	11	<0.50	<0.50	<0.50	
Mar 14	1992.25	20.36	1971.89	7.3	1.4	13.8	4.1	24.73	0.9	75	11	<0.50	<0.50	<0.50	
Jun 14	1992.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1992.25	20.55	1971.70	7.25	1.31	17.60	3.98	29.12	0.86	58.50	7.9	<0.50	<0.50	<0.50	
Nov 14	1992.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1992.25	20.62	1971.63	6.73	1.59	13.33	2.37	25.95	1.04	90.80	9.7	<0.50	<0.50	<0.50	
Jun 15	1992.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1992.25	19.89	1972.36	7.71	1.22	21.90	0.94	28.85	0.80	350.10	4	<0.50	<0.50	<0.50	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-10	Sep 02	1983.81	18.51	1965.30	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	May 03	1983.81	18.65	1965.16	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	Sep 03	1983.81	19.45	1964.36	NM	NM	NM	NM	NM	NM	NM	15	ND	ND	ND
	Jan 04	1983.81	20.32	1963.49	7.0	3.1	NM	1.0	24.40	NM	NM	ND	ND	ND	ND
	May 05	1983.81	16.76	1967.05	6.8	3.2	25.0	1.5	28.10	NM	-253	ND	ND	ND	ND
	Sep 05	1983.81	16.95	1966.86	7.0	2.9	28.0	3.9	27.90	1.9	-239	ND	ND	ND	ND
	Dec 05	1983.81	17.64	1966.17	6.7	3.7	57.0	1.5	23.90	2.3	-140	ND	ND	ND	ND
	Mar 06	1983.81	19.25	1964.56	5.7	1.8	153.0	NM	21.30	1.2	-154	ND	ND	ND	ND
	Jun 06	1983.81	17.90	1965.91	NM	2.1	>999	3.5	28.10	1.5	-303	ND	ND	ND	ND
	Oct 06	1983.81	19.00	1964.81	6.2	1.4	86.0	1.6	27.10	0.9	-272	ND	ND	ND	ND
	Dec 06	1983.81	19.21	1964.60	6.8	3.9	144.0	3.9	26.60	2.5	-321	1	ND	ND	ND
	Mar 07	1983.81	20.84	1962.97	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1983.81	21.39	1962.42	7.0	3.5	>999	2.7	27.30	2.1	-179	ND	ND	ND	ND
	Sep 07	1983.81	20.38	1963.43	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1983.81	20.26	1963.55	6.9	3.6	0.0	0.6	24.50	2.3	-170	1	ND	ND	ND
	Mar 08	1983.81	21.06	1962.75	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1983.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1983.78	20.45	1963.33	6.8	2.9	100.0	0.0	27.70	1.9	-226	ND	ND	ND	ND
	Feb 09	1983.78	20.90	1962.88	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1983.78	21.42	1962.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1983.78	21.46	1962.32	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1983.78	21.67	1962.11	6.3	2.6	-10.0	0.2	27.40	1.6	-330	ND	ND	ND	ND
	Feb 10	1983.78	22.47	1961.31	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1983.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1983.78	21.23	1962.55	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1983.78	21.10	1962.68	7.1	1.0	1.0	0.1	28.00	NM	-274	ND	ND	ND	ND
	Mar 11	1983.78	21.76	1962.02	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1983.78	22.18	1961.60	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1983.78	21.75	1962.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1983.78	21.62	1962.16	6.9	1.3	NM	0.2	26.91	NM	-335	ND	ND	ND	ND
	Mar 12	1983.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1983.28	21.76	1961.52	7.4	3.0	11.0	1.0	27.50	2.0	-283	0.9	ND	ND	ND
	Sep 12	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 12	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1983.28	21.36	1961.92	7.1	2.7	NM	0.7	26.34	1.7	-238	<0.50	<0.50	<0.50	<0.50	
Jun 13	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 14	1983.28	21.43	1961.85	7.3	3.0	76.1	4.7	27.18	1.9	-78	<0.50	<0.50	<0.50	<0.50	
Jun 14	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1983.28	21.60	1961.68	6.4	3.6	5.8	0.4	25.38	2.3	-181	<0.50	<0.50	<0.50	<0.50	
Jun 15	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-11	Sep 02	1980.24	24.22	1956.02	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	May 03	1980.24	24.25	1955.99	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	Sep 03	1980.24	25.62	1954.62	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jan 04	1980.24	26.22	1954.02	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	May 05	1980.24	22.55	1957.69	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 06	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 06	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 06	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 07	1980.24	25.51	1954.73	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 07	1980.24	26.13	1954.11	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 08	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Feb 09	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Feb 10	1980.21	27.54	1952.67	6.7	3.3	3.0	5.0	24.30	2.1	-134	ND	ND	ND	ND
	Jun 10	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1980.21	26.69	1953.52	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 11	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1980.21	27.36	1952.85	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1980.21	27.45	1952.76	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1980.21	27.28	1952.93	6.9	3.3	NM	0.2	24.72	21.3	-94	1.4	ND	ND	ND
	Mar 12	1980.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1979.87	27.37	1952.50	7.3	3.4	3.9	0.9	26.07	2.2	-194	1.4	ND	ND	ND
	Sep 12	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1979.87	25.81	1954.06	7.0	3.7	NM	1.2	24.43	2.4	-104	<0.50	<0.50	<0.50	<0.50
Jun 13	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 14	1979.87	26.32	1953.55	7.2	3.2	13.2	0.9	24.93	2.1	-19	<0.50	<0.50	<0.50	<0.50	
Jun 14	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1979.87	26.55	1953.32	6.8	3.5	3.7	1.0	23.66	2.3	-96	<0.50	<0.50	<0.50	<0.50	
Jun 15	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1979.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-12	Sep 02	1996.59	14.90	1981.69	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	May 03	1996.59	15.07	1981.52	NM	NM	NM	NM	NM	NM	NM	1.3	ND	ND	ND
	Sep 03	1996.59	15.30	1981.29	NM	NM	NM	NM	NM	NM	NM	14	ND	ND	ND
	Jan 04	1996.59	15.40	1981.19	7.0	2.2	NM	NM	22.40	NM	NM	6.1	ND	ND	ND
	May 05	1996.59	12.34	1984.25	6.8	2.6	NM	3.2	24.90	NM	219	ND	ND	ND	ND
	Sep 05	1996.59	13.45	1983.14	7.0	4.2	160.0	5.0	25.60	2.7	95	1.1	ND	ND	ND
	Dec 05	1996.59	14.20	1982.39	6.7	5.0	210.0	2.0	22.50	3.2	523	1.2	ND	ND	ND
	Mar 06	1996.59	15.00	1981.59	NM	6.7	91.0	NM	23.50	4.2	503	1.1	ND	ND	ND
	Jun 06	1996.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 06	1996.59	14.71	1981.88	6.3	3.9	>999	3.9	26.10	2.5	112	ND	ND	ND	ND
	Dec 06	1996.59	15.05	1981.54	6.6	4.4	>999	6.2	25.30	2.8	206	1.4	ND	ND	ND
	Mar 07	1996.59	16.55	1980.04	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1996.59	16.31	1980.28	7.1	3.8	>999	3.5	25.50	2.4	-39	ND	ND	ND	ND
	Sep 07	1996.59	14.27	1982.32	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1996.59	15.04	1981.55	6.3	3.9	286.0	2.6	24.70	2.5	207	ND	ND	ND	ND
	Mar 08	1996.59	16.51	1980.08	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1996.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1996.48	15.73	1980.75	6.7	3.8	366.0	0.8	26.90	2.4	119	2	ND	ND	ND
	Feb 09	1996.48	15.61	1980.87	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1996.48	16.26	1980.22	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1996.48	16.29	1980.19	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1996.48	16.76	1979.72	6.0	3.5	370.0	1.5	27.60	2.2	54	1.2	ND	ND	ND
	Feb 10	1996.48	16.92	1979.56	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1996.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1996.48	15.58	1980.90	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1996.48	15.85	1980.63	6.8	3.6	20.4	1.6	26.18	NM	109	0.76	ND	ND	ND
	Mar 11	1996.48	16.49	1979.99	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1996.48	16.66	1979.82	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1996.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1996.48	15.93	1980.55	7.0	3.5	NM	2.0	24.82	2.3	315	0.95	ND	ND	ND
	Mar 12	1996.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1995.95	15.37	1980.58	7.3	3.5	15.3	2.8	28.24	2.3	-18	1.2	ND	ND	ND
Sep 12	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 12	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1995.95	16.76	1979.19	7.0	3.8	NM	2.4	25.55	2.5	46	0.65	<0.50	<0.50	<0.50	
Jun 13	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1995.95	16.66	1979.29	6.0	3.4	79.0	1.1	24.57	2.2	189	0.86	<0.50	<0.50	<0.50	
Mar 14	1995.95	16.26	1979.69	7.3	3.3	83.0	4.4	23.31	2.1	48	0.67	<0.50	<0.50	<0.50	
Jun 14	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1995.95	16.69	1979.26	6.52	3.58	101.00	1.76	25.65	2.32	221.40	0.77	<0.50	<0.50	<0.50	
Jun 15	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1995.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-13	May 03	1984.23	17.25	1966.98	NM	NM	NM	NM	NM	NM	NM	2,100	ND	ND	ND
	Sep 03	1984.23	17.60	1966.63	NM	NM	NM	NM	NM	NM	NM	2,800	ND	ND	ND
	Jan 04	1984.23	18.00	1966.23	6.6	3.3	NM	1.1	22.20	NM	NM	2,700	ND	ND	ND
	May 05	1984.23	14.76	1969.47	7.0	2.1	>999	4.2	24.50	NM	118	5,310	ND	ND	ND
	Sep 05	1984.23	15.60	1968.63	7.1	4.0	270.0	6.9	25.40	2.5	144	2,600	ND	ND	ND
	Dec 05	1984.23	16.05	1968.18	6.7	5.0	330.0	2.2	24.90	3.2	250	3,400	ND	ND	ND
	Mar 06	1984.23	17.24	1966.99	5.5	3.6	44.0	NM	22.80	2.3	68	3,700	ND	ND	ND
	Jun 06	1984.23	17.40	1966.83	NM	3.7	425.0	7.1	24.20	2.4	120	2,900	NS	NS	NS
	Oct 06	1984.23	17.15	1967.08	6.2	3.6	50.0	3.8	24.60	2.3	169	2,800	ND	ND	ND
	Dec 06	1984.23	17.47	1966.76	6.8	4.3	94.0	4.2	24.50	2.7	330	3,200	ND	ND	ND
	Mar 07	1984.23	18.58	1965.65	6.9	3.5	308.0	9.5	24.00	2.3	514	2,500	ND	ND	ND
	Jun 07	1984.23	18.66	1965.57	7.0	3.5	0.0	6.1	23.60	2.2	411	3,700	ND	ND	ND
	Sep 07	1984.23	17.41	1966.82	6.7	3.3	3.0	4.7	27.70	2.1	228	2,000	ND	ND	ND
	Dec 07	1984.23	17.50	1966.73	6.4	3.7	19.7	6.5	21.30	2.4	282	2,500	ND	ND	ND
	Mar 08	1984.23	18.31	1965.92	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1984.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	2,300	ND	ND	ND
	Oct 08	1984.18	18.25	1965.93	6.8	3.5	50.3	3.1	24.80	2.2	87	2,600	5.3	ND	ND
	Feb 09	1984.18	18.28	1965.90	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1984.18	18.41	1965.77	7.0	3.8	15.7	3.0	24.40	2.4	120	2,200	2.9	ND	ND
	Sep 09	1984.18	18.63	1965.55	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1984.18	19.05	1965.13	6.0	3.4	0.0	2.0	25.20	2.1	135	1,700	3.7	ND	ND
	Feb 10	1984.18	19.22	1964.96	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1984.18	18.72	1965.46	7.0	3.2	5.2	2.9	25.27	NM	NM	1,600	3.2	ND	ND
	Oct 10	1984.18	18.44	1965.74	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1984.18	18.45	1965.73	6.9	3.5	2.0	2.3	23.79	NM	90	1,900	3.9	ND	ND
	Mar 11	1984.18	18.75	1965.43	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1984.18	19.15	1965.03	7.1	3.5	4.0	2.7	24.74	NM	284	1,600	3.2	ND	ND
	Sep 11	1984.18	18.64	1965.54	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1984.18	18.67	1965.51	6.9	3.7	NM	1.6	23.97	2.4	113	1,700	2.4	ND	ND
	Mar 12	1984.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1983.31	18.45	1964.86	7.2	3.5	19.6	1.9	23.36	2.3	86	1,500	3.7	ND	ND
	Sep 12	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Mar 13	1983.31	18.53	1964.78	7.0	3.8	NM	1.6	22.69	2.5	159	1,300	2.8	<0.50	<0.50	
Jun 13	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1983.31	18.50	1964.81	7.5	3.9	19.7	0.9	23.77	2.5	104	1,800	3.5	<0.50	<0.50	
Mar 14	1983.31	18.37	1964.94	7.2	3.2	12.2	3.6	23.95	2.1	-158	1,500	3.7	<0.50	<0.50	
Jun 14	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1983.31	18.31	1965.00	7.39	3.52	7.97	5.92	29.88	2.31	133	640	2.8	<0.50	<0.50	
Nov 14	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1983.31	18.40	1964.91	6.34	3.61	12.03	1.12	23.24	2.35	216.80	1,700	4.6	<0.50	<0.50	
Jun 15	1983.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1983.31	18.20	1965.11	7.40	3.11	9.50	1.68	26.90	2.02	122.70	770	4.1	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-14	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,900	ND	ND	ND
	Jan 04	1987.89	18.35	1969.54	7.0	2.3	NM	1.3	22.30	NM	NM	2,100	ND	ND	ND
	May 05	1987.89	15.02	1972.87	7.0	3.2	NM	NM	24.70	NM	140	2,920	5.5	ND	ND
	Dec 05	1987.89	16.50	1971.39	6.8	5.3	>999	2.1	26.10	3.3	206	3,400	ND	ND	ND
	Mar 06	1987.89	17.54	1970.35	5.2	6.8	898.0	NM	24.20	4.3	234	2,500	ND	ND	ND
	Jun 06	1987.89	17.61	1970.28	NM	3.9	>999	6.8	25.40	2.5	119	1,800	NS	NS	NS
	Oct 06	1987.89	17.42	1970.47	6.1	3.6	>999	7.0	24.80	2.3	297	1,900	ND	ND	ND
	Dec 06	1987.89	17.78	1970.11	6.8	4.5	350.0	4.2	25.70	2.9	226	3,500	ND	ND	ND
	Mar 07	1987.89	18.93	1968.96	6.8	3.7	455.0	8.1	25.10	2.4	501	1,900	ND	ND	ND
	Jun 07	1987.89	18.80	1969.09	7.0	3.7	259.0	6.4	24.80	2.4	299	1,700	ND	ND	ND
	Sep 07	1987.89	17.40	1970.49	6.8	3.5	103.0	4.2	32.20	2.2	220	650	ND	ND	ND
	Dec 07	1987.89	17.66	1970.23	6.4	4.0	9.7	5.7	23.30	2.6	147	1,500	ND	ND	ND
	Mar 08	1987.89	18.63	1969.26	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1987.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,500	ND	ND	ND
	Oct 08	1987.86	18.60	1969.26	6.8	3.7	249.0	3.1	25.70	2.4	116	1,500	2.9	ND	ND
	Feb 09	1987.86	18.47	1969.39	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1987.86	18.63	1969.23	7.0	4.0	>-5.0	2.9	25.60	2.5	118	1,900	4.4	ND	ND
	Sep 09	1987.86	18.88	1968.98	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1987.86	19.20	1968.66	5.6	3.6	300.0	1.8	26.20	2.3	132	1,200	2.1	ND	ND
	Feb 10	1987.86	19.26	1968.60	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1987.86	18.88	1968.98	7.0	3.3	84.2	3.6	25.49	NM	NM	1,500	2.4	ND	ND
	Oct 10	1987.86	18.50	1969.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1987.86	18.56	1969.30	6.9	3.6	25.8	2.9	25.07	NM	101	1,500	2.6	ND	ND
	Mar 11	1987.86	18.97	1968.89	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1987.86	19.15	1968.71	7.3	3.6	11.4	3.2	25.78	NM	259	1,700	2	ND	ND
	Sep 11	1987.86	18.74	1969.12	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1987.86	18.72	1969.14	7.0	3.5	NM	2.6	25.40	2.3	111	1,700	2.5	ND	ND
	Mar 12	1987.86	19.33	1968.53	7.2	3.6	87.5	4.3	23.33	2.3	-51	1,600	NS	NS	NS
	Jun 12	1987.33	18.71	1968.62	7.3	3.5	122.0	3.9	25.77	2.3	104	1,400	2.5	ND	ND
	Sep 12	1987.33	18.28	1969.05	7.3	3.5	NM	3.2	25.71	2.3	144	1,300	2.8	ND	ND
	Nov 12	1987.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1987.33	19.12	1968.21	7.0	3.9	NM	2.6	24.10	2.5	112	1,900	2.9	<0.50	<0.50
	Jun 13	1987.33	19.44	1967.89	7.2	3.1	NM	3.5	28.28	2.5	130	1,300	2.1	<0.50	<0.50
	Sep 13	1987.33	19.16	1968.17	7.0	3.7	NM	2.8	26.13	2.4	91	1,400	2.5	<0.50	<0.50
	Nov 13	1987.33	18.96	1968.37	7.8	3.9	28.9	2.6	25.17	3.5	96	1,500	2.7	<0.50	<0.50
	Mar 14	1987.33	18.89	1968.44	7.3	3.0	165.0	6.0	24.70	2.1	-114	930	2.2	<0.50	<0.50
	Jun 14	1987.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1987.33	18.95	1968.38	7.34	3.60	67.60	3.53	27.45	2.34	122	330	1	<0.50	<0.50
	Nov 14	1987.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1987.33	18.85	1968.48	6.44	3.67	69.60	2.06	25.28	2.39	104.90	1,900	3.6	<0.50	<0.50
	Jun 15	1987.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1987.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-14I	Mar 13	NM	19.52	NM	7.4	1.3	NM	4.1	24.19	0.9	95	7,200	51	4.9	<0.50
	Jun 13	1987.54	19.95	1967.59	7.5	1.4	NM	4.2	30.76	0.9	101	5,500	27	3.8	<0.50
	Sep 13	1987.54	19.66	1967.88	7.4	1.4	NM	2.9	35.26	0.9	82	3,700	23	1.6	<0.50
	Nov 13	1987.54	19.53	1968.01	7.8	1.4	6.3	4.0	24.38	0.9	102	10,000	38	17	<0.50
	Mar 14	1987.54	19.53	1968.01	7.3	1.1	11.3	4.4	25.36	0.7	134	7,600	32	17	<0.50
	Jun 14	1987.54	19.69	1967.85	7.2	1.3	6.5	4.4	28.29	0.9	111	9,800	21	6.9	<0.50
	Sep 14	1987.54	19.41	1968.13	7.3	1.3	6.4	4.0	30.32	0.9	93	9,300	21	1.4	<0.50
	Nov 14	1987.54	19.44	1968.10	7.0	1.3	3.4	4.0	24.91	0.9	26	11,000	25	17	<1.0
	Mar 15	1987.54	19.41	1968.13	6.7	1.3	6.3	2.7	24.99	0.8	106	11,000	32	20	<0.50
	Jun 15	1987.54	19.64	1967.90	7.5	1.3	8.5	2.4	28.07	0.8	84	9,600	25	11	<0.50
	Sep 15	1987.54	19.21	1968.33	7.7	1.2	15.1	2.7	30.32	0.8	192	9,300	23	8.3	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-15	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	5.2	ND	ND	ND
	Jan 04	1983.28	15.60	1967.68	6.4	2.2	NM	1.0	22.40	NM	NM	2.7	ND	ND	ND
	May 05	1983.28	12.59	1970.69	7.0	2.3	NM	2.9	25.10	NM	164	ND	ND	ND	ND
	Sep 05	1983.28	13.45	1969.83	7.0	3.6	36.0	3.5	25.80	2.3	-24	3.6	ND	ND	ND
	Dec 05	1983.28	13.77	1969.51	6.6	4.5	140.0	1.0	25.90	2.8	-38	5	ND	ND	ND
	Mar 06	1983.28	15.00	1968.28	4.7	6.4	20.0	NM	23.90	4.0	613	4.5	ND	ND	ND
	Jun 06	1983.28	15.15	1968.13	NM	3.8	300.0	4.3	26.00	2.5	106	4.4	NS	NS	NS
	Oct 06	1983.28	14.91	1968.37	6.2	3.7	10.0	2.0	25.70	2.3	51	3.3	ND	ND	ND
	Dec 06	1983.28	15.17	1968.11	6.8	4.7	15.0	3.4	25.90	3.0	28	3.7	ND	ND	ND
	Mar 07	1983.28	16.31	1966.97	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1983.28	16.16	1967.12	7.0	3.6	37.0	3.1	25.30	2.3	362	3	ND	ND	ND
	Sep 07	1983.28	14.80	1968.48	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1983.28	14.71	1968.57	6.4	3.7	0.0	1.9	23.30	2.3	170	3	ND	ND	ND
	Mar 08	1983.28	16.62	1966.66	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1983.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1983.25	15.80	1967.45	6.8	3.6	132.0	2.1	27.00	2.3	112	7.8	ND	ND	ND
	Feb 09	1983.25	15.76	1967.49	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1983.25	15.89	1967.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1983.25	16.34	1966.91	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1983.25	16.68	1966.57	5.8	3.2	44.0	1.8	26.60	2.1	34	3	ND	ND	ND
	Feb 10	1983.25	16.81	1966.44	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1983.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1983.25	16.10	1967.15	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1983.25	16.08	1967.17	6.8	3.4	7.6	2.3	27.60	NM	154	2.5	ND	ND	ND
	Mar 11	1983.25	16.29	1966.96	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1983.25	16.64	1966.61	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1983.25	16.18	1967.07	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1983.25	16.17	1967.08	6.8	4.0	NM	2.1	26.75	NM	-42	3.5	ND	ND	ND
	Mar 12	1983.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1982.74	16.70	1966.04	7.3	3.1	25.4	4.1	27.82	2.1	-64	4.2	ND	ND	ND
	Sep 12	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1982.74	16.41	1966.33	7.0	3.6	NM	2.9	26.24	2.3	48	2.7	<0.50	<0.50	<0.50
	Jun 13	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 14	1982.74	16.25	1966.49	7.2	3.1	62.6	2.9	26.32	2.0	66	2.8	<0.50	<0.50	<0.50
	Jun 14	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1982.74	16.70	1966.04	6.43	3.46	21.70	1.79	26.25	2.25	95.40	3.6	<0.50	<0.50	<0.50
	Jun 15	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1982.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-16	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND
	Jan 04	1980.63	26.22	1954.41	7.0	2.3	NM	0.7	22.40	NM	NM	ND	ND	ND	ND
	May 05	1980.63	23.41	1957.22	7.1	2.9	NM	1.1	25.20	NM	-4	ND	ND	ND	ND
	Sep 05	1980.63	24.12	1956.51	7.0	3.4	520.0	3.5	24.60	2.3	-31	ND	ND	ND	ND
	Dec 05	1980.63	24.21	1956.42	6.7	3.8	>999	1.3	25.30	2.4	48	ND	ND	ND	ND
	Mar 06	1980.63	25.06	1955.57	5.2	5.7	199.0	NM	23.80	3.6	162	ND	ND	ND	ND
	Jun 06	1980.63	26.05	1954.58	NM	3.4	>999	5.6	27.10	2.2	-64	ND	ND	ND	ND
	Oct 06	1980.63	25.67	1954.96	6.3	3.4	32.0	2.0	24.60	2.2	-145	ND	ND	ND	ND
	Dec 06	1980.63	25.56	1955.07	6.5	3.6	271.0	2.9	24.40	1.3	-52	ND	ND	ND	ND
	Mar 07	1980.63	26.33	1954.30	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1980.63	27.28	1953.35	6.7	3.3	282.0	2.2	25.00	2.1	94	ND	ND	ND	ND
	Sep 07	1980.63	27.03	1953.60	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1980.63	26.46	1954.17	6.5	3.4	0.0	1.9	24.90	2.2	82	ND	ND	ND	ND
	Mar 08	1980.63	26.33	1954.30	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1980.63	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1980.61	27.19	1953.42	6.9	3.2	68.0	0.0	24.90	2.1	38	ND	2.8	ND	ND
	Feb 09	1980.61	26.52	1954.09	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1980.61	27.30	1953.31	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1980.61	27.86	1952.75	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1980.61	27.99	1952.62	5.7	3.0	100.0	0.4	26.00	1.9	-96	1.9	ND	ND	ND
	Feb 09	1980.61	28.43	1952.18	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1980.61	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1980.61	27.95	1952.66	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1980.61	27.68	1952.93	6.6	3.1	2.5	0.2	26.52	NM	140	ND	ND	ND	ND
	Mar 11	1980.61	27.49	1953.12	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1980.61	28.22	1952.39	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1980.61	28.36	1952.25	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1980.61	28.17	1952.44	6.9	3.5	NM	0.2	24.40	NM	-74	ND	ND	ND	ND
	Mar 12	1980.61	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1980.53	28.51	1952.02	7.2	2.9	NM	1.2	25.13	1.9	-23	ND	ND	ND	ND
	Sep 12	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1980.53	26.86	1953.67	7.0	3.3	NM	1.7	25.33	2.2	-111	<0.50	<0.50	<0.50	<0.50
Jun 13	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 14	1980.53	27.39	1953.14	7.3	2.8	1.8	2.5	24.61	1.8	23	<0.50	<0.50	<0.50	<0.50	
Jun 14	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1980.53	27.55	1952.98	6.8	3.2	3.4	0.3	24.24	2.1	2	<0.50	<0.50	<0.50	<0.50	
Jun 15	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-17	May 05	1990.92	15.07	1975.85	6.9	3.5	22.0	5.9	24.10	NM	181	520	ND	ND	ND
	Dec 05	1990.92	17.05	1973.87	6.9	4.7	6.0	2.3	26.80	3.0	240	470	ND	ND	ND
	Mar 06	1990.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1990.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 06	1990.92	17.91	1973.01	6.2	3.5	2.0	7.4	24.90	2.2	174	1300	ND	ND	ND
	Dec 06	1990.92	18.41	1972.51	6.9	4.1	25.0	6.8	24.10	2.7	386	710	ND	ND	ND
	Mar 07	1990.92	19.63	1971.29	7.0	3.6	87.0	8.1	24.30	2.3	350	440	ND	ND	ND
	Jun 07	1990.92	19.48	1971.44	7.0	3.7	37.0	7.3	25.00	2.3	471	300	ND	ND	ND
	Sep 07	1990.92	17.91	1973.01	6.7	3.4	0.0	5.0	26.70	2.2	197	380	ND	ND	ND
	Dec 07	1990.92	18.45	1972.47	6.3	3.9	0.0	4.8	19.70	2.5	176	480	ND	ND	ND
	Mar 08	1990.92	19.51	1971.41	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1990.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	360	ND	ND	ND
	Oct 08	1990.89	18.84	1972.05	6.8	3.7	-3.1	4.1	25.00	2.4	136	290	ND	ND	ND
	Feb 09	1990.89	19.12	1971.77	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1990.89	19.44	1971.45	5.6	3.8	0.0	1.3	25.00	2.4	170	270	ND	ND	ND
	Sep 09	1990.89	19.58	1971.31	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1990.89	19.95	1970.94	6.6	3.5	-10.0	3.0	25.20	2.2	131	310	ND	ND	ND
	Feb 10	1990.89	19.71	1971.18	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1990.89	19.62	1971.27	7.0	2.9	-0.7	3.1	25.10	NM	NM	270	ND	ND	ND
	Oct 10	1990.89	19.10	1971.79	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1990.89	19.14	1971.75	6.6	3.7	1.3	1.8	26.48	NM	207	240	ND	ND	ND
	Mar 11	1990.89	19.65	1971.24	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1990.89	19.85	1971.04	6.7	3.7	0.5	1.7	25.89	NM	399	350	ND	ND	ND
	Sep 11	1990.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1990.89	19.45	1971.44	7.0	3.5	NM	2.7	24.09	2.6	274	350	ND	ND	ND
	Mar 12	1990.89	20.03	1970.86	7.2	3.6	4.1	1.3	24.72	2.3	-92	320	NS	NS	NS
	Jun 12	1991.04	19.09	1971.95	7.2	3.5	4.5	1.6	24.31	2.3	101	260	ND	ND	ND
	Sep 12	1991.04	18.83	1972.21	7.5	3.5	NM	2.0	25.50	2.8	72	250	ND	ND	ND
	Nov 12	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1991.04	19.94	1971.10	7.0	3.7	NM	1.0	23.75	2.4	54	190	<0.50	<0.50	<0.50
	Jun 13	1991.04	20.30	1970.74	7.0	3.8	NM	1.1	23.43	2.4	91	150	<0.50	<0.50	<0.50
	Sep 13	1991.04	20.18	1970.86	7.1	3.7	NM	1.4	25.61	2.4	-86	130	<0.50	<0.50	<0.50
	Nov 13	1991.04	19.90	1971.14	6.0	3.2	1.7	0.4	24.10	2.1	154	120	<0.50	<0.50	<0.50
Mar 14	1991.04	19.67	1971.37	7.2	3.2	2.0	2.2	23.49	2.1	47	69	<0.50	<0.50	<0.50	
Jun 14	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1991.04	19.80	1971.24	6.4	3.5	4.1	1.0	24.82	2.3	89	65	<0.50	<0.50	<0.50	
Jun 15	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1991.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-18	May 05	1962.87	8.71	1954.16	7.1	3.9	>999	5.6	24.30	NM	139	1600	ND	ND	ND
	Sep 05	1962.87	9.69	1953.18	7.1	4.1	3.0	6.2	26.30	2.6	88	1700	ND	ND	ND
	Dec 05	1962.87	9.70	1953.17	6.8	4.7	NM	2.0	25.20	3.0	420	2400	ND	ND	ND
	Mar 06	1962.87	10.21	1952.66	5.2	6.2	3.0	NM	23.30	3.9	237	1700	NS	NS	NS
	Jun 06	1962.87	11.64	1951.23	NM	3.6	304.0	6.2	25.40	2.3	166	1600	NS	NS	NS
	Oct 06	1962.87	11.21	1951.66	6.3	3.5	0.0	4.1	25.50	2.2	127	2100	ND	ND	ND
	Dec 06	1962.87	10.98	1951.89	6.8	4.2	0.0	4.3	24.70	2.7	297	1400	ND	ND	ND
	Mar 07	1962.87	11.36	1951.51	7.0	3.4	23.0	7.5	22.80	2.2	286	1400	ND	ND	ND
	Jun 07	1962.87	12.53	1950.34	7.0	3.5	24.0	5.5	23.90	2.2	394	1300	ND	ND	ND
	Sep 07	1962.87	12.45	1950.42	6.8	3.3	22.0	5.4	29.30	2.1	210	930	ND	ND	ND
	Dec 07	1962.87	11.54	1951.33	6.3	3.6	0.0	5.8	21.60	2.3	232	1,400	ND	ND	ND
	Mar 08	1962.87	11.15	1951.72	6.9	3.5	0.2	4.3	21.20	2.2	212	1,800	ND	ND	ND
	Jun 08	1962.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,200	ND	ND	ND
	Oct 08	1962.86	11.96	1950.90	5.5	3.5	14.3	7.8	25.50	2.2	196	950	3.7	ND	ND
	Feb 09	1962.86	11.48	1951.38	6.7	3.3	0.0	3.8	22.70	2.1	90	1,500	5.2	ND	ND
	Jun 09	1962.86	12.36	1950.50	7.3	3.5	20.2	3.5	23.90	2.3	131	3,500	5.1	ND	ND
	Sep 09	1962.86	13.24	1949.62	6.6	3.9	18.9	4.3	28.00	2.5	136	1,200	ND	ND	ND
	Nov 09	1962.86	13.27	1949.59	5.9	3.3	40.0	3.6	25.80	2.1	132	1,400	4.1	ND	ND
	Feb 10	1962.86	13.37	1949.49	6.9	3.3	9.0	4.0	23.30	2.1	134	1,600	4.8	ND	ND
	Jun 10	1962.86	12.90	1949.96	7.1	3.1	-0.9	8.0	25.10	NM	NM	1,100	3.5	ND	ND
	Oct 10	1962.86	13.43	1949.43	6.7	3.3	-0.7	4.4	26.19	2.2	528	1,300	3.4	ND	ND
	Nov 10	1962.86	13.20	1949.66	6.8	3.3	0.2	4.0	25.79	NM	192	1,200	3.8	ND	ND
	Mar 11	1962.86	12.43	1950.43	7.5	3.4	25.7	7.8	22.14	NM	118	1,000	2.7	ND	ND
	Jun 11	1962.86	13.32	1949.54	7.4	3.4	0.7	4.4	24.99	NM	234	1,300	2.9	ND	ND
	Sep 11	1962.86	13.61	1949.25	7.0	3.4	39.0	6.2	26.60	2.2	276	1,300	3.2	ND	ND
	Nov 11	1962.86	13.39	1949.47	7.0	3.2	NM	4.0	24.97	2.1	178	1,100	3.3	ND	ND
	Mar 12	1962.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1962.9	13.80	1949.10	7.3	3.2	6.1	4.8	25.23	2.1	115	1,300	3.4	ND	ND
	Sep 12	1962.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1962.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1962.9	12.06	1950.84	7.1	3.6	NM	2.6	23.54	2.3	83	1,200	2.5	<0.50	<0.50
	Jun 13	1962.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1962.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 13	1962.9	13.62	1949.28	6.8	3.6	8.3	3.6	25.49	2.4	152	780	<0.50	<0.50	<0.50	
Mar 14	1962.9	12.75	1950.15	7.3	3.2	58.1	4.6	19.23	2.1	247	230	<0.50	<0.50	<0.50	
Jun 14	1962.9	13.78	1949.12	7.1	3.4	4.8	4.9	27.63	2.2	71	1,100	1.2	<0.50	<0.50	
Sep 14	1962.9	13.97	1948.93	8.0	2.9	7.6	2.5	30.26	1.8	92	620	0.78	<0.50	<0.50	
Nov 14	1962.9	13.22	1949.68	7.0	3.5	2.9	3.9	24.09	2.3	71	1,100	1.7	<0.50	<0.50	
Mar 15	1962.9	12.50	1950.40	6.5	3.5	7.4	2.3	22.37	2.3	243	1,200	2.5	<0.50	<0.50	
Jun 15	1962.9	13.04	1949.86	7.3	3.4	3.2	2.1	26.97	2.2	443	1,200	2.4	<0.50	<0.50	
Sep 15	1962.9	13.74	1949.16	7.6	2.9	20.8	2.1	28.93	1.9	98	1,000	2.6	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-19	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,100	ND	ND	ND
	Jan 04	1980.26	25.65	1954.61	7.0	1.9	NM	1.0	22.40	NM	NM	1,200	ND	ND	ND
	May 05	1980.26	22.70	1957.56	7.1	1.9	NM	5.8	25.00	NM	130	873	ND	ND	ND
	Dec 05	1980.26	23.65	1956.61	6.6	4.7	NM	2.0	24.70	3.0	388	1300	ND	ND	ND
	Mar 06	1980.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1980.26	25.55	1954.71	NM	3.7	>999	7.9	27.10	2.4	86	910	ND	ND	ND
	Oct 06	1980.26	25.23	1955.03	6.1	3.7	>999	4.6	23.90	2.4	175	840	ND	ND	ND
	Dec 06	1980.26	25.01	1955.25	6.8	4.4	>999	5.7	23.90	2.8	595	1200	ND	ND	ND
	Mar 07	1980.26	25.77	1954.49	6.9	3.7	>999	9.1	24.30	2.3	284	890	ND	ND	ND
	Jun 07	1980.26	26.84	1953.42	7.1	3.5	>999	6.7	24.50	2.3	551	870	ND	ND	ND
	Sep 07	1980.26	26.41	1953.85	6.8	3.4	352.0	5.1	27.40	2.2	201	510	ND	ND	ND
	Dec 07	1980.26	25.52	1954.74	6.4	3.8	440.0	5.6	24.30	2.4	150	990	ND	ND	ND
	Mar 08	1980.26	25.35	1954.91	7.0	3.7	7.6	5.2	24.80	2.3	190	1200	NS	NS	NS
	Jun 08	1980.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	930	ND	ND	ND
	Oct 08	1980.24	26.19	1954.05	6.9	3.5	18.0	4.1	24.40	2.2	135	1300	5.7	ND	ND
	Feb 09	1980.24	25.76	1954.48	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1980.24	26.59	1953.65	7.0	3.6	178.0	4.5	25.80	2.3	125	1,400	6.1	ND	ND
	Sep 09	1980.24	27.34	1952.90	6.4	3.9	999.0	4.7	26.60	2.5	157	880	ND	ND	ND
	Nov 09	1980.24	27.42	1952.82	5.9	3.4	>990	2.7	25.50	2.2	131	580	3.7	ND	ND
	Feb 10	1980.24	27.78	1952.46	6.9	3.2	120.0	4.8	23.70	2.1	135	990	5.5	ND	ND
	Jun 10	1980.24	27.08	1953.16	7.0	3.0	2.7	5.0	25.41	NM	NM	930	4.2	ND	ND
	Oct 10	1980.24	27.50	1952.74	7.1	3.2	15.3	5.2	25.28	2.1	394	420	3.2	ND	ND
	Nov 10	1980.24	27.24	1953.00	7.1	3.3	15.5	5.0	25.25	NM	241	840	4.1	ND	ND
	Mar 11	1980.24	26.73	1953.51	6.9	3.4	71.3	5.4	24.59	NM	258	880	3.7	ND	ND
	Jun 11	1980.24	27.55	1952.69	7.4	3.3	20.5	5.0	26.19	NM	190	1000	3.5	ND	ND
	Sep 11	1980.24	27.68	1952.56	7.0	3.4	570.0	6.5	26.90	2.2	250	950	3.6	ND	ND
	Nov 11	1980.24	27.50	1952.74	7.1	3.1	NM	4.6	23.94	2.0	131	1100	4.2	ND	ND
	Mar 12	1980.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1980.13	27.88	1952.25	7.5	3.1	27.1	5.3	25.86	2.0	102	1000	3.5	ND	ND
	Sep 12	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	520	3.2	<0.50	<0.50
	Jun 13	1980.13	27.46	1952.67	7.2	3.4	NM	4.9	28.16	2.2	119	530	3.4	<0.50	<0.50
Sep 13	1980.13	27.94	1952.19	7.2	3.2	NM	4.7	27.22	2.1	255	840	3.2	<0.50	<0.50	
Nov 13	1980.13	27.48	1952.65	6.3	3.1	65.8	3.2	26.49	2.0	228	440	3.2	<0.50	<0.50	
Mar 14	1980.13	26.66	1953.47	7.3	3.0	72.1	3.2	24.47	2.0	160	910	3.7	<0.50	<0.50	
Jun 14	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1980.13	26.60	1953.53	6.9	3.3	36.2	3.4	23.35	2.2	NM	930	4.0	<0.50	<0.50	
Jun 15	1980.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1980.13	27.51	1952.62	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-19I	Sep 12	1967.55	26.60	1940.95	7.7	3.0	NM	3.9	26.53	2.0	131	690	4.0	0.8	ND
	Nov 12	1967.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1967.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	710	5.2	0.74	<0.50
	Jun 13	1967.55	26.42	1941.13	7.3	3.4	NM	4.4	26.1	2.1	589	<0.50	<0.50	<0.50	<0.50
	Sep 13	1978.37	26.92	1951.45	7.0	3.9	NM	5.2	28.5	2.5	650	<0.50	<0.50	<0.50	<0.50
	Nov 13	1978.37	26.47	1951.90	4.3	4.2	20.8	4.3	25.6	2.7	579	<0.50	<0.50	<0.50	<0.50
	Mar 14	1978.37	25.62	1952.75	7.3	3.4	69.4	3.6	23.0	2.2	626	<0.50	<0.50	<0.50	<0.50
	Jun 14	1978.37	26.71	1951.66	6.9	3.5	15.7	5.6	28.5	2.2	650	<0.50	<0.50	<0.50	<0.50
	Sep 14	1978.37	26.81	1951.56	7.4	3.3	46.2	7.3	27.0	2.1	631	<0.50	<0.50	<0.50	<0.50
	Nov 14	1978.37	26.02	1952.35	7.1	3.4	6.3	5.1	22.5	2.2	643	<0.50	<0.50	<0.50	<0.50
	Mar 15	1978.37	25.52	1952.85	6.9	3.3	10.9	2.9	24.0	2.2	539	0.62	<0.50	<0.50	<0.50
	Jun 15	1978.37	25.86	1952.51	7.2	3.3	17.5	2.4	29.0	2.1	630	1.9	<0.50	<0.50	<0.50
	Sep 15	1978.37	26.49	1951.88	7.4	2.7	--	2.3	27.2	1.8	616	<0.50	<0.50	<0.50	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-19D1	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	300	2.9	<0.50	<0.50
	Jun 13	1979.25	27.73	1951.52	7.3	3.0	NM	4.7	27.42	1.9	3	690	4.2	<0.50	<0.50
	Sep 13	1979.25	27.17	1952.08	7.0	3.2	NM	4.3	26.23	2.1	485	990	4.2	<0.50	<0.50
	Nov 13	1979.25	26.70	1952.55	7.3	2.4	28.1	4.7	24.24	1.7	385	620	3.5	<0.50	<0.50
	Jan 14	1979.25	25.81	1953.44	7.3	1.1	NM	4.8	23.10	0.7	274	490	2.4	<0.50	<0.50
	Feb 14	1979.25	25.83	1953.42	7.4	0.5	NM	3.7	23.68	0.4	230	210	1.1	<0.50	<0.50
	Mar 14	1979.25	25.91	1953.34	7.4	0.5	52.8	4.1	23.31	0.3	239	3.7	<0.50	<0.50	<0.50
	Jun 14	1979.25	26.97	1952.28	7.0	2.6	56.2	5.5	31.79	1.7	501	730	4.2	<0.50	<0.50
	Sep 14	1979.25	27.06	1952.19	7.8	2.9	61.4	6.4	29.97	2.1	333	240	1.5	<0.50	<0.50
	Nov 14	1979.25	26.30	1952.95	7.1	3.3	18.6	4.8	23.11	2.1	68	1,000	5.9	<0.50	<0.50
	Mar 15	1979.25	25.74	1953.51	6.8	0.9	44.4	3.9	25.94	0.6	159	210	1.3	<0.50	<0.50
	Jun 15	1979.25	26.20	1953.05	7.4	3.0	20.2	2.6	28.78	1.9	242	720	4.6	<0.50	<0.50
	Sep 15	1979.25	26.74	1952.51	7.6	2.6	9.2	2.2	27.89	1.7	108	820	5.3	<0.50	<0.50
MW-19D2	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	170	1.5	<0.50	<0.50
	Jun 13	1979.28	27.85	1951.43	7.4	2.7	NM	2.0	26.09	1.8	607	<0.50	<0.50	<0.50	<0.50
	Sep 13	1979.28	28.50	1950.78	7.2	2.4	NM	2.6	25.10	1.6	565	<0.50	<0.50	<0.50	<0.50
	Nov 13	1979.28	27.71	1951.57	7.5	2.6	18.0	3.3	24.83	1.7	485	<0.50	<0.50	<0.50	<0.50
	Jan 14	1979.28	26.66	1952.62	7.4	2.0	NM	3.5	22.53	1.3	531	<0.50	<0.50	<0.50	<0.50
	Feb 14	1979.28	26.85	1952.43	7.4	2.1	NM	2.1	23.04	1.3	502	<0.50	<0.50	<0.50	<0.50
	Mar 14	1979.28	26.97	1952.31	7.4	2.1	28.0	4.0	23.12	1.4	509	0.53	<0.50	<0.50	<0.50
	Jun 14	1979.28	27.88	1951.40	7.2	2.2	17.0	3.7	29.19	1.4	617	6.0	<0.50	<0.50	<0.50
	Sep 14	1979.28	27.67	1951.61	7.6	2.2	7.9	4.8	26.23	1.4	531	10	<0.50	<0.50	<0.50
	Nov 14	1979.28	27.01	1952.27	7.2	2.5	3.8	2.9	23.63	1.6	75	39	<0.50	<0.50	<0.50
	Mar 15	1979.28	26.88	1952.40	6.7	2.2	6.0	0.7	25.77	1.5	180	44	<0.50	<0.50	<0.50
	Jun 15	1979.28	27.15	1952.13	7.2	2.2	7.3	0.5	25.77	1.4	381	73	<0.50	<0.50	<0.50
	Sep 15	1979.28	27.12	1952.16	7.7	1.8	13.4	0.8	26.94	1.2	91	110	0.94	<0.50	<0.50
MW-19D3	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.50	<0.50	<0.50	<0.50
	Jun 13	1979.32	25.53	1953.79	7.7	0.5	NM	4.0	28.15	0.3	68	0.68	<0.50	<0.50	<0.50
	Sep 13	1979.32	28.80	1950.52	6.9	3.2	NM	4.9	24.91	2.1	133	710	4.8	<0.50	<0.50
	Nov 13	1979.32	25.42	1953.90	7.6	1.0	10.3	4.1	24.27	0.7	424	160	0.75	<0.50	<0.50
	Jan 14	1979.32	24.87	1954.45	7.4	0.5	NM	4.8	22.46	0.3	368	32	<0.50	<0.50	<0.50
	Feb 14	1979.32	24.67	1954.65	7.4	0.5	NM	4.6	22.68	0.3	344	36	<0.50	<0.50	<0.50
	Mar 14	1979.32	24.72	1954.60	7.4	0.5	17.0	4.4	23.47	0.3	80	17	<0.50	<0.50	<0.50
	Jun 14	1979.32	26.99	1952.33	7.7	0.6	41.6	4.6	33.28	0.4	158	40	<0.50	<0.50	<0.50
	Sep 14	1979.32	29.00	1950.32	7.0	3.1	6.9	6.5	26.73	2.0	256	710	4.7	<0.50	<0.50
	Nov 14	1979.32	26.48	1952.84	7.1	3.2	50.6	6.7	23.14	2.1	135	190	3.2	<0.50	<0.50
	Mar 15	1979.32	24.12	1955.20	6.7	0.6	14.8	3.9	25.63	0.4	201	41	<0.50	<0.50	<0.50
	Jun 15	1979.32	25.50	1953.82	7.6	0.6	26.5	3.3	28.40	0.4	269	21	<0.50	<0.50	<0.50
	Sep 15	1979.32	28.64	1950.68	7.5	2.5	20.5	2.3	26.45	1.6	135	590	4.6	<0.50	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-20	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,800	ND	ND	ND
	Jan 04	1979.99	25.50	1954.49	6.9	2.1	NM	1.1	22.60	NM	NM	290	2.8	ND	ND
	May 05	1979.99	22.58	1957.41	7.2	1.3	NM	5.0	23.60	NM	131	1,460	ND	ND	ND
	Dec 05	1979.99	23.55	1956.44	6.8	4.4	NM	0.8	20.50	2.8	272	1,800	ND	ND	ND
	Mar 06	1979.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1979.99	25.48	1954.51	NM	3.8	736.0	6.9	28.60	2.1	70	2,100	ND	ND	ND
	Oct 06	1979.99	25.04	1954.95	6.1	2.6	>999	4.1	23.70	1.8	234	2,000	ND	ND	ND
	Dec 06	1979.99	24.85	1955.14	6.8	4.1	284.0	4.3	23.90	2.6	245	2,500	ND	ND	ND
	Mar 07	1979.99	26.63	1953.36	6.9	3.3	999.0	9.8	23.80	2.2	530	1,500	ND	ND	ND
	Jun 07	1979.99	26.76	1953.23	7.0	3.5	>999	5.4	23.80	2.2	346	1,300	ND	ND	ND
	Sep 07	1979.99	26.30	1953.69	6.8	3.3	248.0	4.4	32.50	2.1	207	730	ND	ND	ND
	Dec 07	1979.99	25.38	1954.61	6.3	3.8	24.6	5.4	21.90	2.4	180	1400	ND	ND	ND
	Mar 08	1979.99	25.12	1954.87	6.9	3.5	33.0	4.0	23.60	2.3	184	1600	NS	NS	NS
	Jun 08	1979.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	1200	ND	ND	ND
	Oct 08	1979.95	26.05	1953.90	7.3	3.5	-5.0	2.3	25.20	NM	181	1000	3.5	ND	ND
	Feb 09	1979.95	25.57	1954.38	6.6	3.5	247.0	2.5	23.40	2.2	99	830	ND	ND	ND
	Jun 09	1979.95	26.45	1953.50	6.9	3.7	>-5.0	2.2	23.90	2.3	140	1100	3.3	ND	ND
	Sep 09	1979.95	27.21	1952.74	6.5	4.1	386.0	2.5	25.70	2.6	146	940	ND	ND	ND
	Nov 09	1979.95	27.30	1952.65	5.8	3.4	380.0	1.9	25.30	2.2	142	640	2.2	ND	ND
	Feb 10	1979.95	27.54	1952.41	6.9	3.3	38.0	2.5	24.30	2.0	130	990	3.3	ND	ND
	Jun 10	1979.95	27.86	1952.09	7.0	3.2	1.4	3.5	24.59	NM	NM	780	2.4	ND	ND
	Oct 10	1979.95	27.35	1952.60	6.4	3.3	39.3	2.9	26.58	2.2	519	340	1.8	ND	ND
	Nov 10	1979.95	27.12	1952.83	6.6	3.4	0.9	3.0	25.50	NM	194	890	2.6	ND	ND
	Mar 11	1979.95	26.59	1953.36	6.9	3.5	49.7	3.4	25.69	NM	237	800	2.3	ND	ND
	Jun 11	1979.95	27.40	1952.55	6.8	3.5	3.1	3.5	31.92	NM	452	740	1.9	ND	ND
	Sep 11	1979.95	27.56	1952.39	6.9	3.6	20.0	3.4	26.50	2.2	182	680	1.8	ND	ND
	Nov 11	1979.95	27.35	1952.60	7.0	3.3	NM	2.8	24.35	2.2	131	800	1.9	ND	ND
	Mar 12	1979.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
*	Jun 12	1979.82	27.62	1952.20	7.4	3.3	40.1	3.7	25.17	2.2	87	660	2.1	ND	ND
	Sep 12	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	290	1.8	<0.50	<0.50
	Jun 13	1979.82	27.20	1952.62	7.2	3.7	NM	4.7	26.67	2.4	192	660	2.1	<0.50	<0.50
	Sep 13	1979.82	27.70	1952.12	7.0	3.5	NM	4.5	26.41	2.3	428	570	1.8	<0.50	<0.50
	Nov 13	1979.82	27.28	1952.54	6.1	3.4	21.8	2.5	25.53	2.2	245	530	1.4	<0.50	<0.50
	Mar 14	1979.82	26.46	1953.36	7.3	3.1	22.0	3.9	25.92	2.0	345	170	0.66	<0.50	<0.50
	Jun 14	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1979.82	26.34	1953.48	6.4	3.6	25.0	2.1	23.14	2.4	210	680	2.3	<0.50	<0.50
	Jun 15	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1979.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-20D1	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	69	2.8	3.6	<0.50
	Jun 13	1978.81	26.17	1952.64	7.3	3.0	NM	5.2	27.38	2.0	115	110	<0.50	<0.50	<0.50
	Sep 13	1978.81	27.01	1951.80	7.1	3.4	NM	4.8	27.83	2.2	113	100	0.56	<0.50	<0.50
	Nov 13	1978.81	26.60	1952.21	7.1	3.3	83.3	4.5	25.16	2.2	57	260	0.86	<0.50	<0.50
	Mar 14	1978.81	25.70	1953.11	7.4	0.9	70.4	4.9	25.09	0.6	76	76	<0.50	<0.50	<0.50
	Jun 14	1978.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1979.81	27.05	1952.76	7.6	3.1	29.1	4.0	27.20	2.0	213	160	0.62	<0.50	<0.50
	Nov 14	1979.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1979.81	25.56	1954.25	6.3	2.4	45.5	2.0	25.17	1.6	191	340	0.98	<0.50	<0.50
	Jun 15	1979.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1979.81	26.50	1953.31	7.51	2.92	15.10	3.17	26.81	1.90	146	550	2	<0.50	<0.50	
MW-20D2	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	25	<0.50	<0.50	<0.50
	Jun 13	1978.66	26.23	1952.43	7.4	0.8	NM	4.6	25.83	0.5	107	64	<0.50	<0.50	<0.50
	Sep 13	1978.66	26.90	1951.76	7.0	3.5	NM	4.2	27.95	2.3	114	210	0.77	<0.50	<0.50
	Nov 13	1978.66	26.92	1951.74	6.7	2.5	9.0	4.3	24.88	1.6	75	160	1	0.81	<0.50
	Mar 14	1978.66	26.05	1952.61	7.4	0.5	11.1	5.4	23.88	0.3	68	11	<0.50	<0.50	<0.50
	Jun 14	1978.66	26.55	1952.11	7.3	2.1	9.3	5.5	27.33	1.4	77	120	0.78	<0.50	<0.50
	Sep 14	1978.66	27.21	1951.45	7.4	3.4	7.5	3.9	25.21	2.2	229	140	0.84	<0.50	<0.50
	Nov 14	1978.66	26.28	1952.38	7.2	3.2	10.3	12.2	24.38	2.1	142	410	2.2	0.78	<0.50
	Mar 15	1978.66	25.95	1952.71	6.7	2.2	26.7	6.3	26.88	1.5	180	230	1.9	0.96	<0.50
	Jun 15	1978.66	26.47	1952.19	7.5	2.2	15.0	6.6	27.12	1.5	126	520	2.6	1	<0.50
Sep 15	1978.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
MW-20D3	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.66	<0.50	<0.50	<0.50
	Jun 13	1978.69	26.17	1952.52	7.1	0.5	NM	3.9	24.81	0.3	119	<0.50	<0.50	<0.50	<0.50
	Sep 13	1978.69	27.28	1951.41	7.1	3.0	NM	4.9	33.54	1.9	100	25	<0.50	0.8	<0.50
	Nov 13	1978.69	26.57	1952.12	6.9	1.4	31.9	4.0	24.89	0.9	81	62	<0.50	<0.50	<0.50
	Mar 14	1978.69	22.92	1955.77	7.4	0.5	61.1	4.8	23.65	0.3	277	7.9	<0.50	<0.50	<0.50
	Jun 14	1978.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1978.69	31.52	1947.17	7.4	0.8	37.2	3.9	28.12	0.5	215	9.6	<0.50	<0.50	<0.50
	Nov 14	1978.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1978.69	20.10	1958.59	6.8	0.5	11.7	3.2	24.48	0.3	208	<0.50	<0.50	<0.50	<0.50
	Jun 15	1978.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1978.69	30.86	1947.83	7.72	0.62	9.10	2.15	27.57	0.40	137	8.3	<0.50	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-21	Nov 03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	51	ND	ND	ND
	Jan 04	1979.56	24.72	1954.84	6.9	2.0	NM	1.1	22.30	NM	NM	55	ND	ND	ND
	May 05	1979.56	21.76	1957.80	7.1	2.8	NM	2.9	24.60	NM	131	30	ND	ND	ND
	Sep 05	1979.56	22.70	1956.86	7.1	4.7	39.0	4.1	25.80	2.6	109	19	2.4	1.5	ND
	Dec 05	1979.56	22.85	1956.71	6.6	4.6	>999	0.5	24.30	2.9	264	16	1.8	1.3	ND
	Mar 06	1979.56	23.46	1956.10	5.5	3.6	140.0	NM	23.00	2.3	309	43	ND	ND	ND
	Jun 06	1979.56	24.68	1954.88	NM	3.5	>999	4.7	28.50	2.3	112	32	ND	ND	ND
	Oct 06	1979.56	24.35	1955.21	6.2	3.5	>999	2.0	24.10	2.2	79	23	ND	ND	ND
	Dec 06	1979.56	24.15	1955.41	6.7	4.5	617.0	2.7	24.00	2.9	89	39	ND	ND	ND
	Mar 07	1979.56	24.87	1954.69	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1979.56	25.95	1953.61	7.0	3.4	>999	4.2	24.20	2.2	373	28	ND	ND	ND
	Sep 07	1979.56	25.44	1954.12	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1979.56	24.34	1955.22	6.2	3.7	>999	4.4	19.30	2.4	117	83	ND	ND	ND
	Mar 08	1979.56	24.19	1955.37	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1979.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1979.54	24.80	1954.74	7.2	3.4	545.0	0.0	24.50	NM	173	20	ND	ND	ND
	Feb 09	1979.54	24.73	1954.81	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1979.54	25.53	1954.01	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1979.54	26.39	1953.15	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1979.54	26.40	1953.14	6.0	3.4	90.0	0.9	24.90	2.2	119	11	ND	ND	ND
	Feb 10	1979.54	26.14	1953.40	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1979.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1979.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1979.54	26.32	1953.22	6.6	3.5	2.6	0.3	25.18	NM	202	13	ND	ND	ND
	Mar 11	1979.54	25.68	1953.86	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1979.54	26.57	1952.97	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1979.54	26.67	1952.87	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1979.54	26.47	1953.07	6.8	4.0	NM	0.2	24.75	NM	-38	13	ND	ND	ND
*	Mar 12	1979.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1979.25	26.77	1952.48	7.3	3.4	8.6	1.0	26.21	2.2	-127	9.4	ND	ND	ND
	Sep 12	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1979.25	25.03	1954.22	6.9	3.7	NM	0.2	24.49	2.4	107	8.4	<0.50	<0.50	<0.50
	Jun 13	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 14	1979.25	25.58	1953.67	7.2	3.1	61.2	2.7	23.96	2.0	430	1.4	<0.50	<0.50	<0.50
	Jun 14	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1979.25	25.37	1953.88	6.7	3.5	17.3	0.4	25.03	2.3	46	11	<0.50	<0.50	<0.50
	Jun 15	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1979.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-22	May 05	1974.76	23.04	1951.72	6.8	3.9	474.0	1.7	24.10	NM	46	ND	ND	ND	ND
	Sep 05	1974.76	24.18	1950.58	6.9	4.3	10.0	7.2	23.90	2.7	46	ND	ND	ND	ND
	Dec 05	1974.76	24.30	1950.46	6.4	4.2	NM	1.3	24.60	2.7	213	1	ND	ND	ND
	Mar 06	1974.76	24.68	1950.08	4.8	6.1	30.0	NM	24.00	3.8	269	ND	ND	ND	ND
	Jun 06	1974.76	25.91	1948.85	NM	3.4	287.0	6.0	26.40	2.2	376	ND	ND	ND	ND
	Oct 06	1974.76	25.79	1948.97	6.0	3.7	11.0	2.4	23.80	2.4	141	ND	ND	ND	ND
	Dec 06	1974.76	25.49	1949.27	6.5	4.5	0.0	3.5	23.50	2.9	477	ND	ND	ND	ND
	Mar 07	1974.76	24.73	1950.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 07	1974.76	26.91	1947.85	6.7	3.8	26.0	3.4	24.30	2.4	137	ND	ND	ND	ND
	Sep 07	1974.76	26.90	1947.86	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1974.76	25.88	1948.88	6.3	4.0	55.6	2.3	23.80	2.5	216	ND	ND	ND	ND
	Mar 08	1974.76	25.17	1949.59	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1974.76	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1974.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Feb 09	1974.75	25.60	1949.15	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1974.75	26.59	1948.16	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1974.75	27.58	1947.17	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1974.75	27.38	1947.37	6.0	3.6	31.0	1.4	24.50	2.3	131	1.4	ND	ND	ND
	Feb 10	1974.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1974.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1974.75	27.82	1946.93	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1974.75	27.55	1947.20	6.7	3.7	0.1	1.6	24.30	NM	129	ND	ND	ND	ND
	Mar 11	1974.75	26.58	1948.17	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1974.75	27.45	1947.30	7.2	3.4	50.2	5.2	24.89	NM	266	NS	NS	NS	NS
	Sep 11	1974.75	27.87	1946.88	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1974.75	27.57	1947.18	6.9	3.6	NM	1.6	23.70	2.3	88	0.55	ND	ND	ND
	Mar 12	1974.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1975.19	28.05	1947.14	6.8	4.1	250.0	4.0	26.20	2.6	102	0.58	ND	ND	ND
	Sep 12	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1975.19	26.27	1948.92	6.9	3.9	NM	1.7	23.49	2.5	140	<0.50	<0.50	<0.50	<0.50
	Jun 13	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 13	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 14	1975.19	26.95	1948.24	7.3	3.3	120.0	5.0	24.37	2.2	17	0.58	<0.50	<0.50	<0.50	
Jun 14	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1975.19	26.47	1948.72	6.6	3.6	4.9	0.9	21.25	2.4	93	<0.50	<0.50	<0.50	<0.50	
Jun 15	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-23	May 05	1962.32	13.06	1949.26	7.0	3.6	NM	2.6	24.50	NM	121	1,430	ND	ND	ND
	Dec 05	1962.32	14.05	1948.27	6.7	4.9	NM	2.1	24.90	3.1	320	1,900	ND	ND	ND
	Mar 06	1962.32	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 06	1962.32	15.60	1946.72	NM	3.7	318.0	5.8	23.80	2.3	238	1,500	ND	ND	ND
	Oct 06	1962.32	15.48	1946.84	6.3	3.5	0.0	2.5	24.00	2.2	107	2,000	ND	ND	ND
	Dec 06	1962.32	15.16	1947.16	6.8	4.2	0.0	3.2	24.20	2.7	2	2,100	ND	ND	ND
	Mar 07	1962.32	15.12	1947.20	NM	NM	NM	NM	NM	NM	NM	2.1	ND	ND	ND
	Jun 07	1962.32	16.40	1945.92	7.0	3.5	31.0	4.2	23.50	2.2	301	1300	ND	ND	ND
	Sep 07	1962.32	16.61	1945.71	6.8	3.3	1.0	3.8	25.80	2.1	204	750	ND	ND	ND
	Dec 07	1962.32	15.80	1946.52	6.3	3.7	0.0	5.5	22.10	2.4	250	1200	ND	ND	ND
	Mar 08	1962.32	15.18	1947.14	7.0	6.3	0.4	2.2	24.00	4.1	188	1400	ND	ND	ND
	Jun 08	1962.32	NM	NM	NM	NM	NM	NM	NM	NM	NM	1100	ND	ND	ND
	Oct 08	1962.29	16.34	1945.95	6.7	3.5	18.3	2.0	23.40	2.3	170	1300	4.4	ND	ND
	Feb 09	1962.29	15.41	1946.88	6.7	3.4	0.0	1.1	23.00	2.2	82	1100	ND	ND	ND
	Jun 09	1962.29	16.40	1945.89	7.2	3.6	7.1	0.6	23.80	2.3	124	1400	4.6	ND	ND
	Sep 09	1962.29	17.30	1944.99	6.6	4.0	24.5	2.0	25.40	2.5	133	1200	ND	ND	ND
	Nov 09	1962.29	17.31	1944.98	5.9	3.3	51.0	2.0	24.80	2.1	139	880	3.2	ND	ND
	Feb 10	1962.29	17.18	1945.11	6.8	3.4	9.0	1.8	23.70	2.2	135	1000	3.8	ND	ND
	Jun 10	1962.29	16.93	1945.36	7.0	3.2	3.8	4.2	26.24	NM	NM	900	2.6	ND	ND
	Oct 10	1962.29	17.53	1944.76	5.7	3.4	-0.1	2.2	23.60	2.2	610	1100	2.6	ND	ND
	Nov 10	1962.29	17.30	1944.99	7.0	3.4	0.1	2.5	22.72	NM	76	970	2.7	ND	ND
	Mar 11	1962.29	16.30	1945.99	6.9	3.6	2.9	1.9	23.42	NM	202	1100	2.5	ND	ND
	Jun 11	1962.29	17.22	1945.07	NM	NM	NM	NM	NM	NM	NM	970	2.3	ND	ND
	Sep 11	1962.29	17.67	1944.62	6.9	3.5	8.0	3.0	24.50	2.2	229	1,000	2.4	ND	ND
	Nov 11	1962.29	17.41	1944.88	7.0	3.3	NM	2.3	23.58	2.1	170	1,100	2.4	ND	ND
	Mar 12	1962.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1962.45	17.83	1944.62	7.3	3.2	5.1	5.8	24.66	2.1	114	950	2.3	ND	ND
	Sep 12	1962.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1962.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1962.45	15.95	1946.50	7.0	3.6	NM	1.4	23.52	2.4	107	960	2.2	<0.50	<0.50
	Jun 13	1962.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1962.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1962.45	17.57	1944.88	6.7	3.7	5.1	2.1	24.32	2.4	152	900	1.8	<0.50	<0.50
Mar 14	1962.45	16.63	1945.82	7.2	3.2	46.2	2.5	18.77	2.1	226	170	0.63	<0.50	<0.50	
Jun 14	1962.45	17.74	1944.71	6.9	3.4	6.0	2.4	27.06	2.2	151	850	1.4	<0.50	<0.50	
Sep 14	1962.45	17.89	1944.56	7.9	2.8	57.4	3.2	26.69	1.9	95	120	<0.50	<0.50	<0.50	
Nov 14	1962.45	17.19	1945.26	7.0	3.5	2.4	2.1	23.68	2.3	11	870	1.7	<0.50	<0.50	
Mar 15	1962.45	16.50	1945.95	6.7	3.4	5.4	2.0	21.66	2.2	58	740	1.5	<0.50	<0.50	
Jun 15	1962.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1962.45	17.40	1945.05	7.47	2.81	16.50	1.22	26.33	1.83	104	730	1.6	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-24	May 05	1960.74	10.72	1950.02	7.0	3.6	>999	1.5	23.10	NM	76	ND	ND	ND	ND
	Sep 05	1960.74	11.75	1948.99	7.0	3.8	25.0	3.6	25.80	2.4	5	4.3	ND	ND	ND
	Dec 05	1960.74	11.65	1949.09	6.6	4.5	29.0	1.0	25.60	2.7	183	6.7	ND	ND	ND
	Mar 06	1960.74	12.10	1948.64	4.7	6.0	1.0	NM	22.60	3.8	503	6.5	ND	ND	ND
	Jun 06	1960.74	13.16	1947.58	NM	3.4	201.0	5.1	25.10	2.2	132	5.6	ND	ND	ND
	Oct 06	1960.74	13.06	1947.68	6.2	3.2	0.0	1.2	25.50	2.0	-23	2.6	ND	ND	ND
	Dec 06	1960.74	12.80	1947.94	6.9	4.1	0.0	2.6	25.10	2.6	62	2.6	ND	ND	ND
	Mar 07	1960.74	12.88	1947.86	NM	NM	NM	NM	NM	NM	NM	1	ND	ND	ND
	Jun 07	1960.74	13.94	1946.80	7.1	3.3	23.0	2.5	23.20	2.1	409	ND	ND	ND	ND
	Sep 07	1960.74	14.24	1946.50	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Dec 07	1960.74	13.58	1947.16	6.2	3.5	0.0	1.7	24.40	2.2	118	NS	NS	NS	NS
	Mar 08	1960.74	12.98	1947.76	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1960.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 08	1960.73	14.03	1946.70	6.8	3.4	-2.3	1.1	25.20	2.1	152	6.1	ND	ND	ND
	Feb 09	1960.73	13.20	1947.53	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1960.73	14.10	1946.63	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 09	1960.73	14.93	1945.80	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1960.73	14.99	1945.74	5.9	3.1	45.0	1.4	26.50	1.9	130	2.9	ND	ND	ND
	Feb 10	1960.73	14.23	1946.50	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1960.73	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Oct 10	1960.73	15.16	1945.57	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1960.73	14.90	1945.83	7.0	3.2	-0.8	1.4	25.24	NM	68	0.81	ND	ND	ND
	Mar 11	1960.73	14.06	1946.67	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1960.73	14.89	1945.84	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 11	1960.73	15.31	1945.42	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1960.73	15.12	1945.61	7.0	3.1	NM	1.3	24.98	2.0	149	0.95	ND	ND	ND
	Mar 12	1960.73	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1960.82	15.49	1945.33	6.9	3.4	110.0	1.8	25.00	2.2	94	1.3	ND	ND	ND
	Sep 12	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1960.82	13.62	1947.20	7.1	3.6	NM	1.8	22.77	2.3	62	1.3	<0.50	<0.50	<0.50
	Jun 13	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 14	1960.82	14.34	1946.48	7.3	3.0	10.2	2.4	20.18	1.9	42	2.0	<0.50	<0.50	<0.50
Jun 14	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1960.82	14.32	1946.50	6.7	3.3	3.6	1.3	22.86	2.1	79	0.58	<0.50	<0.50	<0.50	
Jun 15	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-25	May 05	1960.74	16.01	1944.73	7.0	4.0	>999	4.3	23.60	NM	141	993	ND	ND	ND
	Sep 05	1960.74	17.45	1943.29	7.0	4.2	30.0	5.1	26.20	2.7	57	920	ND	ND	ND
	Dec 05	1960.74	16.85	1943.89	6.6	5.3	0.0	1.4	24.70	3.3	417	1000	ND	ND	ND
	Mar 06	1960.74	17.30	1943.44	5.2	6.7	94.0	NM	23.60	4.2	255	970	ND	ND	ND
	Jun 06	1960.74	18.64	1942.10	NM	3.9	228.0	5.7	23.50	2.5	376	960	ND	ND	ND
	Oct 06	1960.74	18.75	1941.99	6.2	3.7	0.0	3.1	23.60	2.4	106	1300	ND	ND	ND
	Dec 06	1960.74	18.61	1942.13	6.7	4.5	0.0	3.8	23.90	2.8	429	1200	ND	ND	ND
	Mar 07	1960.74	17.72	1943.02	7.0	3.7	>999	7.5	23.30	2.4	258	670	ND	ND	ND
	Jun 07	1960.74	19.31	1941.43	7.0	3.7	50.0	4.5	23.00	2.4	485	960	ND	ND	ND
	Sep 07	1960.74	19.96	1940.78	6.7	3.5	15.0	3.6	27.00	2.3	195	560	ND	ND	ND
	Dec 07	1960.74	18.92	1941.82	6.3	3.9	0.0	4.8	19.40	2.5	168	780	ND	ND	ND
	Mar 08	1960.74	17.87	1942.87	6.9	3.7	11.9	2.5	24.40	2.3	170	890	ND	ND	ND
	Jun 08	1960.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	630	ND	ND	ND
	Oct 08	1960.73	19.84	1940.89	6.8	3.7	30.2	2.3	23.50	2.4	-94	730	1.5	ND	ND
	Feb 09	1960.73	18.07	1942.66	6.7	3.5	0.0	2.1	23.70	2.3	66	770	ND	ND	ND
	Jun 09	1960.73	19.35	1941.38	7.2	3.7	6.9	1.2	24.10	2.4	127	880	2.0	ND	ND
	Sep 09	1960.73	18.60	1942.13	6.5	4.2	14.2	2.5	25.90	2.7	136	770	ND	ND	ND
	Nov 09	1960.73	20.65	1940.08	5.8	3.5	66.0	2.2	24.70	2.2	140	570	1.3	ND	ND
	Feb 10	1960.73	19.81	1940.92	6.8	3.5	9.0	2.2	22.50	2.2	122	460	2.3	ND	ND
	Jun 10	1960.73	19.85	1940.88	7.0	3.3	-0.1	5.5	26.26	NM	NM	550	0.9	ND	ND
	Oct 10	1960.73	20.85	1939.88	5.9	3.5	-0.7	2.4	24.21	2.3	603	760	0.9	ND	ND
	Nov 10	1960.73	20.62	1940.11	6.7	3.5	0.5	2.8	25.16	NM	182	550	0.9	ND	ND
	Mar 11	1960.73	18.97	1941.76	7.0	3.4	0.0	4.1	20.24	NM	115	420	0.6	ND	ND
	Jun 11	1960.73	19.83	1940.90	7.3	3.6	-1.2	2.4	24.31	NM	216	700	0.8	ND	ND
	Sep 11	1960.73	20.83	1939.90	6.9	3.7	4.0	2.9	24.00	2.3	257	680	0.8	ND	ND
	Nov 11	1960.73	20.62	1940.11	7.0	3.4	NM	2.3	23.26	2.2	166	740	0.82	ND	ND
	Mar 12	1960.73	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1959.29	21.06	1938.23	6.8	3.9	56.0	2.9	25.20	2.5	89	640	0.88	ND	ND
	Sep 12	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1959.29	18.75	1940.54	7.0	3.8	NM	2.3	23.84	2.5	127	660	0.75	<0.50	<0.50
	Jun 13	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 13	1959.29	20.87	1938.42	6.2	3.9	6.5	1.4	24.38	2.5	114	700	0.88	<0.50	<0.50	
Mar 14	1959.29	19.48	1939.81	5.9	3.3	28.3	2.7	15.90	2.1	229	340	0.61	<0.50	<0.50	
Jun 14	1959.29	20.94	1938.35	6.9	3.6	3.9	2.3	27.02	2.4	258	780	0.69	<0.50	<0.50	
Sep 14	1959.29	20.82	1938.47	7.5	3.5	47.8	NM	27.69	2.3	90	550	<0.50	<0.50	<0.50	
Nov 14	1959.29	20.32	1938.97	7.0	3.7	2.4	1.6	22.93	2.4	24	590	0.91	<0.50	<0.50	
Mar 15	1959.29	19.25	1940.04	6.7	3.6	4.5	1.2	22.82	2.4	53	640	0.71	<0.50	<0.50	
Jun 15	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1959.29	21.11	1938.18	7.38	3.20	20.70	1.89	26.29	2.08	92	520	0.7	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-26	Mar 06	1953.48	15.60	1937.88	6.8	3.8	0.0	2.6	23.80	2.4	158	730	ND	ND	ND
	Jun 06	1953.48	17.00	1936.48	NM	2.3	229.0	4.8	24.10	1.5	305	770	ND	ND	ND
	Oct 06	1953.48	17.17	1936.31	6.2	69.4	0.0	2.9	23.70	2.4	180	1100	ND	ND	ND
	Dec 06	1953.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 07	1953.48	15.66	1937.82	7.0	3.8	>999	7.1	23.50	2.4	422	790	ND	ND	ND
	Jun 07	1953.48	17.50	1935.98	7.0	3.5	41.0	4.8	23.60	2.5	517	960	ND	ND	ND
	Sep 07	1953.48	18.12	1935.36	6.7	3.6	5.0	3.5	27.10	2.3	176	620	ND	ND	ND
	Dec 07	1953.48	17.01	1936.47	6.4	4.0	0.0	5.1	21.70	2.5	212	910	ND	ND	ND
	Mar 08	1953.48	15.91	1937.57	7.0	3.8	0.7	7.9	24.30	2.4	176	1100	ND	ND	ND
	Jun 08	1953.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	930	ND	ND	ND
	Oct 08	1953.48	18.34	1935.14	6.8	3.9	-7.2	2.7	24.00	2.5	86	900	1.4	ND	ND
	Feb 09	1953.48	16.04	1937.44	6.7	3.7	0.0	3.3	23.90	2.3	82	960	ND	ND	ND
	Jun 09	1953.48	17.57	1935.91	7.2	3.8	49.3	2.2	25.40	2.5	133	970	1.5	ND	ND
	Sep 09	1953.48	18.79	1934.69	6.6	4.3	10.5	2.8	26.40	2.8	137	910	ND	ND	ND
	Nov 09	1953.48	18.85	1934.63	5.8	3.6	210.0	2.8	24.30	2.3	139	690	ND	ND	ND
	Feb 10	1953.48	17.61	1935.87	6.9	3.6	7.0	2.5	22.60	2.3	143	790	1.8	ND	ND
	Jun 10	1953.48	17.95	1935.53	7.0	2.4	0.2	6.6	26.14	NM	NM	680	0.74	ND	ND
	Oct 10	1953.48	19.09	1934.39	6.8	3.7	-0.8	2.0	24.60	2.4	504	450	0.61	ND	ND
	Nov 10	1953.48	18.75	1934.73	6.9	3.7	0.6	2.6	24.91	NM	92	750	0.74	ND	ND
	Mar 11	1953.48	18.83	1934.65	6.9	3.8	0.0	2.7	23.78	NM	141	760	0.6	ND	ND
	Jun 11	1953.48	17.82	1935.66	6.7	3.7	-1.2	2.0	25.86	NM	475	860	0.67	ND	ND
	Sep 11	1953.48	19.04	1934.44	6.9	3.8	7.0	2.9	24.40	2.4	260	780	0.59	ND	ND
	Nov 11	1953.48	18.72	1934.76	7.0	3.6	NM	2.1	23.33	2.3	161	690	0.61	ND	ND
	Mar 12	1953.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1953.45	19.24	1934.21	6.8	4.1	72.0	2.8	26.00	2.6	85	740	0.54	ND	ND
	Sep 12	1953.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1953.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1953.45	16.81	1936.64	7.0	3.8	NM	2.7	24.35	2.6	118	740	0.51	<0.50	<0.50
	Jun 13	1953.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1953.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 13	1953.45	19.02	1934.43	6.4	4.0	7.0	2.4	24.59	2.6	138	770	0.62	<0.50	<0.50	
Mar 14	1953.45	17.44	1936.01	7.3	2.2	20.3	4.8	21.08	1.4	270	210	<0.50	<0.50	<0.50	
Jun 14	1953.45	19.10	1934.35	6.9	3.7	2.1	2.8	26.43	2.4	233	860	0.5	<0.50	<0.50	
Sep 14	1953.45	18.60	1934.85	7.3	3.6	32.7	NM	25.85	2.4	80	360	<0.50	<0.50	<0.50	
Nov 14	1953.45	18.31	1935.14	7.0	3.8	2.4	2.2	22.84	2.5	-44	890	0.66	<0.50	<0.50	
Mar 15	1953.45	17.09	1936.36	6.7	3.8	2.7	1.8	21.61	2.4	67	680	<0.50	<0.50	<0.50	
Jun 15	1953.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1954.45	19.37	1935.08	7.45	3.04	16.20	1.30	26.51	1.98	96	670	0.54	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-27	Mar 06	1944.23	13.48	1930.75	6.8	3.3	0.0	2.4	21.90	2.1	142	220	ND	ND	ND
	Jun 06	1944.23	18.50	1925.73	NM	3.7	626.0	4.6	26.10	2.3	69	350	ND	ND	ND
	Oct 06	1944.23	16.16	1928.07	6.2	3.3	0.0	2.8	22.20	2.1	155	380	ND	ND	ND
	Dec 06	1944.23	13.85	1930.38	6.8	4.0	507.0	4.5	22.20	2.6	444	380	ND	ND	ND
	Mar 07	1944.23	12.58	1931.65	7.0	3.3	83.0	7.0	21.90	2.1	181	160	ND	ND	ND
	Jun 07	1944.23	18.43	1925.80	7.0	3.3	238.0	4.1	22.20	2.1	392	340	ND	ND	ND
	Sep 07	1944.23	17.85	1926.38	6.8	3.4	22.0	3.4	24.20	2.2	198	320	ND	ND	ND
	Dec 07	1944.23	14.41	1929.82	6.4	3.8	0.0	3.5	20.60	2.5	153	430	ND	ND	ND
	Mar 08	1944.23	13.65	1930.58	7.0	3.4	1.4	2.5	22.60	2.2	174	580	ND	ND	ND
	Jun 08	1944.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	320	ND	ND	ND
	Oct 08	1944.23	18.33	1925.90	6.5	3.8	25.2	1.1	22.59	2.4	105	510	2.6	ND	ND
	Feb 09	1944.23	13.22	1931.01	6.6	3.6	0.0	0.7	21.90	2.3	108	510	ND	ND	ND
	Jun 09	1944.23	18.39	1925.84	7.1	3.9	0.0	0.5	24.10	2.5	128	570	3.3	ND	ND
	Sep 09	1944.23	19.73	1924.50	6.6	4.3	-6.7	0.9	24.20	2.7	131	640	ND	ND	ND
	Nov 09	1944.23	18.92	1925.31	NM	NM	NM	NM	NM	NM	NM	400	2	ND	ND
	Feb 10	1944.23	13.00	1931.23	NM	NM	NM	NM	NM	NM	NM	770	3.5	ND	ND
	Jun 10	1944.23	17.77	1926.46	7.1	3.4	10.2	6.8	24.66	NM	NM	330	1.4	ND	ND
	Oct 10	1944.23	18.87	1925.36	6.9	3.6	0.4	1.4	22.95	2.4	434	420	1.4	ND	ND
	Nov 10	1944.23	17.19	1927.04	6.8	3.7	2.9	1.5	23.57	NM	115	480	1.8	ND	ND
	Mar 11	1944.23	12.99	1931.24	7.0	3.7	259.3	6.7	21.37	NM	108	370	1.2	ND	ND
Jun 11	1944.23	16.68	1927.55	7.3	3.7	-1.4	1.6	23.61	NM	180	440	1.3	ND	ND	
Sep 11	1944.23	20.23	1924.00	6.8	3.8	10.0	2.2	23.60	2.4	237	470	1.3	ND	ND	
Nov 11	1944.23	17.32	1926.91	7.0	3.5	NM	2.1	22.62	2.3	164	380	1.3	ND	ND	
Mar 12	1944.23	16.22	1928.01	7.2	3.6	5.9	2.5	23.10	2.4	-58	470	NS	NS	NS	
Jun 12	1944.15	14.46	1929.69	6.8	3.9	230.0	2.9	23.80	2.4	108	440	0.97	ND	ND	
Sep 12	1944.15	18.54	1925.61	7.3	3.6	NM	2.1	23.06	2.3	152	430	1.2	ND	ND	
Nov 12	1944.15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13	1944.15	15.33	1928.82	7.0	4.0	NM	1.8	23.16	2.6	100	450	1	<0.50	<0.50	
Jun 13	1944.15	20.37	1923.78	7.0	4.0	NM	2.1	25.31	2.6	95	300	1.1	<0.50	<0.50	
Sep 13	1944.15	19.67	1924.48	7.2	2.0	NM	2.4	27.75	1.3	88	350	0.79	<0.50	<0.50	
Nov 13	1944.15	17.49	1926.66	7.2	4.0	7.2	1.7	24.27	2.6	120	420	0.94	<0.50	<0.50	
Mar 14	1944.15	14.67	1929.48	7.2	3.4	29.3	4.3	23.18	2.2	15	220	0.59	<0.50	<0.50	
Jun 14	1944.15	18.96	1925.19	7.0	3.7	4.9	2.3	27.29	2.4	271	430	0.94	<0.50	<0.50	
Sep 14	1944.15	17.94	1926.21	7.3	3.4	24.2	NM	25.78	2.1	96	290	<0.50	<0.50	<0.50	
Nov 14	1944.15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1944.15	13.33	1930.82	6.7	3.7	6.4	1.3	21.76	2.4	39	450	1.3	<0.50	<0.50	
Jun 15	1944.15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1944.15	20.13	1924.02	7.44	3.22	17.80	1.67	26.27	2.09	96	370	0.95	<0.50	<0.50	

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**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-28	Nov 07	1942.97	14.02	1928.95	6.8	4.2	196.0	9.6	26.80	2.7	125	3	ND	ND	ND
	Dec 07	1942.97	12.80	1930.17	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 08	1942.97	11.61	1931.36	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1942.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	1	ND	ND	ND
	Oct 08	1942.96	14.60	1928.36	6.8	4.2	165.0	0.6	22.80	2.7	82	2.2	ND	ND	ND
	Feb 09	1942.96	11.66	1931.30	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1942.96	13.91	1929.05	7.2	4.2	63.8	0.0	23.50	2.7	119	3.3	ND	ND	ND
	Sep 09	1942.96	14.96	1928.00	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1942.96	14.83	1928.13	6.0	3.8	180.0	1.1	23.20	2.5	136	1.3	ND	ND	ND
	Feb 10	1942.96	12.78	1930.18	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1942.96	13.91	1929.05	7.0	3.7	3.7	3.3	23.89	NM	NM	0.94	ND	ND	ND
	Oct 10	1942.96	14.93	1928.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1942.96	14.31	1928.65	6.7	3.9	0.6	0.9	24.25	NM	162	0.66	ND	ND	ND
	Mar 11	1942.96	12.10	1930.86	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1942.96	13.50	1929.46	7.0	4.0	2.4	0.7	23.71	NM	185	ND	ND	ND	ND
	Sep 11	1942.96	14.93	1928.03	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1942.96	14.42	1928.54	7.0	3.7	NM	1.0	22.10	2.4	157	0.62	ND	ND	ND
	Mar 12	1942.96	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1943.07	15.30	1927.77	6.8	4.1	32.0	1.1	22.70	2.6	133	0.73	ND	ND	ND
	Sep 12	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1943.07	12.50	1930.57	7.0	4.1	NM	1.9	24.06	2.7	70	0.50	<0.50	<0.50	<0.50
	Jun 13	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 14	1943.07	12.87	1930.20	7.3	3.5	20.8	1.8	22.59	2.3	66	0.69	<0.50	<0.50	<0.50
	Jun 14	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1943.07	12.36	1930.71	6.7	3.8	6.3	0.7	22.63	2.5	80	0.69	<0.50	<0.50	<0.50
	Jun 15	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1943.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-29	Nov 07	1932.27	14.20	1918.07	6.9	4.3	15.1	6.0	21.80	2.7	108	2.5	ND	ND	ND
	Dec 07	1932.27	14.01	1918.26	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 08	1932.27	13.77	1918.50	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 08	1932.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	1	ND	ND	ND
	Oct 08	1932.25	14.44	1917.81	6.8	4.0	500.0	3.9	20.00	2.6	122	2.2	ND	ND	ND
	Feb 09	1932.25	13.81	1918.44	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 09	1932.25	13.98	1918.27	7.2	4.0	212.0	3.3	20.50	2.6	133	1.3	ND	ND	ND
	Sep 09	1932.25	14.38	1917.87	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 09	1932.25	14.37	1917.88	6.1	3.8	200.0	3.9	20.80	2.4	139	ND	ND	ND	ND
	Feb 10	1932.25	14.19	1918.06	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 10	1932.25	13.92	1918.33	6.9	3.5	3.8	4.8	23.43	NM	NM	0.58	ND	ND	ND
	Oct 10	1932.25	14.19	1918.06	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 10	1932.25	13.90	1918.35	6.8	3.9	1.5	4.0	21.09	NM	138	ND	ND	ND	ND
	Mar 11	1932.25	13.52	1918.73	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 11	1932.25	13.65	1918.60	6.9	3.9	-1.4	4.1	20.62	NM	232	ND	ND	ND	ND
	Sep 11	1932.25	13.84	1918.41	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 11	1932.25	13.85	1918.40	7.0	3.7	NM	4.0	19.77	2.4	183	ND	ND	ND	ND
	Mar 12	1932.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1932.35	13.99	1918.36	6.9	3.8	79.0	5.2	20.30	2.4	133	ND	ND	ND	ND
	Sep 12	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1932.35	13.30	1919.05	7.0	4.1	NM	4.4	19.43	2.7	85	<0.50	<0.50	<0.50	<0.50
	Jun 13	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 14	1932.35	13.55	1918.80	7.3	3.6	42.3	3.6	18.53	2.4	170	<0.50	<0.50	<0.50	<0.50
	Jun 14	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1932.35	13.85	1918.50	6.8	4.0	1.6	2.7	18.75	2.6	85	<0.50	<0.50	<0.50	<0.50
	Jun 15	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1932.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	
MW-30	Nov 07	1940.56	20.11	1920.45	6.8	3.7	144.0	3.1	24.20	2.4	135	74	ND	ND	ND	
	Dec 07	1940.56	17.12	1923.44	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
	Mar 08	1940.56	16.32	1924.24	6.9	3.3	7.2	3.7	18.80	2.1	204	86	ND	ND	ND	
	Jun 08	1940.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	49	ND	ND	ND	
	Oct 08	1940.56	20.91	1919.65	6.7	3.7	221.0	0.9	20.10	2.4	124	100	1.8	ND	ND	
	Feb 09	1940.56	16.05	1924.51	6.6	3.3	7.2	3.2	19.60	2.1	97	71	ND	ND	ND	
	Jun 09	1940.56	19.88	1920.68	7.1	3.7	34.3	1.2	21.40	2.3	141	110	2	ND	ND	
	Sep 09	1940.56	21.57	1918.99	6.6	4.2	0.8	2.0	23.40	2.7	127	70	1.1	ND	ND	
	Nov 09	1940.56	20.55	1920.01	5.9	3.3	-10.0	2.3	20.40	2.1	167	85	1.4	ND	ND	
	Feb 10	1940.56	16.49	1924.07	6.7	3.2	12.0	3.9	19.60	2.1	162	60	ND	ND	ND	
	Jun 10	1940.56	18.98	1921.58	6.9	2.9	1.0	5.3	25.04	NM	NM	41	ND	ND	ND	
	Oct 10	1940.56	20.63	1919.93	6.0	3.1	0.1	4.2	21.95	2.0	595	62	ND	ND	ND	
	Nov 10	1940.56	19.32	1921.24	6.6	3.1	0.7	4.4	22.09	NM	212	54	ND	ND	ND	
	Mar 11	1940.56	15.85	1924.71	6.5	3.3	0.0	4.7	19.41	NM	142	50	ND	ND	ND	
	Jun 11	1940.56	18.17	1922.39	6.3	3.1	-1.1	4.2	22.48	NM	446	50	ND	ND	ND	
	Sep 11	1940.56	21.28	1919.28	7.1	2.9	16.0	7.9	22.20	1.9	237	25	ND	ND	ND	
	Nov 11	1940.56	19.47	1921.09	7.0	2.8	NM	4.7	20.48	1.8	182	38	ND	ND	ND	
	Mar 12	1940.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	*	Jun 12	1940.59	21.42	1919.17	6.9	3.2	210.0	3.7	21.00	2.0	125	84	0.73	ND	ND
		Sep 12	1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Nov 12		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 13		1940.59	17.38	1923.21	6.9	3.3	NM	4.2	19.45	2.1	144	62	<0.50	<0.50	<0.50	
Jun 13		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13		1940.59	19.89	1920.70	6.6	3.3	7.6	3.3	22.07	2.1	141	96	0.58	<0.50	<0.50	
Mar 14		1940.59	17.14	1923.45	7.2	2.9	3.8	3.5	21.39	1.9	166	42	<0.50	<0.50	<0.50	
Jun 14		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15		1940.59	15.90	1924.69	6.6	2.9	4.3	2.4	19.18	1.9	50	93	0.76	<0.50	<0.50	
Jun 15		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15		1940.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-31	Mar 08	1937.93	15.23	1922.70	7.0	4.7	125.0	6.0	22.50	2.9	152	49	ND	ND	ND
	Jun 08	1937.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	31	ND	ND	ND
	Oct 08	1937.93	18.94	1918.99	6.7	4.2	265.0	3.6	22.40	2.7	123	39	ND	ND	ND
	Feb 09	1937.93	15.59	1922.34	6.5	4.0	11.0	3.4	21.90	2.6	99	44	ND	ND	ND
	Jun 09	1937.93	17.30	1920.63	7.0	4.3	77.9	4.6	21.10	2.8	137	45	ND	ND	ND
	Sep 09	1937.93	19.08	1918.85	6.6	4.8	45.2	4.9	23.60	3.0	124	38	ND	ND	ND
	Nov 09	1937.93	18.40	1919.53	6.0	4.0	230.0	4.0	22.90	2.5	141	24	ND	ND	ND
	Feb 10	1937.93	16.41	1921.52	6.7	4.0	18.0	3.9	21.10	2.5	148	34	1.2	ND	ND
	Jun 10	1937.93	16.94	1920.99	6.9	3.7	14.8	5.2	23.60	NM	NM	34	ND	ND	ND
	Oct 10	1937.93	18.80	1919.13	5.9	4.0	3.5	3.9	22.86	2.6	582	30	ND	ND	ND
	Nov 10	1937.93	18.33	1919.60	6.5	4.0	10.1	3.9	24.41	NM	225	27	ND	ND	ND
	Mar 11	1937.93	15.70	1922.23	6.9	4.1	22.7	5.0	22.63	NM	145	26	ND	ND	ND
	Jun 11	1937.93	16.76	1921.17	6.2	4.0	9.8	4.2	25.43	NM	480	64	ND	ND	ND
	Sep 11	1937.93	18.73	1919.20	6.8	4.1	9.5	4.8	24.90	2.6	256	57	ND	ND	ND
	Nov 11	1937.93	17.93	1920.00	6.9	3.8	NM	3.9	21.23	2.5	178	58	ND	ND	ND
	Mar 12	1937.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1937.66	18.37	1919.29	6.8	4.1	440.0	3.9	23.20	2.6	121	44	0.52	ND	ND
	Sep 12	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1937.66	16.27	1921.39	6.9	4.2	NM	2.9	21.34	2.7	139	61	<0.50	<0.50	<0.50
Jun 13	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 13	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 13	1937.66	18.55	1919.11	6.4	4.2	12.7	2.4	24.30	2.7	192	54	<0.50	<0.50	<0.50	
Mar 14	1937.66	16.45	1921.21	7.2	3.6	16.7	2.3	25.83	2.4	92	35	<0.50	<0.50	<0.50	
Jun 14	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 14	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Nov 14	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Mar 15	1937.66	15.34	1922.32	6.7	4.0	5.6	2.7	21.20	2.6	57	73	<0.50	<0.50	<0.50	
Jun 15	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
Sep 15	1937.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-32	Mar 08	1952.82	17.25	1935.57	7.4	3.6	5.4	2.4	23.30	2.3	136	720	ND	ND	ND
	Jun 08	1952.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	750	ND	ND	ND
	Oct 08	1952.82	19.95	1932.87	6.9	3.8	23.7	1.0	23.80	2.4	-101	990	6.1	ND	ND
	Feb 09	1952.82	17.22	1935.60	6.7	3.6	22.5	1.0	23.40	2.3	75	1000	7.2	ND	ND
	Jun 09	1952.82	19.14	1933.68	7.1	3.7	32.7	2.7	23.40	2.4	120	1000	5.3	ND	ND
	Sep 09	1952.82	20.47	1932.35	6.5	4.2	4.1	1.2	25.30	2.7	157	1000	ND	ND	ND
	Nov 09	1952.82	20.44	1932.38	5.8	3.4	180.0	2.8	24.10	2.2	145	660	3.7	ND	ND
	Feb 10	1952.82	18.81	1934.01	6.8	3.5	16.0	1.6	22.70	2.2	158	830	5.4	ND	ND
	Jun 10	1952.82	19.46	1933.36	7.0	3.2	1.2	6.3	26.41	NM	NM	480	2.6	ND	ND
	Oct 10	1952.82	20.77	1932.05	6.5	3.5	8.2	2.7	24.89	2.3	585	660	2.7	ND	ND
	Nov 10	1952.82	20.40	1932.42	6.6	3.5	1.9	2.4	24.50	NM	244	740	3.3	ND	ND
	Mar 11	1952.82	18.21	1934.61	7.1	3.5	4.3	6.7	23.41	NM	111	610	2.3	ND	ND
	Jun 11	1952.82	19.40	1933.42	6.8	3.5	-1.3	3.4	24.82	NM	424	790	2.3	ND	ND
	Sep 11	1952.82	20.91	1931.91	6.9	3.6	10.0	5.1	24.40	2.3	274	610	1.9	ND	ND
	Nov 11	1952.82	20.24	1932.58	7.0	3.3	NM	3.3	23.32	2.2	161	700	2.7	ND	ND
Mar 12	1952.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
*	Jun 12	1952.9	20.94	1931.96	6.9	3.6	240.0	4.7	25.10	2.3	101	640	2	ND	ND
	Sep 12	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1952.9	18.43	1934.47	7.0	3.7	NM	3.4	23.98	2.4	114	720	1.8	<0.50	<0.50
	Jun 13	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1952.9	20.68	1932.22	6.6	3.7	8.3	2.5	24.57	2.4	124	610	2	<0.50	<0.50
	Mar 14	1952.9	18.83	1934.07	7.3	3.3	72.5	1.0	24.26	2.1	73	640	12	<0.50	<0.50
	Jun 14	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1952.9	20.15	1932.75	7.4	3.3	64.4	NM	27.43	2.2	78	360	1	<0.50	<0.50
	Nov 14	1952.9	19.37	1933.53	7.0	3.6	4.9	2.4	23.12	2.4	-163	850	2.7	<0.50	<0.50
	Mar 15	1952.9	18.32	1934.58	6.7	3.5	5.4	1.8	22.15	2.3	53	730	2	<0.50	<0.50
	Jun 15	1952.9	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1952.9	21.06	1931.84	7.47	2.95	12.10	1.88	27.19	1.92	103	590	1.4	<0.50	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-33	Mar 08	1950.92	16.02	1934.90	7.0	3.5	82.4	7.6	20.30	2.2	161	2.4	ND	ND	ND
	Jun 08	1950.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	1	ND	ND	ND
	Oct 08	1950.92	18.00	1932.92	6.7	3.8	6.7	1.0	22.20	2.4	85	3.4	ND	ND	ND
	Feb 09	1950.92	16.11	1934.81	6.4	3.7	0.0	0.0	21.30	2.4	120	ND	ND	ND	ND
	Jun 09	1950.92	17.28	1933.64	7.0	4.0	0.0	0.0	21.40	2.5	138	ND	ND	ND	ND
	Sep 09	1950.92	18.93	1931.99	6.6	4.2	2.2	1.2	23.50	2.7	166	3.3	ND	ND	ND
	Nov 09	1950.92	18.78	1932.14	6.0	3.5	200.0	1.7	22.60	2.2	136	1.4	ND	ND	ND
	Feb 10	1950.92	17.28	1933.64	6.7	3.5	0.0	0.7	21.50	2.2	146	ND	ND	ND	ND
	Jun 10	1950.92	17.71	1933.21	6.9	3.4	1.1	2.1	28.96	NM	NM	ND	ND	ND	ND
	Oct 10	1950.92	19.42	1931.50	6.1	3.6	3.7	1.4	23.04	2.3	558	ND	ND	ND	ND
	Nov 10	1950.92	19.25	1931.67	6.6	3.6	1.7	1.6	23.34	NM	217	ND	ND	ND	ND
	Mar 11	1950.92	17.36	1933.56	6.5	3.8	2.8	1.7	21.27	NM	107	ND	ND	ND	ND
	Jun 11	1950.92	18.00	1932.92	7.3	3.8	-1.2	0.8	22.54	NM	74	ND	ND	ND	ND
	Sep 11	1950.92	19.31	1931.61	6.9	3.8	10.0	4.2	23.10	2.4	191	ND	ND	ND	ND
	Nov 11	1950.92	18.72	1932.20	7.0	3.6	NM	2.2	21.62	2.3	181	ND	ND	ND	ND
*	Mar 12	1950.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Jun 12	1950.98	19.03	1931.95	6.8	4.0	130.0	1.3	22.90	2.5	136	ND	ND	ND	ND
	Sep 12	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1950.98	17.25	1933.73	6.9	4.2	NM	1.9	21.50	2.7	134	<0.50	<0.50	<0.50	<0.50
	Jun 13	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 13	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 13	1950.98	19.40	1931.58	6.9	4.0	7.6	1.4	21.58	2.6	146	<0.50	<0.50	<0.50	<0.50
	Mar 14	1950.98	17.66	1933.32	7.2	3.4	68.8	4.9	18.82	2.2	45	<0.50	<0.50	<0.50	<0.50
	Jun 14	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1950.98	17.06	1933.92	6.6	4.1	8.9	0.7	21.50	2.7	68	<0.50	<0.50	<0.50	<0.50
	Jun 15	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1950.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-34	Dec 11	--		--								910	NS	NS	NS
	Jan 12	--		--								1000	NS	NS	NS
	Mar 12	--		--	7.2	3.7	27.4	2.0	22.63	2.4	-47	1000	NS	NS	NS
	Jun 12	1993.88	17.74	1976.14	7.3	3.4	16.4	2.4	24.19	2.4	89	860	0.97	ND	ND
	Sep 12	1993.88	18.07	1975.81	7.3	3.6	NM	2.1	24.43	2.4	141	730	1.2	ND	ND
	Nov 12	1993.88	17.75	1976.13	8.0	3.7	NM	2.0	24.86	2.4	45	550	1.1	<0.50	<0.50
	Mar 13	1993.88	19.06	1974.82	7.1	4.0	NM	1.6	22.65	2.6	125	550	0.86	<0.50	<0.50
	Jun 13	1993.88	19.32	1974.56	7.3	4.0	NM	1.9	24.03	2.6	63	380	0.9	<0.50	<0.50
	Sep 13	1993.88	19.36	1974.52	7.0	3.8	NM	1.6	25.41	2.5	71	440	0.78	<0.50	<0.50
	Nov 13	1993.88	19.14	1974.74	6.1	3.4	20.0	0.9	23.56	2.3	184	500	0.86	<0.50	<0.50
	Mar 14	1993.88	18.75	1975.13	7.3	3.4	10.4	3.8	22.73	2.2	81	360	0.73	<0.50	<0.50
	Jun 14	1993.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1993.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1993.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1993.88	19.09	1974.79	6.5	3.8	6.6	1.6	24.17	2.4	91	370	0.91	<0.50	<0.50
	Jun 15	1993.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1993.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
MW-35	Dec 11	--		--								410	NS	NS	NS
	Jan 12	--		--								630	NS	NS	NS
	Mar 12	--	20.03	--	7.3	3.4	181.0	3.6	23.81	2.2	-21	580	NS	NS	NS
	Jun 12	1991.37	18.90	1972.47	7.3	3.4	87.1	4.0	24.30	2.2	100	530	ND	ND	ND
	Sep 12	1991.37	18.77	1972.60	7.2	3.4	NM	3.5	23.19	2.2	150	520	ND	ND	ND
	Nov 12	1991.37	18.55	1972.82	8.0	3.4	NM	3.9	24.06	2.2	70	480	<0.50	<0.50	<0.50
	Mar 13	1991.37	19.99	1971.38	7.1	3.7	NM	3.2	23.20	2.4	129	340	<0.50	<0.50	<0.50
	Jun 13	1991.37	20.30	1971.07	7.2	3.8	NM	3.9	24.12	2.5	84	250	<0.50	<0.50	<0.50
	Sep 13	1991.37	20.21	1971.16	7.2	3.6	NM	3.3	25.54	2.3	50	250	<0.50	<0.50	<0.50
	Nov 13	1991.37	19.93	1971.44	6.1	3.8	45.8	1.8	23.47	2.2	184	310	<0.50	<0.50	<0.50
	Mar 14	1991.37	19.72	1971.65	7.3	3.3	323	5.4	23.24	2.1	89	92	<0.50	<0.50	<0.50
	Jun 14	1991.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1991.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1991.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1991.37	19.82	1971.55	6.5	3.7	23	2.4	25.22	2.3	87	180	<0.50	<0.50	<0.50
	Jun 15	1991.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1991.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-36 *	Mar 12	1955.30	19.51	1935.79	7.1	3.5	15.8	2.3	23.44	2.3	-62	160	NS	NS	NS
	Jun 12	1955.30	21.26	1934.04	6.8	3.8	110.0	2.2	25.30	2.5	74	130	ND	ND	ND
	Sep 12	1955.30	21.55	1933.75	7.5	3.4	NM	1.9	25.53	2.2	128	130	ND	ND	ND
	Nov 12	1955.30	20.62	1934.68	7.8	3.5	NM	2.1	22.87	2.7	71	150	<0.50	<0.50	<0.50
	Mar 13	1955.30	19.03	1936.27	6.9	3.8	NM	1.7	23.48	2.5	121	160	0.52	<0.50	<0.50
	Jun 13	1955.30	20.75	1934.55	7.0	3.8	NM	1.8	25.96	2.5	104	110	0.52	<0.50	<0.50
	Sep 13	1955.30	21.48	1933.82	7.0	3.6	NM	1.7	24.72	2.4	131	140	<0.50	<0.50	<0.50
	Nov 13	1955.30	21.22	1934.08	7.4	3.9	9.4	1.9	23.32	2.5	126	130	<0.50	<0.50	<0.50
	Mar 14	1955.30	19.50	1935.80	7.3	3.1	53.6	4.2	24.34	2.1	147	62	<0.50	<0.50	<0.50
	Jun 14	1955.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1955.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1955.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1955.30	19.09	1936.21	6.7	3.6	7.3	1.4	23.23	2.4	60	150	<0.50	<0.50	<0.50
	Jun 15	1955.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1955.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
MW-37 *	Mar 12	1930.06	18.89	1911.17	7.2	3.7	9.5	5.6	20.42	2.4	-27	36	NS	NS	NS
	Jun 12	1929.98	19.10	1910.88	6.9	3.8	200.0	6.3	20.80	2.4	128	34	ND	ND	ND
	Sep 12	1929.98	20.05	1909.93	7.4	3.7	NM	5.5	21.79	2.4	144	32	ND	ND	ND
	Nov 12	1929.98	19.66	1910.32	7.9	3.8	NM	5.0	20.46	2.5	97	31	<0.50	<0.50	<0.50
	Mar 13	1929.98	18.83	1911.15	7.0	4.1	NM	4.3	19.76	2.7	139	34	<0.50	<0.50	<0.50
	Jun 13	1929.98	19.33	1910.65	7.0	4.1	NM	4.2	21.58	2.6	114	37	<0.50	<0.50	<0.50
	Sep 13	1929.98	19.80	1910.18	7.0	3.8	NM	4.6	21.66	2.5	215	40	<0.50	<0.50	<0.50
	Nov 13	1929.98	19.79	1910.19	6.5	4.0	7.2	4.2	21.71	2.6	335	33	<0.50	<0.50	<0.50
	Mar 14	1929.98	18.44	1911.54	7.4	3.5	33.9	4.6	23.10	2.3	113	30	<0.50	<0.50	<0.50
	Jun 14	1929.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1929.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1929.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1929.98	19.25	1910.73	6.7	3.6	3.6	3.0	20.22	2.5	64	35	<0.50	<0.50	<0.50
	Jun 15	1929.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1929.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-38	Jun 12	1908.38	15.05	1893.33	6.8	3.9	550.0	5.0	22.00	2.5	124	5.8	ND	ND	ND
	Sep 12	1908.38	14.95	1893.43	7.6	3.8	NM	4.2	24.26	2.5	140	5.7	ND	ND	ND
	Nov 12	1908.38	14.69	1893.69	7.9	3.8	NM	3.6	22.20	2.5	89	5.9	<0.50	<0.50	<0.50
	Mar 13	1908.38	14.48	1893.90	7.0	4.2	NM	3.9	20.46	2.7	138	7.3	<0.50	<0.50	<0.50
	Jun 13	1908.38	15.05	1893.33	7.0	4.1	NM	3.9	23.24	2.7	117	7.8	<0.50	<0.50	<0.50
	Sep 13	1908.38	14.75	1893.63	6.8	3.9	NM	3.8	23.26	2.5	380	6.6	<0.50	<0.50	<0.50
	Nov 13	1908.38	14.97	1893.41	6.5	4.2	19.1	3.3	22.33	2.7	356	7.0	<0.50	<0.50	<0.50
	Mar 14	1908.38	14.65	1893.73	7.2	3.6	6.8	2.2	20.57	2.4	92	7.3	<0.50	<0.50	<0.50
	Jun 14	1908.38	15.16	1893.22	7.1	3.9	17.4	3.2	54.90	2.5	100	5.4	<0.50	<0.50	<0.50
	Sep 14	1908.38	15.12	1893.26	7.2	3.8	22.4	6.1	25.74	2.5	82	5.8	<0.50	<0.50	<0.50
	Nov 14	1908.38	15.23	1893.15	6.9	4.0	7.6	3.7	21.82	2.6	75	8.2	<0.50	<0.50	<0.50
	Mar 15	1908.38	14.75	1893.63	6.7	4.0	4.3	2.9	20.24	2.6	59	6.0	<0.50	<0.50	<0.50
	Jun 15	1908.38	14.86	1893.52	7.1	3.9	4.5	2.0	22.85	2.5	50	8.1	<0.50	<0.50	<0.50
	Sep 15	1908.38	15.11	1893.27	7.4	3.3	22.1	2.4	23.86	2.2	125	8.1	<0.50	<0.50	<0.50
MW-39	Jun 12	1967.55	26.15	1941.40	7.3	3.4	252.0	3.3	25.73	2.2	50	250	0.63	ND	ND
	Sep 12	1967.55	26.10	1941.45	7.4	3.5	NM	1.6	25.75	2.2	132	240	0.83	ND	ND
	Nov 12	1967.55	25.51	1942.04	7.7	3.5	NM	2.2	22.11	2.3	61	270	0.91	<0.50	<0.50
	Mar 13	1967.55	24.20	1943.35	7.0	3.8	NM	1.4	22.63	2.4	137	280	0.83	<0.50	<0.50
	Jun 13	1967.55	25.63	1941.92	7.0	3.8	NM	1.7	26.48	2.5	94	210	0.83	<0.50	<0.50
	Sep 13	1967.55	26.34	1941.21	6.9	3.7	NM	2.0	26.67	2.4	122	250	0.76	<0.50	<0.50
	Nov 13	1967.55	26.01	1941.54	6.7	3.9	133	1.4	26.36	2.5	157	260	0.81	<0.50	<0.50
	Mar 14	1967.55	24.87	1942.68	7.3	3.3	120	4.9	28.81	2.1	116	59	<0.50	<0.50	<0.50
	Jun 14	1967.55	26.07	1941.48	7.2	3.5	60	4.1	30.55	2.3	389	120	<0.50	<0.50	<0.50
	Sep 14	1967.55	26.15	1941.40	7.5	3.2	84	4.8	26.92	2.0	135	120	<0.50	<0.50	<0.50
	Nov 14	1967.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1967.55	24.67	1942.88	6.7	3.7	96.2	1.3	23.51	2.4	60	160	<0.50	<0.50	<0.50
	Jun 15	1967.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 15	1967.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-40 CMT-30	Nov 12	NM	25.28	NM	7.9	3.6	NM	2.6	17.93	2.3	-68	340	1.1	<0.50	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	4.7	<0.50	<0.50	<0.50
	Jun 13	1978.49	26.15	1952.34	7.6	3.3	NM	4.7	35.97	2.1	160	10	<0.50	<0.50	<0.50
	Sep 13	1978.49	26.71	1951.78	7.9	2.2	NM	3.0	34.38	1.5	35	2.1	<0.50	<0.50	<0.50
	Nov 13	1978.49	26.35	1952.14	7.6	3.0	9.6	3.0	20.28	1.9	91	1.3	<0.50	<0.50	<0.50
	Mar 14	1978.49	26.52	1951.97	7.6	3.1	73.6	3.8	23.63	2.0	103	4.5	<0.50	<0.50	<0.50
	Jun 14	1978.49	26.44	1952.05	8.3	3.6	5.0	4.4	46.19	2.3	79	3.2	<0.50	<0.50	<0.50
	Sep 14	1978.49	26.65	1951.84	8.4	2.7	18.1	5.1	32.95	1.8	313	4.6	<0.50	<0.50	<0.50
	Nov 14	1978.49	25.74	1952.75	8.1	3.6	2.7	8.9	19.34	2.4	-49	35	<0.50	<0.50	<0.50
	Mar 15	1978.49	25.19	1953.30	8.0	3.6	4.1	4.2	18.74	2.3	287	14	<0.50	<0.50	<0.50
	Jun 15	1978.49	25.61	1952.88	8.5	3.5	6.1	2.9	32.98	2.3	164	18	<0.50	<0.50	<0.50
Sep 15	1978.49	26.25	1952.24	8.8	2.6	20.0	3.1	31.43	1.7	13	5.3	<0.50	<0.50	<0.50	
MW-40 CMT-35	Nov 12	NM	25.30	NM	8.1	4.1	NM	1.9	17.84	2.7	-163	260	6.6	<0.50	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	48	3.1	<0.50	<0.50
	Jun 13	NM	26.15	NM	7.3	3.3	NM	5.0	36.39	2.2	127	3.6	<0.50	<0.50	<0.50
	Sep 13	1978.49	26.71	1951.78	7.1	2.4	NM	3.0	33.82	1.3	55	7.9	0.93	<0.50	<0.50
	Nov 13	1978.49	26.20	1952.29	6.5	2.4	4.3	1.7	23.26	1.6	88	12	2.4	<0.50	<0.50
	Mar 14	1978.49	26.47	1952.02	7.6	2.6	58.7	3.6	23.75	1.7	128	2.6	<0.50	<0.50	<0.50
	Jun 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1978.49	25.36	1953.13	7.9	2.8	4.5	5.0	17.67	1.8	207	13	1.6	<0.50	<0.50
	Jun 15	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1978.49	34.21	1944.28	8.7	2.6	15.0	0.0	28.64	1.7	61	19	1.5	<0.50	<0.50	
MW-40 CMT-40	Nov 12	NM	25.34	NM	8.1	3.1	NM	2.0	20.43	2.0	-132	320	1.7	<0.50	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	270	1.6	<0.50	<0.50
	Jun 13	NM	26.18	NM	7.5	3.2	NM	3.5	37.72	2.1	135	53	0.73	<0.50	<0.50
	Sep 13	1978.49	26.69	1951.80	7.7	2.0	NM	4.0	37.45	1.3	-39	37	0.73	<0.50	<0.50
	Nov 13	1978.49	26.19	1952.30	6.4	2.3	238.0	3.5	26.72	1.5	38	51	0.64	<0.50	<0.50
	Mar 14	1978.49	26.50	1951.99	7.6	2.7	33.8	3.2	23.34	1.8	46	27	<0.50	<0.50	<0.50
	Jun 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1978.49	25.32	1953.17	7.3	3.0	92.3	3.5	21.84	1.9	340	100	1.5	<0.50	<0.50
	Jun 15	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1978.49	26.24	1952.25	7.60	2.59	11.10	2.70	35.72	1.68	-97	280	5.9	<0.50	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-40 CMT-45	Nov 12	NM	25.28	NM	8.0	3.3	NM	2.1	20.47	2.1	-159	280	1.9	<0.50	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	310	1.6	<0.50	<0.50
	Jun 13	NM	26.14	NM	7.7	3.1	NM	4.2	29.10	2.0	203	47	<0.50	<0.50	<0.50
	Sep 13	1978.49	26.66	1951.83	7.2	2.2	NM	2.9	38.22	1.2	-90	110	1.3	<0.50	<0.50
	Nov 13	1978.49	26.16	1952.33	6.3	2.6	5.0	3.0	26.60	1.6	82	77	1.1	<0.50	<0.50
	Mar 14	1978.49	26.55	1951.94	7.6	2.7	67.9	4.7	26.76	1.8	57	24	<0.50	<0.50	<0.50
	Jun 14	1978.49	26.41	1952.08	7.0	3.0	7.1	4.7	36.07	2.0	-66	250	1.3	<0.50	<0.50
	Sep 14	1978.49	26.50	1951.99	7.3	2.0	25.4	3.3	33.31	1.3	-51	240	3.0	<0.50	<0.50
	Nov 14	1978.49	25.69	1952.80	7.5	3.1	5.2	6.6	20.28	2.0	-14	150	0.9	<0.50	<0.50
	Mar 15	1978.49	25.12	1953.37	6.4	0.8	12.2	4.2	23.38	0.5	361	120	3.2	<0.50	<0.50
	Jun 15	1978.49	25.66	1952.83	8.2	1.8	25.4	2.9	33.49	1.2	-170	36	1.9	<0.50	<0.50
Sep 15	1978.49	26.25	1952.24	7.6	2.6	8.0	2.4	33.08	1.7	42	310	2.8	<0.50	<0.50	
MW-40 CMT-50	Nov 12	NM	25.28	NM	8.2	3.4	NM	2.0	19.27	2.2	-175	300	2.5	<0.50	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	280	2.4	<0.50	<0.50
	Jun 13	NM	26.14	NM	7.7	3.2	NM	5.7	29.51	2.1	165	64	<0.50	<0.50	<0.50
	Sep 13	1978.49	26.63	1951.86	7.2	3.4	NM	5.8	29.36	2.3	243	24	<0.50	<0.50	<0.50
	Nov 13	1978.49	26.15	1952.34	6.5	2.5	12.9	1.5	25.67	1.6	29	120	1.8	<0.50	<0.50
	Mar 14	1978.49	26.49	1952.00	7.5	2.6	81.0	3.3	20.48	1.7	41	72	0.89	<0.50	<0.50
	Jun 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1979.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1979.49	25.11	1954.38	6.7	0.5	5.0	3.2	23.78	0.3	315	160	6.8	<0.50	<0.50
	Jun 15	1979.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1979.49	26.14	1953.35	7.66	2.23	14.50	2.03	34.68	1.40	-155	280	10.0	1.2	<0.50	
MW-40 CMT-55	Nov 12	NM	25.33	NM	8.0	2.9	NM	3.6	20.60	1.9	-55	930	4.0	1.7	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	390	4.1	1.7	<0.50
	Jun 13	NM	26.12	NM	7.5	3.1	NM	4.3	28.93	2.0	178	200	0.57	<0.50	<0.50
	Sep 13	1978.49	26.61	1951.88	7.7	3.2	NM	4.5	31.25	2.4	168	38	1.0	<0.50	<0.50
	Nov 13	1978.49	26.15	1952.34	6.2	2.3	17.2	3.1	26.89	1.4	38	110	0.86	<0.50	<0.50
	Mar 14	1978.49	26.56	1951.93	7.4	2.5	90.3	3.9	31.25	1.6	-69	130	3.1	<0.50	<0.50
	Jun 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Sep 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 14	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 15	1978.49	25.11	1953.38	7.3	0.6	5.3	2.8	23.03	0.4	379	430	6.7	1.0	<0.50
	Jun 15	1978.49	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
Sep 15	1978.49	26.20	1952.29	7.63	2.44	15.80	4.68	31.93	1.59	-153	520	5.1	1.2	<0.50	

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-40 CMT-60	Nov 12	NM	25.38	NM	8.0	3.2	NM	2.6	18.85	2.1	-128	1,400	11	6.3	<0.50
	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,200	9.5	6.0	<0.50
	Jun 13	NM	26.16	NM	7.5	3.3	NM	4.9	29.49	2.1	220	1,000	5.9	3.6	<0.50
	Sep 13	1978.49	26.62	1951.87	7.6	3.4	NM	5.0	29.80	2.2	236	20	0.56	<0.50	<0.50
	Nov 13	1978.49	26.16	1952.33	5.9	1.0	619.0	1.7	22.22	0.7	-78	190	3.6	2.5	<0.50
	Mar 14	1978.49	26.54	1951.95	7.4	2.6	65.3	5.5	31.53	1.7	-84	360	6.5	2.2	<0.50
	Jun 14	1978.49	26.56	1951.93	7.1	3.0	5.7	5.4	35.94	1.9	-49	750	8.0	2.9	<0.50
	Sep 14	1978.49	26.52	1951.97	7.2	2.9	35.2	3.4	32.51	1.9	-114	700	10.0	2.8	<0.50
	Nov 14	1978.49	25.70	1952.79	7.2	3.0	2.3	18.4	22.40	2.0	28	1,000	6.8	2.6	<0.50
	Mar 15	1978.49	25.17	1953.32	6.7	2.9	5.9	3.1	23.42	1.9	253	190	8.9	1.8	<0.50
	Jun 15	1978.49	25.60	1952.89	7.9	3.0	7.2	3.5	34.58	1.9	-112	140	7.2	1.9	<0.50
	Sep 15	1978.49	26.20	1952.29	7.6	2.6	16.5	6.2	32.89	1.7	-109	690	12.0	2.7	<0.50

**Table A-2: Historical Groundwater Gauging and Analytical Data
Maryland Square Shopping Center**

Well ID	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater Level (feet)	Groundwater Elevation (feet msl)	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-41	Sep 13	1908.89	14.81	1894.08	6.9	3.7	NM	2.7	26.56	2.8	135	1.7	<0.50	<0.50	<0.50
	Nov 13	1908.89	15.05	1893.84	6.7	3.9	239.0	1.1	21.40	2.2	360	2.6	<0.50	<0.50	<0.50
	Mar 14	1908.89	14.55	1894.34	7.3	3.3	192.0	2.8	20.93	2.2	64	2.1	<0.50	<0.50	<0.50
	Jun 14	1908.89	15.34	1893.55	6.9	3.6	76.1	1.2	26.24	2.3	85	2.8	<0.50	<0.50	<0.50
	Sep 14	1908.89	15.50	1893.39	7.0	3.6	68.4	2.4	26.18	2.3	54	2.8	<0.50	<0.50	<0.50
	Nov 14	1908.89	15.47	1893.42	6.9	3.7	57.0	1.2	20.80	2.4	25	3.7	<0.50	<0.50	<0.50
	Mar 15	1908.89	14.85	1894.04	6.7	3.7	33.1	1.6	21.17	2.4	38	3.5	<0.50	<0.50	<0.50
	Jun 15	1908.89	14.57	1894.32	7.0	3.6	34.5	0.7	23.92	2.4	66	3.6	<0.50	<0.50	<0.50
	Sep 15	1908.89	14.80	1894.09	7.3	3.1	25.7	1.3	24.04	2.0	136	3.5	<0.50	<0.50	<0.50
MW-42	Sep 13	1910.31	16.16	1894.15	7.1	4.1	NM	3.0	24.55	2.7	66	0.53	<0.50	<0.50	<0.50
	Nov 13	1910.31	16.32	1893.99	7.0	4.3	29.4	2.1	21.41	2.8	326	0.60	<0.50	<0.50	<0.50
	Mar 14	1910.31	16.01	1894.30	7.3	3.7	73.8	1.5	20.05	2.4	41	<0.50	<0.50	<0.50	
	Jun 14	1910.31	16.51	1893.80	6.7	4.0	13.6	2.1	23.60	2.6	105	0.58	<0.50	<0.50	<0.50
	Sep 14	1910.31	16.45	1893.86	6.8	4.0	21.4	3.2	23.75	2.6	107	0.53	<0.50	<0.50	<0.50
	Nov 14	1910.31	16.57	1893.74	7.0	4.1	6.3	1.7	22.21	2.7	-5	0.71	<0.50	<0.50	<0.50
	Mar 15	1910.31	16.12	1894.19	6.7	4.1	6.5	2.3	20.16	2.7	23	0.62	<0.50	<0.50	<0.50
	Jun 15	1910.31	16.25	1894.06	6.8	4.1	11.1	1.32	22.00	2.7	70	0.74	<0.50	<0.50	<0.50
	Sep 15	1910.31	16.48	1893.83	7.1	3.4	21.5	1.72	23.25	2.2	159	<0.50	<0.50	<0.50	<0.50
MW-43	Sep 13	1958.33	17.14	1941.19	7.1	3.5	NM	3.1	26.33	2.2	45	<0.50	<0.50	<0.50	<0.50
	Nov 13	1958.33	16.96	1941.37	7.0	3.6	163.0	2.2	22.87	2.3	138	<0.50	<0.50	<0.50	<0.50
	Mar 14	1958.33	16.11	1942.22	7.2	3.0	109.0	1.6	22.15	1.9	45	<0.50	<0.50	<0.50	<0.50
	Jun 14	1958.33	17.15	1941.18	6.7	3.2	61.3	2.3	25.50	2.1	128	<0.50	<0.50	<0.50	<0.50
	Sep 14	1958.33	17.33	1941.00	6.8	3.1	70.4	2.7	25.53	2.0	170	<0.50	<0.50	<0.50	<0.50
	Nov 14	1958.33	16.63	1941.70	7.0	3.2	23.5	2.9	23.23	2.1	98	<0.50	<0.50	<0.50	<0.50
	Mar 15	1958.33	15.60	1942.73	6.7	3.2	20.3	1.4	21.61	2.1	85	<0.50	<0.50	<0.50	<0.50
	Jun 15	1958.33	16.35	1941.98	7.0	3.2	31.3	1.0	24.29	2.0	40	<0.50	<0.50	<0.50	<0.50
	Sep 15	1958.33	17.32	1941.01	7.4	2.8	13.4	1.9	25.12	1.8	118	<0.50	<0.50	<0.50	<0.50

Notes:

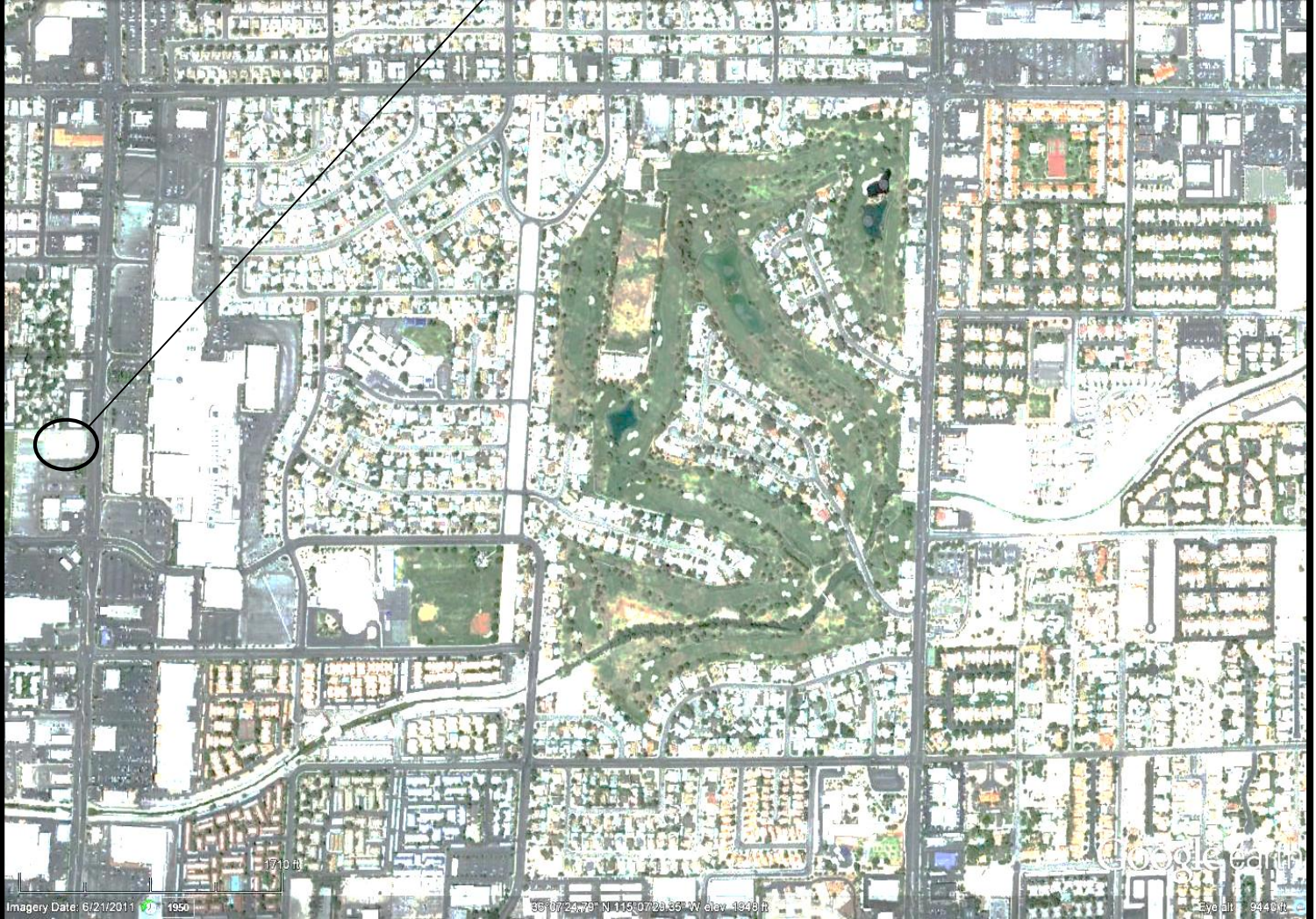
NM = Not Measured °C = degrees Celsius
 msl = mean sea level g/L = gallons per liter
 ND = Non Detect mg/L = milligrams per liter
 NS = Not Sampled mS/cm = milli Siemens per centimeter
 µg/L = micrograms per liter mV = millivolts
 NTU = Nephelometric Turbidity Units

*: All wells were resurveyed to determine top of casing elevation
 Mar 2014: Wells monitored were determined to not be representative of site conditions.

Maryland Square PCE Site

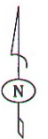
FIGURES

SITE LOCATION



1 inch = 1,000 feet


Note: Scale and location are approximate



SOURCE: Google Earth

SITE VICINIY MAP

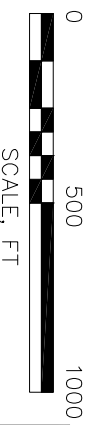
MARYLAND SQUARE SHOPPING CENTER
 3661 S. MARYLAND PARKWAY
 LAS VEGAS, NEVADA

PROJECT NUMBER: LV20915008	DATE: 12/12	Figure 1
APPROVED BY: ADS	DRAWN BY: ABK	
		7115 Amigo Street, Suite 100 Las Vegas, Nevada 89119 Ph: (702) 990-9300 *** Fax: (702) 990-9305



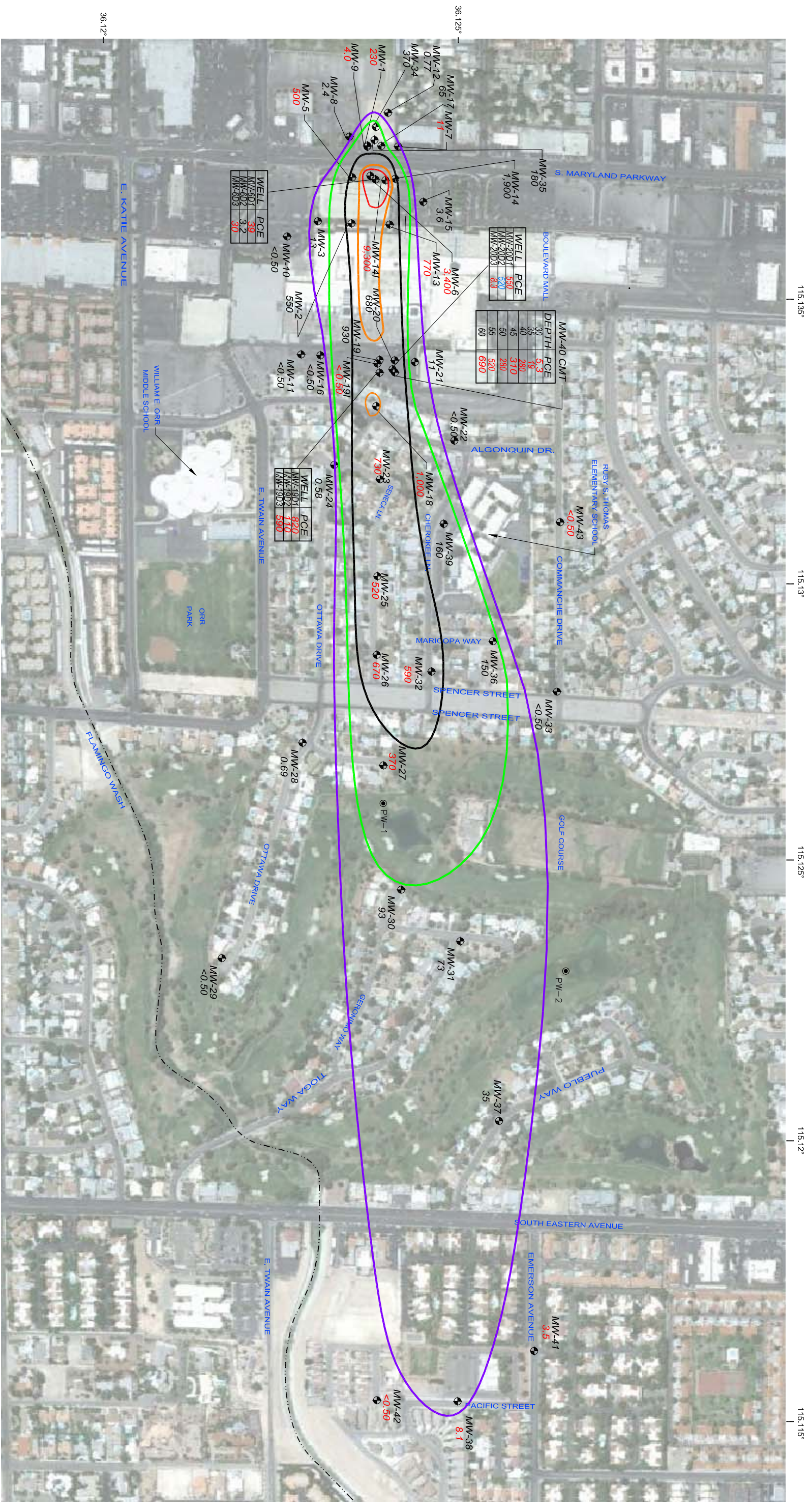
LEGEND
 MW-# GROUNDWATER MONITOR WELL
 PW-# PUMPING WELL

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE



GROUNDWATER POTENTIOMETRIC MAP
SEPTEMBER 18 & 21-24, 2015
 MARYLAND SQUARE SHOPPING CENTER
 3661 S. MARYLAND PARKWAY
 LAS VEGAS, NV

PROJECT NUMBER: LV20915008	DATE: 10/26/15	FIGURE
APPROVED BY: AK	DRAWN BY: JJ	2
Las Vegas, Nevada 89119 Ph: (702) 990-9300 *** Fax: (702) 990-9305		



WELL	PCE
MW-601	39
MW-602	3.2
MW-603	30

WELL	PCE
MW-2001	590
MW-2002	320
MW-2003	8.9

DEPTH	PCE
30	5.3
40	7.9
45	280
50	310
55	280
60	690

WELL	PCE
MW-1901	820
MW-1902	110
MW-1903	590

LEGEND

MW-1 GROUNDWATER MONITOR WELL

PW-1 PUMPING WELL

3000 ISOCONTOUR, µg/L

1000 ISOCONTOUR, µg/L

500 ISOCONTOUR, µg/L

NS NOT SAMPLED

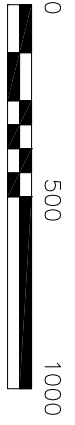
100 ISOCONTOUR, µg/L

5 ISOCONTOUR, µg/L

540 PCE, µg/L MARCH 2015 DATA

540 PCE, µg/L JUNE 2015 DATA

540 PCE, µg/L SEPTEMBER 2015 DATA



SCALE, FT

PCE ISOCONCENTRATION MAP
SEPTEMBER 18 & 21-24, 2015
 MARYLAND SQUARE SHOPPING CENTER
 3661 S. MARYLAND PARKWAY
 LAS VEGAS, NV

PROJECT NUMBER: LV20915008	DATE: 10/26/15	FIGURE
APPROVED BY: AK	DRAWN BY: JJ	3
7115 Amigo Street, Suite 100 Las Vegas, Nevada 89119 Ph: (702) 990-9300 *** Fax: (702) 990-9305		

Maryland Square PCE Site

APPENDIX A
FIELD SHEETS



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-5
 Sample ID: MW-5
 Date: 9/22

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 28.85 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 18.87 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 10 feet to 32 feet
 Approximate Pump Depth: Feet bgs 23 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	ft
1.3	1110	27.87	2.891	1.886	4.59	7.07	129	DTW 18.88, clear, no odor	27.8
.6	1115	27.22	2.821	1.855	4.30	7.58	127.1	DTW 18.91, clear, no odor	22.5
1.0	1120	27.28	2.841	1.845	4.25	7.57	126.2	DTW 18.91, clear, no odor	21.1
1.5	1125	27.19	2.739	1.773	4.25	7.56	122.2	DTW 18.91 " "	21.2

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 12.0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 11.0 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JLB

Well ID: MW-6
 Sample ID: MW-6
 Date: 9/24

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 29.22 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 19.68 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 10 feet to 32 feet
 Approximate Pump Depth: Feet bgs 25 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.4	1140	28.57	2.814	1.829	2.48	7.67	221.9	19.69, clear, no odor	35
0.6	1145	28.10	2.863	1.861	2.36	7.45	236.9	19.70 " "	17.6
1.0	1150	27.92	2.943	1.913	2.44	7.35	231.7	19.76 " "	11.2
1.5	1155	28.00	2.962	1.928	2.46	7.32	237.7	19.79 " "	7.1

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 1200 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-7
 Sample ID: MW-7
 Date: 9/24

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 29.73 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 17.76 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 10 feet to 30 feet
 Approximate Pump Depth: 24 Feet bgs 24 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.4	930	28.71	3.020	1.963	2.63	7.55	403.8	DTW 17.92, clear, no odor	20.1
0.7	935	28.41	3.024	1.965	2.27	7.52	411.8	DTW 17.98, clear, no odor	19.5
1.1	940	28.29	3.040	1.976	2.21	7.51	417.2	DTW 18.00, clear, no odor	15.6
1.5	945	28.28	3.045	1.979	2.13	7.51	412.7	DTW 17.98, clear, no odor	17.2

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 950 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: Jo

Well ID: MW-9
 Sample ID: MW-9
 Date: 9/24

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/in ft.
 Depth to Well Bottom: 50.9 feet 3" = 0.37 gal/in ft.
 Depth to Water: 19.89 feet 4" = 0.67 gal/in ft.
 Constructed Screen Interval: 48.5 feet to 50 feet
 Approximate Pump Depth: 40 Feet bgs 40 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
.5	1011	28.99	1.208	0.785	0.99	7.72	350.4	DEW 20.14, clear, no odor	17.2
.8	1016	28.78	1.215	0.790	0.98	7.71	354.2	DW 20.21, clear, no odor	8.3
1.1	1021	28.93	1.217	0.791	0.95	7.70	349.7	20.21, " "	25.4
	1026	28.85	1.218	0.796	0.94	7.71	350.1	20.21 " "	21.7

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security:

Locking cap?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	<u>0.0</u> PID
Bolts secured?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	<u> </u> Vacuum
Surface Seal?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	<u>10:10</u> Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: _____

Well ID: MW-14
 Sample ID: MW-14
 Date: _____

Purging Equipment: _____ Low Flow Bladder Pump
 Sampling Equipment: _____ Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: _____ 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: _____ feet 3" = 0.37 gal/lin ft.
 Depth to Water: _____ feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: _____ 15 feet to 40 feet
 Approximate Pump Depth: _____ Feet bgs _____ Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.

Total Water Volume Purged: _____ Gallons = _____ N/A Well Volumes
 Purged Dry (Y/N): _____
 Comments: # we can't open the valve, but need to be replaced.

Well Security: Locking cap? yes no Replaced? yes no _____ PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no _____ Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-18
 Sample ID: MW-18
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 21.10 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 17.74 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 5 feet to 26 feet
 Approximate Pump Depth: 17 Feet btoc

Comments: Well bottom is above screen interval

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.4	1255	28.92	2.887	1.863	2.20	7.65	98.7	DTW 17.70 clear no odor	22.7
1.0	1306	29.01	2.872	1.865	2.10	7.58	98.7	13.78 " "	23.5
1.4	1305	28.93	2.880	1.877	2.07	7.57	98.6	13.80 " "	21.7
1.7	1310	28.93	2.887	1.877	2.05	7.55	98.2	13.80 " "	20.8

Total Water Volume Purged: 1.7 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 10.8 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 1815 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JB

Well ID: MW-23
 Sample ID: MW-23
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 25.40 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 17.40 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 5 feet to 26 feet
 Approximate Pump Depth: Feet bgs 21 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.5	1142	26.05	2.784	1.809	1.23	7.60	99.7	DTW 17.87, clear, no odor	17.9
0.8	1147	26.15	2.789	1.814	1.11	7.55	99.7	DTW 17.82 " "	18.5
1.1	1152	26.29	2.797	1.818	1.16	7.50	102.2	DTW 17.83 clear, no odor	17.3
1.5	1157	26.37	2.812	1.829	1.22	7.47	104	DTW 17.84 " "	16.5

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no ~~0.00~~ PID 76.9
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 1200 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-26
 Sample ID: MW-26
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 35.35 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 19.37 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 10 feet to 36 feet
 Approximate Pump Depth: 27 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
.4	1106	26.58	2.008	1.958	1.71	7.58	102.7	19.42, clear, no odor	19.5
.7	1111	26.59	2.018	1.962	1.47	7.54	100.5	19.41 " "	17.1
1.0	1116	24.64	2.031	1.970	1.33	7.52	97.8	19.43 clear, no odor	16.3
1.5	1121	26.51	2.041	1.977	1.30	7.45	96.3	19.43 " "	16.2

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 17.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 1125 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: Jb

Well ID: MW-27
 Sample ID: MW-27
 Date: 9/18

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 35.24 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 20.13 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 10 feet to 36 feet
 Approximate Pump Depth: Feet bgs 26 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.3	1150	27.63	3.192	2.074	2.17	7.54	103.7	BTW 20.19, clear, no odor	21.7
0.6	1155	28.50	3.187	2.071	1.53	7.46	101.1	DTW 20.19, clear, no odor	22.3
1.0	1200	26.26	3.209	2.086	1.64	7.46	98.3	DTW 20.20 " "	20.7
1.4	1205	26.27	3.220	2.093	1.67	7.44	95.9	DTW 20.20 " "	17.8

Total Water Volume Purged: 1.4 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____

Well Security:

Locking cap?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<u>10.1</u> PID
Bolts secured?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<u> </u> Vacuum
Surface Seal?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Replaced?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	<u>1210</u> Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-32
 Sample ID: MW-32
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 35.65 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 21.06 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 13.5 feet to
 Approximate Pump Depth: Feet bgs 27 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.
0.3	1220	28.03	2.930	1.905	2.26	7.66	98	DTW 21.11 clear, no odor 15.7
0.6	1225	27.77	2.934	1.906	1.87	7.57	100.2	DTW 21.10 clear, no odor 13.2
1.0	1230	27.63	2.938	1.909	1.88	7.52	101.9	DTW 21.10 clear, no odor 12.1
1.5	1235	27.19	2.948	1.915	1.88	7.47	107.2	

Total Water Volume Purged: 1.5 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 11.2 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 12.42 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: 16

Well ID: MW-14I
 Sample ID: MW-14I
 Date: 9/24

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 54.20 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 19.21 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 40 feet to 55 feet
 Approximate Pump Depth: Feet bgs 47.5 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	Sub
0.5	1214	29.22	1.195	0.777	3.93	7.70	146.7	DTW 19-19, clear, no odor	27.9
0.6	1223	28.92	1.183	0.769	2.78	7.71	186.9	DTW 19-20, " "	24.8
0.9	1228	29.46	1.179	0.766	2.62	7.68	190.6	DTW 19-20, " "	19.5
1.1	1235	20.32	1.174	0.763	2.67	7.65	191.7	19.20 " "	15.1

Total Water Volume Purged: 1.1 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 1235 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-19I
 Sample ID: MW-19I
 Date: 9/24

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 54.25 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.48 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 34 feet to 54 feet
 Approximate Pump Depth: _____ Feet bgs _____ Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.
.5	825	23.80	2.748	1.785	2.31	7.40	595.4	DTW 26.55, purple
.8	840	26.79	2.777	1.757	2.45	7.39	606.5	DTW 26.54, purple
1.1	845	27.12	2.722	1.769	2.29	7.38	612.2	DTW 26.58, purple
1.5	850	27.24	2.710	1.761	2.30	7.39	616.2	26.59

Total Water Volume Purged: 1.5 Gallons = _____ Well Volumes N/A
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 900 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-6D1
 Sample ID: MW-6D1
 Date: 9/22

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 59.72 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 20.41 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 50 feet to 60 feet
 Approximate Pump Depth: Feet bgs 55 Feet btoc

Comments: Previous inconsistent dtw readings

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	hub.
0.3	8:10	26.74	0.838	0.545	2.98	7.58	157.1	DTW 20.72, clear, no odor	47.2
0.6	8:15	26.71	0.804	.522	2.64	7.58	157.1	DTW 20.75, clear, no odor	40.1
1.0	8:20	26.82	0.763	0.496	2.26	7.56	155.5	DTW 20.82, clear, no odor	25.7
1.3	8:25	26.83	0.719	0.467	2.53	7.55	154.4	DTW 20.83, clear, no odor	11.2

Total Water Volume Purged: 1.3 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 2.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 850 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: Jb

Well ID: MW-6D3
 Sample ID: MW-6D3
 Date: 9/22

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: — feet 3" = 0.37 gal/lin ft.
 Depth to Water: 25.36 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 100 feet to 110 feet
 Approximate Pump Depth: — Feet bgs 102 Feet btoc

Comments: Previous inconsistent dtw readings

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.4	848	26.44	0.474	0.308	5.90	7.66	138.7	DTW 25.72, clear, no odor	15.3
0.7	853	26.54	453.453	0.294	3.03	7.59	145.9	DTW 26.35, clear, no odor	12.7
1.0	858	26.69	0.452	0.294	3.33	7.59	146.5	DTW 26.69, clear, no odor	8.0
1.3	907	26.83	0.432	0.294	3.59	7.59	146.3	DTW 26.87, clear, no odor	8.1

Total Water Volume Purged: 1.3 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 8.0 PID
 Bolts secured? yes no Replaced? yes no — Vacuum
 Surface Seal? yes no Replaced? yes no 905 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JW

Well ID: MW-19D1
 Sample ID: MW-19D1
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 50.15 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.74 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 31 feet to 51 feet
 Approximate Pump Depth: 40 Feet bgs 40 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	ft.
0.4	1015	28.44	2.595	1.686	2.30	7.61	104.4	DTW 26.81, brown, no odor	15.3
0.6	1020	28.60	2.594	1.686	2.21	7.58	105.3	26.80, brown, no odor	12.4
1.0	1025	27.69	2.592	1.685	2.29	7.58	106.3	26.81, clear, no odor	8.1
1.3	1030	27.89	2.602	1.691	2.22	7.58	108.2	26.85, clear, no odor	9.2

Total Water Volume Purged: 1.3 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.2 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 1075 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-19D2
 Sample ID: MW-19D2
 Date: 9/21

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 71.54 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 27.12 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 60 feet to 70 feet
 Approximate Pump Depth: Feet bgs 64 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
1.3	940	24.02	1.902	1.237	1.67	7.77	119.3	DTW 28.14, clear, no odor	17.8
0.5	945	27.23	1.865	1.212	0.76	7.73	116.2	29.15, clear, no odor	25.5
0.9	950	27.29	1.836	1.194	1.91	7.74	91.1	DTW 30.19, clear, no odor	11.2
1.1	955	26.98	1.817	1.181	0.80	7.75	91.1	DTW 30.73, clear, no odor	13.4

Total Water Volume Purged: 1.1 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 1000 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-19D3
 Sample ID: MW-19D3
 Date: 9/24/15

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 99.44 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 28.64 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 92 feet to 102 feet
 Approximate Pump Depth: 96 Feet bgs 96 Feet btoc

Comments:

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	ft. b.
28.45	907	27.91	2.459	1.596	5.68	7.69	126.6	DTW 28.45, clear, no odor	33.1
.5	912	26.48	2.527	1.647	2.47	7.60	132.1	DTW 29.05, clear, no odor	26.7
.7	917	26.34	2.531	1.645	2.29	7.57	134.1	29.51, clear, no odor	24.8
.9	922	26.45	2.536	1.648	2.30	7.54	134.7	DTW 29.78, clear, no odor	20.5

Total Water Volume Purged: .9 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 925 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JB

Well ID: MW-20D1
 Sample ID: MW-20D1
 Date: 9/22

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 45.55 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.5 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 25 feet to 45 feet
 Approximate Pump Depth: Feet bgs 36 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.
0.3	1015	28.08	2.885	1.876	4.01	7.55	164.6	DTW 26.64 brown, no odor
0.6	1020	27.00	2.877	1.875	3.29	7.54	157.3	DTW 26.72 brown, no odor
1.0	1025	26.82	2.877	1.884	3.16	7.52	148.8	DTW 26.72, clear, no odor
1.4	1030	26.81	2.916	1.896	3.17	7.51	145.8	26.75 " "

18.1
18.7
15.4
15.1

Total Water Volume Purged: 1.4 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N

Comments: _____
 Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 10:35 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-20D3
 Sample ID: MW-20D3
 Date: 9/22

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: feet 3" = 0.37 gal/lin ft.
 Depth to Water: 30.86 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 90 feet to 100 feet
 Approximate Pump Depth: Feet bgs 75 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
0.4	925	27.31	0.618	0.402	2.97	7.74	148.2	DTW 30.85, clear, no odor	19.5
0.6	940	27.15	0.617	0.401	2.44	7.73	144.5	DTW 31.68, clear, no odor	11.1
0.8	945	27.59	0.617	0.401	2.31	7.72	140.6	DTW 32.8, clear, no odor	10.5
1.1	950	27.57	0.619	0.402	2.15	7.72	137.2	DTW 33.91, clear, no odor	9.8

Total Water Volume Purged: 1.1 Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 955 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-40 CMT 30
 Sample ID: MW-40 CMT 30
 Date: 9/23

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: _____ inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 28.83 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.25 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 30 feet to 30.6 feet
 Approximate Pump Depth: _____ Feet bgs 28 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
	950	32.05	2.765	1.797	3.22	8.77	-132.9	clear, no odor	51.7
	955	32.00	2.869	1.866	3.14	8.76	10.2	clear, no odor	50.2
	1000	32.12	2.870	1.871	3.25	8.79	10.1	clear, no odor	27.1
	1005	31.43	2.825	1.724	3.13	8.79	13.1		20.0

Total Water Volume Purged: _____ Gallons = N/A Well Volumes
 Purged Dry (Y/N): _____
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 1010 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JL

Well ID: MW-40 CUT 40
 Sample ID: MW-39 CUT 40
 Date: 7/20

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 40.66 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.24 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 15 feet to _____ feet
 Approximate Pump Depth: _____ Feet bgs 39 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
	1215	37.12	2.564	1.672	9.53	7.61	-57.8	clear	17.1
	1220	35.89	1.368	0.893	2.99	7.56	-217.3	" "	15.3
	1225	35.63	2.392	1.557	2.77	7.60	-152.9	" "	14.2
	1230	35.72	2.581 2.589	1.683	2.70	7.60	-96.8	" "	11.1

Total Water Volume Purged: N Gallons = _____ Well Volumes N/A
 Purged Dry (Y/N): _____
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0.0 PID
 Bolts secured? yes no Replaced? yes no Vacuum
 Surface Seal? yes no Replaced? yes no 1235 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
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 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: 085.42620.0001
 Sampler's Name: JB

Well ID: MW-40 CMT 45
 Sample ID: MW-40 CMT 45
 Date: 9/27

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: _____ inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 95 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.25 ~~44.75~~ feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: _____ 45 feet to _____ 45.6 feet
 Approximate Pump Depth: _____ Feet bgs _____ 45 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	
	1125	34.33	1.104	0.722	2.42	7.60	-202.1	clear, no odor	9.1
	1130	33.09	2.464	1.607	2.10	7.61	-56.7	" "	7.3
	1135	32.16	2.581	1.678	2.08	7.60	16.2	" "	6.1
	1145	32.08	2.612	1.698	2.37	7.58	42.4	clear, no odor	8.0

Total Water Volume Purged: _____ Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no
 Bolts secured? yes no Replaced? yes no
 Surface Seal? yes no Replaced? yes no

0.0 PID
 _____ Vacuum
~~1200~~ Sample Collection Time
1200



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JG

Well ID: MW-40 CMT ⁵⁰45
 Sample ID: MW-40 CMT 45
 Date: 9/23

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: _____ inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 50 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 20.14 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: 45 feet to 45.6 feet
 Approximate Pump Depth: _____ Feet bgs 49 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	ft
	1335	36.80	0.832	0.540	2.64	7.34	-243.0	clear, no color	13.1
	1340	34.96	1.134	0.751	3.02	7.76	-190.5	" "	17.2
	1345	34.86	1.901	1.288	2.30	7.66	-192.9	" "	15.0
	1350	34.68	2.231	1.451	2.03	7.66	-155.4	" "	14.5

Total Water Volume Purged: _____ Gallons = N/A Well Volumes
 Purged Dry (Y/N): N
 Comments: _____

Well Security: Locking cap? yes X no Replaced? yes X no 2.0 PID
 Bolts secured? X yes no Replaced? yes X no Vacuum
 Surface Seal? X yes no Replaced? yes X no 1400 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
 7115 AMIGO STREET, SUITE 100
 LAS VEGAS, NEVADA 89119
 (702) 990-9300 (702) 990-9305 fax

Project Name: Maryland Square
 Project Number: Z085000030
 Sampler's Name: JB

Well ID: MW-40 CMT 45
 Sample ID: MW-40 CMT 45 55
 Date: 9/27

Purging Equipment: Low Flow Bladder Pump
 Sampling Equipment: Low Flow Bladder Pump

Casing Type: PVC
 Casing Diameter: _____ inch 2" = 0.16 gal/lin ft.
 Depth to Well Bottom: 54.9 feet 3" = 0.37 gal/lin ft.
 Depth to Water: 26.2 feet 4" = 0.67 gal/lin ft.
 Constructed Screen Interval: _____ 45 feet to _____ 45.6 feet
 Approximate Pump Depth: _____ Feet bgs 54 Feet btoc

Comments: _____

Purged (gal.)	Time	Temp. (°C)	Conductance (mS/cm)	TDS (g/L)	DO (mg/L)	pH (SU)	ORP (mV)	Water Description: Color, Turbidity, Sheen, Etc.	feet
	1406								
	1357	35.97	2.253	1.464	2.73	7.56	-225.2	clear, no odor	23.5
	1411	32.30	1.925	1.251	3.43	7.67	-211.4	clear, no odor	22.1
	1416	31.74	2.293	1.492	3.87	7.69	-184.9	" "	17.5
	1421	31.93	2.444	1.588	4.68	7.63	-153.2	" "	15.8

Total Water Volume Purged: _____ Gallons = _____ Well Volumes
 Purged Dry (Y/N): _____
 Comments: _____

Well Security: Locking cap? yes no Replaced? yes no 0-0 PID
 Bolts secured? yes no Replaced? yes no _____ Vacuum
 Surface Seal? yes no Replaced? yes no 1450 Sample Collection Time

Maryland Square PCE Site

APPENDIX B
LABORATORY ANALYTICAL REPORTS

October 06, 2015

Adam Katlein
Cardno ATC
7115 Amigo Street Suite 100
Las Vegas, NV 89119
TEL: (702) 990-9300
FAX:

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N017040

RE: Maryland Square, LV20915008

Attention: Adam Katlein

Enclosed are the results for sample(s) received on September 25, 2015 by ASSET Laboratories .
The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in
accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the
page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Libucano for

Glen Gesmundo
QA Manager

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in
its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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P: 702.307.2659 F: 702.307.2691

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ASSET Laboratories

Date: 06-Oct-15

CLIENT: Cardno ATC
Project: Maryland Square, LV20915008
Lab Order: N017040
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N017040-001A	MW-1	Groundwater	9/24/2015 11:00:00 AM	9/25/2015	10/6/2015
N017040-002A	MW-5	Groundwater	9/22/2015 11:30:00 AM	9/25/2015	10/6/2015
N017040-003A	MW-6	Groundwater	9/24/2015 12:00:00 PM	9/25/2015	10/6/2015
N017040-004A	MW-7	Groundwater	9/24/2015 9:50:00 AM	9/25/2015	10/6/2015
N017040-005A	MW-9	Groundwater	9/24/2015 10:30:00 AM	9/25/2015	10/6/2015
N017040-006A	MW-13	Groundwater	9/22/2015 12:50:00 PM	9/25/2015	10/6/2015
N017040-007A	MW-18	Groundwater	9/21/2015 1:15:00 PM	9/25/2015	10/6/2015
N017040-008A	MW-23	Groundwater	9/21/2015 12:00:00 PM	9/25/2015	10/6/2015
N017040-009A	MW-25	Groundwater	9/18/2015 12:50:00 PM	9/25/2015	10/6/2015
N017040-010A	MW-26	Groundwater	9/21/2015 11:25:00 AM	9/25/2015	10/6/2015
N017040-011A	MW-27	Groundwater	9/18/2015 12:10:00 PM	9/25/2015	10/6/2015
N017040-012A	MW-32	Groundwater	9/21/2015 12:40:00 PM	9/25/2015	10/6/2015
N017040-013A	MW-38	Groundwater	9/18/2015 10:45:00 AM	9/25/2015	10/6/2015
N017040-014A	MW-41	Groundwater	9/18/2015 9:50:00 AM	9/25/2015	10/6/2015
N017040-015A	MW-42	Groundwater	9/18/2015 9:10:00 AM	9/25/2015	10/6/2015
N017040-016A	MW-43	Groundwater	9/18/2015 11:30:00 AM	9/25/2015	10/6/2015
N017040-017A	MW-14I	Groundwater	9/24/2015 12:35:00 PM	9/25/2015	10/6/2015
N017040-018A	MW-19I	Groundwater	9/24/2015 9:00:00 AM	9/25/2015	10/6/2015
N017040-018B	MW-19I	Groundwater	9/24/2015 9:00:00 AM	9/25/2015	10/6/2015
N017040-018C	MW-19I	Groundwater	9/24/2015 9:00:00 AM	9/25/2015	10/6/2015
N017040-019A	MW-6D1	Groundwater	9/22/2015 8:30:00 AM	9/25/2015	10/6/2015
N017040-020A	MW-6D3	Groundwater	9/22/2015 9:05:00 AM	9/25/2015	10/6/2015
N017040-021A	MW-19D1	Groundwater	9/21/2015 10:35:00 AM	9/25/2015	10/6/2015
N017040-022A	MW-19D2	Groundwater	9/21/2015 10:00:00 AM	9/25/2015	10/6/2015
N017040-023A	MW-19D3	Groundwater	9/21/2015 9:25:00 AM	9/25/2015	10/6/2015
N017040-024A	MW-20D1	Groundwater	9/22/2015 10:35:00 AM	9/25/2015	10/6/2015
N017040-025A	MW-20D3	Groundwater	9/22/2015 9:55:00 AM	9/25/2015	10/6/2015
N017040-026A	MW-40 CMT 30	Groundwater	9/23/2015 10:10:00 AM	9/25/2015	10/6/2015
N017040-026B	MW-40 CMT 30	Groundwater	9/23/2015 10:10:00 AM	9/25/2015	10/6/2015



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CLIENT: Cardno ATC
Project: Maryland Square, LV20915008
Lab Order: N017040
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N017040-026C	MW-40 CMT 30	Groundwater	9/23/2015 10:10:00 AM	9/25/2015	10/6/2015
N017040-027A	MW-40 CMT 35	Groundwater	9/23/2015 8:40:00 AM	9/25/2015	10/6/2015
N017040-028A	MW-40 CMT 40	Groundwater	9/23/2015 12:35:00 PM	9/25/2015	10/6/2015
N017040-029A	MW-40 CMT 45	Groundwater	9/23/2015 12:00:00 PM	9/25/2015	10/6/2015
N017040-029B	MW-40 CMT 45	Groundwater	9/23/2015 12:00:00 PM	9/25/2015	10/6/2015
N017040-029C	MW-40 CMT 45	Groundwater	9/23/2015 12:00:00 PM	9/25/2015	10/6/2015
N017040-030A	MW-40 CMT 50	Groundwater	9/23/2015 2:00:00 PM	9/25/2015	10/6/2015
N017040-031A	MW-40 CMT 55	Groundwater	9/23/2015 2:30:00 PM	9/25/2015	10/6/2015
N017040-031B	MW-40 CMT 55	Groundwater	9/23/2015 2:30:00 PM	9/25/2015	10/6/2015
N017040-031C	MW-40 CMT 55	Groundwater	9/23/2015 2:30:00 PM	9/25/2015	10/6/2015
N017040-032A	MW-40 CMT 60	Groundwater	9/23/2015 1:15:00 PM	9/25/2015	10/6/2015
N017040-032B	MW-40 CMT 60	Groundwater	9/23/2015 1:15:00 PM	9/25/2015	10/6/2015
N017040-032C	MW-40 CMT 60	Groundwater	9/23/2015 1:15:00 PM	9/25/2015	10/6/2015
N017040-033A	Trip Blank	Water	9/24/2015 7:30:00 AM	9/25/2015	10/6/2015
N017040-034A	Field Blank	Water	9/24/2015 12:15:00 PM	9/25/2015	10/6/2015
N017040-035A	Equipment Rinse	Water	9/24/2015 12:45:00 PM	9/25/2015	10/6/2015
N017040-036A	MW-1 DUP	Water	9/24/2015 11:00:00 AM	9/25/2015	10/6/2015



CLIENT: Cardno ATC
Project: Maryland Square, LV20915008
Lab Order: N017040

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Sample N017040-018 (MW-19I) was not analyzed for hexavalent chromium due to color of sample that might interfere with the analysis. Hexavalent Chromium analysis involves colorimetric procedure that might produce false positive results when colored samples were analyzed.



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-1
Lab Order: N017040	Collection Date: 9/24/2015 11:00:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 05:55 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 05:55 AM
Tetrachloroethene	230	1.6	5.0	µg/L	10	10/3/2015 12:57 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 05:55 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 05:55 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 05:55 AM
Surr: 1,2-Dichloroethane-d4	99.8	0	78-125	%REC	10	10/3/2015 12:57 PM
Surr: 1,2-Dichloroethane-d4	104	0	78-125	%REC	1	10/3/2015 05:55 AM
Surr: 4-Bromofluorobenzene	96.4	0	80-120	%REC	10	10/3/2015 12:57 PM
Surr: 4-Bromofluorobenzene	97.8	0	80-120	%REC	1	10/3/2015 05:55 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	10	10/3/2015 12:57 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 05:55 AM
Surr: Toluene-d8	101	0	80-120	%REC	10	10/3/2015 12:57 PM
Surr: Toluene-d8	99.7	0	80-120	%REC	1	10/3/2015 05:55 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-5
Lab Order: N017040	Collection Date: 9/22/2015 11:30:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003B	QC Batch: P15VW179			PrepDate			Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50		µg/L	1	10/4/2015 01:28 AM
cis-1,2-Dichloroethene	0.90	0.051	0.50		µg/L	1	10/4/2015 01:28 AM
Tetrachloroethene	500	1.6	5.0		µg/L	10	10/4/2015 07:48 PM
trans-1,2-Dichloroethene	ND	0.070	0.50		µg/L	1	10/4/2015 01:28 AM
Trichloroethene	2.1	0.12	0.50		µg/L	1	10/4/2015 01:28 AM
Vinyl chloride	ND	0.095	0.50		µg/L	1	10/4/2015 01:28 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125		%REC	10	10/4/2015 07:48 PM
Surr: 1,2-Dichloroethane-d4	100	0	78-125		%REC	1	10/4/2015 01:28 AM
Surr: 4-Bromofluorobenzene	96.8	0	80-120		%REC	10	10/4/2015 07:48 PM
Surr: 4-Bromofluorobenzene	95.5	0	80-120		%REC	1	10/4/2015 01:28 AM
Surr: Dibromofluoromethane	107	0	80-122		%REC	10	10/4/2015 07:48 PM
Surr: Dibromofluoromethane	106	0	80-122		%REC	1	10/4/2015 01:28 AM
Surr: Toluene-d8	101	0	80-120		%REC	10	10/4/2015 07:48 PM
Surr: Toluene-d8	100	0	80-120		%REC	1	10/4/2015 01:28 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-6
Lab Order: N017040	Collection Date: 9/24/2015 12:00:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003B	QC Batch: P15VW179			PrepDate		Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/4/2015 02:47 AM
cis-1,2-Dichloroethene	2.5	0.051	0.50	µg/L	1	10/4/2015 02:47 AM
Tetrachloroethene	3400	16	50	µg/L	100	10/4/2015 08:14 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/4/2015 02:47 AM
Trichloroethene	11	0.12	0.50	µg/L	1	10/4/2015 02:47 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/4/2015 02:47 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	100	10/4/2015 08:14 PM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	10/4/2015 02:47 AM
Surr: 4-Bromofluorobenzene	97.0	0	80-120	%REC	100	10/4/2015 08:14 PM
Surr: 4-Bromofluorobenzene	95.0	0	80-120	%REC	1	10/4/2015 02:47 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	100	10/4/2015 08:14 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/4/2015 02:47 AM
Surr: Toluene-d8	101	0	80-120	%REC	100	10/4/2015 08:14 PM
Surr: Toluene-d8	102	0	80-120	%REC	1	10/4/2015 02:47 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-7
Lab Order: N017040	Collection Date: 9/24/2015 9:50:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 02:50 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 02:50 AM
Tetrachloroethene	11	0.16	0.50	µg/L	1	10/3/2015 02:50 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 02:50 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 02:50 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 02:50 AM
Surr: 1,2-Dichloroethane-d4	103	0	78-125	%REC	1	10/3/2015 02:50 AM
Surr: 4-Bromofluorobenzene	97.2	0	80-120	%REC	1	10/3/2015 02:50 AM
Surr: Dibromofluoromethane	108	0	80-122	%REC	1	10/3/2015 02:50 AM
Surr: Toluene-d8	102	0	80-120	%REC	1	10/3/2015 02:50 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-9
Lab Order: N017040	Collection Date: 9/24/2015 10:30:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 02:24 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 02:24 AM
Tetrachloroethene	4.0	0.16	0.50	µg/L	1	10/3/2015 02:24 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 02:24 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 02:24 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 02:24 AM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	10/3/2015 02:24 AM
Surr: 4-Bromofluorobenzene	97.2	0	80-120	%REC	1	10/3/2015 02:24 AM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/3/2015 02:24 AM
Surr: Toluene-d8	102	0	80-120	%REC	1	10/3/2015 02:24 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-13
Lab Order: N017040	Collection Date: 9/22/2015 12:50:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003B	QC Batch: P15VW179	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/4/2015 02:21 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/4/2015 02:21 AM
Tetrachloroethene	770	8.2	25	µg/L	50	10/4/2015 08:40 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/4/2015 02:21 AM
Trichloroethene	4.1	0.12	0.50	µg/L	1	10/4/2015 02:21 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/4/2015 02:21 AM
Surr: 1,2-Dichloroethane-d4	99.8	0	78-125	%REC	50	10/4/2015 08:40 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/4/2015 02:21 AM
Surr: 4-Bromofluorobenzene	95.2	0	80-120	%REC	50	10/4/2015 08:40 PM
Surr: 4-Bromofluorobenzene	95.9	0	80-120	%REC	1	10/4/2015 02:21 AM
Surr: Dibromofluoromethane	107	0	80-122	%REC	50	10/4/2015 08:40 PM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/4/2015 02:21 AM
Surr: Toluene-d8	102	0	80-120	%REC	50	10/4/2015 08:40 PM
Surr: Toluene-d8	99.6	0	80-120	%REC	1	10/4/2015 02:21 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-18
Lab Order: N017040	Collection Date: 9/21/2015 1:15:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003B	QC Batch: P15VW179	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/4/2015 01:54 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/4/2015 01:54 AM
Tetrachloroethene	1000	3.3	10	µg/L	20	10/4/2015 09:06 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/4/2015 01:54 AM
Trichloroethene	2.6	0.12	0.50	µg/L	1	10/4/2015 01:54 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/4/2015 01:54 AM
Surr: 1,2-Dichloroethane-d4	98.8	0	78-125	%REC	20	10/4/2015 09:06 PM
Surr: 1,2-Dichloroethane-d4	104	0	78-125	%REC	1	10/4/2015 01:54 AM
Surr: 4-Bromofluorobenzene	94.2	0	80-120	%REC	20	10/4/2015 09:06 PM
Surr: 4-Bromofluorobenzene	95.7	0	80-120	%REC	1	10/4/2015 01:54 AM
Surr: Dibromofluoromethane	104	0	80-122	%REC	20	10/4/2015 09:06 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/4/2015 01:54 AM
Surr: Toluene-d8	101	0	80-120	%REC	20	10/4/2015 09:06 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	10/4/2015 01:54 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-23
Lab Order: N017040	Collection Date: 9/21/2015 12:00:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 08:33 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 08:33 AM
Tetrachloroethene	730	3.3	10	µg/L	20	10/3/2015 01:48 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 08:33 AM
Trichloroethene	1.6	0.12	0.50	µg/L	1	10/3/2015 08:33 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 08:33 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	20	10/3/2015 01:48 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 08:33 AM
Surr: 4-Bromofluorobenzene	95.2	0	80-120	%REC	20	10/3/2015 01:48 PM
Surr: 4-Bromofluorobenzene	96.7	0	80-120	%REC	1	10/3/2015 08:33 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	20	10/3/2015 01:48 PM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/3/2015 08:33 AM
Surr: Toluene-d8	100	0	80-120	%REC	20	10/3/2015 01:48 PM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/3/2015 08:33 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-25
Lab Order: N017040	Collection Date: 9/18/2015 12:50:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 07:25 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 07:25 AM
Tetrachloroethene	520	1.6	5.0	µg/L	10	10/2/2015 04:04 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 07:25 AM
Trichloroethene	0.70	0.12	0.50	µg/L	1	9/30/2015 07:25 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 07:25 AM
Surr: 1,2-Dichloroethane-d4	95.6	0	78-125	%REC	10	10/2/2015 04:04 PM
Surr: 1,2-Dichloroethane-d4	103	0	78-125	%REC	1	9/30/2015 07:25 AM
Surr: 4-Bromofluorobenzene	96.3	0	80-120	%REC	10	10/2/2015 04:04 PM
Surr: 4-Bromofluorobenzene	97.4	0	80-120	%REC	1	9/30/2015 07:25 AM
Surr: Dibromofluoromethane	101	0	80-122	%REC	10	10/2/2015 04:04 PM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	9/30/2015 07:25 AM
Surr: Toluene-d8	100	0	80-120	%REC	10	10/2/2015 04:04 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	9/30/2015 07:25 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-26
Lab Order: N017040	Collection Date: 9/21/2015 11:25:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 07:41 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 07:41 AM
Tetrachloroethene	670	3.3	10	µg/L	20	10/3/2015 02:13 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 07:41 AM
Trichloroethene	0.54	0.12	0.50	µg/L	1	10/3/2015 07:41 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 07:41 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	20	10/3/2015 02:13 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 07:41 AM
Surr: 4-Bromofluorobenzene	94.6	0	80-120	%REC	20	10/3/2015 02:13 PM
Surr: 4-Bromofluorobenzene	97.3	0	80-120	%REC	1	10/3/2015 07:41 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	20	10/3/2015 02:13 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 07:41 AM
Surr: Toluene-d8	99.5	0	80-120	%REC	20	10/3/2015 02:13 PM
Surr: Toluene-d8	99.8	0	80-120	%REC	1	10/3/2015 07:41 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-27
Lab Order: N017040	Collection Date: 9/18/2015 12:10:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 06:59 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 06:59 AM
Tetrachloroethene	370	1.6	5.0	µg/L	10	10/2/2015 03:38 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 06:59 AM
Trichloroethene	0.95	0.12	0.50	µg/L	1	9/30/2015 06:59 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 06:59 AM
Surr: 1,2-Dichloroethane-d4	95.4	0	78-125	%REC	10	10/2/2015 03:38 PM
Surr: 1,2-Dichloroethane-d4	104	0	78-125	%REC	1	9/30/2015 06:59 AM
Surr: 4-Bromofluorobenzene	99.5	0	80-120	%REC	10	10/2/2015 03:38 PM
Surr: 4-Bromofluorobenzene	98.3	0	80-120	%REC	1	9/30/2015 06:59 AM
Surr: Dibromofluoromethane	102	0	80-122	%REC	10	10/2/2015 03:38 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	1	9/30/2015 06:59 AM
Surr: Toluene-d8	101	0	80-120	%REC	10	10/2/2015 03:38 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	9/30/2015 06:59 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-32
Lab Order: N017040	Collection Date: 9/21/2015 12:40:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 08:07 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 08:07 AM
Tetrachloroethene	590	3.3	10	µg/L	20	10/3/2015 02:39 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 08:07 AM
Trichloroethene	1.4	0.12	0.50	µg/L	1	10/3/2015 08:07 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 08:07 AM
Surr: 1,2-Dichloroethane-d4	99.8	0	78-125	%REC	20	10/3/2015 02:39 PM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	10/3/2015 08:07 AM
Surr: 4-Bromofluorobenzene	95.2	0	80-120	%REC	20	10/3/2015 02:39 PM
Surr: 4-Bromofluorobenzene	95.6	0	80-120	%REC	1	10/3/2015 08:07 AM
Surr: Dibromofluoromethane	104	0	80-122	%REC	20	10/3/2015 02:39 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 08:07 AM
Surr: Toluene-d8	101	0	80-120	%REC	20	10/3/2015 02:39 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	10/3/2015 08:07 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-38
Lab Order: N017040	Collection Date: 9/18/2015 10:45:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 06:33 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 06:33 AM
Tetrachloroethene	8.1	0.16	0.50	µg/L	1	9/30/2015 06:33 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 06:33 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	9/30/2015 06:33 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 06:33 AM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	9/30/2015 06:33 AM
Surr: 4-Bromofluorobenzene	97.1	0	80-120	%REC	1	9/30/2015 06:33 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	9/30/2015 06:33 AM
Surr: Toluene-d8	99.2	0	80-120	%REC	1	9/30/2015 06:33 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-41
Lab Order: N017040	Collection Date: 9/18/2015 9:50:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174			PrepDate		Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 06:07 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 06:07 AM
Tetrachloroethene	3.5	0.16	0.50	µg/L	1	9/30/2015 06:07 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 06:07 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	9/30/2015 06:07 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 06:07 AM
Surr: 1,2-Dichloroethane-d4	105	0	78-125	%REC	1	9/30/2015 06:07 AM
Surr: 4-Bromofluorobenzene	97.8	0	80-120	%REC	1	9/30/2015 06:07 AM
Surr: Dibromofluoromethane	108	0	80-122	%REC	1	9/30/2015 06:07 AM
Surr: Toluene-d8	100	0	80-120	%REC	1	9/30/2015 06:07 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-42
Lab Order: N017040	Collection Date: 9/18/2015 9:10:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 05:41 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 05:41 AM
Tetrachloroethene	ND	0.16	0.50	µg/L	1	9/30/2015 05:41 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 05:41 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	9/30/2015 05:41 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 05:41 AM
Surr: 1,2-Dichloroethane-d4	105	0	78-125	%REC	1	9/30/2015 05:41 AM
Surr: 4-Bromofluorobenzene	97.9	0	80-120	%REC	1	9/30/2015 05:41 AM
Surr: Dibromofluoromethane	107	0	80-122	%REC	1	9/30/2015 05:41 AM
Surr: Toluene-d8	101	0	80-120	%REC	1	9/30/2015 05:41 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-43
Lab Order: N017040	Collection Date: 9/18/2015 11:30:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_150929B	QC Batch: P15VW174	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	9/30/2015 05:15 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	9/30/2015 05:15 AM
Tetrachloroethene	ND	0.16	0.50	µg/L	1	9/30/2015 05:15 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	9/30/2015 05:15 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	9/30/2015 05:15 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	9/30/2015 05:15 AM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	9/30/2015 05:15 AM
Surr: 4-Bromofluorobenzene	98.2	0	80-120	%REC	1	9/30/2015 05:15 AM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	9/30/2015 05:15 AM
Surr: Toluene-d8	99.4	0	80-120	%REC	1	9/30/2015 05:15 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-14I
Lab Order: N017040	Collection Date: 9/24/2015 12:35:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003B	QC Batch: P15VW179	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.44	2.5	µg/L	5	10/4/2015 03:14 AM
cis-1,2-Dichloroethene	8.3	0.26	2.5	µg/L	5	10/4/2015 03:14 AM
Tetrachloroethene	9300	33	100	µg/L	200	10/4/2015 09:32 PM
trans-1,2-Dichloroethene	ND	0.35	2.5	µg/L	5	10/4/2015 03:14 AM
Trichloroethene	23	0.62	2.5	µg/L	5	10/4/2015 03:14 AM
Vinyl chloride	ND	0.48	2.5	µg/L	5	10/4/2015 03:14 AM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	200	10/4/2015 09:32 PM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	5	10/4/2015 03:14 AM
Surr: 4-Bromofluorobenzene	95.3	0	80-120	%REC	200	10/4/2015 09:32 PM
Surr: 4-Bromofluorobenzene	95.2	0	80-120	%REC	5	10/4/2015 03:14 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	200	10/4/2015 09:32 PM
Surr: Dibromofluoromethane	105	0	80-122	%REC	5	10/4/2015 03:14 AM
Surr: Toluene-d8	102	0	80-120	%REC	200	10/4/2015 09:32 PM
Surr: Toluene-d8	101	0	80-120	%REC	5	10/4/2015 03:14 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC
Lab Order: N017040
Project: Maryland Square, LV20915008
Lab ID: N017040-018

Client Sample ID: MW-19I
Collection Date: 9/24/2015 9:00:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176				PrepDate	Analyst: QBM	
1,1-Dichloroethene	ND	0.087	0.50		µg/L	1	10/2/2015 07:28 PM
cis-1,2-Dichloroethene	ND	0.051	0.50		µg/L	1	10/2/2015 07:28 PM
Tetrachloroethene	ND	0.16	0.50		µg/L	1	10/2/2015 07:28 PM
trans-1,2-Dichloroethene	ND	0.070	0.50		µg/L	1	10/2/2015 07:28 PM
Trichloroethene	ND	0.12	0.50		µg/L	1	10/2/2015 07:28 PM
Vinyl chloride	ND	0.095	0.50		µg/L	1	10/2/2015 07:28 PM
Surr: 1,2-Dichloroethane-d4	97.8	0	78-125		%REC	1	10/2/2015 07:28 PM
Surr: 4-Bromofluorobenzene	98.0	0	80-120		%REC	1	10/2/2015 07:28 PM
Surr: Dibromofluoromethane	103	0	80-122		%REC	1	10/2/2015 07:28 PM
Surr: Toluene-d8	98.2	0	80-120		%REC	1	10/2/2015 07:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_150930A	QC Batch: 52554				PrepDate	9/29/2015	Analyst: CEI
Arsenic	0.71	0.079	0.50		µg/L	5	9/30/2015 12:01 PM
Chromium	170	0.43	5.0		µg/L	5	9/30/2015 12:01 PM
Manganese	6300	23	500		µg/L	1000	10/1/2015 03:39 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-6D1
Lab Order: N017040	Collection Date: 9/22/2015 8:30:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/2/2015 07:02 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/2/2015 07:02 PM
Tetrachloroethene	39	0.16	0.50	µg/L	1	10/2/2015 07:02 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/2/2015 07:02 PM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/2/2015 07:02 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/2/2015 07:02 PM
Surr: 1,2-Dichloroethane-d4	95.8	0	78-125	%REC	1	10/2/2015 07:02 PM
Surr: 4-Bromofluorobenzene	97.2	0	80-120	%REC	1	10/2/2015 07:02 PM
Surr: Dibromofluoromethane	103	0	80-122	%REC	1	10/2/2015 07:02 PM
Surr: Toluene-d8	99.2	0	80-120	%REC	1	10/2/2015 07:02 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-6D3
Lab Order: N017040	Collection Date: 9/22/2015 9:05:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151003A	QC Batch: P15VW178	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 12:31 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 12:31 PM
Tetrachloroethene	30	0.16	0.50	µg/L	1	10/3/2015 12:31 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 12:31 PM
Trichloroethene	0.68	0.12	0.50	µg/L	1	10/3/2015 12:31 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 12:31 PM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	1	10/3/2015 12:31 PM
Surr: 4-Bromofluorobenzene	96.1	0	80-120	%REC	1	10/3/2015 12:31 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 12:31 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	10/3/2015 12:31 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-19D1
Lab Order: N017040	Collection Date: 9/21/2015 10:35:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/2/2015 09:11 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/2/2015 09:11 PM
Tetrachloroethene	820	3.3	10	µg/L	20	10/3/2015 03:04 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/2/2015 09:11 PM
Trichloroethene	5.3	0.12	0.50	µg/L	1	10/2/2015 09:11 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/2/2015 09:11 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	20	10/3/2015 03:04 PM
Surr: 1,2-Dichloroethane-d4	99.0	0	78-125	%REC	1	10/2/2015 09:11 PM
Surr: 4-Bromofluorobenzene	95.8	0	80-120	%REC	20	10/3/2015 03:04 PM
Surr: 4-Bromofluorobenzene	97.6	0	80-120	%REC	1	10/2/2015 09:11 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	20	10/3/2015 03:04 PM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/2/2015 09:11 PM
Surr: Toluene-d8	101	0	80-120	%REC	20	10/3/2015 03:04 PM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/2/2015 09:11 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC

Client Sample ID: MW-19D2

Lab Order: N017040

Collection Date: 9/21/2015 10:00:00 AM

Project: Maryland Square, LV20915008

Matrix: GROUNDWATER

Lab ID: N017040-022

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176				PrepDate	Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/2/2015 08:45 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/2/2015 08:45 PM
Tetrachloroethene	110	0.82	2.5	µg/L	5	10/3/2015 03:30 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/2/2015 08:45 PM
Trichloroethene	0.94	0.12	0.50	µg/L	1	10/2/2015 08:45 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/2/2015 08:45 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	5	10/3/2015 03:30 PM
Surr: 1,2-Dichloroethane-d4	99.2	0	78-125	%REC	1	10/2/2015 08:45 PM
Surr: 4-Bromofluorobenzene	97.2	0	80-120	%REC	5	10/3/2015 03:30 PM
Surr: 4-Bromofluorobenzene	96.4	0	80-120	%REC	1	10/2/2015 08:45 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	5	10/3/2015 03:30 PM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/2/2015 08:45 PM
Surr: Toluene-d8	101	0	80-120	%REC	5	10/3/2015 03:30 PM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/2/2015 08:45 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-19D3
Lab Order: N017040	Collection Date: 9/21/2015 9:25:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/2/2015 07:53 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/2/2015 07:53 PM
Tetrachloroethene	590	1.6	5.0	µg/L	10	10/3/2015 03:56 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/2/2015 07:53 PM
Trichloroethene	4.6	0.12	0.50	µg/L	1	10/2/2015 07:53 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/2/2015 07:53 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	10	10/3/2015 03:56 PM
Surr: 1,2-Dichloroethane-d4	99.0	0	78-125	%REC	1	10/2/2015 07:53 PM
Surr: 4-Bromofluorobenzene	97.1	0	80-120	%REC	10	10/3/2015 03:56 PM
Surr: 4-Bromofluorobenzene	98.7	0	80-120	%REC	1	10/2/2015 07:53 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	10	10/3/2015 03:56 PM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/2/2015 07:53 PM
Surr: Toluene-d8	102	0	80-120	%REC	10	10/3/2015 03:56 PM
Surr: Toluene-d8	102	0	80-120	%REC	1	10/2/2015 07:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-20D1
Lab Order: N017040	Collection Date: 9/22/2015 10:35:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-024	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 06:48 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 06:48 AM
Tetrachloroethene	550	1.6	5.0	µg/L	10	10/3/2015 04:21 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 06:48 AM
Trichloroethene	2.0	0.12	0.50	µg/L	1	10/3/2015 06:48 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 06:48 AM
Surr: 1,2-Dichloroethane-d4	103	0	78-125	%REC	10	10/3/2015 04:21 PM
Surr: 1,2-Dichloroethane-d4	103	0	78-125	%REC	1	10/3/2015 06:48 AM
Surr: 4-Bromofluorobenzene	96.6	0	80-120	%REC	10	10/3/2015 04:21 PM
Surr: 4-Bromofluorobenzene	97.1	0	80-120	%REC	1	10/3/2015 06:48 AM
Surr: Dibromofluoromethane	107	0	80-122	%REC	10	10/3/2015 04:21 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 06:48 AM
Surr: Toluene-d8	100	0	80-120	%REC	10	10/3/2015 04:21 PM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/3/2015 06:48 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-20D3
Lab Order: N017040	Collection Date: 9/22/2015 9:55:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-025	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002A	QC Batch: P15VW176	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/2/2015 06:37 PM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/2/2015 06:37 PM
Tetrachloroethene	8.3	0.16	0.50	µg/L	1	10/2/2015 06:37 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/2/2015 06:37 PM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/2/2015 06:37 PM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/2/2015 06:37 PM
Surr: 1,2-Dichloroethane-d4	97.2	0	78-125	%REC	1	10/2/2015 06:37 PM
Surr: 4-Bromofluorobenzene	98.8	0	80-120	%REC	1	10/2/2015 06:37 PM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/2/2015 06:37 PM
Surr: Toluene-d8	101	0	80-120	%REC	1	10/2/2015 06:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC

Client Sample ID: MW-40 CMT 30

Lab Order: N017040

Collection Date: 9/23/2015 10:10:00 AM

Project: Maryland Square, LV20915008

Matrix: GROUNDWATER

Lab ID: N017040-026

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177				PrepDate	Analyst: QBM	
1,1-Dichloroethene	ND	0.087	0.50		µg/L	1	10/3/2015 03:43 AM
cis-1,2-Dichloroethene	ND	0.051	0.50		µg/L	1	10/3/2015 03:43 AM
Tetrachloroethene	5.3	0.16	0.50		µg/L	1	10/3/2015 03:43 AM
trans-1,2-Dichloroethene	ND	0.070	0.50		µg/L	1	10/3/2015 03:43 AM
Trichloroethene	ND	0.12	0.50		µg/L	1	10/3/2015 03:43 AM
Vinyl chloride	ND	0.095	0.50		µg/L	1	10/3/2015 03:43 AM
Surr: 1,2-Dichloroethane-d4	102	0	78-125		%REC	1	10/3/2015 03:43 AM
Surr: 4-Bromofluorobenzene	97.1	0	80-120		%REC	1	10/3/2015 03:43 AM
Surr: Dibromofluoromethane	107	0	80-122		%REC	1	10/3/2015 03:43 AM
Surr: Toluene-d8	102	0	80-120		%REC	1	10/3/2015 03:43 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 35
Lab Order: N017040	Collection Date: 9/23/2015 8:40:00 AM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-027	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 03:16 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 03:16 AM
Tetrachloroethene	19	0.16	0.50	µg/L	1	10/3/2015 03:16 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 03:16 AM
Trichloroethene	1.5	0.12	0.50	µg/L	1	10/3/2015 03:16 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 03:16 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 03:16 AM
Surr: 4-Bromofluorobenzene	95.6	0	80-120	%REC	1	10/3/2015 03:16 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/3/2015 03:16 AM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/3/2015 03:16 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 40
Lab Order: N017040	Collection Date: 9/23/2015 12:35:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-028	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 04:09 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 04:09 AM
Tetrachloroethene	280	1.6	5.0	µg/L	10	10/3/2015 05:12 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 04:09 AM
Trichloroethene	5.9	0.12	0.50	µg/L	1	10/3/2015 04:09 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 04:09 AM
Surr: 1,2-Dichloroethane-d4	98.3	0	78-125	%REC	10	10/3/2015 05:12 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 04:09 AM
Surr: 4-Bromofluorobenzene	95.2	0	80-120	%REC	10	10/3/2015 05:12 PM
Surr: 4-Bromofluorobenzene	95.7	0	80-120	%REC	1	10/3/2015 04:09 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	10	10/3/2015 05:12 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1	10/3/2015 04:09 AM
Surr: Toluene-d8	101	0	80-120	%REC	10	10/3/2015 05:12 PM
Surr: Toluene-d8	97.3	0	80-120	%REC	1	10/3/2015 04:09 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 45
Lab Order: N017040	Collection Date: 9/23/2015 12:00:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-029	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate			Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1 10/3/2015 04:35 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1 10/3/2015 04:35 AM
Tetrachloroethene	310	1.6	5.0	µg/L	10 10/3/2015 05:38 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1 10/3/2015 04:35 AM
Trichloroethene	2.8	0.12	0.50	µg/L	1 10/3/2015 04:35 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1 10/3/2015 04:35 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	10 10/3/2015 05:38 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1 10/3/2015 04:35 AM
Surr: 4-Bromofluorobenzene	96.2	0	80-120	%REC	10 10/3/2015 05:38 PM
Surr: 4-Bromofluorobenzene	98.5	0	80-120	%REC	1 10/3/2015 04:35 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	10 10/3/2015 05:38 PM
Surr: Dibromofluoromethane	106	0	80-122	%REC	1 10/3/2015 04:35 AM
Surr: Toluene-d8	100	0	80-120	%REC	10 10/3/2015 05:38 PM
Surr: Toluene-d8	99.8	0	80-120	%REC	1 10/3/2015 04:35 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 50
Lab Order: N017040	Collection Date: 9/23/2015 2:00:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-030	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 05:02 AM
cis-1,2-Dichloroethene	1.2	0.051	0.50	µg/L	1	10/3/2015 05:02 AM
Tetrachloroethene	280	1.6	5.0	µg/L	10	10/3/2015 06:04 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 05:02 AM
Trichloroethene	10	0.12	0.50	µg/L	1	10/3/2015 05:02 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 05:02 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	10	10/3/2015 06:04 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 05:02 AM
Surr: 4-Bromofluorobenzene	97.4	0	80-120	%REC	10	10/3/2015 06:04 PM
Surr: 4-Bromofluorobenzene	97.1	0	80-120	%REC	1	10/3/2015 05:02 AM
Surr: Dibromofluoromethane	108	0	80-122	%REC	10	10/3/2015 06:04 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	1	10/3/2015 05:02 AM
Surr: Toluene-d8	101	0	80-120	%REC	10	10/3/2015 06:04 PM
Surr: Toluene-d8	99.7	0	80-120	%REC	1	10/3/2015 05:02 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 55
Lab Order: N017040	Collection Date: 9/23/2015 2:30:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 07:14 AM
cis-1,2-Dichloroethene	1.2	0.051	0.50	µg/L	1	10/3/2015 07:14 AM
Tetrachloroethene	520	1.6	5.0	µg/L	10	10/3/2015 06:29 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 07:14 AM
Trichloroethene	5.1	0.12	0.50	µg/L	1	10/3/2015 07:14 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 07:14 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	10	10/3/2015 06:29 PM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 07:14 AM
Surr: 4-Bromofluorobenzene	95.4	0	80-120	%REC	10	10/3/2015 06:29 PM
Surr: 4-Bromofluorobenzene	97.4	0	80-120	%REC	1	10/3/2015 07:14 AM
Surr: Dibromofluoromethane	108	0	80-122	%REC	10	10/3/2015 06:29 PM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/3/2015 07:14 AM
Surr: Toluene-d8	100	0	80-120	%REC	10	10/3/2015 06:29 PM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/3/2015 07:14 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-40 CMT 60
Lab Order: N017040	Collection Date: 9/23/2015 1:15:00 PM
Project: Maryland Square, LV20915008	Matrix: GROUNDWATER
Lab ID: N017040-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 05:28 AM
cis-1,2-Dichloroethene	2.7	0.051	0.50	µg/L	1	10/3/2015 05:28 AM
Tetrachloroethene	690	3.3	10	µg/L	20	10/4/2015 01:01 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 05:28 AM
Trichloroethene	12	0.12	0.50	µg/L	1	10/3/2015 05:28 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 05:28 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	20	10/4/2015 01:01 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	1	10/3/2015 05:28 AM
Surr: 4-Bromofluorobenzene	96.6	0	80-120	%REC	20	10/4/2015 01:01 AM
Surr: 4-Bromofluorobenzene	96.6	0	80-120	%REC	1	10/3/2015 05:28 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/3/2015 05:28 AM
Surr: Dibromofluoromethane	107	0	80-122	%REC	20	10/4/2015 01:01 AM
Surr: Toluene-d8	100	0	80-120	%REC	20	10/4/2015 01:01 AM
Surr: Toluene-d8	100	0	80-120	%REC	1	10/3/2015 05:28 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_150929A	QC Batch: R103352	PrepDate	Analyst: RB			
Hexavalent Chromium	130	0.30	4.0	µg/L	20	9/29/2015 04:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_150930A	QC Batch: 52554	PrepDate	9/29/2015	Analyst: CEI		
Arsenic	0.96	0.079	0.50	µg/L	5	9/30/2015 11:50 AM
Chromium	130	0.43	5.0	µg/L	5	9/30/2015 11:50 AM
Manganese	9.8	0.11	2.5	µg/L	5	10/1/2015 03:45 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: Trip Blank
Lab Order: N017040	Collection Date: 9/24/2015 7:30:00 AM
Project: Maryland Square, LV20915008	Matrix: WATER
Lab ID: N017040-033	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 01:05 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 01:05 AM
Tetrachloroethene	ND	0.16	0.50	µg/L	1	10/3/2015 01:05 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 01:05 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 01:05 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 01:05 AM
Surr: 1,2-Dichloroethane-d4	101	0	78-125	%REC	1	10/3/2015 01:05 AM
Surr: 4-Bromofluorobenzene	96.8	0	80-120	%REC	1	10/3/2015 01:05 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1	10/3/2015 01:05 AM
Surr: Toluene-d8	99.0	0	80-120	%REC	1	10/3/2015 01:05 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: Field Blank
Lab Order: N017040	Collection Date: 9/24/2015 12:15:00 PM
Project: Maryland Square, LV20915008	Matrix: WATER
Lab ID: N017040-034	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 01:31 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 01:31 AM
Tetrachloroethene	ND	0.16	0.50	µg/L	1	10/3/2015 01:31 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 01:31 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 01:31 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 01:31 AM
Surr: 1,2-Dichloroethane-d4	99.6	0	78-125	%REC	1	10/3/2015 01:31 AM
Surr: 4-Bromofluorobenzene	96.9	0	80-120	%REC	1	10/3/2015 01:31 AM
Surr: Dibromofluoromethane	104	0	80-122	%REC	1	10/3/2015 01:31 AM
Surr: Toluene-d8	101	0	80-120	%REC	1	10/3/2015 01:31 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: Equipment Rinse
Lab Order: N017040	Collection Date: 9/24/2015 12:45:00 PM
Project: Maryland Square, LV20915008	Matrix: WATER
Lab ID: N017040-035	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177			PrepDate			Analyst: QBM
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1		10/3/2015 01:57 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1		10/3/2015 01:57 AM
Tetrachloroethene	ND	0.16	0.50	µg/L	1		10/3/2015 01:57 AM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1		10/3/2015 01:57 AM
Trichloroethene	ND	0.12	0.50	µg/L	1		10/3/2015 01:57 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1		10/3/2015 01:57 AM
Surr: 1,2-Dichloroethane-d4	98.3	0	78-125	%REC	1		10/3/2015 01:57 AM
Surr: 4-Bromofluorobenzene	98.2	0	80-120	%REC	1		10/3/2015 01:57 AM
Surr: Dibromofluoromethane	105	0	80-122	%REC	1		10/3/2015 01:57 AM
Surr: Toluene-d8	100	0	80-120	%REC	1		10/3/2015 01:57 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Oct-15

CLIENT: Cardno ATC	Client Sample ID: MW-1 DUP
Lab Order: N017040	Collection Date: 9/24/2015 11:00:00 AM
Project: Maryland Square, LV20915008	Matrix: WATER
Lab ID: N017040-036	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_151002B	QC Batch: P15VW177	PrepDate	Analyst: QBM			
1,1-Dichloroethene	ND	0.087	0.50	µg/L	1	10/3/2015 06:21 AM
cis-1,2-Dichloroethene	ND	0.051	0.50	µg/L	1	10/3/2015 06:21 AM
Tetrachloroethene	220	1.6	5.0	µg/L	10	10/3/2015 01:22 PM
trans-1,2-Dichloroethene	ND	0.070	0.50	µg/L	1	10/3/2015 06:21 AM
Trichloroethene	ND	0.12	0.50	µg/L	1	10/3/2015 06:21 AM
Vinyl chloride	ND	0.095	0.50	µg/L	1	10/3/2015 06:21 AM
Surr: 1,2-Dichloroethane-d4	100	0	78-125	%REC	10	10/3/2015 01:22 PM
Surr: 1,2-Dichloroethane-d4	102	0	78-125	%REC	1	10/3/2015 06:21 AM
Surr: 4-Bromofluorobenzene	96.5	0	80-120	%REC	10	10/3/2015 01:22 PM
Surr: 4-Bromofluorobenzene	96.6	0	80-120	%REC	1	10/3/2015 06:21 AM
Surr: Dibromofluoromethane	106	0	80-122	%REC	10	10/3/2015 01:22 PM
Surr: Dibromofluoromethane	107	0	80-122	%REC	1	10/3/2015 06:21 AM
Surr: Toluene-d8	100	0	80-120	%REC	10	10/3/2015 01:22 PM
Surr: Toluene-d8	102	0	80-120	%REC	1	10/3/2015 06:21 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W

Sample ID MB-R103352	SampType: MBLK	TestCode: 218.6_W	Units: µg/L	Prep Date:	RunNo: 103352
Client ID: PBW	Batch ID: R103352	TestNo: EPA 218.6		Analysis Date: 9/29/2015	SeqNo: 2094630
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-R103352	SampType: LCS	TestCode: 218.6_W	Units: µg/L	Prep Date:	RunNo: 103352
Client ID: LCSW	Batch ID: R103352	TestNo: EPA 218.6		Analysis Date: 9/29/2015	SeqNo: 2094631
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	4.865	0.20	5.000	0	97.3 90 110

Sample ID N017040-032CDUP	SampType: DUP	TestCode: 218.6_W	Units: µg/L	Prep Date:	RunNo: 103352
Client ID: ZZZZZ	Batch ID: R103352	TestNo: EPA 218.6		Analysis Date: 9/29/2015	SeqNo: 2094633
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	127.714	4.0			129.8 1.62 20

Sample ID N017040-032CMS	SampType: MS	TestCode: 218.6_W	Units: µg/L	Prep Date:	RunNo: 103352
Client ID: ZZZZZ	Batch ID: R103352	TestNo: EPA 218.6		Analysis Date: 9/29/2015	SeqNo: 2094634
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	224.146	4.0	100.0	129.8	94.3 90 110

Sample ID N017040-032CMSD	SampType: MSD	TestCode: 218.6_W	Units: µg/L	Prep Date:	RunNo: 103352
Client ID: ZZZZZ	Batch ID: R103352	TestNo: EPA 218.6		Analysis Date: 9/29/2015	SeqNo: 2094635
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	225.512	4.0	100.0	129.8	95.7 90 110 224.1 0.608 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS

Sample ID MB-52554	SampType: MBLK	TestCode: 6020_DIS	Units: µg/L	Prep Date: 9/29/2015	RunNo: 103362						
Client ID: PBW	Batch ID: 52554	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/30/2015	SeqNo: 2095112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.034	0.10									
Chromium	ND	1.0									
Manganese	0.031	0.50									

Sample ID LCS-52554	SampType: LCS	TestCode: 6020_DIS	Units: µg/L	Prep Date: 9/29/2015	RunNo: 103362						
Client ID: LCSW	Batch ID: 52554	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/30/2015	SeqNo: 2095113						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.839	0.10	10.00	0	108	85	115				
Chromium	10.724	1.0	10.00	0	107	85	115				
Manganese	108.787	0.50	100.0	0	109	85	115				

Sample ID N017061-001B-MS	SampType: MS	TestCode: 6020_DIS	Units: µg/L	Prep Date: 9/29/2015	RunNo: 103362						
Client ID: ZZZZZ	Batch ID: 52554	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/30/2015	SeqNo: 2095117						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	17.554	0.10	10.00	6.803	108	75	125				
Chromium	10.770	1.0	10.00	0.2859	105	75	125				
Manganese	150.002	0.50	100.0	45.29	105	75	125				

Sample ID N017061-001B-MSD	SampType: MSD	TestCode: 6020_DIS	Units: µg/L	Prep Date: 9/29/2015	RunNo: 103362						
Client ID: ZZZZZ	Batch ID: 52554	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/30/2015	SeqNo: 2095118						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	18.029	0.10	10.00	6.803	112	75	125	17.55	2.67	20	
Chromium	10.754	1.0	10.00	0.2859	105	75	125	10.77	0.142	20	
Manganese	149.993	0.50	100.0	45.29	105	75	125	150.0	0.00561	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID P150929LCS2	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103360						
Client ID: LCSW	Batch ID: P15VW174	TestNo: EPA 8260B		Analysis Date: 9/29/2015	SeqNo: 2094795						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	19.700	0.50	20.00	0	98.5	71	127				
cis-1,2-Dichloroethene	20.240	0.50	20.00	0	101	80	120				
Tetrachloroethene	19.210	0.50	20.00	0	96.0	80	120				
trans-1,2-Dichloroethene	20.310	0.50	20.00	0	102	78	126				
Trichloroethene	20.460	0.50	20.00	0	102	80	120				
Vinyl chloride	17.850	0.50	20.00	0	89.2	70	135				
Surr: 1,2-Dichloroethane-d4	25.660		25.00		103	78	125				
Surr: 4-Bromofluorobenzene	24.830		25.00		99.3	80	120				
Surr: Dibromofluoromethane	26.550		25.00		106	80	122				
Surr: Toluene-d8	25.360		25.00		101	80	120				

Sample ID P150929LCS2	SampType: LCS2	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103360						
Client ID: LCSS02	Batch ID: P15VW174	TestNo: EPA 8260B		Analysis Date: 9/29/2015	SeqNo: 2094796						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	19.710	0.50	20.00	0	98.6	71	127	19.70	0.0507	20
cis-1,2-Dichloroethene	20.100	0.50	20.00	0	101	80	120	20.24	0.694	20
Tetrachloroethene	19.150	0.50	20.00	0	95.8	80	120	19.21	0.313	20
trans-1,2-Dichloroethene	19.620	0.50	20.00	0	98.1	78	126	20.31	3.46	20
Trichloroethene	20.470	0.50	20.00	0	102	80	120	20.46	0.0489	20
Vinyl chloride	18.110	0.50	20.00	0	90.6	70	135	17.85	1.45	20
Surr: 1,2-Dichloroethane-d4	25.800		25.00		103	78	125		0	
Surr: 4-Bromofluorobenzene	24.980		25.00		99.9	80	120		0	
Surr: Dibromofluoromethane	26.360		25.00		105	80	122		0	
Surr: Toluene-d8	25.370		25.00		101	80	120		0	

Sample ID P150929MB6	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103360						
Client ID: PBW	Batch ID: P15VW174	TestNo: EPA 8260B		Analysis Date: 9/29/2015	SeqNo: 2094797						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID: P150929MB6	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103360						
Client ID: PBW	Batch ID: P15VW174	TestNo: EPA 8260B		Analysis Date: 9/29/2015	SeqNo: 2094797						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	26.090		25.00		104	78	125				
Surr: 4-Bromofluorobenzene	24.610		25.00		98.4	80	120				
Surr: Dibromofluoromethane	27.090		25.00		108	80	122				
Surr: Toluene-d8	25.370		25.00		101	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID P151002LCS	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103404						
Client ID: LCSW	Batch ID: P15VW176	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	18.680	0.50	20.00	0	93.4	71	127				
cis-1,2-Dichloroethene	19.120	0.50	20.00	0	95.6	80	120				
Tetrachloroethene	19.220	0.50	20.00	0	96.1	80	120				
trans-1,2-Dichloroethene	19.580	0.50	20.00	0	97.9	78	126				
Trichloroethene	20.030	0.50	20.00	0	100	80	120				
Vinyl chloride	17.830	0.50	20.00	0	89.2	70	135				
Surr: 1,2-Dichloroethane-d4	24.090		25.00		96.4	78	125				
Surr: 4-Bromofluorobenzene	25.180		25.00		101	80	120				
Surr: Dibromofluoromethane	25.560		25.00		102	80	122				
Surr: Toluene-d8	25.070		25.00		100	80	120				

Sample ID P151002LCSD	SampType: LCSD	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103404						
Client ID: LCSS02	Batch ID: P15VW176	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	18.710	0.50	20.00	0	93.6	71	127	18.68	0.160	20	
cis-1,2-Dichloroethene	19.180	0.50	20.00	0	95.9	80	120	19.12	0.313	20	
Tetrachloroethene	19.500	0.50	20.00	0	97.5	80	120	19.22	1.45	20	
trans-1,2-Dichloroethene	19.470	0.50	20.00	0	97.4	78	126	19.58	0.563	20	
Trichloroethene	20.280	0.50	20.00	0	101	80	120	20.03	1.24	20	
Vinyl chloride	17.620	0.50	20.00	0	88.1	70	135	17.83	1.18	20	
Surr: 1,2-Dichloroethane-d4	24.120		25.00		96.5	78	125		0		
Surr: 4-Bromofluorobenzene	24.690		25.00		98.8	80	120		0		
Surr: Dibromofluoromethane	25.390		25.00		102	80	122		0		
Surr: Toluene-d8	25.380		25.00		102	80	120		0		

Sample ID P151002MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103404						
Client ID: PBW	Batch ID: P15VW176	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID: P151002MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103404						
Client ID: PBW	Batch ID: P15VW176	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.370		25.00		97.5	78	125				
Surr: 4-Bromofluorobenzene	24.650		25.00		98.6	80	120				
Surr: Dibromofluoromethane	25.690		25.00		103	80	122				
Surr: Toluene-d8	24.850		25.00		99.4	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID P151002LCS2	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103405						
Client ID: LCSW	Batch ID: P15VW177	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098445						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	19.050	0.50	20.00	0	95.2	71	127				
cis-1,2-Dichloroethene	18.390	0.50	20.00	0	92.0	80	120				
Tetrachloroethene	19.220	0.50	20.00	0	96.1	80	120				
trans-1,2-Dichloroethene	20.290	0.50	20.00	0	101	78	126				
Trichloroethene	19.970	0.50	20.00	0	99.8	80	120				
Vinyl chloride	17.720	0.50	20.00	0	88.6	70	135				
Surr: 1,2-Dichloroethane-d4	24.790		25.00		99.2	78	125				
Surr: 4-Bromofluorobenzene	24.630		25.00		98.5	80	120				
Surr: Dibromofluoromethane	25.100		25.00		100	80	122				
Surr: Toluene-d8	25.270		25.00		101	80	120				

Sample ID P151002LCS2	SampType: LCS2	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103405						
Client ID: LCSS02	Batch ID: P15VW177	TestNo: EPA 8260B		Analysis Date: 10/2/2015	SeqNo: 2098446						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	19.030	0.50	20.00	0	95.2	71	127	19.05	0.105	20	
cis-1,2-Dichloroethene	18.780	0.50	20.00	0	93.9	80	120	18.39	2.10	20	
Tetrachloroethene	19.830	0.50	20.00	0	99.2	80	120	19.22	3.12	20	
trans-1,2-Dichloroethene	20.310	0.50	20.00	0	102	78	126	20.29	0.0985	20	
Trichloroethene	20.250	0.50	20.00	0	101	80	120	19.97	1.39	20	
Vinyl chloride	17.820	0.50	20.00	0	89.1	70	135	17.72	0.563	20	
Surr: 1,2-Dichloroethane-d4	24.920		25.00		99.7	78	125		0		
Surr: 4-Bromofluorobenzene	24.820		25.00		99.3	80	120		0		
Surr: Dibromofluoromethane	25.720		25.00		103	80	122		0		
Surr: Toluene-d8	25.180		25.00		101	80	120		0		

Sample ID P151002MB6	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103405						
Client ID: PBW	Batch ID: P15VW177	TestNo: EPA 8260B		Analysis Date: 10/3/2015	SeqNo: 2098447						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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"Serving Clients with Passion and Professionalism"

CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID	P151002MB6	SampType:	MBLK	TestCode:	8260WATER	Units:	µg/L	Prep Date:		RunNo:	103405
Client ID:	PBW	Batch ID:	P15VW177	TestNo:	EPA 8260B			Analysis Date:	10/3/2015	SeqNo:	2098447
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.190		25.00		101	78	125				
Surr: 4-Bromofluorobenzene	24.520		25.00		98.1	80	120				
Surr: Dibromofluoromethane	26.450		25.00		106	80	122				
Surr: Toluene-d8	25.010		25.00		100	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID	P151003LCS	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103407					
Client ID:	LCSW	Batch ID:	P15VW178	TestNo:	EPA 8260B	Analysis Date:	10/3/2015	SeqNo:	2098540		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20.620	0.50	20.00	0	103	71	127				
cis-1,2-Dichloroethene	18.970	0.50	20.00	0	94.8	80	120				
Tetrachloroethene	19.870	0.50	20.00	0	99.4	80	120				
trans-1,2-Dichloroethene	20.360	0.50	20.00	0	102	78	126				
Trichloroethene	19.950	0.50	20.00	0	99.8	80	120				
Vinyl chloride	20.470	0.50	20.00	0	102	70	135				
Surr: 1,2-Dichloroethane-d4	24.890		25.00		99.6	78	125				
Surr: 4-Bromofluorobenzene	24.440		25.00		97.8	80	120				
Surr: Dibromofluoromethane	26.160		25.00		105	80	122				
Surr: Toluene-d8	25.260		25.00		101	80	120				

Sample ID	P151003LCSD	SampType: LCSD	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103407					
Client ID:	LCSS02	Batch ID:	P15VW178	TestNo:	EPA 8260B	Analysis Date:	10/3/2015	SeqNo:	2098541		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.750	0.50	20.00	0	98.8	71	127	20.62	4.31	20	
cis-1,2-Dichloroethene	18.940	0.50	20.00	0	94.7	80	120	18.97	0.158	20	
Tetrachloroethene	19.740	0.50	20.00	0	98.7	80	120	19.87	0.656	20	
trans-1,2-Dichloroethene	20.130	0.50	20.00	0	101	78	126	20.36	1.14	20	
Trichloroethene	20.110	0.50	20.00	0	101	80	120	19.95	0.799	20	
Vinyl chloride	20.110	0.50	20.00	0	101	70	135	20.47	1.77	20	
Surr: 1,2-Dichloroethane-d4	25.020		25.00		100	78	125		0		
Surr: 4-Bromofluorobenzene	24.820		25.00		99.3	80	120		0		
Surr: Dibromofluoromethane	25.910		25.00		104	80	122		0		
Surr: Toluene-d8	25.420		25.00		102	80	120		0		

Sample ID	P151003MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103407					
Client ID:	PBW	Batch ID:	P15VW178	TestNo:	EPA 8260B	Analysis Date:	10/3/2015	SeqNo:	2098542		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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"Serving Clients with Passion and Professionalism"

CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID: P151003MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103407						
Client ID: PBW	Batch ID: P15VW178	TestNo: EPA 8260B		Analysis Date: 10/3/2015	SeqNo: 2098542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	0.400	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.840		25.00		99.4	78	125				
Surr: 4-Bromofluorobenzene	24.110		25.00		96.4	80	120				
Surr: Dibromofluoromethane	26.210		25.00		105	80	122				
Surr: Toluene-d8	25.130		25.00		101	80	120				

Qualifiers:

- | | | |
|---|--|--|
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Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID P151003LCS2	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103369						
Client ID: LCSW	Batch ID: P15VW179	TestNo: EPA 8260B		Analysis Date: 10/3/2015	SeqNo: 2098570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	20.870	0.50	20.00	0	104	71	127				
cis-1,2-Dichloroethene	19.940	0.50	20.00	0	99.7	80	120				
Tetrachloroethene	19.270	0.50	20.00	0	96.4	80	120				
trans-1,2-Dichloroethene	20.420	0.50	20.00	0	102	78	126				
Trichloroethene	21.010	0.50	20.00	0	105	80	120				
Vinyl chloride	20.830	0.50	20.00	0	104	70	135				
Surr: 1,2-Dichloroethane-d4	24.810		25.00		99.2	78	125				
Surr: 4-Bromofluorobenzene	24.530		25.00		98.1	80	120				
Surr: Dibromofluoromethane	25.640		25.00		103	80	122				
Surr: Toluene-d8	25.360		25.00		101	80	120				

Sample ID P151003LCS2	SampType: LCS2	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103369						
Client ID: LCSS02	Batch ID: P15VW179	TestNo: EPA 8260B		Analysis Date: 10/3/2015	SeqNo: 2098571						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	20.640	0.50	20.00	0	103	71	127	20.87	1.11	20
cis-1,2-Dichloroethene	19.460	0.50	20.00	0	97.3	80	120	19.94	2.44	20
Tetrachloroethene	19.580	0.50	20.00	0	97.9	80	120	19.27	1.60	20
trans-1,2-Dichloroethene	20.520	0.50	20.00	0	103	78	126	20.42	0.489	20
Trichloroethene	20.420	0.50	20.00	0	102	80	120	21.01	2.85	20
Vinyl chloride	20.860	0.50	20.00	0	104	70	135	20.83	0.144	20
Surr: 1,2-Dichloroethane-d4	25.480		25.00		102	78	125		0	
Surr: 4-Bromofluorobenzene	24.870		25.00		99.5	80	120		0	
Surr: Dibromofluoromethane	25.640		25.00		103	80	122		0	
Surr: Toluene-d8	25.430		25.00		102	80	120		0	

Sample ID P151003MB6	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103369						
Client ID: PBW	Batch ID: P15VW179	TestNo: EPA 8260B		Analysis Date: 10/4/2015	SeqNo: 2098572						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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"Serving Clients with Passion and Professionalism"

CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID: P151003MB6	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103369						
Client ID: PBW	Batch ID: P15VW179	TestNo: EPA 8260B	Analysis Date: 10/4/2015	SeqNo: 2098572							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.640		25.00		103	78	125				
Surr: 4-Bromofluorobenzene	23.560		25.00		94.2	80	120				
Surr: Dibromofluoromethane	26.780		25.00		107	80	122				
Surr: Toluene-d8	25.150		25.00		101	80	120				

Qualifiers:

- | | | |
|---|--|--|
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Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID P151004LCS	SampType: LCS	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103409						
Client ID: LCSW	Batch ID: P15VW180	TestNo: EPA 8260B		Analysis Date: 10/4/2015	SeqNo: 2098611						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	20.630	0.50	20.00	0	103	71	127				
cis-1,2-Dichloroethene	18.320	0.50	20.00	0	91.6	80	120				
Tetrachloroethene	19.890	0.50	20.00	0	99.4	80	120				
trans-1,2-Dichloroethene	21.470	0.50	20.00	0	107	78	126				
Trichloroethene	20.930	0.50	20.00	0	105	80	120				
Vinyl chloride	20.290	0.50	20.00	0	101	70	135				
Surr: 1,2-Dichloroethane-d4	24.910		25.00		99.6	78	125				
Surr: 4-Bromofluorobenzene	24.150		25.00		96.6	80	120				
Surr: Dibromofluoromethane	24.810		25.00		99.2	80	122				
Surr: Toluene-d8	25.080		25.00		100	80	120				

Sample ID P151004LCSD	SampType: LCSD	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103409						
Client ID: LCSS02	Batch ID: P15VW180	TestNo: EPA 8260B		Analysis Date: 10/4/2015	SeqNo: 2098612						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloroethene	21.710	0.50	20.00	0	109	71	127	20.63	5.10	20	
cis-1,2-Dichloroethene	19.120	0.50	20.00	0	95.6	80	120	18.32	4.27	20	
Tetrachloroethene	20.380	0.50	20.00	0	102	80	120	19.89	2.43	20	
trans-1,2-Dichloroethene	22.570	0.50	20.00	0	113	78	126	21.47	5.00	20	
Trichloroethene	21.220	0.50	20.00	0	106	80	120	20.93	1.38	20	
Vinyl chloride	20.980	0.50	20.00	0	105	70	135	20.29	3.34	20	
Surr: 1,2-Dichloroethane-d4	24.740		25.00		99.0	78	125		0		
Surr: 4-Bromofluorobenzene	24.210		25.00		96.8	80	120		0		
Surr: Dibromofluoromethane	25.620		25.00		102	80	122		0		
Surr: Toluene-d8	25.160		25.00		101	80	120		0		

Sample ID P151004MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103409						
Client ID: PBW	Batch ID: P15VW180	TestNo: EPA 8260B		Analysis Date: 10/4/2015	SeqNo: 2098613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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"Serving Clients with Passion and Professionalism"

CLIENT: Cardno ATC
Work Order: N017040
Project: Maryland Square, LV20915008

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260WATERP

Sample ID: P151004MB3	SampType: MBLK	TestCode: 8260WATER	Units: µg/L	Prep Date:	RunNo: 103409						
Client ID: PBW	Batch ID: P15VW180	TestNo: EPA 8260B		Analysis Date: 10/4/2015	SeqNo: 2098613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Tetrachloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.910		25.00		99.6	78	125				
Surr: 4-Bromofluorobenzene	23.880		25.00		95.5	80	120				
Surr: Dibromofluoromethane	26.360		25.00		105	80	122				
Surr: Toluene-d8	24.910		25.00		99.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Chain of Custody

Client: Cardno
 Address: 7115 Amigo Street, Suite 100
 Las Vegas, Nevada 89119
 Phone: 702 990 9300 Fax: 702 990 9305
 Project Name: Maryland Square
 Project Number: LV20915008 PO # _____
 Submitted By: Johanna Garcia
 Title: Staff Scientist
 Signature: [Signature] Date: 9/25/15



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
 Phone: 562.219.7435 Fax: 562.219.7436

Sample Condition Upon Receipt
 Temp 21°C IR# 1
 Method of Cooling ice
 Headspace NO
 Intact ✓
 Seal _____
 Comments _____

Work Order No.	Sample ID/Location	Date	Time	Matrix								PCB/TCEDCE/VC EPA 8260	6020 (metals)	215.6 Hexavalent Chromium	Turn Around Time	No. of container	Container Type	PRESERVATION	QA/QC	
				Water	Liquid	Soil	Solid	Wastewater	Groundwater	Others	RTNE								Remarks	
<u>N017040-11</u>	<u>MW-27</u>	<u>9/18/15</u>	<u>1210</u>							<u>X</u>	<u>X</u>									
<u>-12</u>	<u>MW-32</u>	<u>9/21/15</u>	<u>1240</u>							<u>✓</u>	<u>X</u>									
<u>-13</u>	<u>MW-38</u>	<u>9/18/15</u>	<u>1045</u>							<u>X</u>	<u>X</u>									
<u>-14</u>	<u>MW-41</u>	<u>9/18/15</u>	<u>950</u>							<u>X</u>	<u>X</u>									
<u>-15</u>	<u>MW-42</u>	<u>9/18/15</u>	<u>910</u>							<u>X</u>	<u>X</u>									
<u>-16</u>	<u>MW-43</u>	<u>9/18/15</u>	<u>1130</u>							<u>X</u>	<u>X</u>									
<u>-17</u>	<u>MW-14F</u>	<u>9/24/15</u>	<u>1235</u>							<u>X</u>	<u>X</u>									
<u>-18</u>	<u>MW-19 I</u>	<u>9/24/15</u>	<u>900</u>							<u>✓</u>	<u>X</u>	<u>X</u>	<u>X</u>							
<u>-19</u>	<u>MW-6D1</u>	<u>9/22/15</u>	<u>830</u>							<u>X</u>	<u>X</u>									
<u>-20</u>	<u>MW-6D3</u>	<u>9/22/15</u>	<u>905</u>							<u>X</u>	<u>X</u>									

Send report to:
 Name Adam Katlein
 Address 7115 Amigo Street, Ste. 100
 Las Vegas, Nevada 89119
 Email adam.katlein@cardno.com

Bill to:
 Name (Same)
 Address _____
 Email _____

Sampled by:
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
 Name Johanna Garcia Signature [Signature]

Special Instruction/Comments:

Relinquished by (Signature): <u>[Signature]</u>	Date: <u>9/25/15</u>	Time: <u>1150</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>9/25/15</u>	Time: <u>1503</u>
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>9/25/15</u>	Time: <u>1516</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>9/29/15</u>	Time: <u>1619</u>
Relinquished by (Signature): _____	Date: _____	Time: _____	Received by (Signature): _____	Date: _____	Time: _____

TAT Starts at 8 AM the following day if samples received after 3 pm.

A ≤ 24 Hours D = 3 Workdays
 B = Next Workday E = Routine 5-7 Workdays
 C = 2 Workdays

Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

Carrier: Airbill/Tracking #: _____

Container Type: T = Tube V = VOA L = Liter P = Pint
 J = Jar B = Tedlar G = Glass
 M = Metal P = Plastic

EDD Requirement: Excel EDD
 Geotracker Global ID _____
 LabSpec

Sample/Records Storage: All samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
 Fees will be applied for extended storage.

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 9/25/2015 Workorder: N017040
 Rep sample Temp (Deg C): 2.1 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ASSET
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: MBC *MBC* 9/28/2015

Reviewed By: *gog* 09/29/15

nancy@assetlaboratories.com

From: Marlon B. Cartin [marlon@assetlaboratories.com]
Sent: Tuesday, October 06, 2015 9:31 AM
To: 'Adam Katlein'
Cc: nancy@assetlaboratories.com
Subject: RE: Maryland Square, LV20915008 (ASSET Labs No.N017040)

Hi Adam,

We will amend the result for you. It will be later today or tomorrow morning.

Thanks,

Marlon B. Cartin

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118

P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

From: Adam Katlein [<mailto:adam.katlein@cardno.com>]
Sent: Tuesday, October 06, 2015 8:08 AM
To: Marlon B. Cartin
Subject: FW: Maryland Square, LV20915008 (ASSET Labs No.N017040)

Hey Marlon,

On this lab report can you please have the sample labeled as MW-14D2 changed to MW-19D2. MW-14D2 doesn't exist out there.

Thanks

Adam Katlein

PROJECT MANAGER

ENGINEERING & ENVIRONMENTAL SERVICES

CARDNO

Office (+1) 702-990-9300 Direct (+1) 702-990-7517 Mobile (+1) 586-839-7892 Fax (+1) 702-990-9305

Address 7115 Amigo Street, Suite 100, Las Vegas, NV 89119

Email adam.katlein@cardno.com Web www.cardno.com

From: reports.lv@assetlaboratories.com [<mailto:reports.lv@assetlaboratories.com>]
Sent: Tuesday, October 06, 2015 6:33 AM
To: Adam Katlein
Subject: Maryland Square, LV20915008 (ASSET Labs No.N017040)

Enclosed is the final report for the above project.

Thanks,

Glen Gesmundo

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 406 | F: 702.307.2691 | M: 702.882.3289

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Maryland Square PCE Site

APPENDIX C
MANN-KENDALL TREND TEST FOR
PLUME STABILITY

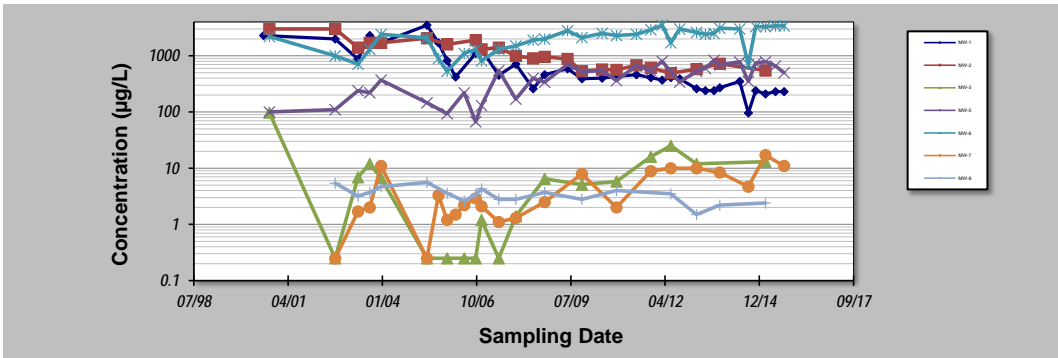
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 6-Oct-15	Job ID: Z085000030
Facility Name: Maryland Square PCE Site	Constituent: PCE
Conducted By: Cardno ATC	Concentration Units: µg/L

Sampling Point ID:	MW-1	MW-2	MW-3	MW-5	MW-6	MW-7	MW-8
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Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)							
		MW-1	MW-2	MW-3	MW-5	MW-6	MW-7	MW-8	
1	Aug 00	2,300							
2	Oct 00		3,000	98	100	2,200			
3	Sep 02	2,000	3,000	0.25	110	1,000	0.25	5.4	
4	May 03	870	1,400	6.9	240	710	1.7	3.2	
5	Sep 03	2,300	1,700	12	220	1,300	2	3.7	
6	Jan 04	1,700	1,700	6.7	370	2,400	11	4.7	
7	May 05	3,500	2,050	0.25	146	2,090	0.25	5.6	
8	Sep 05	1,700				890	3.3		
9	Dec 05	820	1,600	0.25	93	530	1.2	3.6	
10	Mar 06	420					1.5		
11	Jun 06			0.25	220	1,100	2.2	2.6	
12	Oct 06	1,100	1,900	0.25	67	1,300	2.9	3.4	
13	Dec 06	1,300	1,300	1.2	130	810	2.1	4.3	
14	Jun 07	450	1,400	0.25	550	1,300	1.1	2.8	
15	Dec 07	710	1,000	1.4	170	1,500	1.3	2.8	
16	Jun 08	260	900		400	1,900			
17	Oct 08	460	960	6.5	340	2,000	2.5	3.7	
18	Jun 09	590	880		700	2,800			
19	Nov 09	390	530	5.1	520	2,100	7.9	2.8	
20	Jun 10	400	570		550	2,500			
21	Nov 10	430	560	5.8	360	2,300	2.0	4	
22	Jun 11	460	680		670	2,400			
23	Nov 11	410	610	16	540	2,900	8.9		
24	Mar 12	370			800	3,500			
25	Jun 12	410	490	25	520	1,700	10	3.5	
26	Sep 12	390			340	3,000			
27	Mar 13	260	580	12	530	2,600	10	1.5	
28	Jun 13	240			600	2,400			
29	Sep 13	240			830	2,500			
30	Nov 13	270	720		690	3,100	8.4	2.2	
31	Jun 14	350			780	3,000			
32	Sep 14	96			350	700	4.7		
33	Nov 14	240			740	3,300			
34	Mar 15	210	550	13	790	3,300	17	2.4	
35	Jun 15	230			660	3,400			
36	Sep 15	230			500	3,400	11		
37									
38									
39									
40									

Coefficient of Variation:	1.02	0.61	1.99	0.54	0.43	0.93	0.31
Mann-Kendall Statistic (S):	-423	-184	41	276	317	125	-65
Confidence Factor:	>99.9%	>99.9%	91.8%	>99.9%	>99.9%	>99.9%	99.3%
Concentration Trend:	Decreasing	Decreasing	Prob. Increasing	Increasing	Increasing	Increasing	Decreasing



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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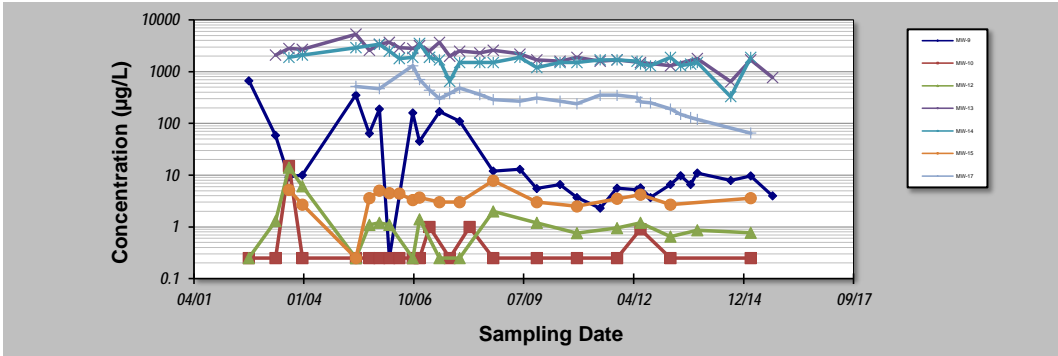
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 6-Oct-15	Job ID: Z085000030
Facility Name: Maryland Square PCE Site	Constituent: PCE
Conducted By: Cardno ATC	Concentration Units: µg/L

Sampling Point ID:	MW-9	MW-10	MW-12	MW-13	MW-14	MW-15	MW-17
--------------------	-------------	--------------	--------------	--------------	--------------	--------------	--------------

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-9	MW-10	MW-12	MW-13	MW-14	MW-15	MW-17
1	Sep 02	670	0.25	0.25				
2	May 03	59	0.25	1.3	2100			
3	Sep 03	9	15	14	2,800	1900	5.2	
4	Jan 04	10	0.25	6.1	2,700	2100	2.7	
5	May 05	353	0.25	0.25	5,310	2,920	0.25	520
6	Sep 05	64	0.25	1.1	2,600		3.6	
7	Dec 05	190	0.25	1.2	3,400	3,400	5	470
8	Mar 06	0.25	0.25	1.1	3,700	2,500	4.5	
9	Jun 06		0.25		2,900	1,800	4.4	
10	Oct 06	160	0.25	0.25	2,800	1,900	3.3	1300
11	Dec 06	45	0.25	1.4	3,200	3,500	3.7	710
12	Mar 07		1		2,500	1,900		440
13	Jun 07	170		0.25	3,700	1,700	3	300
14	Sep 07		0.25		2,000	650		380
15	Dec 07	110		0.25	2,500	1,500	3	480
16	Mar 08		1					
17	Jun 08				2,300	1,500		360
18	Oct 08	12	0.25	2	2,600	1,500	7.8	290
19	Jun 09	13			2,200	1,900		270
20	Nov 09	6	0.25	1.2	1,700	1,200	3	310
21	Jun 10	7			1,600	1,500		270
22	Nov 10	4	0.25	0.76	1,900	1,500	2.5	240
23	Jun 11	2			1,600	1,700		350
24	Nov 11	5.6	0.25	0.95	1,700	1,700	3.5	350
25	May 12	5.2				1,600		320
26	Jun 12	5.7	0.9	1.2	1,500	1,400	4.2	260
27	Sep 12	3.7				1,300		250
28	Mar 13	6.6	0.25	0.65	1,300	1,900	2.7	190
29	Jun 13	9.8				1,300		150
30	Sep 13	6.6				1,400		130
31	Nov 13	11.0		0.86	1,800	1,500		120
32	Jun 14							
33	Sep 14	7.9			640	330		
34	Nov 14							
35	Mar 15	9.7	0.25	0.77	1,700	1,900	3.6	65
36	Jun 15							
37	Sep 15	4.0			770			
38								
39								
40								

Coefficient of Variation:	2.08	3.00	1.75	0.42	0.38	0.41	0.69
Mann-Kendall Statistic (S):	-146	-1	-26	-240	-171	-22	-208
Confidence Factor:	99.7%	50.0%	78.9%	>99.9%	99.9%	78.4%	>99.9%
Concentration Trend:	Decreasing	No Trend	No Trend	Decreasing	Decreasing	Stable	Decreasing



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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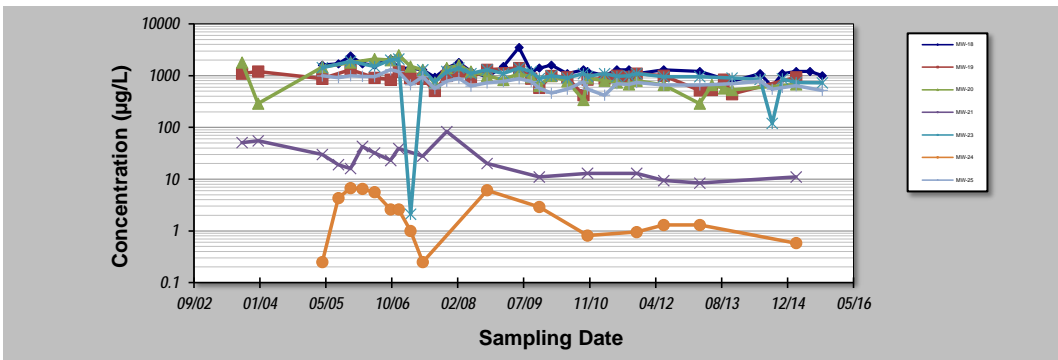
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 6-Oct-15	Job ID: Z085000030
Facility Name: Maryland Square PCE Site	Constituent: PCE
Conducted By: Cardno ATC	Concentration Units: µg/L

Sampling Point ID:	MW-18	MW-19	MW-20	MW-21	MW-23	MW-24	MW-25
--------------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-18	MW-19	MW-20	MW-21	MW-23	MW-24	MW-25
1	Sep 03		1,100	1,800	51			
2	Jan 04		1,200	290	55			
3	May 05	1,600	873	1,460	30	1,430	0.25	993
4	Sep 05	1,700			19		4.3	920
5	Dec 05	2,400	1,300	1,800	16	1,900	6.7	1,000
6	Mar 06	1,700			43		6.5	970
7	Jun 06	1,600	910	2,100	32	1,500	5.6	960
8	Oct 06	2,100	840	2,000	23	2,000	2.6	1,300
9	Dec 06	1,400	1,200	2,500	39	2,100	2.6	1,200
10	Mar 07	1,400	890	1,500		2.1	1.0	670
11	Jun 07	1,300	870	1,300	28	1,300	0.25	960
12	Sep 07	930	510	730		750		560
13	Dec 07	1,400	990	1,400	83	1,200		780
14	Mar 08	1,800	1,200	1,600		1,400		890
15	Jun 08	1,200	930	1,200		1,100		630
16	Oct 08	950	1,300	1,000	20	1,300	6.1	730
17	Feb 09	1,500		830		1,100		770
18	Jun 09	3,500	1,400	1,100		1,400		880
19	Sep 09	1,200	880	940		1,200		770
20	Nov 09	1,400	580	640	11	880	2.9	570
21	Feb 10	1,600	990	990		1,000		460
22	Jun 10	1,100	930	780		900		550
23	Oct 10	1,300	420	340		1,100		760
24	Nov 10	1,200	840	890	13	970	0.81	550
25	Mar 11	1,000	880	800		1,100		420
26	Jun 11	1,300	1,000	740		970		700
27	Sep 11	1,300	950	680		1,000		680
28	Nov 11	1,100	1,100	800	13	1,100	0.95	740
29	Jun 12	1,300	1,000	660	9.4	950	1.3	660
30	Mar 13	1,200	520	290	8.4	960	1.3	660
31	Jun 13		530	660				
32	Sep 13		840	570				
33	Nov 13	780	440	530		900		700
34	Jun 14	1,100				850		780
35	Sep 14	620				120		550
36	Nov 14	1,100				870		590
37	Mar 15	1,200	930	680	11.0	740	0.58	640
38	Jun 15	1,200						
39	Sep 15	1,000				730		520
40								

Coefficient of Variation:	0.37	0.28	0.53	0.71	0.40	0.86	0.27
Mann-Kendall Statistic (S):	-287	-80	-293	-85	-280	-39	-275
Confidence Factor:	>99.9%	92.0%	>99.9%	100.0%	>99.9%	95.7%	>99.9%
Concentration Trend:	Decreasing	Prob. Decreasing	Decreasing	Decreasing	Decreasing	Decreasing	Decreasing



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S=0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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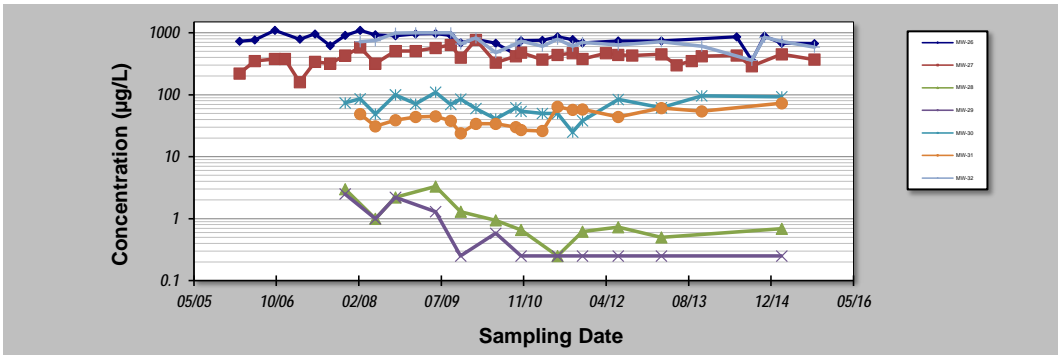
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 6-Oct-15	Job ID: Z085000030
Facility Name: Maryland Square PCE Site	Constituent: PCE
Conducted By: Cardno ATC	Concentration Units: µg/L

Sampling Point ID:	MW-26	MW-27	MW-28	MW-29	MW-30	MW-31	MW-32
--------------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-26	MW-27	MW-28	MW-29	MW-30	MW-31	MW-32
1	Mar 06	730	220					
2	Jun 06	770	350					
3	Oct 06	1,100	380					
4	Dec 06		380					
5	Mar 07	790	160					
6	Jun 07	960	340					
7	Sep 07	620	320					
8	Dec 07	910	430	3.0	2.5	74		
9	Mar 08	1,100	580			86	49	720
10	Jun 08	930	320	1.0	1.0	49	31	750
11	Oct 08	900	510	2.2	2.2	100	39	990
12	Feb 09	960	510			71	44	1,000
13	Jun 09	970	570	3.3	1.3	110	45	1,000
14	Sep 09	910	640			70	38	1,000
15	Nov 09	690	400	1.3	0.25	85	24	660
16	Feb 10	790	770			60	34	830
17	Jun 10	680	330	0.94	0.58	41	34	480
18	Oct 10	450	420			62	30	660
19	Nov 10	750	480	0.66	0.25	54	27	740
20	Mar 11	760	370			50	26	610
21	Jun 11	860	440	0.25	0.25	50	64	790
22	Sep 11	780	470			25	57	610
23	Nov 11	690	380	0.62	0.25	38	58	700
24	Mar 12		470					
25	Jun 12	740	440	0.73	0.25	84	44	640
26	Sep 12		430					
27	Mar 13	740	450	0.50	0.25	62	61	720
28	Jun 13		300					
29	Sep 13		350					
30	Nov 13		420			96	54	610
31	Jun 14	860	430					
32	Sep 14	360	290					360
33	Nov 14	890						850
34	Mar 15	680	450	0.69	0.25	93	73	730
35	Jun 15							
36	Sep 15	670	370					590
37								
38								
39								
40								

Coefficient of Variation:	0.21	0.26	0.80	1.05	0.34	0.33	0.23
Mann-Kendall Statistic (S):	-128	4	-38	-39	-32	43	-77
Confidence Factor:	99.2%	51.8%	99.6%	99.7%	84.1%	92.8%	98.5%
Concentration Trend:	Decreasing	No Trend	Decreasing	Decreasing	Stable	Prob. Increasing	Decreasing



Notes:

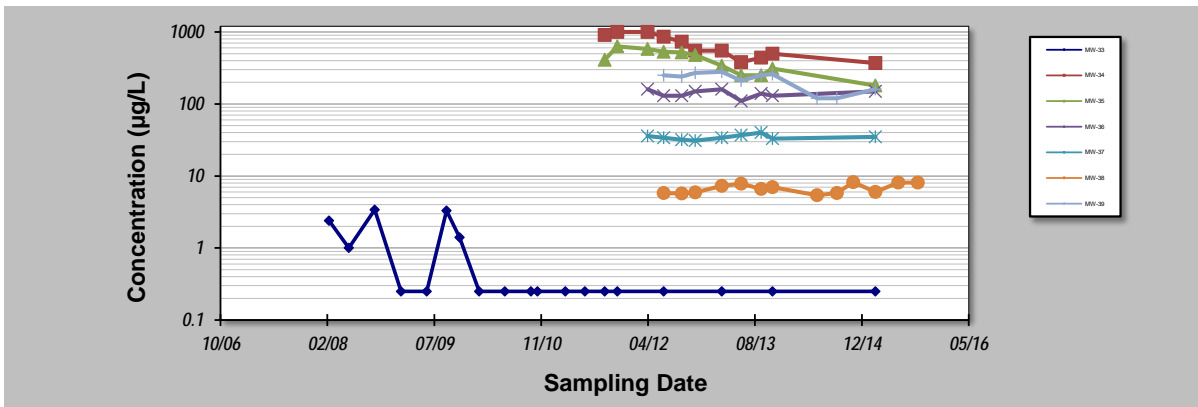
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 6-Oct-15	Job ID: Z085000030
Facility Name: Maryland Square PCE Site	Constituent: PCE
Conducted By: Cardno ATC	Concentration Units: µg/L

Sampling Point ID:		MW-33	MW-34	MW-35	MW-36	MW-37	MW-38	MW-39
Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
1	Mar 08	2.4						
2	Jun 08	1.0						
3	Oct 08	3.4						
4	Feb 09	0.25						
5	Jun 09	0.25						
6	Sep 09	3.3						
7	Nov 09	1.4						
8	Feb 10	0.25						
9	Jun 10	0.25						
10	Oct 10	0.25						
11	Nov 10	0.25						
12	Mar 11	0.25						
13	Jun 11	0.25						
14	Sep 11	0.25	910	410				
15	Nov 11	0.25	1,000	630				
16	Mar 12		1,000	580	160	36		
17	Jun 12	0.25	860	530	130	34	5.8	250
18	Sep 12		730	520	130	32	5.7	240
19	Nov 12		550	480	150	31	5.9	270
20	Mar 13	0.25	550	340	160	34	7.3	280
21	Jun 13		380	250	110	37	7.8	210
22	Sep 13		440	250	140	40	6.6	250
23	Nov-13	0.25	500	310	130	33	7.0	260
24	Jun 14						5.4	120
25	Sep 14						5.8	120
26	Nov 14						8.2	
27	Mar 15	0.25	370	180	150	35	6.0	160
28	Jun 15						8.1	
29	Sep 15						8.1	
30								
Coefficient of Variation:		1.34	0.37	0.37	0.12	0.08	0.16	0.28
Mann-Kendall Statistic (S):		-62	-43	-40	-3	5	28	-17
Confidence Factor:		98.5%	>99.9%	100.0%	58.0%	65.7%	95.0%	92.2%
Concentration Trend:		Decreasing	Decreasing	Decreasing	Stable	No Trend	Prob. Increasing	Prob. Decreasing



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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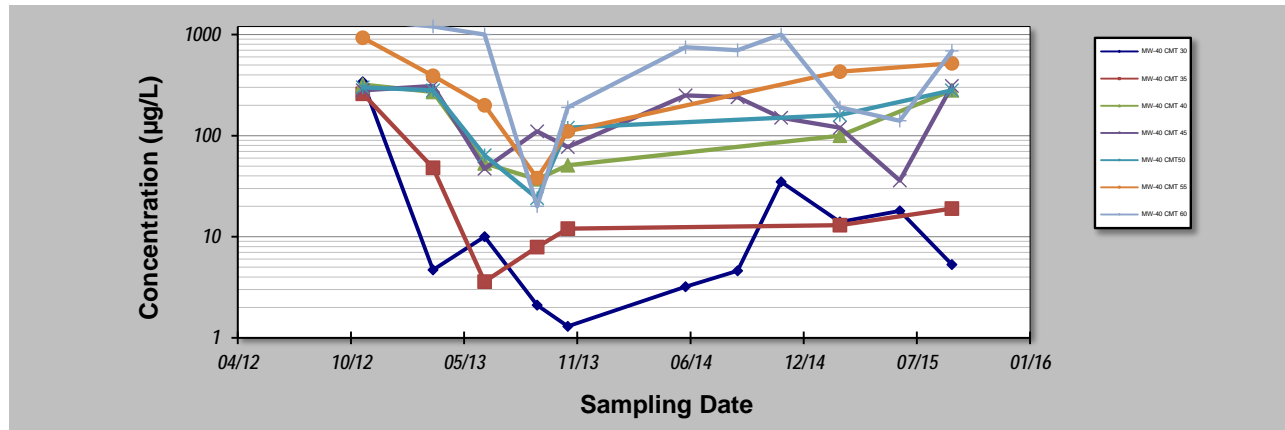
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **6-Oct-15** Job ID: **Z085000030**
 Facility Name: **Maryland Square PCE Site** Constituent: **PCE**
 Conducted By: **Cardno ATC** Concentration Units: **µg/L**

Sampling Point ID: **MW-40 CMT 30 MW-40 CMT 35 MW-40 CMT 40 MW-40 CMT 45 MW-40 CMT50 MW-40 CMT 55 MW-40 CMT 60**

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-40 CMT 30	MW-40 CMT 35	MW-40 CMT 40	MW-40 CMT 45	MW-40 CMT50	MW-40 CMT 55	MW-40 CMT 60
1	Nov 12	340	260	320	280	300	930	1,400
2	Mar 13	4.7	48	270	310	280	390	1,200
3	Jun 13	10	3.6	53	47	64	200	1,000
4	Sep 13	2.1	7.9	37	110	24	38	20
5	Nov-13	1.3	12	51	77	120	110	190
6	Jun 14	3.2			250			750
7	Sep 14	4.6			240			700
8	Nov 14	35			150			1,000
9	Mar 15	14	13	100	120	160	430	190
10	Jun 15	18			36			140
11	Sep 15	5.3	19	280	310	280	520	690
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		2.51	0.92	0.79	0.60	0.64	0.69	0.71
Mann-Kendall Statistic (S):		5	5	-3	-6	-2	5	-23
Confidence Factor:		61.9%	76.5%	61.4%	64.8%	55.7%	76.5%	95.7%
Concentration Trend:		No Trend	No Trend	Stable	Stable	Stable	No Trend	Decreasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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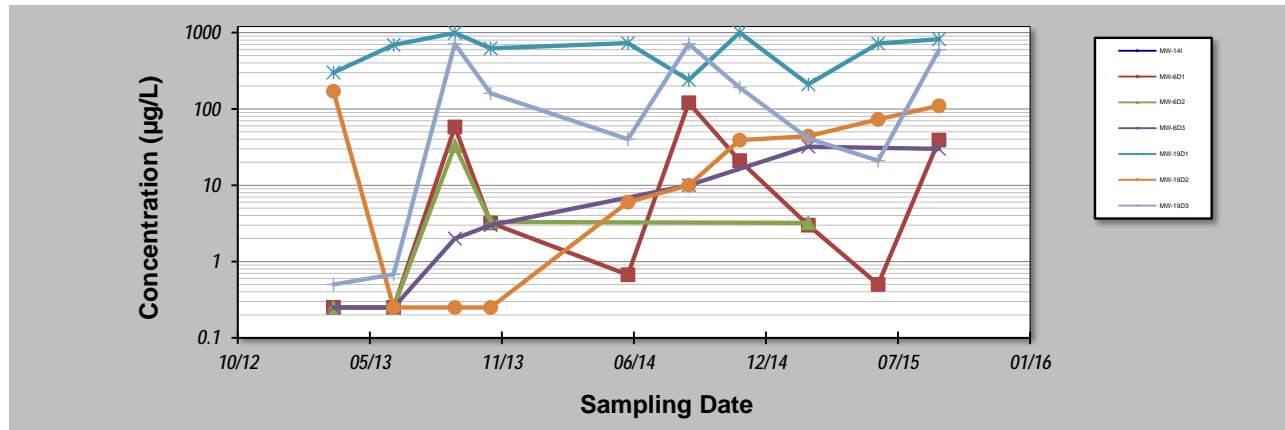
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **6-Oct-15** Job ID: **Z085000030**
 Facility Name: **Maryland Square PCE Site** Constituent: **PCE**
 Conducted By: **Cardno ATC** Concentration Units: **µg/L**

Sampling Point ID: **MW-14I** **MW-6D1** **MW-6D2** **MW-6D3** **MW-19D1** **MW-19D2** **MW-19D3**

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-14I	MW-6D1	MW-6D2	MW-6D3	MW-19D1	MW-19D2	MW-19D3
1	Mar 13	7,200	0.25	0.25	0.25	300	170	0.50
2	Jun 13	5,500	0.25	0.25	0.25	690	0.25	0.68
3	Sep 13	3,700	58	33	2.0	990	0.25	710
4	Nov-13	10,000	3.2	3.3	3.0	620	0.25	160
5	Jun 14	9,800	0.67			730	6.0	40
6	Sep 14	9,300	120		10	240	10	710
7	Nov 14	11,000	21			1,000	39	190
8	Mar 15	11,000	3.0	3.2	32	210	44	41
9	Jun 15	9,600	0.5			720	73	21
10	Sep 15	9,300	39		30	820	110	590
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Coefficient of Variation:	0.28	1.48	1.76	1.27	0.46	1.24	1.22
Mann-Kendall Statistic (S):	13	2	3	18	5	33	10
Confidence Factor:	85.4%	54.0%	67.5%	99.7%	63.6%	>99.9%	78.4%
Concentration Trend:	No Trend	No Trend	No Trend	Increasing	No Trend	Increasing	No Trend



Notes:

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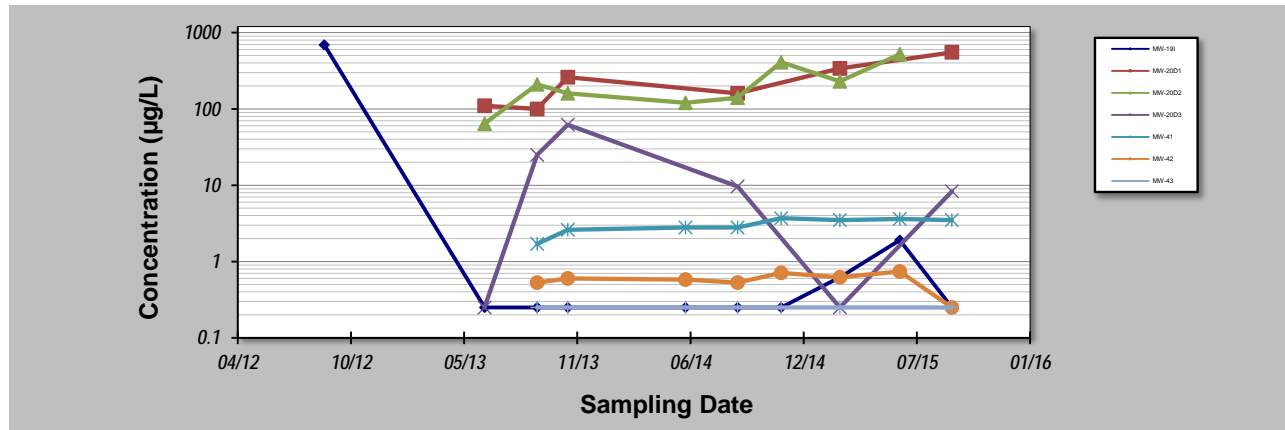
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **6-Oct-15** Job ID: **Z085000030**
 Facility Name: **Maryland Square PCE Site** Constituent: **PCE**
 Conducted By: **Cardno ATC** Concentration Units: **µg/L**

Sampling Point ID: **MW-19I** **MW-20D1** **MW-20D2** **MW-20D3** **MW-41** **MW-42** **MW-43**

Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-19I	MW-20D1	MW-20D2	MW-20D3	MW-41	MW-42	MW-43
1	Sep 12	690						
2	Jun 13	0.25	110	64	0.25			
3	Sep 13	0.25	100	210	25	1.7	0.53	0.25
4	Nov-13	0.25	260	160	62	2.6	0.60	0.25
5	Jun 14	0.25		120		2.8	0.58	0.25
6	Sep 14	0.25	160	140	10	2.8	0.53	0.25
7	Nov 14	0.25		410		3.7	0.71	0.25
8	Mar 15	0.62	340	230	0.25	3.5	0.62	0.25
9	Jun 15	1.9		520		3.6	0.74	
10	Sep 15	0.25	550		8.3	3.5	0.25	0.25
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		3.14	0.68	0.67	1.34	0.23	0.26	0.00
Mann-Kendall Statistic (S):		2	11	16	-2	18	5	0
Confidence Factor:		53.5%	97.2%	96.9%	57.0%	98.4%	68.3%	37.9%
Concentration Trend:		No Trend	Increasing	Increasing	No Trend	Increasing	No Trend	Stable



Notes:

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