

# First Quarter 2013 Groundwater Monitoring and Sampling Report

Maryland Square PCE Site  
3661 South Maryland Parkway  
Las Vegas, Nevada

Cardno ATC Project No. 085.42620.0001



Prepared for  
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April 28, 2013

## Executive Summary

April 28, 2013

Herman Kishner Trust  
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Los Angeles, California 90017

**Re: First Quarter 2013 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 First Quarter 2013**

Cardno ATC is currently performing quarterly monitoring and sampled of 50 of the site groundwater monitoring wells. Depth to groundwater and purge water data from the ten wells sampled by Tetra Tech is not included below.

Current Phase of Project:	<u>Monitoring and Sampling</u>
Frequency of Sampling:	<u>Groundwater: Select Wells Quarterly (Semi-annual for 2012 and 2013)</u>
Frequency of Monitoring:	<u>Groundwater: Select Wells Quarterly (Semi-annual for 2012 and 2013)</u>
Purge Water Removed This Quarter:	<u>56.50 gallons</u>
Approximate Depth to Groundwater:	<u>18.59 ft btoc</u>
Groundwater Flow Direction:	<u>Site Monitoring Network: East</u>
Groundwater Analytical Methods:	<u>VOCs by EPA 8260B</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

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The following chronology, prepared by others, summarizes the technical development of the site characterization and groundwater monitoring program:

**November 2000:** *Phase II Assessment Report*, dated November 28, 2000, and received by NDEP on July 25, 2001.

As the result of a property transaction, subsurface soil and groundwater conditions were investigated along the eastern boundary of the property by advancing one soil boring and converting it into a monitoring well (MW-1). Analysis of water samples collected from MW-1 confirmed PCE concentrations in groundwater at the property exceeded the established U.S. Environmental protection Agency (EPA) primary maximum contamination level (MCL) for PCE in drinking water of 5.0 micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb).

**November 2000:** *Spill Report*, telephone spill notification made dated November 29, 2000, and received and logged by NDEP on November 29, 2000.

Based on preliminary results obtained from the Phase II field investigation, a spill notification was called into NDEP and a spill report was recorded.

**August 2001:** *A through K Report*, dated August 22, 2001, and received by NDEP on September 11, 2001.

Per NDEP requirements, downgradient subsurface soil and groundwater conditions were investigated by advancing five additional soil borings in the vicinity of the Boulevard Mall parking garage and converting the borings into monitoring wells (MW-2 through MW-6). Groundwater samples collected from these wells exhibited concentrations of PCE and trichloroethene (TCE) exceeding 5  $\mu\text{g/L}$ , which is the primary MCL for both compounds.

**November 2002:** *Additional Soil and Groundwater Investigation Report*, dated November 13, 2002, and received by NDEP on November 18, 2002.

Converse Consultants (Converse) completed an additional soil and groundwater investigation beneath the shopping center building located on the property and on the Boulevard Mall property. Five soil samples were collected from beneath the suite previously occupied by the dry cleaning facility. PCE was detected in four of these five soil samples at concentrations of 110 micrograms per kilogram ( $\mu\text{g/kg}$ ) or ppb (in two samples), 170  $\mu\text{g/kg}$ , and 15,000  $\mu\text{g/kg}$ . At that time, the EPA Preliminary Remediation Goal (PRG) for PCE in industrial soil was 3,400 ppb, which was the concentration threshold used to compare screen investigation samples. PRGs have now been superseded by Regional Screening Levels (RSL), which are updated and revised biennially in even-numbered years.

Additionally, six groundwater monitoring wells were installed (MW-7 through MW-12) on the property and on the Boulevard Mall property. This additional investigation (1) indicated the presence of PCE in soil beneath the shopping center building, (2) established a lateral PCE boundary location upgradient on the property (MW-12), and (3) established the lateral extent of PCE-contaminated groundwater north of MW-3 on the Boulevard Mall Property.

**May 2003:** *Additional Soil and Groundwater Investigation Report*, dated May 16, 2003, and received by NDEP on May 16, 2003.

An additional well (MW-13) was installed on the Boulevard Mall property to evaluate the extent of PCE-contaminated groundwater to the northeast. The boring for well MW-13 was drilled to 29 feet below ground surface (bgs), the water level was measured at 17.25 feet bgs, and a soil sample was collected from the vadose zone at 14 feet bgs. This soil sample contained PCE at a concentration of 45  $\mu\text{g/kg}$ . The groundwater sample



collected at this location exhibited a PCE concentration of 2,100 µg/L.

**March 2004:** *Well Installation/Slug Testing/Groundwater Monitoring Report – 4<sup>th</sup> Quarter 2003 and 1<sup>st</sup> Quarter 2004*, dated March 26, 2004, and received by NDEP on March 26, 2004.

Subsurface soil conditions were explored by advancing eight soil borings and converting six of the borings into monitoring wells (MW-14 through MW-16 and MW-19 through MW-21). Groundwater samples collected at these locations in January 2004 exhibited dissolved PCE that ranged in concentration from below detection limits (MW-16) to 1,200 µg/L (MW-19).

During the same period, slug tests were performed on seven monitoring wells (MW-2, MW-3, MW-13, MW-15, MW-16, MW-19, and MW-20) to obtain hydraulic parameters required for designing a hydrogen release compound (HRC) groundwater treatment system. Hydraulic conductivities derived using the Bouwer-Rice method ranged from 1.9 to 17 feet per day, while those derived via the Hvorslev Method ranged from 0.8 to 6.4 feet per day.

**February 2004:** *Correspondence from Dickerson, Dickerson, Consul & Pocker*, dated February 27, 2004, and received by NDEP on March 1, 2004.

AI Phillips the Cleaner (APTC) accepted responsibility for the release and assumed control of assessment activities from the Trust after which all site characterization and monitoring work was conducted by URS Corporation (URS). During this time, Converse was retained to review documents prepared by URS on behalf of the Trust.

**July 2005:** *Report – Subsurface Investigation June 2005*, dated July 2005, and received by NDEP on July 11, 2005.

URS completed an additional soil and groundwater investigation and an investigation of the soil beneath the shopping center building located at the site. Seven soil borings (B-5 through B-12) were advanced at locations within the suite previously occupied by the dry cleaning facility. Soil samples were collected at 5-foot intervals from borings B-6 through B-10 to a total depth of 15 feet bgs, and at 2.5 and 3.5 feet bgs at boring locations B-11 and B-12. Three soil samples collected at B-8 (5 feet bgs) and B-10 (10 and 15 feet bgs) contained PCE concentrations above the industrial PRG (relevant at that time) of 3,400 ppb. In addition, five groundwater monitoring wells were installed on the property and in the residential neighborhood east of the Boulevard Mall (MW-17, MW-18, and MW-22 through MW-24).

**April 2006:** *Report – Quarterly Groundwater Sampling and Additional Monitor Well Installation*, dated April 25, 2006, and received by NDEP on April 27, 2006.

Two additional groundwater monitoring wells (MW-26 and MW-27) were installed in March 2006 at locations representing the eastern end of the residential neighborhood. PCE concentrations of 730 and 220 µg/L in groundwater were observed at wells MW-26 and MW-27. TCE concentrations were reported to be below method detection limits.

**February 2007: Source Area Soil Assessment**, dated February 23, 2007.

URS advanced 17 soil borings at the property to collect and analyze additional subsurface soil samples to refine the source area soil assessment. The report compiled analytical data profiling 24 soil samples collected from 12 borings advanced within the source area in 2002 and 2005, with new analytical data generated from 53 soil samples collected at 17 additional boring locations cited within the source area. A total of 77 subsurface soil data points representing conditions within the source area at the site were considered for assessment of soil in the source area, and URS proposed a remedial method, schedule, and site-specific cleanup level based on the examination of the derived data population.

**April 2007:** *Report of Off-Site Soil Vapor Assessment*, dated April 13, 2007.

In March 2007, URS conducted an off-site soil vapor study in the Boulevard Mall parking lot and select locations in the residential area east of the mall. Soil vapor concentrations measured at total depth reportedly ranged from below method detection limits at soil vapor boring (SVB)-2, and 11 to 170,000 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) at SVB-14.

**September 2007:**        **Correspondence Issued from NDEP**, dated September 10, 2007.

Groundwater sampling procedures were changed for the project from a three volume purge-and-sample method to low-flow sampling using ASTM International (ASTM) D6771-02.

**November 2007:**        **Installation of Downgradient Groundwater Monitoring Wells**, dated November 26, 2007.

URS installed three monitoring wells (MW-28 through MW-30) within the residential area in October 2007. These wells expanded the groundwater monitoring network farther to the eastern and south-southeastern portions of the residential area. PCE concentrations in groundwater samples collected from these wells ranged from 2.5  $\mu\text{g}/\text{L}$  at monitoring well location MW-29 to 74  $\mu\text{g}/\text{L}$  at monitoring well location MW-30. TCE concentrations were reported to be below method detection limits.

**March 2008:**            **Installation of Additional Downgradient Groundwater Monitoring Wells**, dated March 24, 2008.

URS constructed three additional groundwater monitoring wells (MW-31 through MW-33), two of which bounded the east portion of the residential area, and the third bounded the east-northeast portion of the residential area. PCE concentrations in groundwater samples collected from these new wells ranged from 2.4  $\mu\text{g}/\text{L}$  at monitoring well location MW-33 to 720  $\mu\text{g}/\text{L}$  at monitoring well location W-32. TCE concentrations were reported to be below method detection limits.

**July 2008:**            **Notice of Hearing to Consider First Day of Pleadings (Chapter 11)**, undated and received by NDEP on July 8, 2008.

APTC declared bankruptcy and URS discontinued work at the site. Converse, on behalf of the Trust, resumed quarterly monitoring, supported the litigation work, and prepared a remediation scope of work.

**July 2010:**            **Quarterly Groundwater Monitoring Report – 2<sup>nd</sup> Quarter 2010**, dated July 23, 2010, and received by NDEP electronically on July 23, 2010.

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 generally continued to maintain data consistency.

**October 2010:** **Quarterly Groundwater Monitoring Report – 3<sup>rd</sup> Quarter 2010**, dated October 22, 2010, and received at NDEP electronically on October 22, 2010; resubmitted with NDEP-requested modifications December 21, 2010.

**December 2010:**        **Permanent Injunction Governing the Clean Up of Hazardous Substances at and Emanating from Maryland Square Shopping Center**, dated December 27, 2010, and received by NDEP on November 18, 2002.

The injunction dictated the schedule for remediation of the source area and groundwater at the site. It also decreed that groundwater monitoring should continue based on the previously defined NDEP schedule.

**January 2011:**        **Quarterly Groundwater Monitoring Report – 4<sup>th</sup> quarter 2010**, dated January 21, 2011, and received at NDEP electronically on January 21, 2011.

**February 2011:**        **Draft Plan for mitigation of Indoor Air and Well Water**, dated February 28, 2011, and received at NDEP electronically on February 28, 2011.

This work plan describes indoor air monitoring and additional groundwater characterization required by the permanent injunction delineates the PCE plume to 5 µg/L.

**April 2011:** *Quarterly Groundwater Monitoring Report – 1<sup>st</sup> Quarter 2011*, dated April 20, 2011, and received at NDEP electronically on April 20, 2011.

**June 2011:** *Draft Plan for Mitigation of Indoor Air and Well Water*, dated June 28, 2011, and received at NDEP electronically on April 20, 2011.

This work plan incorporated NDEP comments on the previously submitted draft.

**July 2011:** *Quarterly Groundwater Monitoring Report – 3<sup>rd</sup> Quarter 2011*, dated July 28, 2011, and received at NDEP electronically on July 28, 2011.

**August 2011:** *Addendum to the Draft Work Plan for Mitigation of Indoor Air and Well Water*, dated August 15, 2011, and received at NDEP electronically on August 15, 2011.

This addendum incorporated NDEP comments on the previously submitted draft.

Groundwater monitoring and sampling responsibilities transferred from Tetra Tech to Cardno ATC for the fourth quarter of 2011.

### **New Well Installation**

A total of three nested monitoring wells with three points each, comprised of nine total monitoring points, have been installed since the fourth quarter of 2012.

Tetra Tech conducted the installation of wells MW-6D, MW-19D, and MW-20D in January 2012.

Nested well MW-6D was constructed by the western side of the Boulevard Mall parking garage, just north of well MW-6. The nested well consists of three monitoring wells (MW-6D1, MW-6D2, and MW-6D3). Grab samples were collected during the initial advancement of the boring that was converted into the three monitoring wells. Groundwater samples were collected from depths of 32, 41, 51, 65, 71, 81, 91, 101, 111, and 121 feet with PCE concentrations of 720 µg/L, 1,100 µg/L, 180 µg/L, 150 µg/L, 17 µg/L, 0.76 µg/L, non-detect, non-detect, 0.52 µg/L, and non-detect, respectively. The total depth of the borehole is 120 feet. MW-6D1 has a screen interval from 50 to 60 feet bgs. MW-6D2 has a screen interval from 80 to 90 feet bgs. MW-6D3 has a screen interval from 100 to 110 feet bgs.

The PCE concentrations from the First Quarter 2013 sampling event for MW-6D1, MW-6D2, and MW-6D3 were reported below laboratory detection limits (<0.50 µg/L).

Nested well MW-19D was constructed in the parking lot east of Boulevard Mall, near well MW-19. The nested well consists of three monitoring wells (MW-19D1, MW-19D2, and MW-19D3). Grab samples were collected during the initial advancement of the boring that was converted into the three monitoring wells. Groundwater samples were collected from depths of 27, 36, 46, 81, and 101 feet with PCE concentrations of 810 µg/L, 840 µg/L, 700 µg/L, non-detect, and non-detect, respectively. The total depth of the borehole is 104 feet. MW-19D1 has a screen interval of 31 to 51 feet bgs. MW-19D2 has a screen interval from 60-70 feet bgs. MW-19D3 has a screen interval of 92 to 102 feet bgs.

The PCE concentrations from the First Quarter 2013 sampling event for MW-19D1, MW-19D2, and MW-19D3 were 300 µg/L, 170 µg/L, and 0.50 µg/L, respectively.

Nested well MW-20D was constructed in the parking lot east of Boulevard Mall, near well MW-20. The nested well consists of three monitoring wells (MW-20D1, MW-20D2, and MW-20D3). Grab samples were collected during the initial advancement of the boring that was converted into the three monitoring wells. Groundwater samples were collected from depths of 56 and 101 feet with PCE concentrations of 470 µg/L and 0.52 µg/L, respectively. A duplicate sample of the 101 foot depth was taken that came back as a non-detect from the

laboratory. The total depth of the borehole is 100.5 feet. MW-20D1 has a screen interval of 25 to 45 feet bgs. MW-20D2 has a screen interval from 55-65 feet bgs. MW-20D3 has a screen interval of 90 to 100 feet bgs.

The PCE concentrations from the First Quarter 2013 sampling event for MW-20D1, MW-20D2, and MW-20D3 were 69 µg/L, 25 µg/L, and 0.66 µg/L, respectively.

## 2 Groundwater Monitoring and Sampling

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Based on the observed site conditions, 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, 3<sup>rd</sup> Quarter 2009, Maryland Square Shopping Center," dated December 22, 2009.

Based on the revised schedule for the First Quarter 2013 sampling event, which prescribes sampling at all site-related active monitoring wells, each well was sampled to record groundwater characteristics and quantify volatile organic compound (VOC) concentrations. Depth to groundwater measurements were collected at active monitoring well locations. Ten of the site monitoring wells (MW-19, MW-19I, MW-19D1, MW-19D2, MW-19D3, MW-20, MW-20D1, MW-20D2, MW-20D3, and all depths of MW-40 CMT) were within the vicinity of an on-going pilot test being conducted by Tetra Tech to the east of the Boulevard Mall. This area was not accessible to Cardno ATC, so groundwater sampling of those ten wells was conducted by Tetra Tech, and laboratory data was then sent to Cardno ATC for use in this report. Depth to groundwater measurements were not reported to Cardno ATC from the ten wells that Tetra Tech conducting groundwater monitoring on.

As per agreement with NDEP, select monitoring wells are sampled in 2013 on a quarterly, semi-annual, or annual basis. 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 2013 sampling schedule has been modified and approved by NDEP.

The NDEP modified the sampling schedule in response to Cardno ATC's "Letter Request to Adjust Sampling Schedule for Fourth Quarter 2012 and First Quarter 2013," dated October 26, 2012. The letter proposed that the 2012 monitoring be revised to include only wells MW-34 through MW-40 and that the sampling event for First Quarter 2013 be revised to include all site wells.

The NDEP approved 2013 annual sampling schedule for monitoring wells in the groundwater monitoring program is:

- First Quarter – MW-1 through MW-3, MW-5 through MW-40, MW-14I, and MW-19I (plus newly installed wells 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-9, MW-14, MW-17, MW-27, MW-34 through MW-40, MW-14I, MW-19I, MW-6D1, MW-6D2, MW-6D3, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D2, and MW-20D3 (plus any newly installed wells)
- Third Quarter – MW-1, MW-5, MW-6, MW-9, MW-14, MW-17, MW-34 through MW-40, MW-14I, MW-19I, MW-6D1, MW-6D2, MW-6D3, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D2, and MW-20D3 (plus any newly installed wells)
- Fourth Quarter – MW-1, MW-2, MW-5 through MW-9, MW-12, MW-13, MW-14, MW-17 through MW-20, MW-23, MW-25, MW-26, MW-27, MW-30, MW-31 through MW-40, MW-14I, MW-19I, MW-6D1, MW-6D2, MW-6D3, MW-19D1, MW-19D2, MW-19D3, MW-20D1, MW-20D2, and MW-20D3 (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 excavation of three well volumes of groundwater using downhole pumps or bailers.

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. For consistency with previous events, Cardno ATC placed the inlet of the pump in the middle of the saturated zone for each well (between top of groundwater and bottom of well). Groundwater was pumped at a flow rate of 0.25 L/min. Following the stabilization of groundwater parameters, the pump rate was lowered 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 a properly labeled steel 55-gallon drum 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. 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 duplicate groundwater samples from monitoring wells MW-36, MW-9, MW-27, MW-28, and MW-31.

Laboratory analysis of each groundwater sample produced quantitative data within quality assurance standards. Surrogate compound recoveries associated with each field sample consistently verified proper analytical technique. No laboratory quality control data were flagged outside of established tolerances. The analytical data on water quality for the first 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. The ten monitoring wells sampled by Tetra Tech are not included in this section. Depths to groundwater in the wells sampled during this quarterly event ranged from 12.50 feet bgs (MW-28) to 26.86 feet bgs (MW-16). The average groundwater elevation exhibited an average increase of 0.20 feet across the site compared with similar wells from the Fourth Quarter 2012 groundwater monitoring event (MW-34 through MW-39) and increased 0.70 feet across the site compared with similar wells from the Second Quarter 2012 (last time all site wells were monitored). Based on the first quarter results, the local hydraulic gradient across the site is generally toward the east.

DO readings for across the site ranged from 0.18 to 5.66 milligrams per liter (mg/L). ORP readings from across the site ranged from -237.5 to 205.1 millivolts (mV).

## 2.3 Groundwater Analytical Results

On March 18<sup>th</sup>, 2013 through March 22<sup>nd</sup>, 2013, Cardno ATC mobilized to the site to obtain groundwater samples from the existing groundwater monitoring wells (MW-1 through MW-3, MW-5 through MW-18, MW-21 through MW-39, and MW-141) and the new groundwater monitoring well MW-6D over the vicinity of the site (Figure 2). Tetra

Tech provided the PCE laboratory analysis for wells MW-19, MW-19I, MW-19D1, MW-19D2, MW-19D3, MW-20, MW-20D1, MW-20D2, MW-20D3, and MW-40 CMT.

Groundwater samples were submitted to Advanced Technologies Laboratory (ATL) of Las Vegas, Nevada, an NDEP-certified laboratory, for the analysis of VOCs using EPA method 8260B.

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 1: 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	20.35	1971.66	260	<0.50	Decreasing
MW-2	19.29	1964.24	580	2.5	Decreasing
MW-3	20.37	1963.44	12	<0.50	No Trend
MW-5	19.69	1969.00	530	2.3	Increasing
MW-6	20.23	1967.89	2,600	10	Increasing
MW-6D1	16.29	NM	<0.50	<0.50	N/A <sup>1</sup>
MW-6D2	14.94	NM	<0.50	<0.50	N/A <sup>1</sup>
MW-6D3	14.04	NM	<0.50	<0.50	N/A <sup>1</sup>
MW-7	18.47	1971.31	10	<0.50	Increasing
MW-8	20.65	1971.06	1.5	<0.50	Decreasing
MW-9	20.56	1971.69	6.6	<0.50	Decreasing
MW-10	21.36	1961.92	<0.50	<0.50	No Trend
MW-11	25.81	1954.06	<0.50	<0.50	N/A <sup>2</sup>
MW-12	16.76	1979.19	0.65	<0.50	No Trend
MW-13	18.53	1964.78	1,300	2.8	Decreasing
MW-14	19.12	1968.21	1,900	2.9	Decreasing
MW-14I	19.52	NM	7,200	51	N/A <sup>1</sup>
MW-15	16.41	1966.33	2.7	<0.50	Stable
MW-16	26.86	1953.67	<0.50	<0.50	N/A <sup>2</sup>
MW-17	19.94	1971.10	190	<0.50	Decreasing
MW-18	12.06	1950.84	1,200	2.5	Decreasing
MW-19	NM	NM	520	3.2	Stable
MW-19I	NM	NM	710	5.2	N/A <sup>1</sup>
MW-19D1	NM	NM	300	2.9	N/A <sup>1</sup>
MW-19D2	NM	NM	170	1.5	N/A <sup>1</sup>
MW-19D3	NM	NM	0.50	<0.50	N/A <sup>1</sup>
MW-20	NM	NM	290	1.8	Decreasing
MW-20D1	NM	NM	69	2.8	N/A <sup>1</sup>
MW-20D2	NM	NM	25	<0.50	N/A <sup>1</sup>

Well ID	Depth to GW Level (feet)	Groundwater Elevation (feet amsl)	PCE (µg/L)	TCE (µg/L)	Mann-Kendall Trend (Since Well Installation)
MW-20D3	NM	NM	0.66	<0.50	N/A <sup>1</sup>
MW-21	25.03	1954.22	8.4	<0.50	Decreasing
MW-22	26.27	1948.92	<0.50	<0.50	N/A <sup>2</sup>
MW-23	15.95	1946.50	960	2.2	Decreasing
MW-24	13.62	1947.20	1.3	<0.50	Probably Decreasing
MW-25	18.75	1940.54	660	0.75	Decreasing
MW-26	16.81	1936.64	740	0.51	Decreasing
MW-27	15.33	1928.82	450	1.0	Increasing
MW-28	12.50	1930.57	0.50	<0.50	Decreasing
MW-29	13.30	1919.05	<0.50	<0.50	Decreasing
MW-30	17.38	1923.21	62	<0.50	Decreasing
MW-31	16.27	1921.39	61	<0.50	No Trend
MW-32	18.43	1934.47	720	1.8	Decreasing
MW-33	17.25	1933.73	<0.50	<0.50	Decreasing
MW-34	19.06	1974.82	550	0.86	Decreasing
MW-35	19.99	1971.38	340	<0.50	Probably Decreasing
MW-36	19.03	1936.27	160	0.52	No Trend
MW-37	18.83	1911.15	34	<0.50	Stable
MW-38	14.48	1893.90	7.3	<0.50	No Trend
MW-39	24.20	1943.35	280	0.83	No Trend
MW-40 CMT-30	NM	NM	4.7	<0.50	N/A <sup>1</sup>
MW-40 CMT-35	NM	NM	48	3.1	N/A <sup>1</sup>
MW-40 CMT-40	NM	NM	270	1.6	N/A <sup>1</sup>
MW-40 CMT-45	NM	NM	310	1.6	N/A <sup>1</sup>
MW-40 CMT-50	NM	NM	280	2.4	N/A <sup>1</sup>
MW-40 CMT-55	NM	NM	390	4.1	N/A <sup>1</sup>
MW-40 CMT-60	NM	NM	1,200	9.5	N/A <sup>1</sup>

Notes: <sup>1</sup>Unable to evaluate trend without at least four sampling events of data

<sup>2</sup>Mann-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 Measured, survey not completed or data not received from Tetra Tech

- Decrease in elevation

+ Increase in elevation

Amsl: Above Mean Sea Level

The groundwater locations selected for quarterly monitoring represent the most recently installed wells and cover the groundwater conditions at the Maryland Square site (except for ten wells sampled by Tetra Tech). The range of groundwater elevations spanned from 1893.90 feet above mean sea level (amsl) (MW-38) to 1979.19 feet amsl (MW-12). Groundwater elevations are summarized in Tables 1, 1-A, and 2-A.



Groundwater elevations decreased across all groundwater monitoring wells located on the Maryland Square property by 1.07 feet compared with the same wells from the Second Quarter 2012 data (last time all on-site monitoring wells were sampled). Groundwater elevations across the Boulevard Mall property increased by an average of 0.37 feet. Finally, groundwater elevations increased across groundwater monitoring wells located on the surrounding streets and golf course area by 1.77 feet when compared with the Second Quarter 2012 data. 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 the groundwater samples collected from all monitoring wells except MW-6D1, MW-6D2, MW-6D2, MW-10, MW-11, MW-16, MW-22, and MW-29. PCE was detected at concentrations ranging from 0.50 µg/L (MW-19D3 and MW-28) to 7,200 µg/L (MW-14I). PCE concentrations identified by the laboratory in the groundwater samples collected from wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, MW-9, MW-13, MW-14, MW-14I, MW-17, MW-18, MW-19, MW-19I, MW-19D1, MW-19D2, MW-20, MW-20D1, MW-20D2, MW-21, MW-23, MW-25, MW-26, MW-27, MW-30, MW-31, MW-32, MW-34 through MW-39, and MW-40 CMT-35 through MW-40 CMT-60 exceeded the maximum contaminant levels (MCL) for PCE in groundwater of 5 µg/L.

Duplicate samples were collected from MW-6, MW-9, MW-27, MW-28, and MW-31. In MW-6 concentrations of PCE were measured at 2,600 µg/L and 2,400 µg/L, a relative percent difference (RPD) of 8.0%. In MW-9 concentrations of PCE were measured at 6.6 µg/L and 7.7 µg/L, a RPD of 15.4%. In MW-27 concentrations of PCE were measured at 450 µg/L and 470 µg/L, a RPD of 4.3%. In MW-28 concentrations of PCE were measured at 0.50 µg/L and 0.61 µg/L, a RPD of 19.8%. In MW-31, PCE concentrations were measured at 59 µg/L and 61 µg/L, a RPD of 3.33%. The duplicate sample results do not show significant statistical variation based on the levels of the concentrations.

The Mann-Kendall Trend Test for Plume Stability was also used to determine whether the plume was increasing or decreasing at each particular well. A confidence factor greater than 95% was needed to state that PCE concentration at a given well was increasing or decreasing. A confidence factor between 90% and 95% was needed to state that PCE concentration at a given well was probably increasing or probably decreasing. Data was gathered for the past 20 sampling events at each well, and if a well did not have at least four sampling events then it was not included. Results of the Mann-Kendall Test showed that the PCE plume was decreasing at nineteen wells, increasing at four wells, probably decreasing at two wells, stable at three wells, and showed no trend at seven wells (ten including MW-11, MW-16, and MW-22 which weren't analyzed).

Trichloroethene (TCE) was detected at concentrations ranging from 0.51 µg/L to 51 µg/L in the groundwater samples collected from wells MW-2, MW-5, MW-6, MW-13, MW-14, MW-14I, MW-18, MW-19, MW-19I, MW-19D1, MW-19D2, MW-20, MW-20D1, MW-23, MW-25, MW-26, MW-27, MW-32, MW-36, MW-39, and all depths of MW-40 CMT except CMT-30. The detected concentrations were below the MCL for TCE in groundwater of 5 µg/L, with the exception of MW-6 (10 µg/L), MW-14I (51 µg/L), MW-19I (5.2 µg/L), and MW-40 CMT-60 (9.5 µg/L).

Cis-1,2-dichloroethene (DCE) was detected in monitoring wells MW-14I (4.9 µg/L), MW-19I (0.74 µg/L), MW-20D1 (3.6 µg/L), MW-40 CMT-55 (1.7 µg/L), and MW-40 CMT-60 (6.0 µg/L). 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 small amounts of TCE and cis-1,2 DCE suggests that reductive dechlorination is not significant at the site.

## 3 Summary

Based on the results of this groundwater sampling event, Cardno ATC provides the following summary and conclusions:

- PCE was detected in the groundwater samples collected from all monitoring wells except MW-6D1, MW-6D2, MW-6D2, MW-10, MW-11, MW-16, MW-22, and MW-29. PCE was detected at concentrations ranging from 0.50 µg/L (MW-19D3 and MW-28) to 7,200 µg/L (MW-14I). PCE concentrations identified by the laboratory in the groundwater samples collected from wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, MW-9, MW-13, MW-14, MW-14I, MW-17, MW-18, MW-19, MW-19I, MW-19D1, MW-19D2, MW-20, MW-20D1, MW-20D2, MW-21, MW-23, MW-25, MW-26, MW-27, MW-30, MW-31, MW-32, MW-34 through MW-39, and MW-40 CMT-35 through MW-40 CMT-60 exceeded the maximum contaminant levels (MCL) for PCE in groundwater of 5 µg/L.
- Trichloroethene (TCE) was detected at concentrations ranging from 0.51 µg/L to 51 µg/L in the groundwater samples collected from wells MW-2, MW-5, MW-6, MW-13, MW-14, MW-14I, MW-18, MW-19, MW-19I, MW-19D1, MW-19D2, MW-20, MW-20D1, MW-23, MW-25, MW-26, MW-27, MW-32, MW-36, MW-39, and all depths of MW-40 CMT except CMT-30. The detected concentrations were below the MCL for TCE in groundwater of 5 µg/L, with the exception of MW-6 (10 µg/L), MW-14I (51 µg/L), MW-19I (5.2 µg/L), and MW-40 CMT-60 (9.5 µg/L).
- Cis-1,2-dichloroethene (DCE) was detected in monitoring wells MW-14I (4.9 µg/L), MW-19I (0.74 µg/L), MW-20D1 (3.6 µg/L), MW-40 CMT-55 (1.7 µg/L), and MW-40 CMT-60 (6.0 µg/L). The detected concentrations were below the MCL for DCE in groundwater of 70 µg/L.

### 3.1 Recommendations

Cardno ATC recommends continuing monitoring and sampling of the site monitoring wells in accordance with the NDEP approved 2013 schedule.

NDEP requested the evaluation of possible locations for additional monitoring wells, in a letter dated August 17, 2012, that would aid in developing the northern and eastern border of the plume. Three proposed monitoring well locations were considered by Cardno ATC. The first monitoring well proposed would be approximately 500 feet to the north of MW-39 on Commanche Drive. This well would help to further define the northern border of the plume. Two additional monitoring wells are proposed to be placed in the vicinity of MW-38. MW-38 represents the eastern boundary of the plume, but more definition is needed to determine the extent of the plume to the north and south of MW-38. The northern monitoring well is proposed to be placed on Emerson Avenue near Manzano Drive, approximately 550 feet to the northwest of MW-38. The southern monitoring well is proposed to be placed approximately 350 to the south of MW-38 on Palace Sands. See Figure 3 for locations of proposed monitoring wells.

For your convenience, a copy of this report has been forwarded to the NDEP case officer for review.

### 3.2 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

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This First Quarter 2013 Groundwater Monitoring 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) 798-5750.

Sincerely,

**Cardno ATC**



Adam Katlein  
Staff Scientist



Andrew D. Stuart  
Senior Project Manager  
Nevada Certified Environmental Manager  
No. EM-1905 (Expires 01/26/13)

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	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)
<b>Project Monitoring Wells Located on Maryland Square Property</b>											
MW-1	Mar 13	1992.01	20.35	1971.66	10-30	0.90	2.5	59.2	<b>260</b>	<0.50	<0.50
MW-7	Mar 13	1989.78	18.47	1971.31	10-30	3.43	2.5	70.3	<b>10</b>	<0.50	<0.50
MW-8	Mar 13	1991.71	20.65	1971.06	10-30	4.97	2.3	78.3	1.5	<0.50	<0.50
MW-9	Mar 13	1992.25	20.56	1971.69	48.5-50	0.63	0.9	-0.1	<b>6.6</b>	<0.50	<0.50
MW-12	Mar 13	1995.95	16.76	1979.19	13.5-33.5	2.39	2.5	46.4	0.65	<0.50	<0.50
MW-17	Mar 13	1991.04	19.94	1971.10	15-30	0.99	2.4	54.3	<b>190</b>	<0.50	<0.50
MW-34	Mar 13	1993.88	19.06	1974.82	--	1.58	2.6	125.3	<b>550</b>	0.86	<0.50
MW-35	Mar 13	1991.37	19.99	1971.38	--	3.16	2.4	128.5	<b>340</b>	<0.50	<0.50
<b>Project Monitoring Wells Located on Boulevard Mall Property</b>											
MW-2	Mar 13	1983.53	19.29	1964.24	10-32	2.67	2.3	205.1	<b>580</b>	2.5	1.0
MW-3	Mar 13	1983.81	20.37	1963.44	10-32	1.68	2.9	153.2	<b>12</b>	<0.50	<0.50
MW-4	Mar 12	1989.86	NM	NM	10-32	NM	NM	NM	NS	NS	NS
MW-5	Mar 13	1988.69	19.69	1969.00	10-32	4.40	2.3	133.5	<b>530</b>	2.3	0.67
MW-6	Mar 13	1988.12	20.23	1967.89	10-32	3.30	2.2	100.3	<b>2,600</b>	<b>10</b>	2.2
MW-6D1	Mar 13	NM	16.29	1972.43	50-60	5.66	0.4	86.1	<0.50	<0.50	<0.50
MW-6D2	Mar 13	NM	14.94	1973.78	80-90	4.25	0.4	54.8	<0.50	<0.50	<0.50

**Table A-1: Current 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)	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)
<b>Project Monitoring Wells Located on Boulevard Mall Property</b>											
MW-6D3	Mar 13	NM	14.04	1974.68	100-110	0.72	0.3	29.4	<0.50	<0.50	<0.50
MW-10	Mar 13	1983.28	21.36	1961.92	10-30	0.74	1.7	-237.5	<0.50	<0.50	<0.50
MW-11	Mar 13	1979.87	25.81	1954.06	13.5-33.5	1.21	2.4	-103.6	<0.50	<0.50	<0.50
MW-13	Mar 13	1983.31	18.53	1964.78	9-29	1.55	2.5	159.2	<b>1,300</b>	2.8	<0.50
MW-14	Mar 13	1987.33	19.12	1968.21	15-40	2.61	2.5	112.3	<b>1,900</b>	2.9	<0.50
MW-14I	Mar 13	NM	19.52	NM	40-55	4.05	0.9	94.6	<b>7,200</b>	<b>51</b>	4.9
MW-15	Mar 13	1982.74	16.41	1966.33	15-32	2.92	2.3	47.9	2.7	<0.50	<0.50
MW-16	Mar 13	1980.53	26.86	1953.67	19-32	1.65	2.2	-110.8	<0.50	<0.50	<0.50
MW-19	Mar 13	1980.13	NM	NM	19-35	NM	NM	NM	<b>520</b>	3.2	<0.50
MW-19D1	Mar 13	NM	NM	NM	31-51	NM	NM	NM	<b>300</b>	2.9	<0.50
MW-19D2	Mar 13	NM	NM	NM	60-70	NM	NM	NM	<b>170</b>	1.5	<0.50
MW-19D3	Mar 13	NM	NM	NM	92-102	NM	NM	NM	0.50	<0.50	<0.50
MW-19I	Mar 13	1967.55	NM	NM	34-54	NM	NM	NM	<b>710</b>	<b>5.2</b>	0.74
MW-20	Mar 13	1979.82	NM	NM	19-35	NM	NM	NM	<b>290</b>	1.8	<0.50
MW-20D1	Mar 13	NM	NM	NM	25-45	NM	NM	NM	<b>69</b>	2.8	3.6

**Table A-1: Current 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)	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)
<b>Project Monitoring Wells Located on Boulevard Mall Property</b>											
MW-20D2	Mar 13	NM	NM	NM	55-65	NM	NM	NM	<b>25</b>	<0.50	<0.50
MW-20D3	Mar 13	NM	NM	NM	90-100	NM	NM	NM	0.66	<0.50	<0.50
MW-21	Mar 13	1979.25	25.03	1954.22	19-36	0.18	2.4	107.3	<b>8.4</b>	<0.50	<0.50
MW-40 CMT-30	Mar 13	NM	NM	NM	30-30.6	NM	NM	NM	4.7	<0.50	<0.50
MW-40 CMT-35	Mar 13	NM	NM	NM	35-35.6	NM	NM	NM	<b>48</b>	3.1	<0.50
MW-40 CMT-40	Mar 13	NM	NM	NM	40-40.6	NM	NM	NM	<b>270</b>	1.6	<0.50
MW-40 CMT-45	Mar 13	NM	NM	NM	45-45.6	NM	NM	NM	<b>310</b>	1.6	<0.50
MW-40 CMT-50	Mar 13	NM	NM	NM	50-50.6	NM	NM	NM	<b>280</b>	2.4	<0.50
MW-40 CMT-55	Mar 13	NM	NM	NM	55-55.6	NM	NM	NM	<b>390</b>	4.1	1.7
MW-40 CMT-60	Mar 13	NM	NM	NM	60-60.6	NM	NM	NM	<b>1,200</b>	<b>9.5</b>	6.0
<b>Project Monitoring Wells Located on Surrounding Streets and Golf Course</b>											
MW-18	Mar 13	1962.90	12.06	1950.84	5-26	2.64	2.3	82.8	<b>1,200</b>	2.5	<0.50
MW-22	Mar 13	1975.19	26.27	1948.92	15-36	1.70	2.5	139.9	<0.50	<0.50	<0.50
MW-23	Mar 13	1962.45	15.95	1946.50	5-26	1.42	2.4	107.4	<b>960</b>	2.2	<0.50
MW-24	Mar 13	1960.82	13.62	1947.20	5-26	1.75	2.3	62.3	1.3	<0.50	<0.50
MW-25	Mar 13	1959.29	18.75	1940.54	5-26	2.34	2.5	127.0	<b>660</b>	0.75	<0.50



**Table A-1: Current 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)	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)
<b>Project Monitoring Wells Located on Surrounding Streets and Golf Course</b>											
MW-26	Mar 13	1953.45	16.81	1936.64	10-36	2.66	2.6	118.1	<b>740</b>	0.51	<0.50
MW-27	Mar 13	1944.15	15.33	1928.82	10-36	1.76	2.6	100.2	<b>450</b>	1.0	<0.50
MW-28	Mar 13	1943.07	12.50	1930.57	15-36	1.92	2.7	69.9	0.50	<0.50	<0.50
MW-29	Mar 13	1932.35	13.30	1919.05	15-36	4.41	2.7	84.8	<0.50	<0.50	<0.50
MW-30	Mar 13	1940.59	17.38	1923.21	20-41	4.19	2.1	143.9	<b>62</b>	<0.50	<0.50
MW-31	Mar 13	1937.66	16.27	1921.39	13.5-33.6	2.93	2.7	138.9	<b>61</b>	<0.50	<0.50
MW-32	Mar 13	1952.90	18.43	1934.47	13.5-33.7	3.43	2.4	114.1	<b>720</b>	1.8	<0.50
MW-33	Mar 13	1950.98	17.25	1933.73	13.5-33.8	1.89	2.7	134.0	<0.50	<0.50	<0.50
MW-36	Mar 13	1955.30	19.03	1936.27	17-38	1.69	2.5	120.5	<b>160</b>	0.52	<0.50
MW-37	Mar 13	1929.98	18.83	1911.15	17-38	4.29	2.7	138.9	<b>34</b>	<0.50	<0.50
MW-38	Mar 13	1908.38	14.48	1893.90	15-36	3.87	2.7	138.0	<b>7.3</b>	<0.50	<0.50
MW-39	Mar 13	1967.55	24.20	1943.35	15-36	1.36	2.4	137.4	<b>280</b>	0.83	<0.50

Notes: NM = Not Measured °C = degrees Celsius Bold value indicates concentration that exceeds regulatory standard.  
 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  
 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	17.90	1974.14	NM	NM	NM	NM	NM	NM	NM	2,000	ND	ND	ND
	May 03	1992.04	18.70	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	19.30	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	1,700	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	18.30	1973.74	6.3	3.7	81.0	4.6	26.70	2.4	129	1,100	ND	ND	ND
	Dec 06	1992.04	18.88	1973.16	6.7	4.4	>999	5.1	26.90	2.8	111	1,300	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	19.90	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	20.10	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	1971.60	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	3.90	NM	0.90	24.80	2.5	59	260	<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	NS	NS	NS	NS	
	Nov 12	1983.53	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	<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-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	NS	NS	NS	NS	
	Nov 12	1983.81	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

**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	

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	NS	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	

**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	2,200	13.0	8.1	ND
	Sep 02	1989.01	18.26	1970.75	NM	NM	NM	NM	NM	nM	NM	1,000	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	1,300	ND	ND	ND
	Jan 04	1989.01	19.74	1969.27	7.0	2.3	NM	1.2	22.40	NM	NM	2,400	ND	ND	ND
	May 05	1989.01	16.21	1972.8	6.9	2.4	NM	2.8	25.90	NM	123	2,090	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	1,100	ND	ND	ND
	Oct 06	1989.01	18.73	1970.28	6.3	3.6	7.0	4.1	26.50	2.3	61	1,300	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	1,300	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	1,500	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	
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
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
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

**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	2.0	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	NS	NS	NS	NS	
	Nov 12	1989.78	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



**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	NS	NS	NS	NS	
	Nov 12	1991.71	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

**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-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	6.6	<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-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	

**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	

**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	NS	NS	NS	NS	
	Nov 12	1995.95	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	

**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	NS	NS	NS	NS	
	Nov 12	1983.31	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

**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	2.0	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	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
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

**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	



**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
	Sep 12	1980.53	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
	Nov 12	1980.53	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

**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	1,300	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

**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	1,600	ND	ND	ND
	Sep 05	1962.87	9.69	1953.18	7.1	4.1	3.0	6.2	26.30	2.6	88	1,700	ND	ND	ND
	Dec 05	1962.87	9.70	1953.17	6.8	4.7	NM	2.0	25.20	3.0	420	2,400	ND	ND	ND
	Mar 06	1962.87	10.21	1952.66	5.2	6.2	3.0	NM	23.30	3.9	237	1,700	NS	NS	NS
	Jun 06	1962.87	11.64	1951.23	NM	3.6	304.0	6.2	25.40	2.3	166	1,600	NS	NS	NS
	Oct 06	1962.87	11.21	1951.66	6.3	3.5	0.0	4.1	25.50	2.2	127	2,100	ND	ND	ND
	Dec 06	1962.87	10.98	1951.89	6.8	4.2	0.0	4.3	24.70	2.7	297	1,400	ND	ND	ND
	Mar 07	1962.87	11.36	1951.51	7.0	3.4	23.0	7.5	22.80	2.2	286	1,400	ND	ND	ND
	Jun 07	1962.87	12.53	1950.34	7.0	3.5	24.0	5.5	23.90	2.2	394	1,300	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	NS	NS	NS	NS	
	Nov 12	1962.9	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

**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	1,300	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	1,200	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	1,200	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	1,300	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	1,000	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	1,100	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	1,000	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	1981.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	520	3.2	<0.50	<0.50	
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	NS	NS	NS	NS	
	Mar 13	1968.55	NM	NM	NM	NM	NM	NM	NM	NM	710	5.2	0.74	<0.50	
MW-19D1	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	300	2.9	<0.50	<0.50	
MW-19D2	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	170	1.5	<0.50	<0.50	
MW-19D3	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	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-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	1,400	ND	ND	ND	
	Mar 08	1979.99	25.12	1954.87	6.9	3.5	33.0	4.0	23.60	2.3	184	1,600	NS	NS	NS	
	Jun 08	1979.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,200	ND	ND	ND
	Oct 08	1979.95	26.05	1953.90	7.3	3.5	-5.0	2.3	25.20	NM	181	1,000	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	1,100	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	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	NM	NS	NS	NS	NS	
Nov 12	1979.82	NM	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	NM	290	1.8	<0.50	<0.50	
MW-20D1	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	69	2.8	3.6	<0.50	
MW-20D2	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	25	<0.50	<0.50	<0.50	
MW-20D3	Mar 13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.66	<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	NS	NS	NS	NS	
	Nov 12	1979.25	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

**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
	Sep 12	1975.19	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
	Nov 12	1975.19	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

**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	1,300	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	1,200	ND	ND	ND
	Mar 08	1962.32	15.18	1947.14	7.0	6.3	0.4	2.2	24.00	4.1	188	1,400	ND	ND	ND
	Jun 08	1962.32	NM	NM	NM	NM	NM	NM	NM	NM	NM	1,100	ND	ND	ND
	Oct 08	1962.29	16.34	1945.95	6.7	3.5	18.3	2.0	23.40	2.3	170	1,300	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	1,100	ND	ND	ND
	Jun 09	1962.29	16.40	1945.89	7.2	3.6	7.1	0.6	23.80	2.3	124	1,400	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	1,200	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	1,000	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	1,100	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	1,100	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



**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
	Sep 12	1960.82	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
	Nov 12	1960.82	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

**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	1,000	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	1,300	ND	ND	ND
	Dec 06	1960.74	18.61	1942.13	6.7	4.5	0.0	3.8	23.90	2.8	429	1,200	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
	Sep 12	1959.29	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS	
	Nov 12	1959.29	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

**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	1,100	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	1,100	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	0.7	ND	ND
	Oct 10	1953.48	19.09	1934.39	6.8	3.7	-0.8	2.0	24.60	2.4	504	450	0.6	ND	ND
	Nov 10	1953.48	18.75	1934.73	6.9	3.7	0.6	2.6	24.91	NM	92	750	0.7	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	0.6	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	

\*

**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	2.0	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	NS	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	<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-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	

**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		

**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	2.0	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
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	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

**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
	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
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	1,000	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	1,000	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	1,000	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	1952.90	20.94	1931.96	6.9	3.6	240.0	4.7	25.10	2.3	101	640	2.0	ND
	Sep 12	1952.90	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Nov 12	1952.90	NM	NM	NM	NM	NM	NM	NM	NM	NM	NS	NS	NS	NS
	Mar 13	1952.90	18.43	1934.47	7.0	3.7	NM	3.4	23.98	2.4	114	720	1.8	<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
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
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
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

**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
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
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
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
MW-40 CMT-30	Nov 12		25.28		7.9	3.6	NM	2.6	17.9	2.3	-68	340	1.1	<0.50	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	4.7	<0.50	<0.50	<0.50
MW-40 CMT-35	Nov 12		25.30		8.1	4.1	NM	1.9	17.8	2.7	-163	260	6.6	<0.50	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	48	3.1	<0.50	<0.50
MW-40 CMT-40	Nov 12		25.34		8.1	3.1	NM	2.0	20.4	2.0	-132	320	1.7	<0.50	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	270	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-40 CMT-45	Nov 12		25.28		8.0	3.3	NM	2.1	20.5	2.1	-159	280	1.9	<0.50	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	310	1.6	<0.50	<0.50
MW-40 CMT-50	Nov 12		25.28		8.2	3.4	NM	2.0	19.3	2.2	-175	300	2.5	<0.50	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	280	2.4	<0.50	<0.50
MW-40 CMT-55	Nov 12		25.33		8.0	2.9	NM	3.6	20.6	1.9	-55	930	4.0	1.7	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	390	4.1	1.7	<0.50
MW-40 CMT-60	Nov 12		25.38		8.0	3.2	NM	2.6	18.9	2.1	-128	1,400	11	6.3	<0.50
	Mar 13		NM		NM	NM	NM	NM	NM	NM	NM	1,200	9.5	6.0	<0.50

Notes:

NM = Not Measured  
 msl = mean sea level  
 ND = Non Detect  
 NS = Not Sampled  
 µg/L = micrograms per liter

°C = degrees Celsius  
 g/L = gallons per liter  
 mg/L = milligrams per liter  
 mS/cm = milli Siemens per centimeter  
 mV = millivolts  
 NTU = Nephelometric Turbidity Units

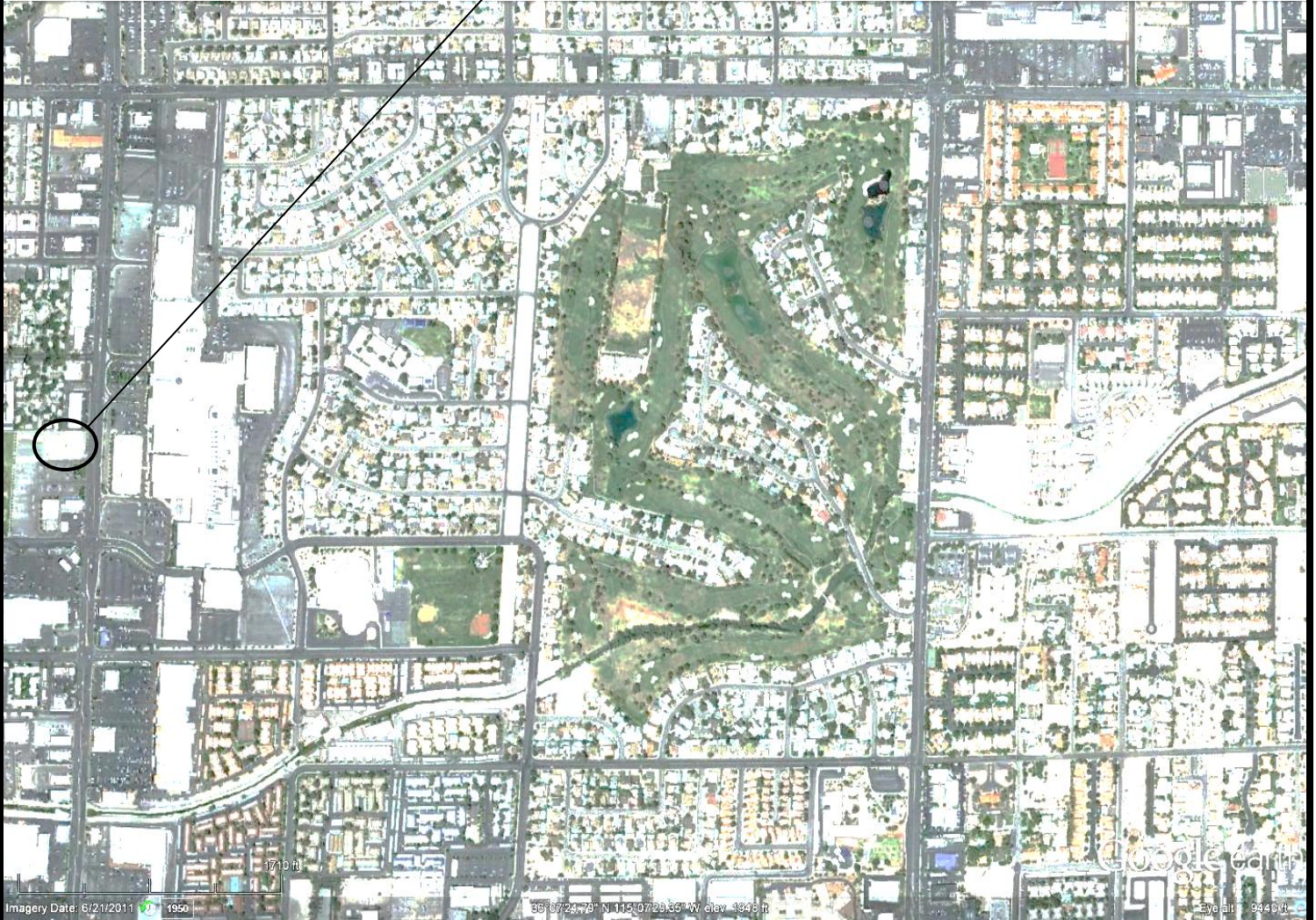
\*: All wells were resurveyed to determine top of casing elevation

Maryland Square PCE Site

FIGURES

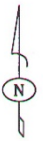


SITE LOCATION



1 inch = 1,000 feet


Note: Scale and location are approximate



SOURCE: Google Earth

**SITE VICINITY MAP**

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

PROJECT NUMBER: 085.42620.0001	DATE: 12/12	Figure 1
APPROVED BY: ADS	DRAWN BY: ABK	
 <b>Cardno ATC</b> Shaping the Future		2925 East Patrick Lane, Suite M Las Vegas, Nevada 89120-2457 Ph: (702) 798-5750 *** Fax: (702) 798-5742



115.135°

115.13°

115.125°

115.12°

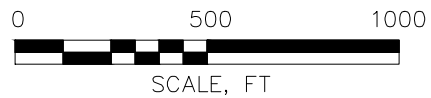
115.115°



LEGEND

- MW-1 GROUNDWATER MONITOR WELL
- PW-1 PUMPING WELL
- 1962.16 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 1950 GROUNDWATER ELEVATION CONTOUR (5 FT. INTERVALS)
- GROUNDWATER FLOW DIRECTION
- NM NOT MEASURED OR NO SURVEY DATA

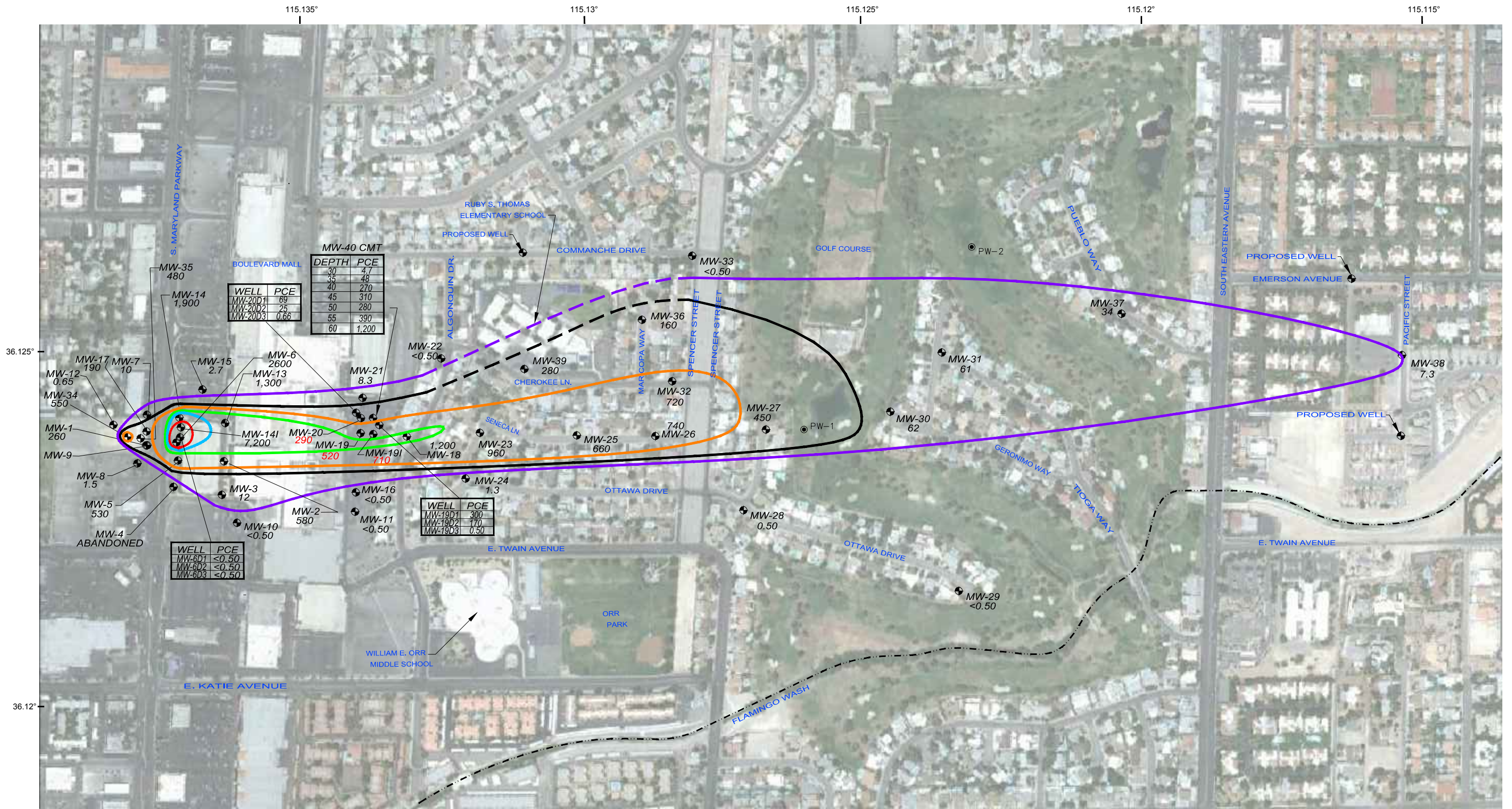
NOTE: SCALE AND LOCATIONS ARE APPROXIMATE



**GROUNDWATER POTENTIOMETRIC MAP**  
**MARCH 18 - MARCH 22, 2013**  
 MARYLAND SQUARE SHOPPING CENTER  
 3661 S. MARYLAND PARKWAY  
 LAS VEGAS, NV

PROJECT NUMBER: 85.42620.0001	DATE: 04/26/13	FIGURE 2
APPROVED BY: AS	DRAWN BY: SMO	
<b>Cardno ATC</b> 2925 E. Patrick Lane, Suite M Las Vegas, Nevada 89120-2457 Ph: (702) 798-5750 *** Fax: (702) 798-5742		





WELL	PCE
MW-20D1	69
MW-20D2	25
MW-20D3	0.66

DEPTH	PCE
30	4.7
35	48
40	270
45	310
50	280
55	390
60	1,200

WELL	PCE
MW-6D1	<0.50
MW-6D2	<0.50
MW-6D3	<0.50

WELL	PCE
MW-19D1	300
MW-19D2	170
MW-19D3	0.50

**LEGEND**

- MW-1 ● GROUNDWATER MONITOR WELL
- PW-1 ● PUMPING WELL
- 500 ISOCONTOUR, μg/L
- 100 ISOCONTOUR, μg/L (DASHED WHERE INFERRED)
- 5 ISOCONTOUR, μg/L (DASHED WHERE INFERRED)
- 2500 ISOCONTOUR, μg/L
- 2000 ISOCONTOUR, μg/L
- 1500 ISOCONTOUR, μg/L
- 1000 ISOCONTOUR, μg/L
- 540 PCE, μg/L
- NS NOT SAMPLED
- 1,000 Tetra Tech Data
- 2,000 Cardno ATC Data

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

0 500 1000  
SCALE, FT

**PCE ISOCONCENTRATION MAP**  
**MARCH 18 - MARCH 22, 2013**  
 MARYLAND SQUARE SHOPPING CENTER  
 3661 S. MARYLAND PARKWAY  
 LAS VEGAS, NV

PROJECT NUMBER: 85.42620.0001	DATE: 04/18/13	FIGURE
APPROVED BY: AS	DRAWN BY: AK	3
2925 E. Patrick Lane, Suite M Las Vegas, Nevada 89120-2457 Ph: (702) 798-5750 *** Fax: (702) 798-5742		



Maryland Square PCE Site

**APPENDIX A**  
FIELD SHEETS





# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 036, 42620-0031  
 Sampler's Name: NBA

Well ID: MW-1  
 Sample ID: \_\_\_\_\_  
 Date: 3/19/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW Flow

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 25.89 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 22.35 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth \_\_\_\_\_ Feet bgs 23.00 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.
0.25	1515	24.59	3.889	2.529	1.68	6.97	86.8	Sl. Cloudy, No odor
.5	1520	24.64	3.899	2.535	0.98	6.96	73.2	" "
.75	1525	24.57	3.899	2.535	0.91	6.96	65.8	" "
1.0	1530	24.71	3.898	2.534	0.91	6.97	62.0	" "
1.25	1535	24.80	3.898	2.534	0.90	6.97	59.2	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N

Comments: \_\_\_\_\_  
 Well Security: Locking cap? P yes \_\_\_ no Replaced? \_\_\_ yes \_\_\_ no 1.8 PID  
 Bolts secured? P yes \_\_\_ no Replaced? \_\_\_ yes \_\_\_ no \_\_\_\_\_ Vacuum  
1538 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Worland Square  
 Project Number: 025-42626-0001  
 Sampler's Name: NBA

Well ID: MW-2  
 Sample ID: \_\_\_\_\_  
 Date: 3/21

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 29.49 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 19.29 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 24.5 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.
.25	811	22.97	3.398	2.269	4.30	7.07	229.7	sl. cloudy, No odor
.5	816	23.05	3.526	2.292	2.82	7.06	219.4	" "
.75	821	23.19	3.527	2.299	2.70	7.06	210.9	" "
1.0	826	23.25	3.527	2.293	2.68	7.05	207.3	" "
1.25	831	23.24	3.528	2.293	2.67	7.05	205.1	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \_\_\_\_\_

Well Security: Locking cap?  yes \_\_\_ no Replaced? \_\_\_ yes  no 1.7 PID  
 Bolts secured?  yes \_\_\_ no Replaced? \_\_\_ yes  no \_\_\_\_\_ Vacuum  
8:39 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Manland Square  
 Project Number: 085, 82620.0001  
 Sampler's Name: AJBA

Well ID: MW-3  
 Sample ID: \_\_\_\_\_  
 Date: 3/21/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 29.70 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 20.37 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 25.0 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.
.25	723	24.45	4.449	2.900	1.06	6.88	197.3	Slightly cloudy, no odor
.5	728	25.12	4.474	2.908	1.70	6.87	177.6	" "
.75	733	24.99	4.472	2.905	1.68	6.87	165.5	" "
1.0	738	25.20	4.473	2.907	1.67	6.86	154.9	" "
1.25	743	25.15	4.473	2.908	1.68	6.86	153.2	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 0.7 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
746 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Mayland Square  
Project Number: 025-02610-0001  
Sampler's Name: NBA

Well ID: 1110-5  
Sample ID: \_\_\_\_\_  
Date: 2/21

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: low flow

Casing Type: PVC  
Casing Diameter: 2 inch  
Depth to Well Bottom: 29.11 feet  
Depth to Water: 10.64 feet  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 24.5 Feet btoc ✓

2" = 0.16 gal/lin ft.  
3" = 0.37 gal/lin ft.  
4" = 0.67 gal/lin ft.

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.
.25	1034	24.90	3.569	2.320	4.43	7.05	131.0	Slightly cloudy, No odor
.5	1039	24.96	3.564	2.317	4.40	7.05	131.9	" "
.75	1044	25.00	3.563	2.317	4.40	7.05	131.8	" "
1.00	1049	25.13	3.565	2.318	4.38	7.05	132.6	" "
1.25	1054	25.23	3.567	2.319	4.40	7.05	133.5	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): H

Comments: \_\_\_\_\_

Well Security: Locking cap? ✓ yes \_\_\_ no Replaced? \_\_\_ yes ✓ no  
Bolts secured? ✓ yes \_\_\_ no Replaced? \_\_\_ yes ✓ no  
2.4 PID  
\_\_\_\_ Vacuum  
1057 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: 085 47670.0001  
Sampler's Name: NBA

Well ID: MW-6  
Sample ID:           
Date: 3/22/13

Purging Equipment:           
Sampling Equipment: LOW FLOW

Casing Type: PVC  
Casing Diameter: 2 inch  
Depth to Well Bottom: 29.08 feet  
Depth to Water: 20.23 feet  
Approximate Pump Depth:          Feet bgs 24.5 Feet btoc

2" = 0.16 gal/lin ft.  
3" = 0.37 gal/lin ft.  
4" = 0.67 gal/lin ft.

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.
.25	1154	24.73	3.435	2.234	3.45	7.07	108.7	sl. cloudy, No color
.5	1159	24.83	3.444	2.240	3.35	7.06	106.6	" "
.75	1204	24.85	3.447	2.243	3.37	7.06	102.6	" "
1.0	1209	24.92	3.448	2.243	3.30	7.06	101.2	" "
1.25	1214	24.83	3.448	2.240	3.30	7.06	100.3	" "

Total Water Volume Purged: 1.25 Gallons =          Well Volumes  
Purged Dry (Y/N):           
Comments:         

Well Security: Locking cap?  yes  no  
Bolts secured?  yes  no  
Replaced?  yes  no  
Replaced?  yes  no  
2.0 PID  
         Vacuum  
1217 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620.0001  
 Sampler's Name: NBA

Well ID: MW-601  
 Sample ID: \_\_\_\_\_  
 Date: 3/22/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC

Casing Diameter: 2 inch

2" = 0.16 gal/lin ft.

Depth to Well Bottom: 59.72 + 6.29 feet

3" = 0.37 gal/lin ft.

Depth to Water: 16.29 59.72 feet

4" = 0.67 gal/lin ft.

Approximate Pump Depth: \_\_\_\_\_ Feet bgs 55' Feet btoc 38.0'

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.
.25	1015	22.80	0.632	0.411	5.93	7.57	69.8	sl. Cloudy, No odor
.5	1020	22.99	0.631	0.411	5.68	7.57	77.4	" "
.75	1025	23.28	0.630	0.410	5.67	7.56	80.1	" "
1.0	1030	23.62	0.629	0.409	5.67	7.57	80.5	" "
1.25	1035	23.48	0.629	0.409	5.66	7.57	86.1	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \* set 60' of hose

Well Security: Locking cap?  yes  no Replaced?  yes  no 1.0 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
1035 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

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

Well ID: MW-6D2  
 Sample ID: \_\_\_\_\_  
 Date: 3/22

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 89.00 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 14.94 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 85' Feet btoc 52.00

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.
.25	933	22.62	0.627	0.408	6.10	7.57	60.0	sl. cloudy, 1/2 odor
.15	938	22.58	0.626	0.407	4.53	7.56	57.4	" "
.75	943	22.65	0.624	0.404	4.27	7.56	56.1	" "
1.0	948	22.70	0.622	0.404	4.25	7.56	56.3	" "
1.25	953	22.90	0.622	0.404	4.24	7.56	55.1	" "
1.5	958	22.93	0.622	0.404	4.25	7.56	54.8	" "

Total Water Volume Purged: 1.5 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: 1st 95' of well

Well Security: Locking cap? no yes \_\_\_\_\_ no \_\_\_\_\_ Replaced? \_\_\_\_\_ yes no no \_\_\_\_\_  
 Bolts secured? yes yes \_\_\_\_\_ no \_\_\_\_\_ Replaced? \_\_\_\_\_ yes no no \_\_\_\_\_  
0.8 PID  
 Vacuum  
 1001 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 080-42620-001  
 Sampler's Name: NBA

Well ID: mw-6D3  
 Sample ID: \_\_\_\_\_  
 Date: 3/22

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch  
 Depth to Well Bottom: 14.04 feet  
 Depth to Water: 1 feet  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 105' Feet btoc

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.67 gal/lin ft.

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.
.25	839	20.48	0.724	0.467	1.90	7.76	105.4	<del>st. cloudy</del> No odor
.5	844	21.67	0.535	0.347	1.13	7.66	81.4	" "
.75	849	22.31	0.533	0.346	0.96	7.64	77.8	" "
1.0	854	22.10	0.533	0.347	1.62	7.63	81.5	" "
1.25	859	22.17	0.534	0.347	0.86	7.62	75.1	" "
1.5	904	22.12	0.535	0.347	0.72	7.61	49.6	" "
1.75	909	22.32	0.534	0.347	0.73	7.61	30.7	" "
2.0	914	22.18	0.534	0.347	0.72	7.61	29.4	" "

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

Comments: \* const depth at 110', screen at 100-110', pump set at 105'  
\* set 1/2" of hose

Well Security: Locking cap?  yes  no Replaced?  yes  no 0.6 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
917 Sample Collection Time





# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 015-42620-0001  
 Sampler's Name: NRB

Well ID: MW-7  
 Sample ID: \_\_\_\_\_  
 Date: 3/19/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 2 inch  
 Depth to Well Bottom: 29.40 feet      2" = 0.16 gal/lin ft.  
 Depth to Water: 18.47 feet      3" = 0.37 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs      24.0 Feet btoc      4" = 0.67 gal/lin ft.

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.
0.25	1338	25.46	3.848	2.503	3.68	7.03	66.7	sl. cloudy, no odor
0.5	1343	25.28	3.845	2.500	3.49	7.02	66.8	" "
0.75	1348	25.17	3.840	2.496	3.45	7.02	67.7	" "
1.0	1353	25.12	3.839	2.494	3.42	7.02	68.1	" "
1.25	1358	25.22	3.838	2.494	3.43	7.02	70.3	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
 PID: 0.7  
 Vacuum: \_\_\_\_\_  
 Sample Collection Time: 1359



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Martian Spume  
Project Number: 285.42026.001  
Sampler's Name: NBA

Well ID: MW-8  
Sample ID: \_\_\_\_\_  
Date: 3/19/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low Flow

Casing Type: PVC  
Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 30.25 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 20.65 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 25.5 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.
.25	1148	25.72	3.473	2.296	4.74	7.06	63.3	sl. cloudy, No obs
.5	1153	25.81	3.549	2.306	5.42	7.05	69.4	" "
.75	1158	25.98	3.551	2.308	4.99	7.04	76.4	" "
1.0	1203	25.87	3.550	2.306	4.99	7.05	77.6	" "
1.25	1208	25.97	3.549	2.306	4.97	7.04	78.3	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N  
Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
Bolts secured?  yes  no      Replaced?  yes  no  
PID: 03  
Vacuum: 2  
Sample Collection Time: 1211



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Mingway Square  
 Project Number: 088, 42620.0001  
 Sampler's Name: NOT

Well ID: MW-9  
 Sample ID: \_\_\_\_\_  
 Date: 3/19/13

Purgig Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 49.94 feet      3" = 0.37 gal/lin ft.  
 Depth to Water: 20.56 feet      4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs      35.0 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.
<u>.25</u>	<u>1245</u>	<u>25.65</u>	<u>1.320</u>	<u>0.865</u>	<u>0.65</u>	<u>7.24</u>	<u>15.7</u>	<u>clear, No odor</u>
<u>.5</u>	<u>1250</u>	<u>25.63</u>	<u>1.370</u>	<u>0.890</u>	<u>0.52</u>	<u>7.25</u>	<u>-0.1</u>	" "
<u>.75</u>	<u>1255</u>	<u>25.54</u>	<u>1.381</u>	<u>0.897</u>	<u>0.64</u>	<u>7.23</u>	<u>-0.3</u>	" "
<u>1.0</u>	<u>1300</u>	<u>25.64</u>	<u>1.382</u>	<u>0.899</u>	<u>0.61</u>	<u>7.24</u>	<u>-0.7</u>	" "
<u>1.25</u>	<u>1305</u>	<u>25.53</u>	<u>1.361</u>	<u>0.878</u>	<u>0.63</u>	<u>7.24</u>	<u>-0.05</u>	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N

Comments: \_\_\_\_\_

Well Security:    Locking cap?  yes     no      Replaced?  yes     no  
                          Bolts secured?  yes     no      Replaced?  yes     no  
                          0.2 PID  
                          - Vacuum  
                          120x Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Senior  
Project Number: 088-42620-6001  
Sampler's Name: NBA

Well ID: MW-10  
Sample ID: \_\_\_\_\_  
Date: 3/19/13

Purging Equipment: Low Flow  
Sampling Equipment: (Low Flow)

Casing Type: PVC  
Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 30.19 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 21.36 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 21.0 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.
.25	905	24.93	2.523	1.835	1.77	7.06	-226.0	very cloudy, no odor
.5	910	26.26	2.794	1.815	0.40	7.04	-256.7	" "
.75	915	26.36	2.679	1.738	0.78	7.06	-236.9	" "
1.0	920	26.45	2.670	1.734	0.75	7.06	-235.4	" "
1.25	925	26.46	2.668	1.731	0.74	7.06	-237.2	" "
1.5	930	26.34	2.667	1.731	0.74	7.06	-237.5	" "

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

Comments: \* Top of casing has thread, need to cut at next event.  
\* Replaced with 35' with hose

Well Security: Locking cap? Y yes \_\_\_ no      Replaced? \_\_\_ yes Y no  
Bolts secured? Y yes \_\_\_ no      Replaced? \_\_\_ yes Y no  
0.3 PID  
\_\_\_\_ Vacuum  
933 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: mainland square  
Project Number: 085 42620.001  
Sampler's Name: AK

Well ID: MW-11  
Sample ID: \_\_\_\_\_  
Date: 3/18 12:20

Purging Equipment: lw flow  
Sampling Equipment: lw flow

Casing Type: PVC  
Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 32.38 feet 3" = 0.37 gal/lin ft.  
Depth to Water: 25.81 feet 4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 29 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.
.25	1149	22.61	2.626	1.747	5.05	7.10	44.2	clear, no odor
.50	1154	24.08	3.672	2.587	1.36	6.96	-12.3	clear, no odor
.75	1159	24.41	3.732	2.428	1.17	6.98	-101.9	clear, no odor
1.0	1204	24.43	3.733	2.430	1.20	6.49	-103.3	clear, no odor
1.25	1209	24.43	3.734	2.431	1.21	7.00	-108.6	clear, no odor

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes

Purged Dry (Y/N): N  
Comments: strong retro odor from well immediately after removing well cap, odor goes away while pumping well, no signs of psi in perme thro

Well Security: Locking cap?  yes  no Replaced?  yes  no 27.3 PID  
Bolts secured?  yes  no Replaced?  yes  no 2 Vacuum  
12:20 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620-0001  
 Sampler's Name: NBA

Well ID: MW-12  
 Sample ID: \_\_\_\_\_  
 Date: 3/10/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 332.9 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 16.76 feet 4" = 0.67 gal/lin ft.  
 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.
0.25	1054	25.33	3.799	2.477	4.00	7.01	49.0	Sl. Cloudy, No odor
0.5	1059	25.45	3.816	2.487	2.47	7.01	47.4	" "
0.75	1104	25.64	3.805	2.477	2.45	7.01	48.3	" "
1.0	1109	25.77	3.815	2.482	2.42	7.00	48.8	" "
1.25	1114	25.53	3.814	2.479	2.40	7.00	44.4	" "
1.5	1119	25.55	3.814	2.480	2.39	7.00	46.4	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 0.6 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
1127 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: 085-42620-001  
Sampler's Name: NBA

Well ID: 11W-13  
Sample ID: \_\_\_\_\_  
Date: 3/21

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low flow

Casing Type: PVC  
Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 24.90 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 18.53 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 22.0 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.
.25	906	22.35	3.789	2.463	1.70	7.01	175.6	clear, no odor
.5	911	22.50	3.785	2.460	1.59	7.00	169.2	" "
.75	916	22.46	3.787	2.461	1.58	7.00	165.7	" "
1.0	921	22.60	3.784	2.460	1.56	7.00	161.7	" "
1.25	926	22.69	3.785	2.460	1.55	7.00	159.2	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N  
Comments: \* Change Hose w/30l

Well Security: Locking cap?  yes \_\_\_no      Replaced? \_\_\_yes  no      16.0 PID  
Bolts secured?  yes \_\_\_no      Replaced? \_\_\_yes  no      \_\_\_ Vacuum  
929 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620-0001  
 Sampler's Name: NISA

Well ID: MW-14  
 Sample ID: \_\_\_\_\_  
 Date: 3/22

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 29.95 feet      3" = 0.37 gal/lin ft.  
 Depth to Water: 19.12 feet      4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs      24.5 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.
.25	1104	23.49	3.866	2.515	3.45	7.04	111.1	Sl. Cloudy, No Odor
.5	1109	23.57	3.799	2.498	3.53	7.05	113.3	" "
.75	1114	23.84	3.873	2.518	2.62	7.03	113.4	" "
1.0	1119	24.07	3.869	2.516	2.61	7.02	112.6	" "
1.25	1124	23.98	3.868	2.517	2.62	7.02	112.8	" "
1.5	1129	24.10	3.868	2.517	2.61	7.02	112.3	" "

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

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
11.5 PID  
  Vacuum  
1132 Sample Collection Time





# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Mayland Square  
Project Number: ORS 42620-0001  
Sampler's Name: NBA

Well ID: MW-14I  
Sample ID: \_\_\_\_\_  
Date: 3/22/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: LOW FLOW

Casing Type: PVC  
Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 54.64 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 19.52 feet      4" = 0.67 gal/lin ft.  
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.
.25	1337	23.82	1.350	0.877	4.50	7.38	92.8	Clear, No Odor
.5	1342	24.22	1.338	0.869	4.04	7.38	91.7	" "
.75	1347	24.15	1.335	0.868	4.08	7.38	91.5	" "
1.0	1352	24.12	1.332	0.866	4.06	7.38	92.1	" "
1.25	1357	24.16	1.331	0.865	4.08	7.38	94.0	" "
1.5	1402	24.19	1.332	0.865	4.05	7.38	94.6	" "

Total Water Volume Purged: 1.5 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N  
Comments: set 60' of hose

Well Security: Locking cap?  yes  no      Replaced?  yes  no      240 PID  
Bolts secured?  yes  no      Replaced?  yes  no      \_\_\_\_\_ Vacuum  
1405 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Mountain Square  
Project Number: 085.42620.0001  
Sampler's Name: NRA

Well ID: MW-15  
Sample ID: \_\_\_\_\_  
Date: 3/19/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: LOW FLOW

Casing Type: PVC

Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 28.03 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 16.41 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth \_\_\_\_\_ Feet bgs      22 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.
.75	1003	25.67	3.593	2.387	4.12	7.03	25.5	sl. cloudy, No odor
.5	1008	26.03	3.690	2.335	3.00	7.00	43.1	" "
.75	1013	26.04	3.582	2.329	2.98	7.00	46.5	" "
1.0	1018	26.18	3.581	2.329	2.94	7.00	47.8	" "
1.25	1023	26.20	3.581	2.330	2.92	7.01	47.9	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N  
Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no      1.0 PID  
Bolts secured?  yes  no      Replaced?  yes  no      \_\_\_\_\_ Vacuum  
1026 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Manland Square  
Project Number: 062 42620.600  
Sampler's Name: DHK

Well ID: mw-16  
Sample ID: \_\_\_\_\_  
Date: 3/10

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: low flow

Casing Type: PVC  
Casing Diameter: 2 inch  
Depth to Well Bottom: 34.25 feet  
Depth to Water: 26.86 feet  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 30.5 Feet btoc

2" = 0.16 gal/in ft.  
3" = 0.37 gal/in ft.  
4" = 0.67 gal/in ft.

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.
<u>0.10</u>	<u>1046</u>	<u>25.25</u>	<u>3.309</u>	<u>2.152</u>	<u>1.99</u>	<u>7.06</u>	<u>-62.5</u>	<u>clear, no odor</u>
<u>.25</u>	<u>1048</u>	<u>25.36</u>	<u>3.315</u>	<u>2.154</u>	<u>1.73</u>	<u>7.06</u>	<u>-74.8</u>	<u>clear, no odor</u>
<u>.50</u>	<u>1059</u>	<u>25.30</u>	<u>3.311</u>	<u>2.153</u>	<u>1.69</u>	<u>7.04</u>	<u>-111.4</u>	<u>clear, no odor</u>
<u>.75</u>	<u>1058</u>	<u>25.33</u>	<u>3.294</u>	<u>2.154</u>	<u>1.67</u>	<u>7.04</u>	<u>-111.2</u>	<u>clear, no odor</u>
<u>1.0</u>	<u>1103</u>	<u>25.33</u>	<u>3.292</u>	<u>2.155</u>	<u>1.65</u>	<u>7.03</u>	<u>-110.9</u>	<u>clear, no odor</u>
<u>1.25</u>	<u>1108</u>	<u>25.33</u>	<u>3.292</u>	<u>2.153</u>	<u>1.65</u>	<u>7.03</u>	<u>-110.8</u>	<u>clear, no odor</u>

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): Y  
Comments: condensation H2O in well vault

Well Security: Locking cap?  yes  no  
Bolts secured?  yes  no  
Replaced?  yes  no  
Replaced?  yes  no  
0.0 PID  
\_\_\_\_ Vacuum  
1115 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: east. 426206.0001  
Sampler's Name: NBA

Well ID: mw-17  
Sample ID: \_\_\_\_\_  
Date: 3/19/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low Flow

Casing Type: PVC  
Casing Diameter: 4 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 30.20 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 19.94 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs      25.0 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.
.25	1424	23.78	3.755	2.442	1.04	6.99	64.7	Clear, No odor
.5	1427	23.68	3.758	2.443	0.99	6.99	49.5	" "
.75	1234	23.71	3.760	2.443	0.99	6.98	44.2	" "
1.0	1239	23.69	3.759	2.444	0.98	6.98	51.4	" "
1.25	1244	23.72	3.758	2.443	0.98	6.98	53.9	" "
1.5	1249	23.76	3.748	2.444	0.99	6.98	54.3	" "

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

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
Bolts secured?  yes  no      Replaced?  yes  no  
1.5 PID  
  Vacuum  
12:52 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 883-42620-0001  
 Sampler's Name: NBA

Well ID: MW-18  
 Sample ID: \_\_\_\_\_  
 Date: 3/22/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4" inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 20.36 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 12.06 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 16.0 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.
.25	1245	23.31	3.585	2.332	2.97	7.09	94.8	Clear, No Odor
.5	1250	23.60	3.579	2.327	2.67	7.09	86.3	" "
.75	1255	23.37	3.576	2.324	2.64	7.09	83.4	" "
1.0	1300	23.56	3.574	2.324	2.63	7.09	83.0	" "
1.25	1305	23.56	3.574	2.324	2.64	7.09	83.2	" "
1.5	1310	23.54	3.574	2.323	2.64	7.09	82.8	" "

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

Well Security: Locking cap?  yes  no Replaced?  yes  no 6.0 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
1313 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42020-0001  
 Sampler's Name: NBA

Well ID: MW-21  
 Sample ID: \_\_\_\_\_  
 Date: 3/21

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: low flow

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 23.88 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 25.03 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 29.5 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.
.25	1119	24.48	3.703	2.407	0.43	6.94	123.1	clear, No odor
.15	1124	24.51	3.703	2.407	0.24	6.94	108.6	" "
.75	1129	24.50	3.702	2.406	0.20	6.94	106.5	" "
1.0	1134	24.48	3.702	2.406	0.19	6.95	109.5	" "
1.25	1139	24.49	3.701	2.406	0.18	6.94	107.3	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes

Purged Dry (Y/N): \_\_\_\_\_

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 0.12 PID  
 Bolts secured?  yes  no Replaced?  yes  no   Vacuum  
1142 Sample Collection Time



## GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

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

Well ID: ML-22  
 Sample ID: \_\_\_\_\_  
 Date: 3/20/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 35.06 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 26.27 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 30.5 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.
.25	830	23.38	3.860	2.508	2.40	6.94	161.6	Clear, No odor
.5	835	23.45	3.863	2.506	1.94	6.92	151.6	" "
.75	840	23.44	3.862	2.511	1.75	6.91	146.9	" "
1.0	845	23.49	3.863	2.512	1.71	6.90	143.4	" "
1.25	850	23.52	3.863	2.513	1.69	6.90	141.6	" "
1.5	855	23.49	3.863	2.513	1.70	6.90	139.9	" "

Total Water Volume Purged: 1.5 Gallons = \_\_\_\_\_ Well Volumes

Purged Dry (Y/N): N

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 0.4 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
858 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Manland Square  
 Project Number: 085-42620  
 Sampler's Name: \_\_\_\_\_

Well ID: mw-23  
 Sample ID: \_\_\_\_\_  
 Date: 3/21

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 25.36 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 15.95 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth \_\_\_\_\_ Feet bgs 20.5 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.
.25	1548	23.68	3.643	2.369	1.44	7.01	123.3	Clear, No odor
.5	1553	23.64	3.643	2.369	1.48	7.01	115.3	" "
.75	1558	23.56	3.647	2.370	1.46	7.02	110.5	" "
1.0	1603	23.53	3.648	2.371	1.44	7.02	108.2	" "
1.25	1608	23.47	3.647	2.371	1.43	7.02	107.6	" "
1.5	1613	23.52	3.647	2.370	1.42	7.02	107.4	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 5.6 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
16/6 Sample Collection Time





# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: \_\_\_\_\_  
 Sampler's Name: \_\_\_\_\_

Well ID: MW-24  
 Sample ID: \_\_\_\_\_  
 Date: 3/18/13

Purging Equipment: Low Flow  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch      2" = 0.16 gal/in ft.  
 Depth to Well Bottom: 20.37 feet      3" = 0.37 gal/in ft.  
 Depth to Water: 13.62 feet      4" = 0.67 gal/in ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 17 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.
.25	1308	22.88	3.572	2.321	1.49	7.12	63.9	Clear, no odor
.50	1313	22.74	3.560	2.313	1.80	7.06	58.8	Clear, no odor
.75	1318	22.75	3.556	2.311	1.79	7.06	62.2	Clear, no odor
1.0	1323	22.76	3.555	2.311	1.77	7.05	62.5	Clear, no odor
1.25	1328	22.76	3.554	2.309	1.77	7.05	62.3	Clear, no odor
1.5	1333	22.77	3.554	2.310	1.76	7.06	62.2	Clear, no odor
1.75	1338	22.77	3.554	2.308	1.75	7.06	62.3	Clear, no odor

Total Water Volume Purged: 1.75 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
 PID: 0.0  
 Vacuum: \_\_\_\_\_  
 Sample Collection Time: 13:35



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Mojave Square  
 Project Number: 085-42670-0001  
 Sampler's Name: MRP

Well ID: MW-28  
 Sample ID: \_\_\_\_\_  
 Date: 3/21

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 4 inch      2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 25.95 feet      3" = 0.37 gal/lin ft.  
 Depth to Water: 18.75 feet      4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 22.5 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.
.25	1507	24.12	3.844	2.499	2.48	6.99	130.4	Clear, No odor
.5	1512	24.03	3.843	2.499	2.33	6.98	127.9	" "
.75	1517	24.06	3.843	2.500	2.35	6.98	127.6	" "
1.0	1522	23.97	3.846	2.499	2.36	6.98	127.8	" "
1.25	1527	24.04	3.845	2.498	2.34	6.98	126.5	" "
1.5	1532	23.84	3.848	2.499	2.34	6.98	127.0	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
0.3 PID  
4 Vacuum  
1535 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42610-0001  
 Sampler's Name: NBA

Well ID: MW-26  
 Sample ID: \_\_\_\_\_  
 Date: 3/21

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/in ft.  
 Depth to Well Bottom: 35.30 feet 3" = 0.37 gal/in ft.  
 Depth to Water: 16.81 feet 4" = 0.67 gal/in ft.  
 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.
0.25	1430	24.37	<del>2.579</del> 2.966	2.579	2.88	7.02	120.2	clear, No Odor
.5	1435	24.40	3.968	2.580	2.65	7.01	117.4	" "
.75	1440	24.32	3.970	2.582	2.67	7.01	117.1	" "
1.0	1445	24.40	3.972	2.579	2.66	7.00	117.2	" "
1.25	1450	24.31	3.970	2.580	2.665	7.00	117.6	" "
1.5	1455	24.35	3.970	2.579	2.655	7.00	118.1	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
PID 0.9  
 Vacuum \_\_\_\_\_  
 Sample Collection Time 1458



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620-0001  
 Sampler's Name: NBA

Well ID: MW-27  
 Sample ID: \_\_\_\_\_  
 Date: 3/21/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch      2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 35.21 feet      3" = 0.37 gal/lin ft.  
 Depth to Water: 15.33 feet      4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs      25.5 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.
<u>0.25</u>	<u>1258</u>	<u>23.17</u>	<u>3.975</u>	<u>2.583</u>	<u>1.94</u>	<u>6.97</u>	<u>127.2</u>	<u>Clear, No Odor</u>
<u>.5</u>	<u>1303</u>	<u>23.22</u>	<u>3.975</u>	<u>2.584</u>	<u>1.82</u>	<u>6.97</u>	<u>112.6</u>	" "
<u>.75</u>	<u>1308</u>	<u>23.19</u>	<u>3.980</u>	<u>2.589</u>	<u>1.79</u>	<u>6.97</u>	<u>106.5</u>	" "
<u>1.0</u>	<u>1313</u>	<u>23.29</u>	<u>3.979</u>	<u>2.584</u>	<u>1.77</u>	<u>6.97</u>	<u>103.3</u>	" "
<u>1.25</u>	<u>1318</u>	<u>23.17</u>	<u>3.980</u>	<u>2.586</u>	<u>1.77</u>	<u>6.97</u>	<u>100.7</u>	" "
<u>1.5</u>	<u>1323</u>	<u>23.16</u>	<u>3.979</u>	<u>2.586</u>	<u>1.76</u>	<u>6.97</u>	<u>100.2</u>	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
 Bolts secured?  yes  no      Replaced?  yes  no  
 \_\_\_\_\_ PID  
 \_\_\_\_\_ Vacuum  
1306 Sample Collection Time



## GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Manland Square  
 Project Number: 005-476-20-001  
 Sampler's Name: DHR

Well ID: mw-28  
 Sample ID: \_\_\_\_\_  
 Date: 3/18

Purging Equipment: \_\_\_\_\_ low flow  
 Sampling Equipment: \_\_\_\_\_ low flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 24.44 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 12.50 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth \_\_\_\_\_ Feet bgs 18.5 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.
.25	1412	24.24	4.081	2.660	4.02	7.04	79.2	Clear, NO odor
.50	1417	23.92	4.070	2.667	4.25	7.03	76.4	clear, NO odor
.75	1422	23.91	4.094	2.660	4.89	7.03	74.6	clear, NO odor
1.0	1427	24.03	4.091	2.666	1.93	7.02	72.3	clear, NO odor
1.25	1432	24.04	4.089	2.666	1.92	7.02	72.1	clear, NO odor
1.5	1437	24.05	4.092	2.667	1.94	7.02	72.0	clear, NO odor
1.75	1442	24.06	4.090	2.665	1.92	7.01	69.9	clear, NO odor

Total Water Volume Purged: 1.75 Gallons = \_\_\_\_\_ 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  
1445 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 055-42620-6001  
 Sampler's Name: DWR

Well ID: MW-29  
 Sample ID: \_\_\_\_\_  
 Date: 3/18/13

Purging Equipment: \_\_\_\_\_ Low flow  
 Sampling Equipment: \_\_\_\_\_ Low flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 34.71 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 13.30 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ 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.
.25	1529	20.36	4.155	2.701	4.67	7.08	82.9	Clear, No odor
.50	1534	19.50	4.142	2.694	4.53	6.84	85.9	Clear, No odor
.75	1539	19.43	4.147	2.695	4.45	6.95	84.4	Clear, No odor
1.0	1544	19.42	4.145	2.692	4.43	6.95	84.6	Clear, No odor
1.25	1549	19.42	4.143	2.692	4.42	6.95	84.7	Clear, No odor
1.5	1554	19.43	4.143	2.694	4.41	6.96	84.9	Clear, No odor
1.75	1559	19.43	4.142	2.692	4.41	6.96	84.8	Clear, No odor

Total Water Volume Purged: 1.75 Gallons = \_\_\_\_\_ 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  
1604 Sample Collection Time



GROUNDWATER COLLECTION LOG

CARDNO ATC
2925 EAST PATRICK LANE, SUITE M
LAS VEGAS, NEVADA 89120-2457
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square
Project Number: 088-426201-0001
Sampler's Name: N/A

Well ID: MW-30
Sample ID:
Date: 3/20/13

Purging Equipment:
Sampling Equipment: Low Flow

Casing Type: PVC
Casing Diameter: 4 inch
Depth to Well Bottom: 39.70 feet
Depth to Water: 17.38 feet
Approximate Pump Depth: 28.5 Feet bgs

Comments:

Table with 9 columns: Purged (gal.), Time, Temp. (°C), Conductance (mS/cm), TDS (g/L), DO (mg/L), pH (SU), ORP (mV), Water Description: Color, Turbidity, Sheen, Etc. Rows contain data for purging volumes from 0.25 to 1.5 gallons.

Total Water Volume Purged: 1.5 Gallons = Well Volumes

Purged Dry (Y/N): N

Comments:

Well Security: Locking cap? yes no Replaced? yes no
Bolts secured? yes no Replaced? yes no
1.2 PID
Vacuum
1313 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: 085-20-0001  
Sampler's Name: NBA

Well ID: MW-31  
Sample ID: \_\_\_\_\_  
Date: 3/20/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: LOW FLOW LOW FLOW

Casing Type: PVC  
Casing Diameter: 4 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 33.61 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 16.27 feet      4" = 0.67 gal/lin ft.  
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.
.25	1200	21.28	4.243	2.757	2.92	6.94	146.2	Clear, No odor
.5	1205	21.26	4.236	2.752	2.83	6.93	142.6	" "
.75	1210	21.34	4.219	2.742	2.90	6.93	140.5	" "
1.0	1215	21.40	4.214	2.736	2.93	6.92	139.6	" "
1.25	1220	21.39	4.212	2.734	2.92	6.92	138.7	" "
1.5	1225	21.34	4.213	2.734	2.93	6.92	138.9	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
Bolts secured?  yes  no      Replaced?  yes  no  
PID: 1.1  
Vacuum: \_\_\_\_\_  
Sample Collection Time: 1228





# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Marland Square  
Project Number: 085-42620-0001  
Sampler's Name: AIBA

Well ID: mw-32  
Sample ID: \_\_\_\_\_  
Date: 3/21/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low Flow

Casing Type: PVC  
Casing Diameter: 4 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 33.69 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 18.43 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth: \_\_\_\_\_ Feet bgs 26.0 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.
.25	1349	24.19	3.694	2.400	3.74	7.06	129.8	Clear No Olor
.5	1354	24.16	3.698	2.401	3.57	7.05	121.7	" "
.75	1359	24.19	3.693	2.402	3.46	7.04	118.6	" "
1.0	1404	24.12	3.690	2.403	3.45	7.04	115.8	" "
1.25	1409	24.14	3.691	2.402	3.43	7.03	114.4	" "
1.5	1414	23.98	3.690	2.402	3.43	7.03	114.1	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap? X yes \_\_\_ no      Replaced? \_\_\_ yes X no  
Bolts secured? X yes \_\_\_ no      Replaced? \_\_\_ yes X no  
2.3 PID  
1417 Vacuum  
1417 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-4262010001  
 Sampler's Name: NBA

Well ID: MW-33  
 Sample ID: \_\_\_\_\_  
 Date: 3/20/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 33.49 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 17.25 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 25.5 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.
.25	922	21.35	4.179	2.741	1.68	6.88	149.7	Clear, No odor
.5	927	21.39	4.222	2.746	1.73	6.89	141.9	" "
.75	932	21.41	4.219	2.746	1.90	6.89	137.6	" "
1.0	937	21.43	4.217	2.743	1.92	6.90	136.4	" "
1.25	942	21.46	4.217	2.744	1.90	6.90	134.9	" "
1.5	947	21.50	4.216	2.743	1.99	6.90	134.0	" "

Total Water Volume Purged: 1.5 Gallons = \_\_\_\_\_ Well Volumes

Purged Dry (Y/N): N

Comments: Replaced hose w/ 35' hose

Well Security: Locking cap?  yes  no Replaced?  yes  no 1.1 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
950 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: 045-42620-0001  
Sampler's Name: NBA

Well ID: MW-34  
Sample ID: \_\_\_\_\_  
Date: 3/20/10

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low Flow

Casing Type: PVC  
Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 29.07 feet 3" = 0.37 gal/lin ft.  
Depth to Water: 19.06 feet 4" = 0.67 gal/lin ft.  
Approximate Pump Depth \_\_\_\_\_ Feet bgs 24.0 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.
.25	1441	22.75	3.987	2.592	1.96	7.07	134.4	Clear, No odor
.5	1446	22.63	3.986	2.591	1.71	7.07	130.5	" "
.75	1451	22.60	3.988	2.592	1.60	7.07	128.5	" "
1.0	1456	22.70	3.989	2.593	1.57	7.08	126.7	" "
1.25	1501	22.65	3.988	2.592	1.58	7.08	125.3	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes \_\_\_ no Replaced? \_\_\_ yes  no 9.4 PID  
Bolts secured?  yes \_\_\_ no Replaced? \_\_\_ yes  no \_\_\_\_\_ Vacuum  
1504 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620-001  
 Sampler's Name: ALM

Well ID: MW-35  
 Sample ID: \_\_\_\_\_  
 Date: 3/20/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 27.97 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 19.99 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 24.0 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.
0.25	1353	23.17	3.835	2.493	3.52	7.10	142.0	sl. cloudy, No color
0.5	1358	23.21	3.776	2.454	3.32	7.08	135.2	" "
0.75	1403	23.20	3.761	2.444	3.31	7.08	133.5	" "
1.0	1408	23.20	3.734	2.425	3.17	7.07	130.8	" "
1.25	1413	23.19	3.735	2.425	3.15	7.07	129.3	" "
1.5	1418	23.20	3.733	2.408	3.16	7.07	128.5	" "

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

Well Security: Locking cap?  yes  no Replaced?  yes  no 2.4 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
1421 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085 42620-0001  
 Sampler's Name: NBA

Well ID: mw-36  
 Sample ID: \_\_\_\_\_  
 Date: 3/21/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 27.84 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 19.03 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth: \_\_\_\_\_ Feet bgs 28.5 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.
.25	1210	23.32	3.815	2.479	1.80	6.95	122.8	Clear, No odor
.5	1215	23.46	3.813	2.476	1.90	6.94	121.6	" "
.75	1220	23.44	3.816	2.478	1.71	6.94	120.5	" "
1.0	1225	23.34	3.819	2.477	1.69	6.94	119.8	" "
1.25	1230	23.39	3.813	2.476	1.69	6.94	120.1	" "
1.5	1235	23.48	3.813	2.477	1.69	6.94	120.5	" "

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

Comments: \_\_\_\_\_

Well Security: Locking cap? ✓ yes \_\_\_ no      Replaced? \_\_\_ yes ✓ no  
 Bolts secured? ✓ yes \_\_\_ no      Replaced? \_\_\_ yes ✓ no  
0.0 PID  
 Vacuum  
 123.8 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
 Project Number: 085-42620-0001  
 Sampler's Name: N/A

Well ID: MW-37  
 Sample ID: \_\_\_\_\_  
 Date: 3/20/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: Low Flow

Casing Type: PVC  
 Casing Diameter: 4 inch 2" = 0.16 gal/in ft.  
 Depth to Well Bottom: 37.04 feet 3" = 0.37 gal/in ft.  
 Depth to Water: 18.83 feet 4" = 0.67 gal/in ft.  
 Approximate Pump Depth \_\_\_\_\_ Feet bgs 28.0 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.
.25	1108	19.75	4.113	2.673	4.41	6.96	145.0	Clear, No odor
.5	1113	19.79	4.110	2.671	4.33	6.96	143.0	" "
.75	1118	19.88	4.108	2.671	4.29	6.96	140.9	" "
1.0	1123	19.73	4.109	2.672	4.30	6.96	139.9	" "
1.25	1128	19.79	4.110	2.672	4.28	6.96	138.8	" "
1.5	1133	19.76	4.109	2.671	4.29	6.96	138.9	" "

Total Water Volume Purged: 1.5 Gallons = \_\_\_\_\_ 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  
1136 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
 2925 EAST PATRICK LANE, SUITE M  
 LAS VEGAS, NEVADA 89120-2457  
 (702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Source  
 Project Number: 085-426700001  
 Sampler's Name: NBA

Well ID: mw-38  
 Sample ID: \_\_\_\_\_  
 Date: 5/20/13

Purging Equipment: \_\_\_\_\_  
 Sampling Equipment: LOW FLOW

Casing Type: PVC  
 Casing Diameter: 2 inch 2" = 0.16 gal/lin ft.  
 Depth to Well Bottom: 35.10 feet 3" = 0.37 gal/lin ft.  
 Depth to Water: 14.48 feet 4" = 0.67 gal/lin ft.  
 Approximate Pump Depth \_\_\_\_\_ Feet bgs 25.0 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.
.25	1016	20.53	4.146	2.695	3.85	7.00	143.6	Clear, No odor
.5	1021	20.51	4.150	2.697	3.92	6.99	141.4	" "
.75	1026	20.61	4.153	2.695	3.90	6.99	139.4	" "
1.0	1031	20.46	4.152	2.694	3.98	6.99	138.7	" "
1.25	1036	20.46	4.152	2.696	3.87	6.99	138.0	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
 Purged Dry (Y/N): N  
 Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no Replaced?  yes  no 1.2 PID  
 Bolts secured?  yes  no Replaced?  yes  no \_\_\_\_\_ Vacuum  
1039 Sample Collection Time



# GROUNDWATER COLLECTION LOG

CARDNO ATC  
2925 EAST PATRICK LANE, SUITE M  
LAS VEGAS, NEVADA 89120-2457  
(702) 798-5750 (702) 798-5742 fax

Project Name: Maryland Square  
Project Number: 0815-42670.0001  
Sampler's Name: NBA

Well ID: MW-39  
Sample ID: \_\_\_\_\_  
Date: 3/27/13

Purging Equipment: \_\_\_\_\_  
Sampling Equipment: Low Flow

Casing Type: PVC  
Casing Diameter: 2 inch      2" = 0.16 gal/lin ft.  
Depth to Well Bottom: 38.00 feet      3" = 0.37 gal/lin ft.  
Depth to Water: 24.20 feet      4" = 0.67 gal/lin ft.  
Approximate Pump Depth \_\_\_\_\_ Feet bgs 31 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.
.25	639	22.26	3.770	2.450	1.73	6.98	156.2	Sl. Cloudy, No odor
.5	644	22.70	3.770	2.449	1.39	6.97	149.4	" "
.75	649	22.61	3.768	2.449	1.38	6.96	140.1	" "
1.0	654	22.42	3.769	2.449	1.36	6.95	138.7	" "
1.25	659	22.63	3.770	2.449	1.36	6.95	137.4	" "

Total Water Volume Purged: 1.25 Gallons = \_\_\_\_\_ Well Volumes  
Purged Dry (Y/N): N

Comments: \_\_\_\_\_

Well Security: Locking cap?  yes  no      Replaced?  yes  no  
Bolts secured?  yes  no      Replaced?  yes  no  
PID: 010  
Vacuum: \_\_\_\_\_  
Sample Collection Time: 702



Maryland Square PCE Site

**APPENDIX B**  
LABORATORY ANALYTICAL REPORTS

April 01, 2013

Andrew Stuart  
Cardno ATC  
2925 E. Patrick Lane, Ste M  
Las Vegas, NV 89120  
TEL: (702) 798-5750  
FAX:

CA-ELAP No.:2676  
NV Cert. No.:NV-009222007A

Workorder No.: N009877

RE: Maryland Square Shopping Center, 085.42620.0

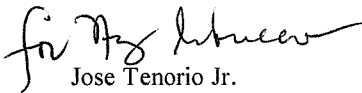
Attention: Andrew Stuart

Enclosed are the results for sample(s) received on March 22, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

I hereby certify that all laboratory analysis requested were performed by Nevada Division of Environmental Protection-certified laboratory for the parameters and matrices reported herein.

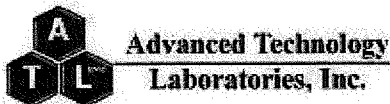
Thank you for the opportunity to service the needs of your company.Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.  
Laboratory Director

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



3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

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**CLIENT:** Cardno ATC  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab Order:** N009877

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**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.



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-1
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 3:38:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-001	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:30 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:30 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:30 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:30 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:30 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:30 PM
Tetrachloroethene	260 1.2	5.0	µg/L 10 3/27/2013 11:22 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:30 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:30 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:30 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:30 PM
Surr: 1,2-Dichloroethane-d4	104 0	56-120	%REC 10 3/27/2013 11:22 AM
Surr: 1,2-Dichloroethane-d4	100 0	56-120	%REC 1 3/29/2013 03:30 PM
Surr: 4-Bromofluorobenzene	98.8 0	80-120	%REC 10 3/27/2013 11:22 AM
Surr: 4-Bromofluorobenzene	94.6 0	80-120	%REC 1 3/29/2013 03:30 PM
Surr: Dibromofluoromethane	98.7 0	72-120	%REC 1 3/29/2013 03:30 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 10 3/27/2013 11:22 AM
Surr: Toluene-d8	97.4 0	80-123	%REC 10 3/27/2013 11:22 AM
Surr: Toluene-d8	97.7 0	80-123	%REC 1 3/29/2013 03:30 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-2
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 8:34:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-002	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:15 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:15 PM
cis-1,2-Dichloroethene	1.0 0.057	0.50	µg/L 1 3/29/2013 04:15 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:15 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:15 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:15 PM
Tetrachloroethene	580 1.2	5.0	µg/L 10 3/27/2013 11:51 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:15 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:15 PM
Trichloroethene	2.5 0.075	0.50	µg/L 1 3/29/2013 04:15 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:15 PM
Surr: 1,2-Dichloroethane-d4	99.3 0	56-120	%REC 10 3/27/2013 11:51 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/29/2013 04:15 PM
Surr: 4-Bromofluorobenzene	94.6 0	80-120	%REC 10 3/27/2013 11:51 AM
Surr: 4-Bromofluorobenzene	92.5 0	80-120	%REC 1 3/29/2013 04:15 PM
Surr: Dibromofluoromethane	101 0	72-120	%REC 1 3/29/2013 04:15 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 10 3/27/2013 11:51 AM
Surr: Toluene-d8	98.8 0	80-123	%REC 10 3/27/2013 11:51 AM
Surr: Toluene-d8	97.9 0	80-123	%REC 1 3/29/2013 04:15 PM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-003

**Client Sample ID:** MW-3  
**Collection Date:** 3/21/2013 7:46:00 AM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 08:50 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 08:50 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 08:50 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 08:50 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 08:50 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 08:50 AM
Tetrachloroethene	12 0.12	0.50	µg/L 1 3/29/2013 08:50 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 08:50 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 08:50 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 08:50 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 08:50 AM
Surr: 1,2-Dichloroethane-d4	98.4 0	56-120	%REC 1 3/29/2013 08:50 AM
Surr: 4-Bromofluorobenzene	98.7 0	80-120	%REC 1 3/29/2013 08:50 AM
Surr: Dibromofluoromethane	100 0	72-120	%REC 1 3/29/2013 08:50 AM
Surr: Toluene-d8	104 0	80-123	%REC 1 3/29/2013 08:50 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-5
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 10:57:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-004	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:38 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:38 PM
cis-1,2-Dichloroethene	0.67 0.057	0.50	µg/L 1 3/29/2013 04:38 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:38 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:38 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:38 PM
Tetrachloroethene	530 1.2	5.0	µg/L 10 3/27/2013 12:20 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:38 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:38 PM
Trichloroethene	2.3 0.075	0.50	µg/L 1 3/29/2013 04:38 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:38 PM
Surr: 1,2-Dichloroethane-d4	99.1 0	56-120	%REC 10 3/27/2013 12:20 PM
Surr: 1,2-Dichloroethane-d4	98.0 0	56-120	%REC 1 3/29/2013 04:38 PM
Surr: 4-Bromofluorobenzene	94.6 0	80-120	%REC 10 3/27/2013 12:20 PM
Surr: 4-Bromofluorobenzene	96.2 0	80-120	%REC 1 3/29/2013 04:38 PM
Surr: Dibromofluoromethane	98.3 0	72-120	%REC 1 3/29/2013 04:38 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 10 3/27/2013 12:20 PM
Surr: Toluene-d8	97.6 0	80-123	%REC 10 3/27/2013 12:20 PM
Surr: Toluene-d8	98.5 0	80-123	%REC 1 3/29/2013 04:38 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-6
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 12:17:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-005	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:54 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:54 PM
cis-1,2-Dichloroethene	2.2 0.057	0.50	µg/L 1 3/29/2013 06:54 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:54 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:54 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:54 PM
Tetrachloroethene	2600 5.9	25	µg/L 50 3/27/2013 12:49 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:54 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:54 PM
Trichloroethene	10 0.075	0.50	µg/L 1 3/29/2013 06:54 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:54 PM
Surr: 1,2-Dichloroethane-d4	105 0	56-120	%REC 50 3/27/2013 12:49 PM
Surr: 1,2-Dichloroethane-d4	97.1 0	56-120	%REC 1 3/29/2013 06:54 PM
Surr: 4-Bromofluorobenzene	96.2 0	80-120	%REC 50 3/27/2013 12:49 PM
Surr: 4-Bromofluorobenzene	93.2 0	80-120	%REC 1 3/29/2013 06:54 PM
Surr: Dibromofluoromethane	98.3 0	72-120	%REC 1 3/29/2013 06:54 PM
Surr: Dibromofluoromethane	106 0	72-120	%REC 50 3/27/2013 12:49 PM
Surr: Toluene-d8	100 0	80-123	%REC 50 3/27/2013 12:49 PM
Surr: Toluene-d8	95.1 0	80-123	%REC 1 3/29/2013 06:54 PM

<b>Qualifiers:</b>	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	





<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-6 Dupe
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 12:17:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-006	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 07:17 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 07:17 PM
cis-1,2-Dichloroethene	2.2 0.057	0.50	µg/L 1 3/29/2013 07:17 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 07:17 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 07:17 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 07:17 PM
Tetrachloroethene	2400 5.9	25	µg/L 50 3/27/2013 01:18 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 07:17 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 07:17 PM
Trichloroethene	11 0.075	0.50	µg/L 1 3/29/2013 07:17 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 07:17 PM
Surr: 1,2-Dichloroethane-d4	103 0	56-120	%REC 50 3/27/2013 01:18 PM
Surr: 1,2-Dichloroethane-d4	98.1 0	56-120	%REC 1 3/29/2013 07:17 PM
Surr: 4-Bromofluorobenzene	97.8 0	80-120	%REC 50 3/27/2013 01:18 PM
Surr: 4-Bromofluorobenzene	94.4 0	80-120	%REC 1 3/29/2013 07:17 PM
Surr: Dibromofluoromethane	99.6 0	72-120	%REC 1 3/29/2013 07:17 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 50 3/27/2013 01:18 PM
Surr: Toluene-d8	100 0	80-123	%REC 50 3/27/2013 01:18 PM
Surr: Toluene-d8	97.4 0	80-123	%REC 1 3/29/2013 07:17 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-6D1
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 10:38:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-007	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:44 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:44 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:44 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:44 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:44 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:44 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 02:44 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:44 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:44 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:44 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:44 PM
Surr: 1,2-Dichloroethane-d4	95.4 0	56-120	%REC 1 3/29/2013 02:44 PM
Surr: 4-Bromofluorobenzene	93.5 0	80-120	%REC 1 3/29/2013 02:44 PM
Surr: Dibromofluoromethane	100 0	72-120	%REC 1 3/29/2013 02:44 PM
Surr: Toluene-d8	98.5 0	80-123	%REC 1 3/29/2013 02:44 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-6D2
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 10:01:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-008	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:13 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:13 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:13 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:13 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:13 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:13 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 03:13 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:13 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:13 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:13 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:13 PM
Surr: 1,2-Dichloroethane-d4	96.8 0	56-120	%REC 1 3/29/2013 03:13 PM
Surr: 4-Bromofluorobenzene	95.3 0	80-120	%REC 1 3/29/2013 03:13 PM
Surr: Dibromofluoromethane	104 0	72-120	%REC 1 3/29/2013 03:13 PM
Surr: Toluene-d8	98.0 0	80-123	%REC 1 3/29/2013 03:13 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-6D3
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 9:17:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-009	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 01:36 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 01:36 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 01:36 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 01:36 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 01:36 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 01:36 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 01:36 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 01:36 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 01:36 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 01:36 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 01:36 PM
Surr: 1,2-Dichloroethane-d4	93.2 0	56-120	%REC 1 3/29/2013 01:36 PM
Surr: 4-Bromofluorobenzene	92.6 0	80-120	%REC 1 3/29/2013 01:36 PM
Surr: Dibromofluoromethane	92.9 0	72-120	%REC 1 3/29/2013 01:36 PM
Surr: Toluene-d8	98.0 0	80-123	%REC 1 3/29/2013 01:36 PM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-010

**Client Sample ID:** MW-7  
**Collection Date:** 3/19/2013 1:59:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 08:28 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 08:28 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 08:28 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 08:28 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 08:28 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 08:28 AM
Tetrachloroethene	10 0.12	0.50	µg/L 1 3/29/2013 08:28 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 08:28 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 08:28 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 08:28 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 08:28 AM
Surr: 1,2-Dichloroethane-d4	98.0 0	56-120	%REC 1 3/29/2013 08:28 AM
Surr: 4-Bromofluorobenzene	98.2 0	80-120	%REC 1 3/29/2013 08:28 AM
Surr: Dibromofluoromethane	98.9 0	72-120	%REC 1 3/29/2013 08:28 AM
Surr: Toluene-d8	104 0	80-123	%REC 1 3/29/2013 08:28 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-8
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 12:11:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-011	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:34 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:34 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 06:34 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:34 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:34 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:34 AM
Tetrachloroethene	1.5 0.12	0.50	µg/L 1 3/29/2013 06:34 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:34 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:34 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 06:34 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:34 AM
Surr: 1,2-Dichloroethane-d4	96.6 0	56-120	%REC 1 3/29/2013 06:34 AM
Surr: 4-Bromofluorobenzene	98.7 0	80-120	%REC 1 3/29/2013 06:34 AM
Surr: Dibromofluoromethane	96.2 0	72-120	%REC 1 3/29/2013 06:34 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 06:34 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-9
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 1:08:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-012	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:57 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:57 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 06:57 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:57 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:57 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:57 AM
Tetrachloroethene	6.6 0.12	0.50	µg/L 1 3/29/2013 06:57 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:57 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:57 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 06:57 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:57 AM
Surr: 1,2-Dichloroethane-d4	97.1 0	56-120	%REC 1 3/29/2013 06:57 AM
Surr: 4-Bromofluorobenzene	98.1 0	80-120	%REC 1 3/29/2013 06:57 AM
Surr: Dibromofluoromethane	94.9 0	72-120	%REC 1 3/29/2013 06:57 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 06:57 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-10
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 9:33:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-013	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 01:39 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 01:39 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 01:39 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 01:39 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 01:39 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 01:39 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 01:39 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 01:39 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 01:39 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 01:39 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 01:39 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/29/2013 01:39 AM
Surr: 4-Bromofluorobenzene	98.2 0	80-120	%REC 1 3/29/2013 01:39 AM
Surr: Dibromofluoromethane	102 0	72-120	%REC 1 3/29/2013 01:39 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 01:39 AM

<b>Qualifiers:</b>	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	





**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-014

**Client Sample ID:** MW-11  
**Collection Date:** 3/18/2013 12:20:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:49 AM
Benzene	1.0 0.048	0.50	µg/L 1 3/29/2013 05:49 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:49 AM
Ethylbenzene	1.0 0.036	0.50	µg/L 1 3/29/2013 05:49 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:49 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:49 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 05:49 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:49 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:49 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 05:49 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:49 AM
Surr: 1,2-Dichloroethane-d4	90.6 0	56-120	%REC 1 3/29/2013 05:49 AM
Surr: 4-Bromofluorobenzene	94.5 0	80-120	%REC 1 3/29/2013 05:49 AM
Surr: Dibromofluoromethane	93.9 0	72-120	%REC 1 3/29/2013 05:49 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 05:49 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-12
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 11:22:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-015	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:12 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:12 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 06:12 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:12 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:12 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:12 AM
Tetrachloroethene	0.65 0.12	0.50	µg/L 1 3/29/2013 06:12 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:12 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:12 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 06:12 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:12 AM
Surr: 1,2-Dichloroethane-d4	95.0 0	56-120	%REC 1 3/29/2013 06:12 AM
Surr: 4-Bromofluorobenzene	97.3 0	80-120	%REC 1 3/29/2013 06:12 AM
Surr: Dibromofluoromethane	98.4 0	72-120	%REC 1 3/29/2013 06:12 AM
Surr: Toluene-d8	99.8 0	80-123	%REC 1 3/29/2013 06:12 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-13
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 9:29:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-016	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:31 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:31 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 06:31 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:31 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:31 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:31 PM
Tetrachloroethene	1300 5.9	25	µg/L 50 3/28/2013 11:09 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:31 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:31 PM
Trichloroethene	2.8 0.075	0.50	µg/L 1 3/29/2013 06:31 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:31 PM
Surr: 1,2-Dichloroethane-d4	97.0 0	56-120	%REC 50 3/28/2013 11:09 AM
Surr: 1,2-Dichloroethane-d4	94.3 0	56-120	%REC 1 3/29/2013 06:31 PM
Surr: 4-Bromofluorobenzene	96.7 0	80-120	%REC 50 3/28/2013 11:09 AM
Surr: 4-Bromofluorobenzene	94.6 0	80-120	%REC 1 3/29/2013 06:31 PM
Surr: Dibromofluoromethane	93.3 0	72-120	%REC 1 3/29/2013 06:31 PM
Surr: Dibromofluoromethane	107 0	72-120	%REC 50 3/28/2013 11:09 AM
Surr: Toluene-d8	98.2 0	80-123	%REC 50 3/28/2013 11:09 AM
Surr: Toluene-d8	93.5 0	80-123	%REC 1 3/29/2013 06:31 PM

<b>Qualifiers:</b>	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	



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-14
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 11:32:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-017	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 08:02 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 08:02 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 08:02 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 08:02 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 08:02 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 08:02 PM
Tetrachloroethene	1900 23	100	µg/L 200 3/29/2013 06:05 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 08:02 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 08:02 PM
Trichloroethene	2.9 0.075	0.50	µg/L 1 3/29/2013 08:02 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 08:02 PM
Surr: 1,2-Dichloroethane-d4	98.8 0	56-120	%REC 200 3/29/2013 06:05 PM
Surr: 1,2-Dichloroethane-d4	102 0	56-120	%REC 1 3/29/2013 08:02 PM
Surr: 4-Bromofluorobenzene	94.4 0	80-120	%REC 200 3/29/2013 06:05 PM
Surr: 4-Bromofluorobenzene	96.9 0	80-120	%REC 1 3/29/2013 08:02 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/29/2013 08:02 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 200 3/29/2013 06:05 PM
Surr: Toluene-d8	99.4 0	80-123	%REC 200 3/29/2013 06:05 PM
Surr: Toluene-d8	98.0 0	80-123	%REC 1 3/29/2013 08:02 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-14I
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 2:05:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-018	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 07:39 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 07:39 PM
cis-1,2-Dichloroethene	4.9 0.057	0.50	µg/L 1 3/29/2013 07:39 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 07:39 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 07:39 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 07:39 PM
Tetrachloroethene	7200 23	100	µg/L 200 3/29/2013 06:34 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 07:39 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 07:39 PM
Trichloroethene	51 0.075	0.50	µg/L 1 3/29/2013 07:39 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 07:39 PM
Surr: 1,2-Dichloroethane-d4	97.4 0	56-120	%REC 200 3/29/2013 06:34 PM
Surr: 1,2-Dichloroethane-d4	97.2 0	56-120	%REC 1 3/29/2013 07:39 PM
Surr: 4-Bromofluorobenzene	90.2 0	80-120	%REC 200 3/29/2013 06:34 PM
Surr: 4-Bromofluorobenzene	96.3 0	80-120	%REC 1 3/29/2013 07:39 PM
Surr: Dibromofluoromethane	98.8 0	72-120	%REC 1 3/29/2013 07:39 PM
Surr: Dibromofluoromethane	100 0	72-120	%REC 200 3/29/2013 06:34 PM
Surr: Toluene-d8	97.5 0	80-123	%REC 200 3/29/2013 06:34 PM
Surr: Toluene-d8	96.1 0	80-123	%REC 1 3/29/2013 07:39 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-15
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 10:26:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-019	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 07:19 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 07:19 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 07:19 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 07:19 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 07:19 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 07:19 AM
Tetrachloroethene	2.7 0.12	0.50	µg/L 1 3/29/2013 07:19 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 07:19 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 07:19 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 07:19 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 07:19 AM
Surr: 1,2-Dichloroethane-d4	96.5 0	56-120	%REC 1 3/29/2013 07:19 AM
Surr: 4-Bromofluorobenzene	96.4 0	80-120	%REC 1 3/29/2013 07:19 AM
Surr: Dibromofluoromethane	93.3 0	72-120	%REC 1 3/29/2013 07:19 AM
Surr: Toluene-d8	100 0	80-123	%REC 1 3/29/2013 07:19 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-16
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/18/2013 11:15:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-020	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 01:59 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 01:59 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 01:59 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 01:59 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 01:59 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 01:59 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 01:59 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 01:59 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 01:59 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 01:59 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 01:59 PM
Surr: 1,2-Dichloroethane-d4	99.7 0	56-120	%REC 1 3/29/2013 01:59 PM
Surr: 4-Bromofluorobenzene	95.1 0	80-120	%REC 1 3/29/2013 01:59 PM
Surr: Dibromofluoromethane	99.9 0	72-120	%REC 1 3/29/2013 01:59 PM
Surr: Toluene-d8	104 0	80-123	%REC 1 3/29/2013 01:59 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-17
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 12:52:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-021	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:07 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:07 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:07 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:07 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:07 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:07 PM
Tetrachloroethene	190 1.2	5.0	µg/L 10 3/28/2013 12:07 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:07 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:07 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:07 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:07 PM
Surr: 1,2-Dichloroethane-d4	98.7 0	56-120	%REC 10 3/28/2013 12:07 PM
Surr: 1,2-Dichloroethane-d4	97.8 0	56-120	%REC 1 3/29/2013 03:07 PM
Surr: 4-Bromofluorobenzene	95.7 0	80-120	%REC 10 3/28/2013 12:07 PM
Surr: 4-Bromofluorobenzene	95.4 0	80-120	%REC 1 3/29/2013 03:07 PM
Surr: Dibromofluoromethane	98.6 0	72-120	%REC 1 3/29/2013 03:07 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 10 3/28/2013 12:07 PM
Surr: Toluene-d8	97.5 0	80-123	%REC 10 3/28/2013 12:07 PM
Surr: Toluene-d8	100 0	80-123	%REC 1 3/29/2013 03:07 PM

<b>Qualifiers:</b>	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	





**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 01-Apr-13

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-18
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 1:13:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-022	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 06:09 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 06:09 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 06:09 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 06:09 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 06:09 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 06:09 PM
Tetrachloroethene	1200 5.9	25	µg/L 50 3/28/2013 12:36 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 06:09 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 06:09 PM
Trichloroethene	2.5 0.075	0.50	µg/L 1 3/29/2013 06:09 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 06:09 PM
Surr: 1,2-Dichloroethane-d4	99.6 0	56-120	%REC 50 3/28/2013 12:36 PM
Surr: 1,2-Dichloroethane-d4	97.2 0	56-120	%REC 1 3/29/2013 06:09 PM
Surr: 4-Bromofluorobenzene	99.8 0	80-120	%REC 50 3/28/2013 12:36 PM
Surr: 4-Bromofluorobenzene	88.8 0	80-120	%REC 1 3/29/2013 06:09 PM
Surr: Dibromofluoromethane	96.6 0	72-120	%REC 1 3/29/2013 06:09 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 50 3/28/2013 12:36 PM
Surr: Toluene-d8	101 0	80-123	%REC 50 3/28/2013 12:36 PM
Surr: Toluene-d8	96.2 0	80-123	%REC 1 3/29/2013 06:09 PM

<b>Qualifiers:</b>	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	



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-21
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 11:42:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-023	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 08:05 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 08:05 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 08:05 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 08:05 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 08:05 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 08:05 AM
Tetrachloroethene	8.4 0.12	0.50	µg/L 1 3/29/2013 08:05 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 08:05 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 08:05 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 08:05 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 08:05 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/29/2013 08:05 AM
Surr: 4-Bromofluorobenzene	98.3 0	80-120	%REC 1 3/29/2013 08:05 AM
Surr: Dibromofluoromethane	100 0	72-120	%REC 1 3/29/2013 08:05 AM
Surr: Toluene-d8	104 0	80-123	%REC 1 3/29/2013 08:05 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-22
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 8:58:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-024	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:04 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:04 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:04 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:04 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:04 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:04 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 05:04 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:04 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:04 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 05:04 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:04 AM
Surr: 1,2-Dichloroethane-d4	99.5 0	56-120	%REC 1 3/29/2013 05:04 AM
Surr: 4-Bromofluorobenzene	98.0 0	80-120	%REC 1 3/29/2013 05:04 AM
Surr: Dibromofluoromethane	98.8 0	72-120	%REC 1 3/29/2013 05:04 AM
Surr: Toluene-d8	103 0	80-123	%REC 1 3/29/2013 05:04 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-23
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 4:16:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-025	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:46 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:46 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:46 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:46 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:46 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:46 PM
Tetrachloroethene	960 5.9	25	µg/L 50 3/28/2013 01:05 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:46 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:46 PM
Trichloroethene	2.2 0.075	0.50	µg/L 1 3/29/2013 05:46 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:46 PM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 50 3/28/2013 01:05 PM
Surr: 1,2-Dichloroethane-d4	97.1 0	56-120	%REC 1 3/29/2013 05:46 PM
Surr: 4-Bromofluorobenzene	94.8 0	80-120	%REC 50 3/28/2013 01:05 PM
Surr: 4-Bromofluorobenzene	84.1 0	80-120	%REC 1 3/29/2013 05:46 PM
Surr: Dibromofluoromethane	97.2 0	72-120	%REC 1 3/29/2013 05:46 PM
Surr: Dibromofluoromethane	106 0	72-120	%REC 50 3/28/2013 01:05 PM
Surr: Toluene-d8	100 0	80-123	%REC 50 3/28/2013 01:05 PM
Surr: Toluene-d8	93.8 0	80-123	%REC 1 3/29/2013 05:46 PM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-026

**Client Sample ID:** MW-24  
**Collection Date:** 3/18/2013 1:45:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:26 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:26 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:26 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:26 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:26 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:26 AM
Tetrachloroethene	1.3 0.12	0.50	µg/L 1 3/29/2013 05:26 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:26 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:26 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 05:26 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:26 AM
Surr: 1,2-Dichloroethane-d4	99.2 0	56-120	%REC 1 3/29/2013 05:26 AM
Surr: 4-Bromofluorobenzene	100 0	80-120	%REC 1 3/29/2013 05:26 AM
Surr: Dibromofluoromethane	98.0 0	72-120	%REC 1 3/29/2013 05:26 AM
Surr: Toluene-d8	105 0	80-123	%REC 1 3/29/2013 05:26 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-25
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 3:35:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-027	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:01 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:01 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:01 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:01 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:01 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:01 PM
Tetrachloroethene	660 2.3	10	µg/L 20 3/28/2013 01:34 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:01 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:01 PM
Trichloroethene	0.75 0.075	0.50	µg/L 1 3/29/2013 05:01 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:01 PM
Surr: 1,2-Dichloroethane-d4	99.2 0	56-120	%REC 20 3/28/2013 01:34 PM
Surr: 1,2-Dichloroethane-d4	98.2 0	56-120	%REC 1 3/29/2013 05:01 PM
Surr: 4-Bromofluorobenzene	94.7 0	80-120	%REC 20 3/28/2013 01:34 PM
Surr: 4-Bromofluorobenzene	93.7 0	80-120	%REC 1 3/29/2013 05:01 PM
Surr: Dibromofluoromethane	98.4 0	72-120	%REC 1 3/29/2013 05:01 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 20 3/28/2013 01:34 PM
Surr: Toluene-d8	98.6 0	80-123	%REC 20 3/28/2013 01:34 PM
Surr: Toluene-d8	96.4 0	80-123	%REC 1 3/29/2013 05:01 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-26
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 2:58:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-028	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:23 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:23 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:23 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:23 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:23 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:23 PM
Tetrachloroethene	740 2.3	10	µg/L 20 3/28/2013 02:03 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:23 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:23 PM
Trichloroethene	0.51 0.075	0.50	µg/L 1 3/29/2013 05:23 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:23 PM
Surr: 1,2-Dichloroethane-d4	100 0	56-120	%REC 20 3/28/2013 02:03 PM
Surr: 1,2-Dichloroethane-d4	99.0 0	56-120	%REC 1 3/29/2013 05:23 PM
Surr: 4-Bromofluorobenzene	92.8 0	80-120	%REC 20 3/28/2013 02:03 PM
Surr: 4-Bromofluorobenzene	93.5 0	80-120	%REC 1 3/29/2013 05:23 PM
Surr: Dibromofluoromethane	98.9 0	72-120	%REC 1 3/29/2013 05:23 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 20 3/28/2013 02:03 PM
Surr: Toluene-d8	99.5 0	80-123	%REC 20 3/28/2013 02:03 PM
Surr: Toluene-d8	98.2 0	80-123	%REC 1 3/29/2013 05:23 PM

<b>Qualifiers:</b>	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	



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 01-Apr-13

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-27
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 1:26:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-029	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:53 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:53 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:53 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:53 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:53 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:53 PM
Tetrachloroethene	450 1.2	5.0	µg/L 10 3/28/2013 02:32 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:53 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:53 PM
Trichloroethene	1.0 0.075	0.50	µg/L 1 3/29/2013 03:53 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:53 PM
Surr: 1,2-Dichloroethane-d4	96.7 0	56-120	%REC 10 3/28/2013 02:32 PM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/29/2013 03:53 PM
Surr: 4-Bromofluorobenzene	91.7 0	80-120	%REC 10 3/28/2013 02:32 PM
Surr: 4-Bromofluorobenzene	93.8 0	80-120	%REC 1 3/29/2013 03:53 PM
Surr: Dibromofluoromethane	99.9 0	72-120	%REC 1 3/29/2013 03:53 PM
Surr: Dibromofluoromethane	102 0	72-120	%REC 10 3/28/2013 02:32 PM
Surr: Toluene-d8	98.4 0	80-123	%REC 10 3/28/2013 02:32 PM
Surr: Toluene-d8	97.0 0	80-123	%REC 1 3/29/2013 03:53 PM

<b>Qualifiers:</b>	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	



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-030

**Client Sample ID:** MW-27DUP  
**Collection Date:** 3/21/2013 1:26:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: MS5_130329A	QC Batch: P13VW051	PrepDate:	Analyst: QBM
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 09:56 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 09:56 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 09:56 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 09:56 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 09:56 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 09:56 PM
Tetrachloroethene	470 1.2	5.0	µg/L 10 3/29/2013 07:03 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 09:56 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 09:56 PM
Trichloroethene	1.3 0.075	0.50	µg/L 1 3/29/2013 09:56 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 09:56 PM
Surr: 1,2-Dichloroethane-d4	96.7 0	56-120	%REC 10 3/29/2013 07:03 PM
Surr: 1,2-Dichloroethane-d4	98.6 0	56-120	%REC 1 3/29/2013 09:56 PM
Surr: 4-Bromofluorobenzene	91.9 0	80-120	%REC 10 3/29/2013 07:03 PM
Surr: 4-Bromofluorobenzene	93.5 0	80-120	%REC 1 3/29/2013 09:56 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/29/2013 09:56 PM
Surr: Dibromofluoromethane	102 0	72-120	%REC 10 3/29/2013 07:03 PM
Surr: Toluene-d8	100 0	80-123	%REC 10 3/29/2013 07:03 PM
Surr: Toluene-d8	97.8 0	80-123	%REC 1 3/29/2013 09:56 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-28
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/18/2013 2:45:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-031	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 12:50 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 12:50 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 12:50 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 12:50 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 12:50 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 12:50 PM
Tetrachloroethene	0.50 0.12	0.50	µg/L 1 3/29/2013 12:50 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 12:50 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 12:50 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 12:50 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 12:50 PM
Surr: 1,2-Dichloroethane-d4	99.2 0	56-120	%REC 1 3/29/2013 12:50 PM
Surr: 4-Bromofluorobenzene	91.0 0	80-120	%REC 1 3/29/2013 12:50 PM
Surr: Dibromofluoromethane	96.8 0	72-120	%REC 1 3/29/2013 12:50 PM
Surr: Toluene-d8	99.8 0	80-123	%REC 1 3/29/2013 12:50 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-28DUPE
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/18/2013 2:45:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-032	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 01:13 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 01:13 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 01:13 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 01:13 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 01:13 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 01:13 PM
Tetrachloroethene	0.61 0.12	0.50	µg/L 1 3/29/2013 01:13 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 01:13 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 01:13 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 01:13 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 01:13 PM
Surr: 1,2-Dichloroethane-d4	97.6 0	56-120	%REC 1 3/29/2013 01:13 PM
Surr: 4-Bromofluorobenzene	94.6 0	80-120	%REC 1 3/29/2013 01:13 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/29/2013 01:13 PM
Surr: Toluene-d8	102 0	80-123	%REC 1 3/29/2013 01:13 PM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-033

**Client Sample ID:** MW-29  
**Collection Date:** 3/18/2013 4:04:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:41 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:41 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 04:41 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:41 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:41 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:41 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 04:41 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:41 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:41 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 04:41 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:41 AM
Surr: 1,2-Dichloroethane-d4	95.2 0	56-120	%REC 1 3/29/2013 04:41 AM
Surr: 4-Bromofluorobenzene	97.2 0	80-120	%REC 1 3/29/2013 04:41 AM
Surr: Dibromofluoromethane	94.3 0	72-120	%REC 1 3/29/2013 04:41 AM
Surr: Toluene-d8	103 0	80-123	%REC 1 3/29/2013 04:41 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-30
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 1:13:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-034	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 05:07 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 05:07 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 05:07 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 05:07 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 05:07 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 05:07 PM
Tetrachloroethene	62 0.12	0.50	µg/L 1 3/29/2013 05:07 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 05:07 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 05:07 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 05:07 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 05:07 PM
Surr: 1,2-Dichloroethane-d4	97.2 0	56-120	%REC 1 3/29/2013 05:07 PM
Surr: 4-Bromofluorobenzene	92.8 0	80-120	%REC 1 3/29/2013 05:07 PM
Surr: Dibromofluoromethane	101 0	72-120	%REC 1 3/29/2013 05:07 PM
Surr: Toluene-d8	97.4 0	80-123	%REC 1 3/29/2013 05:07 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-31
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 12:28:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-035	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:22 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:22 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:22 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:22 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:22 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:22 PM
Tetrachloroethene	61 0.12	0.50	µg/L 1 3/29/2013 02:22 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:22 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:22 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:22 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:22 PM
Surr: 1,2-Dichloroethane-d4	103 0	56-120	%REC 1 3/29/2013 02:22 PM
Surr: 4-Bromofluorobenzene	99.3 0	80-120	%REC 1 3/29/2013 02:22 PM
Surr: Dibromofluoromethane	106 0	72-120	%REC 1 3/29/2013 02:22 PM
Surr: Toluene-d8	105 0	80-123	%REC 1 3/29/2013 02:22 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-31DUPE
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 12:28:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-036	

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

**EPA 8260B**

RunID: <b>MS1_130329A</b>	QC Batch: <b>D13VW004</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:44 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:44 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:44 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:44 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:44 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:44 PM
Tetrachloroethene	59 0.12	0.50	µg/L 1 3/29/2013 02:44 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:44 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:44 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:44 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:44 PM
Surr: 1,2-Dichloroethane-d4	95.2 0	56-120	%REC 1 3/29/2013 02:44 PM
Surr: 4-Bromofluorobenzene	94.8 0	80-120	%REC 1 3/29/2013 02:44 PM
Surr: Dibromofluoromethane	98.6 0	72-120	%REC 1 3/29/2013 02:44 PM
Surr: Toluene-d8	99.5 0	80-123	%REC 1 3/29/2013 02:44 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-32
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 2:17:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-037	

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

**EPA 8260B**

RunID: <b>MS1_130330A</b>	QC Batch: <b>D13VW005</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/30/2013 09:03 PM
Benzene	ND 0.048	0.50	µg/L 1 3/30/2013 09:03 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/30/2013 09:03 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/30/2013 09:03 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/30/2013 09:03 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/30/2013 09:03 PM
Tetrachloroethene	720 2.3	10	µg/L 20 3/29/2013 07:31 PM
Toluene	ND 0.034	0.50	µg/L 1 3/30/2013 09:03 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/30/2013 09:03 PM
Trichloroethene	1.8 0.075	0.50	µg/L 1 3/30/2013 09:03 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/30/2013 09:03 PM
Surr: 1,2-Dichloroethane-d4	99.8 0	56-120	%REC 20 3/29/2013 07:31 PM
Surr: 1,2-Dichloroethane-d4	86.5 0	56-120	%REC 1 3/30/2013 09:03 PM
Surr: 4-Bromofluorobenzene	94.7 0	80-120	%REC 20 3/29/2013 07:31 PM
Surr: 4-Bromofluorobenzene	94.3 0	80-120	%REC 1 3/30/2013 09:03 PM
Surr: Dibromofluoromethane	98.0 0	72-120	%REC 1 3/30/2013 09:03 PM
Surr: Dibromofluoromethane	104 0	72-120	%REC 20 3/29/2013 07:31 PM
Surr: Toluene-d8	100 0	80-123	%REC 20 3/29/2013 07:31 PM
Surr: Toluene-d8	98.7 0	80-123	%REC 1 3/30/2013 09:03 PM

<b>Qualifiers:</b>	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	





<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-34
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 3:04:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-038	

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

**EPA 8260B**

RunID: <b>MS1_130330A</b>	QC Batch: <b>D13VW005</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/30/2013 08:40 PM
Benzene	ND 0.048	0.50	µg/L 1 3/30/2013 08:40 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/30/2013 08:40 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/30/2013 08:40 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/30/2013 08:40 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/30/2013 08:40 PM
Tetrachloroethene	550 2.3	10	µg/L 20 3/29/2013 08:00 PM
Toluene	ND 0.034	0.50	µg/L 1 3/30/2013 08:40 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/30/2013 08:40 PM
Trichloroethene	0.86 0.075	0.50	µg/L 1 3/30/2013 08:40 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/30/2013 08:40 PM
Surr: 1,2-Dichloroethane-d4	97.7 0	56-120	%REC 20 3/29/2013 08:00 PM
Surr: 1,2-Dichloroethane-d4	84.5 0	56-120	%REC 1 3/30/2013 08:40 PM
Surr: 4-Bromofluorobenzene	93.3 0	80-120	%REC 20 3/29/2013 08:00 PM
Surr: 4-Bromofluorobenzene	93.2 0	80-120	%REC 1 3/30/2013 08:40 PM
Surr: Dibromofluoromethane	98.6 0	72-120	%REC 1 3/30/2013 08:40 PM
Surr: Dibromofluoromethane	100 0	72-120	%REC 20 3/29/2013 08:00 PM
Surr: Toluene-d8	96.6 0	80-123	%REC 20 3/29/2013 08:00 PM
Surr: Toluene-d8	98.5 0	80-123	%REC 1 3/30/2013 08:40 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-35
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 2:21:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-039	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 10:25 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 10:25 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 10:25 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 10:25 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 10:25 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 10:25 PM
Tetrachloroethene	340 1.2	5.0	µg/L 10 3/29/2013 08:29 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 10:25 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 10:25 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 10:25 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 10:25 PM
Surr: 1,2-Dichloroethane-d4	96.2 0	56-120	%REC 10 3/29/2013 08:29 PM
Surr: 1,2-Dichloroethane-d4	100 0	56-120	%REC 1 3/29/2013 10:25 PM
Surr: 4-Bromofluorobenzene	93.3 0	80-120	%REC 10 3/29/2013 08:29 PM
Surr: 4-Bromofluorobenzene	92.7 0	80-120	%REC 1 3/29/2013 10:25 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/29/2013 10:25 PM
Surr: Dibromofluoromethane	99.3 0	72-120	%REC 10 3/29/2013 08:29 PM
Surr: Toluene-d8	98.2 0	80-123	%REC 10 3/29/2013 08:29 PM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 10:25 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-36
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 12:38:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-040	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 10:54 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 10:54 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 10:54 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 10:54 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 10:54 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 10:54 PM
Tetrachloroethene	160 1.2	5.0	µg/L 10 3/29/2013 08:58 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 10:54 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 10:54 PM
Trichloroethene	0.52 0.075	0.50	µg/L 1 3/29/2013 10:54 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 10:54 PM
Surr: 1,2-Dichloroethane-d4	100 0	56-120	%REC 10 3/29/2013 08:58 PM
Surr: 1,2-Dichloroethane-d4	102 0	56-120	%REC 1 3/29/2013 10:54 PM
Surr: 4-Bromofluorobenzene	95.0 0	80-120	%REC 10 3/29/2013 08:58 PM
Surr: 4-Bromofluorobenzene	92.0 0	80-120	%REC 1 3/29/2013 10:54 PM
Surr: Dibromofluoromethane	104 0	72-120	%REC 1 3/29/2013 10:54 PM
Surr: Dibromofluoromethane	104 0	72-120	%REC 10 3/29/2013 08:58 PM
Surr: Toluene-d8	98.8 0	80-123	%REC 10 3/29/2013 08:58 PM
Surr: Toluene-d8	99.2 0	80-123	%REC 1 3/29/2013 10:54 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-37
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 11:36:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-041	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:39 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:39 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 04:39 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:39 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:39 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:39 PM
Tetrachloroethene	34 0.12	0.50	µg/L 1 3/29/2013 04:39 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:39 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:39 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 04:39 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:39 PM
Surr: 1,2-Dichloroethane-d4	94.2 0	56-120	%REC 1 3/29/2013 04:39 PM
Surr: 4-Bromofluorobenzene	93.7 0	80-120	%REC 1 3/29/2013 04:39 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/29/2013 04:39 PM
Surr: Toluene-d8	99.6 0	80-123	%REC 1 3/29/2013 04:39 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-33
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 9:50:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-042	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:41 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:41 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:41 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:41 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:41 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:41 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 03:41 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:41 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:41 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:41 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:41 PM
Surr: 1,2-Dichloroethane-d4	95.9 0	56-120	%REC 1 3/29/2013 03:41 PM
Surr: 4-Bromofluorobenzene	92.6 0	80-120	%REC 1 3/29/2013 03:41 PM
Surr: Dibromofluoromethane	101 0	72-120	%REC 1 3/29/2013 03:41 PM
Surr: Toluene-d8	99.4 0	80-123	%REC 1 3/29/2013 03:41 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-38
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 10:39:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-043	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:10 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:10 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 04:10 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:10 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:10 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:10 PM
Tetrachloroethene	7.3 0.12	0.50	µg/L 1 3/29/2013 04:10 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:10 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:10 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 04:10 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:10 PM
Surr: 1,2-Dichloroethane-d4	96.5 0	56-120	%REC 1 3/29/2013 04:10 PM
Surr: 4-Bromofluorobenzene	94.7 0	80-120	%REC 1 3/29/2013 04:10 PM
Surr: Dibromofluoromethane	101 0	72-120	%REC 1 3/29/2013 04:10 PM
Surr: Toluene-d8	99.3 0	80-123	%REC 1 3/29/2013 04:10 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> MW-39
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 7:02:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-044	

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

**EPA 8260B**

RunID: <b>MS5_130329A</b>	QC Batch: <b>P13VW051</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 11:23 PM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 11:23 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 11:23 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 11:23 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 11:23 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 11:23 PM
Tetrachloroethene	280 1.2	5.0	µg/L 10 3/29/2013 09:27 PM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 11:23 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 11:23 PM
Trichloroethene	0.83 0.075	0.50	µg/L 1 3/29/2013 11:23 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 11:23 PM
Surr: 1,2-Dichloroethane-d4	97.2 0	56-120	%REC 10 3/29/2013 09:27 PM
Surr: 1,2-Dichloroethane-d4	97.8 0	56-120	%REC 1 3/29/2013 11:23 PM
Surr: 4-Bromofluorobenzene	93.2 0	80-120	%REC 10 3/29/2013 09:27 PM
Surr: 4-Bromofluorobenzene	93.2 0	80-120	%REC 1 3/29/2013 11:23 PM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/29/2013 11:23 PM
Surr: Dibromofluoromethane	100 0	72-120	%REC 10 3/29/2013 09:27 PM
Surr: Toluene-d8	98.0 0	80-123	%REC 10 3/29/2013 09:27 PM
Surr: Toluene-d8	98.3 0	80-123	%REC 1 3/29/2013 11:23 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Trip Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/18/2013 8:30:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-045	

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

**EPA 8260B**

RunID: <b>MS5_130325B</b>	QC Batch: <b>P13VW047</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 01:39 AM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 01:39 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 01:39 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 01:39 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 01:39 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 01:39 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 01:39 AM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 01:39 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 01:39 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 01:39 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 01:39 AM
Surr: 1,2-Dichloroethane-d4	100 0	56-120	%REC 1 3/26/2013 01:39 AM
Surr: 4-Bromofluorobenzene	96.5 0	80-120	%REC 1 3/26/2013 01:39 AM
Surr: Dibromofluoromethane	103 0	72-120	%REC 1 3/26/2013 01:39 AM
Surr: Toluene-d8	98.0 0	80-123	%REC 1 3/26/2013 01:39 AM

<b>Qualifiers:</b>	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	





<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Field Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/18/2013 3:19:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-046	

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

**EPA 8260B**

RunID: <b>MS5_130325B</b>	QC Batch: <b>P13VW047</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 02:08 AM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 02:08 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 02:08 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 02:08 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 02:08 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 02:08 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 02:08 AM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 02:08 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 02:08 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 02:08 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 02:08 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/26/2013 02:08 AM
Surr: 4-Bromofluorobenzene	96.5 0	80-120	%REC 1 3/26/2013 02:08 AM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/26/2013 02:08 AM
Surr: Toluene-d8	99.5 0	80-123	%REC 1 3/26/2013 02:08 AM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-047

**Client Sample ID:** Equipment Blank  
**Collection Date:** 3/18/2013 3:15:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS5_130325B</b>	QC Batch: <b>P13VW047</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 02:37 AM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 02:37 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 02:37 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 02:37 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 02:37 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 02:37 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 02:37 AM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 02:37 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 02:37 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 02:37 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 02:37 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/26/2013 02:37 AM
Surr: 4-Bromofluorobenzene	97.0 0	80-120	%REC 1 3/26/2013 02:37 AM
Surr: Dibromofluoromethane	106 0	72-120	%REC 1 3/26/2013 02:37 AM
Surr: Toluene-d8	99.9 0	80-123	%REC 1 3/26/2013 02:37 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Trip Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 7:50:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-048	

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

**EPA 8260B**

RunID: <b>MS5_130326A</b>	QC Batch: <b>P13VW048</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 11:10 AM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 11:10 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 11:10 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 11:10 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 11:10 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 11:10 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 11:10 AM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 11:10 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 11:10 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 11:10 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 11:10 AM
Surr: 1,2-Dichloroethane-d4	102 0	56-120	%REC 1 3/26/2013 11:10 AM
Surr: 4-Bromofluorobenzene	96.8 0	80-120	%REC 1 3/26/2013 11:10 AM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/26/2013 11:10 AM
Surr: Toluene-d8	100 0	80-123	%REC 1 3/26/2013 11:10 AM

<b>Qualifiers:</b>	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	



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Field Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/19/2013 11:00:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-049	

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

**EPA 8260B**

RunID: <b>MS5_130326A</b>	QC Batch: <b>P13VW048</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 11:39 AM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 11:39 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 11:39 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 11:39 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 11:39 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 11:39 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 11:39 AM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 11:39 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 11:39 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 11:39 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 11:39 AM
Surr: 1,2-Dichloroethane-d4	101 0	56-120	%REC 1 3/26/2013 11:39 AM
Surr: 4-Bromofluorobenzene	96.1 0	80-120	%REC 1 3/26/2013 11:39 AM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/26/2013 11:39 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/26/2013 11:39 AM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-050

**Client Sample ID:** Equipment Blank  
**Collection Date:** 3/19/2013 12:30:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS5_130326A</b>	QC Batch: <b>P13VW048</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 12:08 PM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 12:08 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 12:08 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 12:08 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 12:08 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 12:08 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 12:08 PM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 12:08 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 12:08 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 12:08 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 12:08 PM
Surr: 1,2-Dichloroethane-d4	102 0	56-120	%REC 1 3/26/2013 12:08 PM
Surr: 4-Bromofluorobenzene	94.5 0	80-120	%REC 1 3/26/2013 12:08 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/26/2013 12:08 PM
Surr: Toluene-d8	99.2 0	80-123	%REC 1 3/26/2013 12:08 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Trip Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 8:00:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-051	

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

**EPA 8260B**

RunID: <b>MS5_130326A</b>	QC Batch: <b>P13VW048</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 12:37 PM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 12:37 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 12:37 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 12:37 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 12:37 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 12:37 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 12:37 PM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 12:37 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 12:37 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 12:37 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 12:37 PM
Surr: 1,2-Dichloroethane-d4	104 0	56-120	%REC 1 3/26/2013 12:37 PM
Surr: 4-Bromofluorobenzene	99.2 0	80-120	%REC 1 3/26/2013 12:37 PM
Surr: Dibromofluoromethane	105 0	72-120	%REC 1 3/26/2013 12:37 PM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/26/2013 12:37 PM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Field Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/20/2013 12:47:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-052	

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

**EPA 8260B**

RunID: <b>MS5_130326A</b>	QC Batch: <b>P13VW048</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/26/2013 01:06 PM
Benzene	ND 0.048	0.50	µg/L 1 3/26/2013 01:06 PM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/26/2013 01:06 PM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/26/2013 01:06 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/26/2013 01:06 PM
o-Xylene	ND 0.042	0.50	µg/L 1 3/26/2013 01:06 PM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/26/2013 01:06 PM
Toluene	ND 0.034	0.50	µg/L 1 3/26/2013 01:06 PM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/26/2013 01:06 PM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/26/2013 01:06 PM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/26/2013 01:06 PM
Surr: 1,2-Dichloroethane-d4	103 0	56-120	%REC 1 3/26/2013 01:06 PM
Surr: 4-Bromofluorobenzene	97.9 0	80-120	%REC 1 3/26/2013 01:06 PM
Surr: Dibromofluoromethane	106 0	72-120	%REC 1 3/26/2013 01:06 PM
Surr: Toluene-d8	99.4 0	80-123	%REC 1 3/26/2013 01:06 PM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-053

**Client Sample ID:** Equipment Blank  
**Collection Date:** 3/20/2013 11:17:00 AM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:01 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:01 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:01 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:01 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:01 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:01 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 02:01 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:01 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:01 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:01 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:01 AM
Surr: 1,2-Dichloroethane-d4	96.8 0	56-120	%REC 1 3/29/2013 02:01 AM
Surr: 4-Bromofluorobenzene	97.8 0	80-120	%REC 1 3/29/2013 02:01 AM
Surr: Dibromofluoromethane	99.2 0	72-120	%REC 1 3/29/2013 02:01 AM
Surr: Toluene-d8	102 0	80-123	%REC 1 3/29/2013 02:01 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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<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Trip Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 6:15:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-054	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:24 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:24 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:24 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:24 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:24 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:24 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 02:24 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:24 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:24 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:24 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:24 AM
Surr: 1,2-Dichloroethane-d4	92.4 0	56-120	%REC 1 3/29/2013 02:24 AM
Surr: 4-Bromofluorobenzene	98.8 0	80-120	%REC 1 3/29/2013 02:24 AM
Surr: Dibromofluoromethane	94.8 0	72-120	%REC 1 3/29/2013 02:24 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 02:24 AM

<b>Qualifiers:</b>	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	



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Field Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/21/2013 1:50:00 PM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-055	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 02:47 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 02:47 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 02:47 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 02:47 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 02:47 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 02:47 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 02:47 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 02:47 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 02:47 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 02:47 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 02:47 AM
Surr: 1,2-Dichloroethane-d4	92.9 0	56-120	%REC 1 3/29/2013 02:47 AM
Surr: 4-Bromofluorobenzene	98.6 0	80-120	%REC 1 3/29/2013 02:47 AM
Surr: Dibromofluoromethane	93.8 0	72-120	%REC 1 3/29/2013 02:47 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 02:47 AM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-056

**Client Sample ID:** Equipment Blank  
**Collection Date:** 3/21/2013 10:14:00 AM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:10 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:10 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:10 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:10 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:10 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:10 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 03:10 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:10 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:10 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:10 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:10 AM
Surr: 1,2-Dichloroethane-d4	94.3 0	56-120	%REC 1 3/29/2013 03:10 AM
Surr: 4-Bromofluorobenzene	98.4 0	80-120	%REC 1 3/29/2013 03:10 AM
Surr: Dibromofluoromethane	96.7 0	72-120	%REC 1 3/29/2013 03:10 AM
Surr: Toluene-d8	102 0	80-123	%REC 1 3/29/2013 03:10 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



<b>CLIENT:</b> Cardno ATC	<b>Client Sample ID:</b> Trip Blank
<b>Lab Order:</b> N009877	<b>Collection Date:</b> 3/22/2013 5:43:00 AM
<b>Project:</b> Maryland Square Shopping Center, 085.42620.0	<b>Matrix:</b> WATER
<b>Lab ID:</b> N009877-057	

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:33 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:33 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:33 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:33 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:33 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:33 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 03:33 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:33 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:33 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:33 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:33 AM
Surr: 1,2-Dichloroethane-d4	95.1 0	56-120	%REC 1 3/29/2013 03:33 AM
Surr: 4-Bromofluorobenzene	98.7 0	80-120	%REC 1 3/29/2013 03:33 AM
Surr: Dibromofluoromethane	98.4 0	72-120	%REC 1 3/29/2013 03:33 AM
Surr: Toluene-d8	103 0	80-123	%REC 1 3/29/2013 03:33 AM

<b>Qualifiers:</b>	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	



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-058

**Client Sample ID:** Field Blank  
**Collection Date:** 3/22/2013 12:41:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 03:55 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 03:55 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 03:55 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 03:55 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 03:55 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 03:55 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 03:55 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 03:55 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 03:55 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 03:55 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 03:55 AM
Surr: 1,2-Dichloroethane-d4	96.6 0	56-120	%REC 1 3/29/2013 03:55 AM
Surr: 4-Bromofluorobenzene	98.5 0	80-120	%REC 1 3/29/2013 03:55 AM
Surr: Dibromofluoromethane	96.8 0	72-120	%REC 1 3/29/2013 03:55 AM
Surr: Toluene-d8	102 0	80-123	%REC 1 3/29/2013 03:55 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



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-059

**Client Sample ID:** Equipment Blank  
**Collection Date:** 3/22/2013 10:40:00 AM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 04:18 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 04:18 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 04:18 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 04:18 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 04:18 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 04:18 AM
Tetrachloroethene	ND 0.12	0.50	µg/L 1 3/29/2013 04:18 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 04:18 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 04:18 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 04:18 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 04:18 AM
Surr: 1,2-Dichloroethane-d4	98.0 0	56-120	%REC 1 3/29/2013 04:18 AM
Surr: 4-Bromofluorobenzene	98.6 0	80-120	%REC 1 3/29/2013 04:18 AM
Surr: Dibromofluoromethane	98.4 0	72-120	%REC 1 3/29/2013 04:18 AM
Surr: Toluene-d8	101 0	80-123	%REC 1 3/29/2013 04:18 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



**CLIENT:** Cardno ATC  
**Lab Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0  
**Lab ID:** N009877-060

**Client Sample ID:** MW-9 DUP  
**Collection Date:** 3/19/2013 1:08:00 PM  
**Matrix:** WATER

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

**EPA 8260B**

RunID: <b>MS1_130328A</b>	QC Batch: <b>D13VW003</b>	PrepDate:	Analyst: <b>QBM</b>
1,1-Dichloroethene	ND 0.16	0.50	µg/L 1 3/29/2013 07:42 AM
Benzene	ND 0.048	0.50	µg/L 1 3/29/2013 07:42 AM
cis-1,2-Dichloroethene	ND 0.057	0.50	µg/L 1 3/29/2013 07:42 AM
Ethylbenzene	ND 0.036	0.50	µg/L 1 3/29/2013 07:42 AM
m,p-Xylene	ND 0.14	1.0	µg/L 1 3/29/2013 07:42 AM
o-Xylene	ND 0.042	0.50	µg/L 1 3/29/2013 07:42 AM
Tetrachloroethene	7.7 0.12	0.50	µg/L 1 3/29/2013 07:42 AM
Toluene	ND 0.034	0.50	µg/L 1 3/29/2013 07:42 AM
trans-1,2-Dichloroethene	ND 0.11	0.50	µg/L 1 3/29/2013 07:42 AM
Trichloroethene	ND 0.075	0.50	µg/L 1 3/29/2013 07:42 AM
Vinyl chloride	ND 0.082	0.50	µg/L 1 3/29/2013 07:42 AM
Surr: 1,2-Dichloroethane-d4	97.6 0	56-120	%REC 1 3/29/2013 07:42 AM
Surr: 4-Bromofluorobenzene	96.3 0	80-120	%REC 1 3/29/2013 07:42 AM
Surr: Dibromofluoromethane	94.4 0	72-120	%REC 1 3/29/2013 07:42 AM
Surr: Toluene-d8	100 0	80-123	%REC 1 3/29/2013 07:42 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



**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 8260\_WP\_LL**

Sample ID: <b>D130328LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88248</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>D13VW003</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/28/2013</b>				SeqNo: <b>1547801</b>	
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	80	120				
Benzene	19.820	0.50	20.00	0	99.1	80	120				
cis-1,2-Dichloroethene	19.380	0.50	20.00	0	96.9	80	120				
Ethylbenzene	19.630	0.50	20.00	0	98.2	80	120				
m,p-Xylene	40.710	1.0	40.00	0	102	80	120				
o-Xylene	20.080	0.50	20.00	0	100	80	120				
Tetrachloroethene	20.300	0.50	20.00	0	102	80	121				
Toluene	19.360	0.50	20.00	0	96.8	80	120				
trans-1,2-Dichloroethene	19.740	0.50	20.00	0	98.7	80	120				
Trichloroethene	20.350	0.50	20.00	0	102	80	120				
Vinyl chloride	18.960	0.50	20.00	0	94.8	80	120				
Surr: 1,2-Dichloroethane-d4	24.970		25.00		99.9	56	120				
Surr: 4-Bromofluorobenzene	24.680		25.00		98.7	80	120				
Surr: Dibromofluoromethane	24.570		25.00		98.3	72	120				
Surr: Toluene-d8	24.070		25.00		96.3	80	123				

Sample ID: <b>N009877-013AMS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88248</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>D13VW003</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>				SeqNo: <b>1547802</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.450	0.50	20.00	0	97.3	80	120				
Benzene	20.030	0.50	20.00	0	100	80	120				
cis-1,2-Dichloroethene	20.430	0.50	20.00	0	102	79	120				
Ethylbenzene	18.930	0.50	20.00	0	94.6	80	120				
m,p-Xylene	38.720	1.0	40.00	0	96.8	80	123				
o-Xylene	19.780	0.50	20.00	0	98.9	80	120				
Tetrachloroethene	19.120	0.50	20.00	0	95.6	70	145				
Toluene	19.130	0.50	20.00	0	95.7	80	120				

**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





**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009877-013AMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88248</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>D13VW003</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547802</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	20.070	0.50	20.00	0	100	80	120				
Trichloroethene	20.190	0.50	20.00	0	101	80	120				
Vinyl chloride	19.040	0.50	20.00	0	95.2	77	120				
Surr: 1,2-Dichloroethane-d4	26.100		25.00		104	56	120				
Surr: 4-Bromofluorobenzene	24.280		25.00		97.1	80	120				
Surr: Dibromofluoromethane	26.050		25.00		104	72	120				
Surr: Toluene-d8	24.320		25.00		97.3	80	123				

Sample ID: <b>N009877-013AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88248</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>D13VW003</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547803</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.580	0.50	20.00	0	97.9	80	120	19.45	0.666	20	
Benzene	20.450	0.50	20.00	0	102	80	120	20.03	2.08	20	
cis-1,2-Dichloroethene	21.170	0.50	20.00	0	106	79	120	20.43	3.56	20	
Ethylbenzene	19.380	0.50	20.00	0	96.9	80	120	18.93	2.35	20	
m,p-Xylene	39.060	1.0	40.00	0	97.6	80	123	38.72	0.874	20	
o-Xylene	19.990	0.50	20.00	0	100	80	120	19.78	1.06	20	
Tetrachloroethene	19.720	0.50	20.00	0	98.6	70	145	19.12	3.09	20	
Toluene	19.700	0.50	20.00	0	98.5	80	120	19.13	2.94	20	
trans-1,2-Dichloroethene	20.800	0.50	20.00	0	104	80	120	20.07	3.57	20	
Trichloroethene	20.990	0.50	20.00	0	105	80	120	20.19	3.89	20	
Vinyl chloride	19.510	0.50	20.00	0	97.6	77	120	19.04	2.44	20	
Surr: 1,2-Dichloroethane-d4	27.180		25.00		109	56	120		0		
Surr: 4-Bromofluorobenzene	25.160		25.00		101	80	120		0		
Surr: Dibromofluoromethane	27.170		25.00		109	72	120		0		
Surr: Toluene-d8	24.850		25.00		99.4	80	123		0		

**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   |  |



Advanced Technology  
Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>D130328MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88248</b>						
Client ID: <b>PBW</b>	Batch ID: <b>D13VW003</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547804</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	22.320		25.00		89.3	56	120				
Surr: 4-Bromofluorobenzene	24.080		25.00		96.3	80	120				
Surr: Dibromofluoromethane	23.350		25.00		93.4	72	120				
Surr: Toluene-d8	25.080		25.00		100	80	123				

**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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>D130329LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88249</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>D13VW004</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>				SeqNo: <b>1547827</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.720	0.50	20.00	0	98.6	80	120				
Benzene	19.920	0.50	20.00	0	99.6	80	120				
cis-1,2-Dichloroethene	19.670	0.50	20.00	0	98.4	80	120				
Ethylbenzene	19.950	0.50	20.00	0	99.8	80	120				
m,p-Xylene	40.660	1.0	40.00	0	102	80	120				
o-Xylene	20.170	0.50	20.00	0	101	80	120				
Tetrachloroethene	20.750	0.50	20.00	0	104	80	121				
Toluene	19.160	0.50	20.00	0	95.8	80	120				
trans-1,2-Dichloroethene	20.000	0.50	20.00	0	100	80	120				
Trichloroethene	20.190	0.50	20.00	0	101	80	120				
Vinyl chloride	19.700	0.50	20.00	0	98.5	80	120				
Surr: 1,2-Dichloroethane-d4	25.050		25.00		100	56	120				
Surr: 4-Bromofluorobenzene	24.610		25.00		98.4	80	120				
Surr: Dibromofluoromethane	25.040		25.00		100	72	120				
Surr: Toluene-d8	23.760		25.00		95.0	80	123				

Sample ID: <b>N009877-031AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88249</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>D13VW004</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>				SeqNo: <b>1547829</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.230	0.50	20.00	0	86.2	80	120	18.66	7.97	20	
Benzene	18.810	0.50	20.00	0	94.1	80	120	19.37	2.93	20	
cis-1,2-Dichloroethene	19.070	0.50	20.00	0	95.4	79	120	20.10	5.26	20	
Ethylbenzene	18.230	0.50	20.00	0	91.2	80	120	19.55	6.99	20	
m,p-Xylene	35.880	1.0	40.00	0	89.7	80	123	38.61	7.33	20	
o-Xylene	18.340	0.50	20.00	0	91.7	80	120	19.77	7.50	20	
Tetrachloroethene	19.030	0.50	20.00	0.5000	92.6	70	145	20.34	6.65	20	
Toluene	17.860	0.50	20.00	0	89.3	80	120	19.19	7.18	20	
trans-1,2-Dichloroethene	17.950	0.50	20.00	0	89.8	80	120	19.34	7.46	20	
Trichloroethene	19.190	0.50	20.00	0	96.0	80	120	19.88	3.53	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009877-031AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88249</b>			
Client ID: <b>ZZZZZ</b>		Batch ID: <b>D13VW004</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>		SeqNo: <b>1547829</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	17.830	0.50	20.00	0	89.2	77	120	18.68	4.66	20	
Surr: 1,2-Dichloroethane-d4	24.620		25.00		98.5	56	120		0		
Surr: 4-Bromofluorobenzene	24.040		25.00		96.2	80	120		0		
Surr: Dibromofluoromethane	24.120		25.00		96.5	72	120		0		
Surr: Toluene-d8	23.090		25.00		92.4	80	123		0		

Sample ID: <b>D130329MB2</b>		SampType: <b>MBLK</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88249</b>			
Client ID: <b>PBW</b>		Batch ID: <b>D13VW004</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>		SeqNo: <b>1547830</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.640		25.00		98.6	56	120				
Surr: 4-Bromofluorobenzene	21.140		25.00		84.6	80	120				
Surr: Dibromofluoromethane	23.760		25.00		95.0	72	120				
Surr: Toluene-d8	25.310		25.00		101	80	123				

Sample ID: <b>N009877-031AMS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88249</b>			
Client ID: <b>ZZZZZ</b>		Batch ID: <b>D13VW004</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>		SeqNo: <b>1547831</b>			
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   |  |



**Advanced Technology  
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3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009877-031AMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88249</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>D13VW004</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547831</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.660	0.50	20.00	0	93.3	80	120				
Benzene	19.370	0.50	20.00	0	96.9	80	120				
cis-1,2-Dichloroethene	20.100	0.50	20.00	0	101	79	120				
Ethylbenzene	19.550	0.50	20.00	0	97.8	80	120				
m,p-Xylene	38.610	1.0	40.00	0	96.5	80	123				
o-Xylene	19.770	0.50	20.00	0	98.8	80	120				
Tetrachloroethene	20.340	0.50	20.00	0.5000	99.2	70	145				
Toluene	19.190	0.50	20.00	0	96.0	80	120				
trans-1,2-Dichloroethene	19.340	0.50	20.00	0	96.7	80	120				
Trichloroethene	19.880	0.50	20.00	0	99.4	80	120				
Vinyl chloride	18.680	0.50	20.00	0	93.4	77	120				
Surr: 1,2-Dichloroethane-d4	27.060		25.00		108	56	120				
Surr: 4-Bromofluorobenzene	24.620		25.00		98.5	80	120				
Surr: Dibromofluoromethane	26.420		25.00		106	72	120				
Surr: Toluene-d8	24.580		25.00		98.3	80	123				

**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:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>D130330LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88250</b>	
Client ID: <b>LCSW</b>		Batch ID: <b>D13VW005</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/30/2013</b>				SeqNo: <b>1547853</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19.990	0.50	20.00	0	100	80	120				
Benzene	19.730	0.50	20.00	0	98.6	80	120				
cis-1,2-Dichloroethene	19.350	0.50	20.00	0	96.8	80	120				
Ethylbenzene	20.150	0.50	20.00	0	101	80	120				
m,p-Xylene	41.310	1.0	40.00	0	103	80	120				
o-Xylene	20.500	0.50	20.00	0	103	80	120				
Tetrachloroethene	21.670	0.50	20.00	0	108	80	121				
Toluene	19.140	0.50	20.00	0	95.7	80	120				
trans-1,2-Dichloroethene	19.600	0.50	20.00	0	98.0	80	120				
Trichloroethene	21.120	0.50	20.00	0	106	80	120				
Vinyl chloride	18.180	0.50	20.00	0	90.9	80	120				
Surr: 1,2-Dichloroethane-d4	24.690		25.00		98.8	56	120				
Surr: 4-Bromofluorobenzene	24.300		25.00		97.2	80	120				
Surr: Dibromofluoromethane	25.190		25.00		101	72	120				
Surr: Toluene-d8	24.370		25.00		97.5	80	123				

Sample ID: <b>N009881-025AMS</b>		SampType: <b>MS</b>		TestCode: <b>8260_WP_LL</b>		Units: <b>µg/L</b>		Prep Date:		RunNo: <b>88250</b>	
Client ID: <b>ZZZZZ</b>		Batch ID: <b>D13VW005</b>		TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/30/2013</b>				SeqNo: <b>1547854</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.990	0.50	20.00	0	95.0	80	120				
Benzene	19.240	0.50	20.00	0	96.2	80	120				
cis-1,2-Dichloroethene	19.720	0.50	20.00	0	98.6	79	120				
Ethylbenzene	18.530	0.50	20.00	0	92.6	80	120				
m,p-Xylene	38.420	1.0	40.00	0	96.0	80	123				
o-Xylene	19.270	0.50	20.00	0	96.4	80	120				
Tetrachloroethene	22.980	0.50	20.00	3.510	97.4	70	145				
Toluene	18.920	0.50	20.00	0	94.6	80	120				
trans-1,2-Dichloroethene	19.820	0.50	20.00	0	99.1	80	120				
Trichloroethene	20.310	0.50	20.00	0	102	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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**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009881-025AMS</b>	SampType: <b>MS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88250</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>D13VW005</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/30/2013</b>	SeqNo: <b>1547854</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	17.470	0.50	20.00	0	87.4	77	120				
Surr: 1,2-Dichloroethane-d4	26.630		25.00		107	56	120				
Surr: 4-Bromofluorobenzene	24.010		25.00		96.0	80	120				
Surr: Dibromofluoromethane	27.030		25.00		108	72	120				
Surr: Toluene-d8	24.890		25.00		99.6	80	123				

Sample ID: <b>N009881-025AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88250</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>D13VW005</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/30/2013</b>	SeqNo: <b>1547855</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.290	0.50	20.00	0	91.4	80	120	18.99	3.76	20	
Benzene	18.980	0.50	20.00	0	94.9	80	120	19.24	1.36	20	
cis-1,2-Dichloroethene	19.220	0.50	20.00	0	96.1	79	120	19.72	2.57	20	
Ethylbenzene	18.780	0.50	20.00	0	93.9	80	120	18.53	1.34	20	
m,p-Xylene	38.550	1.0	40.00	0	96.4	80	123	38.42	0.338	20	
o-Xylene	19.350	0.50	20.00	0	96.8	80	120	19.27	0.414	20	
Tetrachloroethene	23.050	0.50	20.00	3.510	97.7	70	145	22.98	0.304	20	
Toluene	18.700	0.50	20.00	0	93.5	80	120	18.92	1.17	20	
trans-1,2-Dichloroethene	18.420	0.50	20.00	0	92.1	80	120	19.82	7.32	20	
Trichloroethene	19.820	0.50	20.00	0	99.1	80	120	20.31	2.44	20	
Vinyl chloride	17.340	0.50	20.00	0	86.7	77	120	17.47	0.747	20	
Surr: 1,2-Dichloroethane-d4	25.410		25.00		102	56	120		0		
Surr: 4-Bromofluorobenzene	24.330		25.00		97.3	80	120		0		
Surr: Dibromofluoromethane	25.590		25.00		102	72	120		0		
Surr: Toluene-d8	23.880		25.00		95.5	80	123		0		

Sample ID: <b>D130330MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88250</b>						
Client ID: <b>PBW</b>	Batch ID: <b>D13VW005</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/30/2013</b>	SeqNo: <b>1547856</b>						
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:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>D130330MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88250</b>							
Client ID: <b>PBW</b>	Batch ID: <b>D13VW005</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/30/2013</b>	SeqNo: <b>1547856</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.240		25.00		97.0	56	120				
Surr: 4-Bromofluorobenzene	23.650		25.00		94.6	80	120				
Surr: Dibromofluoromethane	25.050		25.00		100	72	120				
Surr: Toluene-d8	24.870		25.00		99.5	80	123				

**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:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130325LCS2</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88189</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW047</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/25/2013</b>			SeqNo: <b>1545125</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	19.560	0.50	20.00	0	97.8	80	120					
Benzene	19.180	0.50	20.00	0	95.9	80	120					
cis-1,2-Dichloroethene	19.430	0.50	20.00	0	97.2	80	120					
Ethylbenzene	19.060	0.50	20.00	0	95.3	80	120					
m,p-Xylene	38.940	1.0	40.00	0	97.4	80	120					
o-Xylene	19.410	0.50	20.00	0	97.0	80	120					
Tetrachloroethene	19.150	0.50	20.00	0	95.8	80	121					
Toluene	19.300	0.50	20.00	0	96.5	80	120					
trans-1,2-Dichloroethene	18.970	0.50	20.00	0	94.8	80	120					
Trichloroethene	19.540	0.50	20.00	0	97.7	80	120					
Vinyl chloride	18.640	0.50	20.00	0	93.2	80	120					
Surr: 1,2-Dichloroethane-d4	23.950		25.00		95.8	56	120					
Surr: 4-Bromofluorobenzene	25.180		25.00		101	80	120					
Surr: Dibromofluoromethane	25.790		25.00		103	72	120					
Surr: Toluene-d8	25.500		25.00		102	80	123					

Sample ID: <b>P130325LCS2</b>		SampType: <b>LCS2</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88189</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW047</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/25/2013</b>			SeqNo: <b>1545126</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.110	0.50	20.00	0	101	80	120	19.56	2.77	20		
Benzene	19.650	0.50	20.00	0	98.2	80	120	19.18	2.42	20		
cis-1,2-Dichloroethene	20.100	0.50	20.00	0	101	80	120	19.43	3.39	20		
Ethylbenzene	19.460	0.50	20.00	0	97.3	80	120	19.06	2.08	20		
m,p-Xylene	39.150	1.0	40.00	0	97.9	80	120	38.94	0.538	20		
o-Xylene	19.590	0.50	20.00	0	98.0	80	120	19.41	0.923	20		
Tetrachloroethene	19.900	0.50	20.00	0	99.5	80	121	19.15	3.84	20		
Toluene	19.590	0.50	20.00	0	98.0	80	120	19.30	1.49	20		
trans-1,2-Dichloroethene	20.570	0.50	20.00	0	103	80	120	18.97	8.09	20		
Trichloroethene	19.850	0.50	20.00	0	99.2	80	120	19.54	1.57	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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**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130325LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88189</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW047</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/25/2013</b>	SeqNo: <b>1545126</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	18.960	0.50	20.00	0	94.8	80	120	18.64	1.70	20	
Surr: 1,2-Dichloroethane-d4	24.710		25.00		98.8	56	120		0		
Surr: 4-Bromofluorobenzene	24.800		25.00		99.2	80	120		0		
Surr: Dibromofluoromethane	25.810		25.00		103	72	120		0		
Surr: Toluene-d8	25.690		25.00		103	80	123		0		

Sample ID: <b>P130325MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88189</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW047</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/25/2013</b>	SeqNo: <b>1545127</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.560		25.00		94.2	56	120				
Surr: 4-Bromofluorobenzene	24.540		25.00		98.2	80	120				
Surr: Dibromofluoromethane	25.970		25.00		104	72	120				
Surr: Toluene-d8	25.210		25.00		101	80	123				

**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 Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130326LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88204</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW048</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/26/2013</b>			SeqNo: <b>1545722</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.950	0.50	20.00	0	105	80	120					
Benzene	18.770	0.50	20.00	0	93.8	80	120					
cis-1,2-Dichloroethene	19.260	0.50	20.00	0	96.3	80	120					
Ethylbenzene	19.400	0.50	20.00	0	97.0	80	120					
m,p-Xylene	39.440	1.0	40.00	0	98.6	80	120					
o-Xylene	19.520	0.50	20.00	0	97.6	80	120					
Tetrachloroethene	19.590	0.50	20.00	0	98.0	80	121					
Toluene	19.110	0.50	20.00	0	95.6	80	120					
trans-1,2-Dichloroethene	19.940	0.50	20.00	0	99.7	80	120					
Trichloroethene	19.520	0.50	20.00	0	97.6	80	120					
Vinyl chloride	17.840	0.50	20.00	0	89.2	80	120					
Surr: 1,2-Dichloroethane-d4	25.170		25.00		101	56	120					
Surr: 4-Bromofluorobenzene	25.290		25.00		101	80	120					
Surr: Dibromofluoromethane	25.940		25.00		104	72	120					
Surr: Toluene-d8	25.240		25.00		101	80	123					

Sample ID: <b>P130326LCS D</b>		SampType: <b>LCS D</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88204</b>		
Client ID: <b>LCS S02</b>		Batch ID: <b>P13VW048</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/26/2013</b>			SeqNo: <b>1545723</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	21.480	0.50	20.00	0	107	80	120	20.95	2.50	20		
Benzene	19.720	0.50	20.00	0	98.6	80	120	18.77	4.94	20		
cis-1,2-Dichloroethene	19.810	0.50	20.00	0	99.0	80	120	19.26	2.82	20		
Ethylbenzene	20.110	0.50	20.00	0	101	80	120	19.40	3.59	20		
m,p-Xylene	40.580	1.0	40.00	0	101	80	120	39.44	2.85	20		
o-Xylene	20.080	0.50	20.00	0	100	80	120	19.52	2.83	20		
Tetrachloroethene	20.610	0.50	20.00	0	103	80	121	19.59	5.07	20		
Toluene	20.100	0.50	20.00	0	101	80	120	19.11	5.05	20		
trans-1,2-Dichloroethene	20.340	0.50	20.00	0	102	80	120	19.94	1.99	20		
Trichloroethene	20.630	0.50	20.00	0	103	80	120	19.52	5.53	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130326LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88204</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW048</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/26/2013</b>	SeqNo: <b>1545723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	18.850	0.50	20.00	0	94.3	80	120	17.84	5.51	20	
Surr: 1,2-Dichloroethane-d4	25.400		25.00		102	56	120		0		
Surr: 4-Bromofluorobenzene	25.190		25.00		101	80	120		0		
Surr: Dibromofluoromethane	25.940		25.00		104	72	120		0		
Surr: Toluene-d8	25.630		25.00		103	80	123		0		

Sample ID: <b>P130326MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88204</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW048</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/26/2013</b>	SeqNo: <b>1545725</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.570		25.00		98.3	56	120				
Surr: 4-Bromofluorobenzene	24.170		25.00		96.7	80	120				
Surr: Dibromofluoromethane	26.650		25.00		107	72	120				
Surr: Toluene-d8	25.070		25.00		100	80	123				

**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   |  |



**Advanced Technology  
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**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130327LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88215</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW049</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/27/2013</b>			SeqNo: <b>1546426</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.550	0.50	20.00	0	103	80	120					
Benzene	18.730	0.50	20.00	0	93.6	80	120					
cis-1,2-Dichloroethene	18.960	0.50	20.00	0	94.8	80	120					
Ethylbenzene	19.110	0.50	20.00	0	95.6	80	120					
m,p-Xylene	39.260	1.0	40.00	0	98.2	80	120					
o-Xylene	19.680	0.50	20.00	0	98.4	80	120					
Tetrachloroethene	20.330	0.50	20.00	0	102	80	121					
Toluene	18.850	0.50	20.00	0	94.3	80	120					
trans-1,2-Dichloroethene	19.100	0.50	20.00	0	95.5	80	120					
Trichloroethene	19.410	0.50	20.00	0	97.0	80	120					
Vinyl chloride	17.610	0.50	20.00	0	88.0	80	120					
Surr: 1,2-Dichloroethane-d4	23.750		25.00		95.0	56	120					
Surr: 4-Bromofluorobenzene	24.530		25.00		98.1	80	120					
Surr: Dibromofluoromethane	24.720		25.00		98.9	72	120					
Surr: Toluene-d8	24.880		25.00		99.5	80	123					

Sample ID: <b>P130327LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88215</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW049</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/27/2013</b>			SeqNo: <b>1546427</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.890	0.50	20.00	0	104	80	120	20.55	1.64	20		
Benzene	19.190	0.50	20.00	0	96.0	80	120	18.73	2.43	20		
cis-1,2-Dichloroethene	19.380	0.50	20.00	0	96.9	80	120	18.96	2.19	20		
Ethylbenzene	19.370	0.50	20.00	0	96.9	80	120	19.11	1.35	20		
m,p-Xylene	39.480	1.0	40.00	0	98.7	80	120	39.26	0.559	20		
o-Xylene	19.650	0.50	20.00	0	98.2	80	120	19.68	0.153	20		
Tetrachloroethene	19.770	0.50	20.00	0	98.8	80	121	20.33	2.79	20		
Toluene	19.100	0.50	20.00	0	95.5	80	120	18.85	1.32	20		
trans-1,2-Dichloroethene	19.810	0.50	20.00	0	99.0	80	120	19.10	3.65	20		
Trichloroethene	19.870	0.50	20.00	0	99.4	80	120	19.41	2.34	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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**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130327LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88215</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW049</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/27/2013</b>	SeqNo: <b>1546427</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	18.100	0.50	20.00	0	90.5	80	120	17.61	2.74	20	
Surr: 1,2-Dichloroethane-d4	24.620		25.00		98.5	56	120		0		
Surr: 4-Bromofluorobenzene	25.020		25.00		100	80	120		0		
Surr: Dibromofluoromethane	24.930		25.00		99.7	72	120		0		
Surr: Toluene-d8	24.970		25.00		99.9	80	123		0		

Sample ID: <b>P130327MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88215</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW049</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/27/2013</b>	SeqNo: <b>1546428</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.030		25.00		100	56	120				
Surr: 4-Bromofluorobenzene	23.720		25.00		94.9	80	120				
Surr: Dibromofluoromethane	25.060		25.00		100	72	120				
Surr: Toluene-d8	24.780		25.00		99.1	80	123				

**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:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

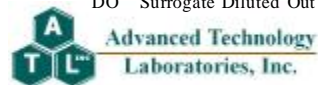
**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130328LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88229</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW050</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/28/2013</b>			SeqNo: <b>1547146</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	19.820	0.50	20.00	0	99.1	80	120					
Benzene	18.720	0.50	20.00	0	93.6	80	120					
cis-1,2-Dichloroethene	18.990	0.50	20.00	0	95.0	80	120					
Ethylbenzene	18.560	0.50	20.00	0	92.8	80	120					
m,p-Xylene	37.520	1.0	40.00	0	93.8	80	120					
o-Xylene	18.880	0.50	20.00	0	94.4	80	120					
Tetrachloroethene	18.930	0.50	20.00	0	94.6	80	121					
Toluene	18.700	0.50	20.00	0	93.5	80	120					
trans-1,2-Dichloroethene	18.920	0.50	20.00	0	94.6	80	120					
Trichloroethene	19.170	0.50	20.00	0	95.9	80	120					
Vinyl chloride	17.210	0.50	20.00	0	86.1	80	120					
Surr: 1,2-Dichloroethane-d4	24.180		25.00		96.7	56	120					
Surr: 4-Bromofluorobenzene	24.550		25.00		98.2	80	120					
Surr: Dibromofluoromethane	25.280		25.00		101	72	120					
Surr: Toluene-d8	25.290		25.00		101	80	123					

Sample ID: <b>P130328LCS D</b>		SampType: <b>LCS D</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88229</b>		
Client ID: <b>LCS S02</b>		Batch ID: <b>P13VW050</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/28/2013</b>			SeqNo: <b>1547147</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	19.580	0.50	20.00	0	97.9	80	120	19.82	1.22	20		
Benzene	18.880	0.50	20.00	0	94.4	80	120	18.72	0.851	20		
cis-1,2-Dichloroethene	18.980	0.50	20.00	0	94.9	80	120	18.99	0.0527	20		
Ethylbenzene	18.770	0.50	20.00	0	93.8	80	120	18.56	1.13	20		
m,p-Xylene	38.300	1.0	40.00	0	95.8	80	120	37.52	2.06	20		
o-Xylene	18.910	0.50	20.00	0	94.6	80	120	18.88	0.159	20		
Tetrachloroethene	19.270	0.50	20.00	0	96.4	80	121	18.93	1.78	20		
Toluene	19.150	0.50	20.00	0	95.8	80	120	18.70	2.38	20		
trans-1,2-Dichloroethene	19.300	0.50	20.00	0	96.5	80	120	18.92	1.99	20		
Trichloroethene	19.960	0.50	20.00	0	99.8	80	120	19.17	4.04	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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**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130328LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88229</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW050</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547147</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	17.360	0.50	20.00	0	86.8	80	120	17.21	0.868	20	
Surr: 1,2-Dichloroethane-d4	23.830		25.00		95.3	56	120		0		
Surr: 4-Bromofluorobenzene	24.660		25.00		98.6	80	120		0		
Surr: Dibromofluoromethane	25.160		25.00		101	72	120		0		
Surr: Toluene-d8	25.760		25.00		103	80	123		0		

Sample ID: <b>P130328MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88229</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW050</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547148</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.390		25.00		97.6	56	120				
Surr: 4-Bromofluorobenzene	23.960		25.00		95.8	80	120				
Surr: Dibromofluoromethane	26.110		25.00		104	72	120				
Surr: Toluene-d8	24.680		25.00		98.7	80	123				

**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:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130329LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88245</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW051</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/29/2013</b>			SeqNo: <b>1547720</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.910	0.50	20.00	0	105	80	120					
Benzene	19.230	0.50	20.00	0	96.2	80	120					
cis-1,2-Dichloroethene	19.180	0.50	20.00	0	95.9	80	120					
Ethylbenzene	19.540	0.50	20.00	0	97.7	80	120					
m,p-Xylene	39.850	1.0	40.00	0	99.6	80	120					
o-Xylene	19.720	0.50	20.00	0	98.6	80	120					
Tetrachloroethene	20.360	0.50	20.00	0	102	80	121					
Toluene	19.440	0.50	20.00	0	97.2	80	120					
trans-1,2-Dichloroethene	19.810	0.50	20.00	0	99.0	80	120					
Trichloroethene	19.900	0.50	20.00	0	99.5	80	120					
Vinyl chloride	18.140	0.50	20.00	0	90.7	80	120					
Surr: 1,2-Dichloroethane-d4	24.280		25.00		97.1	56	120					
Surr: 4-Bromofluorobenzene	24.620		25.00		98.5	80	120					
Surr: Dibromofluoromethane	25.080		25.00		100	72	120					
Surr: Toluene-d8	24.730		25.00		98.9	80	123					

Sample ID: <b>P130329LCS</b>		SampType: <b>LCS</b>		TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>			Prep Date:			RunNo: <b>88245</b>		
Client ID: <b>LCSW</b>		Batch ID: <b>P13VW051</b>		TestNo: <b>EPA 8260B</b>			Analysis Date: <b>3/29/2013</b>			SeqNo: <b>1547720</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	20.100	0.50	20.00	0	101	80	120	20.91	3.95	20		
Benzene	18.970	0.50	20.00	0	94.8	80	120	19.23	1.36	20		
cis-1,2-Dichloroethene	18.530	0.50	20.00	0	92.6	80	120	19.18	3.45	20		
Ethylbenzene	19.050	0.50	20.00	0	95.2	80	120	19.54	2.54	20		
m,p-Xylene	38.750	1.0	40.00	0	96.9	80	120	39.85	2.80	20		
o-Xylene	19.710	0.50	20.00	0	98.6	80	120	19.72	0.0507	20		
Tetrachloroethene	19.800	0.50	20.00	0	99.0	80	121	20.36	2.79	20		
Toluene	19.170	0.50	20.00	0	95.9	80	120	19.44	1.40	20		
trans-1,2-Dichloroethene	19.060	0.50	20.00	0	95.3	80	120	19.81	3.86	20		
Trichloroethene	19.940	0.50	20.00	0	99.7	80	120	19.90	0.201	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Cardno ATC  
**Work Order:** N009877  
**Project:** Maryland Square Shopping Center, 085.42620.0

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130329LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88245</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW051</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	17.290	0.50	20.00	0	86.5	80	120	18.14	4.80	20	
Surr: 1,2-Dichloroethane-d4	23.860		25.00		95.4	56	120		0		
Surr: 4-Bromofluorobenzene	24.040		25.00		96.2	80	120		0		
Surr: Dibromofluoromethane	24.470		25.00		97.9	72	120		0		
Surr: Toluene-d8	24.870		25.00		99.5	80	123		0		

Sample ID: <b>P130329MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88245</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW051</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1547722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	0.50									
Benzene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Ethylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
o-Xylene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.840		25.00		95.4	56	120				
Surr: 4-Bromofluorobenzene	24.350		25.00		97.4	80	120				
Surr: Dibromofluoromethane	25.490		25.00		102	72	120				
Surr: Toluene-d8	24.820		25.00		99.3	80	123				

**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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Laboratories, Inc.**

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# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport  
 Client  
 ATL  
 CA OverN  
 FedEx  
 Other: \_\_\_\_\_

Sample Condition Upon Receipt  
 1. CHILLED  
 2. HEADSPACE (VOA)  
 3. CONTAINER INTACT  
 4. SEALED  
 5. # OF SPLS MATCH COC  
 6. PRESERVED

P.O. #: \_\_\_\_\_ Date: 3/23/13

Logged By: mac

Client: CARDNO ATC Address: 2925 E. Patrick Lane, Suite 101 Tel: 702 998 5750

Attention: Andrew Stuart City: Las Vegas State: NV Zip Code: 89120 Fax: 702 798 5742

Project Name: Maryland Square Shopping Center Project #: 085.42620.0001

Relinquished by: (Signature and Printed Name) Norman Ascano Date: 3/22/13 Time: 1550

Relinquished by: (Signature and Printed Name) Norman Ascano Date: 3/22/13 Time: 1550

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Send Report To:  
 Attn: Andrew Stuart  
 Co: Cardno ATC  
 Addr: 2925 E. Patrick Lane  
 City: Las Vegas State: NV Zip: 89120

LAB USE ONLY:

LAB No.	Sample ID / Location	Date	Time
<u>mw-1</u>	<u>MW-1</u>	<u>3/19</u>	<u>1538</u>
<u>mw-2</u>	<u>MW-2</u>	<u>3/21</u>	<u>834</u>
<u>mw-3</u>	<u>MW-3</u>	<u>3/21</u>	<u>746</u>
<u>mw-5</u>	<u>MW-5</u>	<u>3/21</u>	<u>1057</u>
<u>mw-6</u>	<u>MW-6</u>	<u>3/22</u>	<u>1217</u>
<u>mw-6 Dupe</u>	<u>MW-6 Dupe</u>	<u>3/22</u>	<u>1217</u>
<u>mw-6D1</u>	<u>MW-6D1</u>	<u>3/22</u>	<u>1038</u>
<u>mw-6D2</u>	<u>MW-6D2</u>	<u>3/22</u>	<u>1001</u>
<u>mw-6D3</u>	<u>MW-6D3</u>	<u>3/22</u>	<u>917</u>
<u>mw-7</u>	<u>MW-7</u>	<u>3/19</u>	<u>1359</u>

Special Instructions/Comments: \_\_\_\_\_

Circle or Add Analysis(es) Requested:  
826B (Volatiles)  
8015M - GRO  
8015B - DRO/RO  
8 PCE TCE PCE IVL (org)

Container(s) Type: \_\_\_\_\_

Container Types: T=Tube V=VOA L=Liter P=Pin P=Plastic M=Metal

QA/QC RTNE CT F SWRCB Logcode OTHER REMARKS

Observation: \_\_\_\_\_

Preservatives: H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitting: Norman Ascano Date: 3/22/13

Storage Fees (applies when storage is requested):  
 Sample: \$2.00 / sample / mo (after 45 days)  
 Records: \$1 / ATL workorder / mo (after 1 year)

Sample/Records - Archival & Disposal  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

TAT starts 8AM the following day if samples received after 3 PM

TAT:  A = Overnight  B = Emergency Next Workday  C = Critical 2 Workdays  D = Urgent 3 Workdays  E = Routine 7 Workdays

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport  
 Client  
 ATL  
 CA OverN  
 FedEx  
 Other:

Sample Condition Upon Receipt  
 Y  N  4. SEALED  
 Y  N  5. # OF SPLS MATCH COC  
 Y  N  6. PRESERVED

P.O. #: \_\_\_\_\_ Date: 3/22/13

Logged By: Mac

Client: CARDNO Ate Address: 2925 E. Patrick Lane / Suite 10 Tel: 702 998 5750

Attention: Andrew Stuart City: Las Vegas State: NV Zip Code: 89120 Fax: 702 798 5742

Project Name: Maryland Square Shopping Center Project #: 085.42620.0001

Relinquished by: [Signature] (Signature and Printed Name) Date: 3/22/13 Time: 1550

Relinquished by: [Signature] (Signature and Printed Name) Date: 3/22/13 Time: 1550

Relinquished by: \_\_\_\_\_ (Signature and Printed Name) Date: \_\_\_\_\_ Time: \_\_\_\_\_

Special Instructions/Comments: \_\_\_\_\_

Bill To: \_\_\_\_\_ Attn: \_\_\_\_\_

Co: SAME AS PAGE 1

Addr: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Add Analysis(es) Requested: 8208 (Voliles) 8015M - GRO 8015B - DRO/RO

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr / Submitter: Norman Ascano Date: 3/22

Storage Fees (applies when storage is requested):  
 Sample: \$2.00 / sample /mo (after 45 days)  
 Records: \$1 /ATL workorder /mo (after 1 year)

LAB USE ONLY:	Sample ID / Location	Sample Description	Date	Time	Container(s)	TAT #	Type	Container(s)	Type	REMARKS
N009877-11	MW-8		3/19	1211		33	✓			
	MW-9		3/19	1308						
	MW-10		3/19	933						
	MW-11		3/18	1220						
	MW-12		3/19	1122						
	MW-13		3/21	929						
	MW-14		3/22	1132						
	MW-14I		3/22	1405						
	MW-15		3/19	1026						
	MW-16		3/18	1115						

Preservatives:  
 H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Container Types: T=Tube V=VOA L=Liter P=Plastic M=Metal  
 G=Glass J=Jar B=Bedlar P=Print E=Emergency Next Workday  
 C=Critical 2 Workdays D=Urgent 3 Workdays R=Routine 7 Workdays

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport  
 Client  
 ATL  
 CA OverN  
 FedEx  
 Other:

Sample Condition Upon Receipt  
 Y  N  4. SEALED  
 Y  N  5. # OF SPLS MATCH COC  
 Y  N  6. PRESERVED  
 Y  N

P.O. #: \_\_\_\_\_ Date: \_\_\_\_\_

Logged By: \_\_\_\_\_

Client: **CARDNO Ate** Address: **2925 E. Patrick Lane, Suite M** Tel: **702 998 5750**

Attention: **Andrew Stuart** City: **Las Vegas** State: **NV** Zip Code: **89120** Fax: **702 798 5742**

Project Name: **Maryland Square Shopping Center** Project #: **085.42620.0001**

Relinquished by: (Signature and Printed Name) **Norman Ascano** Date: **3/22/13** Time: **1550**

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Special Instructions/Comments: \_\_\_\_\_

Bill To: \_\_\_\_\_

Attn: **Same as pg. 1**

Co: \_\_\_\_\_

Addr: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Add Analysis(es) Requested: **8205 (Volatiles) 8015M - GRO 8015B - DRO/RO**

**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
**Storage Fees (applies when storage is requested):**  
 Sample: \$2.00 / sample / mo (after 45 days)  
 Records: \$1 / ATL workorder / mo (after 1 year)

LAB USE ONLY:	Sample ID / Location	Date	Time
NT09077-21	MW-17	3/19	1252
-	MW-18	3/22	1313
-	MW-21	3/21	1142
-	MW-22	3/20	858
-	MW-23	3/21	1616
-	MW-24	3/18	1345
-	MW-25	3/21	1535
-	MW-26	3/21	1458
-	MW-27	3/21	1326
-	MW-27D	3/21	1326

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

**Preservatives:** H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

SPECIFY APPROPRIATE MATRIX	Container(s)		PRESERVATION	Q.A./Q.C.
	TAT #	Type		
WATER	3	V	H	
GROUND WATER				
WASTEWATER				
SOL				

TAT starts 8AM the following day if samples received after 3 PM

Emergency Next Workday  B =

Overnight ≤ 24 hrs  A =

Critical 2 Workdays  D =

Urgent 3 Workdays  E =

Routine 7 Workdays  F =

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport  
 Client  ATL  CA OverN  FedEx  Other: \_\_\_\_\_

Sample Condition Upon Receipt  
 1. CHILLED Y  N  4. SEALED Y  N   
 2. HEADSPACE (VOA) Y  N  5. # OF SPLS MATCH COC Y  N   
 3. CONTAINER INTACT Y  N  6. PRESERVED Y  N

P.O. #: \_\_\_\_\_ Date: \_\_\_\_\_

Logged By: \_\_\_\_\_

Address: **2925 E. Patrick Lane, Suite M**  
 City: **Las Vegas** State: **NV** Zip Code: **89120**  
 Tel: **702 998 5750** Fax: **702 798 5742**

Client: **CARDNO Avc**  
 Attention: **Andrew Stuart**  
 Project Name: **Maryland Square Shopping Center**  
 Project #: **085.42620.0001**

Relinquished by: (Signature and Printed Name) **Norman Ascano** Date: **3/22/13** Time: **1550**  
 Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr./Submitter: **Norman Ascano** Date: **3/22/13**  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
 Storage Fees (applies when storage is requested):  
 Sample: \$2.00 / sample /mo (after 45 days)  
 Records: \$1 /ATL workorder /mo (after 1 year)

LAB USE ONLY:	Sample ID / Location	Sample Description	Date	Time
✓	MD09877-31	MW-28	3/18	1445
✓	-	MW-28D	3/18	1445
✓	-	MW-29	3/18	1604
✓	-	MW-30	3/20	1313
✓	-	MW-31	3/20	1228
✓	-	MW-31D	3/20	1228
✓	-	MW-32	3/21	1417
✓	-	MW-34	3/20	1504
✓	-	MW-35	3/20	1421
✓	-	MW-36	3/21	1738

Send Report To:  
 Attn: **Same as lg**  
 Co: \_\_\_\_\_  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Bill To:  
 Attn: \_\_\_\_\_  
 Co: \_\_\_\_\_  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Add Analysis(es) Requested:  
 8206 (Volatiles)  
 8015M - GRO  
 8015B - DRO/DRO  
 X PCE TCE DCE IVL (20)

Special Instructions/Comments:

Specify Appropriate Matrix:  
 SOIL \_\_\_\_\_  
 WATER \_\_\_\_\_  
 GROUND WATER \_\_\_\_\_  
 WASTEWATER \_\_\_\_\_

Container(s) Type: **U**

TAT # **3**

Q/A/QC RTNE CT     
 SWRCB Logcode   
 OTHER

REMARKS

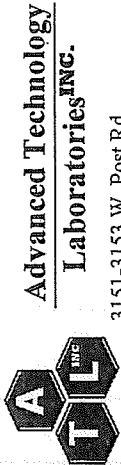
TAT starts 8AM the following day if samples received after 3 PM

Container Types: T=Tube V=VOA L=Liter P=Pin C=Critical 2 Workdays D=Urgent 3 Workdays E=Routine 7 Workdays

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

# CHAIN OF CUSTODY RECORD

## FOR LABORATORY USE ONLY



3151-3153 W. Post Rd.  
Las Vegas, NV 89118  
Tel: (702) 307-2659 • Fax: (702) 307-2691

Client: **CARDNO AVE**  
Attention: **Andrew Stuart**

Project Name: **Maryland Square Shopping Center**

Relinquished by: (Signature and Printed Name)  
**Norman Ascano**

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

I hereby authorize ATL to perform the work indicated below:

Project Mgr/Submitter:

**Norman Ascano**  
Print Name: **Norman Ascano**  
Signature: *[Signature]*

Sample/Records - Archival & Disposal  
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):  
Sample: \$2.00 / sample /mo (after 45 days)  
Records: \$1 /ATL workorder /mo (after 1 year)

Method of Transport  
Client  ATL  CA OverN  FedEx  Other: \_\_\_\_\_

P.O. #: \_\_\_\_\_ Date: \_\_\_\_\_  
Logged By: \_\_\_\_\_

Address: **2925 E. Patrick Lane, Suite 101**  
City: **Las Vegas** State: **NV** Zip Code: **89120**

Project #: **085.42620.0001**  
Sampler: \_\_\_\_\_  
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.

Date: **3/22/13** Time: **1550**  
Received by: (Signature and Printed Name)  
**Andrew Stuart**

Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Received by: (Signature and Printed Name)

Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Received by: (Signature and Printed Name)

Special Instructions/Comments:

Bill To: \_\_\_\_\_  
Attn: \_\_\_\_\_  
Co: \_\_\_\_\_  
Addr: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Acid Analyzist(s) Requested

8260B (Valies)  
8015M - GRO  
8015B - DROPRO  
**PLEASE RECEIVE HERE**

LAB USE ONLY	Lab No.	Sample ID / Location	Sample Description	Date	Time
	N009077-#1	MW-37		3/20	1136
		MW-33		3/20	950
		MW-38		3/20	1039
		MW-39		3/22	702
		Trip Blank		3/18	830
		Field Blank		3/18	1519
		Equipment Blank		3/18	1515
		Trip Blank		3/19	750
		Field Blank		3/19	1100
		Equipment Blank		3/19	1230

Sample Condition Upon Receipt  
1. CHILLED Y  N  4. SEALED Y  N   
2. HEADSPACE (VOA) Y  N  5. # OF SPLS MATCH COC Y  N   
3. CONTAINER INTACT Y  N  6. PRESERVED Y  N

Tel: **702 998 5750**  
Fax: **702 798 5742**

(Printed Name) **Norman Ascano**  
(Signature) *[Signature]*

Date: **3/22/13** Time: **1550**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Container(s)	TAT #	Type	REMARKS
WATER	23	U	
GROUND WATER			
WASTEWATER			
SOIL			

SPECIFY APPROPRIATE MATRIX

QA/QC  
RTNE  CT   
SWRCB Logcode   
OTHER

Preservatives:  
H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Container Types: T=Tube V=VOA L=Liter  
P=Plastic G=Glass B=Bedlar J=Jar P=Pin

Urgent 3 Workdays  
Critical 2 Workdays

Routine 7 Workdays

TAT:  A =  B =  C =  D =  E =

Emergency Next Workday

Overnight  A =  B =  C =  D =  E =

Overnight  A =  B =  C =  D =  E =

Overnight  A =  B =  C =  D =  E =


Overnight  A =  B =  C =  D =  E =

Overnight  A =  B =  C =  D =  E =

TAT starts 8AM the following day if samples received after 3 PM



# CHAIN OF CUSTODY RECORD



**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport: 1. CHILLED  2. SEALED  3. UNSEALED  4. SEALED  5. OF SPLS MATCH COC  6. PRESERVED  7. PRESERVED  8. PRESERVED

Client: **CARDNO Atc** Attention: **Andrew Stuart** Project #: **085.42620.0001**

Address: **2925 E. Patrick Lane, Suite M** City: **Las Vegas** State: **NV** Zip Code: **89120**

Sampler: **Norman Ascano** (Signature and Printed Name) Date: **3/22/13** Time: **1550**

Received by: **Norman Ascano** (Signature and Printed Name) Date: **3/22/13** Time: **1550**

Relinquished by: **Norman Ascano** (Signature and Printed Name) Date: **3/22/13** Time: **1550**

Relinquished by: **Norman Ascano** (Signature and Printed Name) Date: **3/22/13** Time: **1550**

Relinquished by: **Norman Ascano** (Signature and Printed Name) Date: **3/22/13** Time: **1550**

Bill To: **Sam Aspg.** Attn: **Sam Aspg.** Co: **Sam Aspg.** Addr: **Sam Aspg.** City: **Sam Aspg.** State: **Sam Aspg.** Zip: **Sam Aspg.**

Special Instructions/Comments:

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr./Submitter: **Norman Ascano** Date: **3/22/13**  
 Print Name: **Norman Ascano** Signature: *[Signature]*

**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
**Storage Fees (applies when storage is requested):**  
 Sample: \$2.00 / sample /mo (after 45 days)  
 Records: \$1 /ATL workorder /mo (after 1 year)

LAB USE ONLY:	Sample ID / Location	Date	Time
AT	1009B77-S1 Trip Blank	3/20	800
TE	Field Blank	3/20	1247
M	Equipment Blank	3/20	1117
	Trip Blank	3/21	615
	Field Blank	3/21	1350
	Equipment Blank	3/21	1014
	Trip Blank	3/22	543
	Field Blank	3/22	1241
	Equipment Blank	3/22	1040

Circle or Add Analysis(es) Requested: **8208 (Volatiles), 8015M - GRO, 8015B - DR/DORO, PCE, TCE, DCE, VC, VAC**

Container(s): **WATER, GROUND WATER, WASTEWATER**

TAT # **23** Type **H**

Container Types: T=Tube V=VOA L=Liter P=Pint B=Blank A=Overnight ≤24 hrs. C=Emergency Next Workday B=Blank A=Overnight ≤24 hrs. T=Tube V=VOA L=Liter P=Pint B=Blank

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

TAT starts 6AM the following day if samples received after 3 PM



# Advanced Technology Laboratories, Inc.

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: 3/22/2013 Workorder: N009877  
 Rep sample Temp (Deg C): 4.4 IR Gun ID: 1  
 Temp Blank:  Yes  No  
 Carrier name: Client  
 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 type="checkbox"/>            | No <input checked="" 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 type="checkbox"/>            | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/>                     |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH < 2 for Metals | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | NA <input checked="" 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?<br>Was Client notified?                   | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | NA <input checked="" type="checkbox"/>          |
|   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | NA <input type="checkbox"/>                     |

Comments: Please see communication.

Checklist Completed B MBC *MBC* 3/23/13

Reviewed By: *704*

## **Marlon Cartin**

---

**From:** Marlon B. Cartin [marlon@atl-labs.com]  
**Sent:** Monday, March 25, 2013 10:56 AM  
**To:** 'andrew.stuart@cardno.com'  
**Subject:** Maryland Square

Hi Andrew!

Below are the issues I have for the above project. I pick-up the samples last Friday late afternoon;

Received extra sample MW-9D taken 3/19@1308 – sample not in COC.  
MW-14 – two VOAs were broken when I pull out the samples from the plastic bag.  
MW-27 – two VOAs with Headspace >5 mm.

Please advice.

Thanks,

**Marlon B. Cartin**  
**Advanced Technology Laboratories, Inc.**  
3151 W. Post Road  
Las Vegas, NV 89118  
Phone: 702-307-2659 ext 410  
Mobile: 702-439-0421  
[www.atl-labs.com](http://www.atl-labs.com)

Advanced Technology Laboratories, Inc. is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs, Inc. - Your Partner for Quality Environmental Testing

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and delete the original message. Thank you.

# CLIENT CORRESPONDENCE LOG

DATE: 3/25/2013 2:35:48 PM

Client Name: -CARAT01  
ATL Workorder No.: N00987

DATE	CONTACT	CALL IN/OUT	ISSUE / PROBLEM	COMMENTS/CORRECTIVE ACTION	INITIAL
3/25/2013 2:18:44	A. Stuart	IN	Sample and extra sample.	contact will send thru fax the new version of COC.	matlone

# CHAIN OF CUSTODY RECORD

### FOR LABORATORY USE ONLY

**Advanced Technology Laboratories Inc.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**Client:** CARDNO Avc  
**Attention:** Andrew Stuart  
**Project Name:** Maryland Square Shopping Center

**Method of Transport:**  
 Client  ATL  CA OverN  FedEx  Other:

**Sample Condition Upon Receipt:**  
 1. CHILLED  4. SEALED  Y  N   
 2. HEADSPACE (VOA)  N  5. # OF SPLS MATCH COC  Y  N   
 3. CONTAINER INTACT  Y  N  6. PRESERVED  Y  N

**Address:** 2925 E Patrick Lane Suite M  
**City:** Las Vegas **State:** NV **Zip Code:** 89120  
**Project #:** 085.42620-0001  
**Sampler:** [Signature] **Printed Name:** Norman Ascano

**Received by:** [Signature] **Date:** 3/22/13 **Time:** 1:55  
**Received by:** [Signature] **Date:** 3/22/13 **Time:** 1:55

**Special Instructions/Comments:**

**LAB USE ONLY:**

LAB USE ONLY:	Lab No.	Sample ID / Location	Date	Time	Sample Description
	MW-1		3/19	1538	
	MW-2		3/21	834	
	MW-3		3/21	746	
	MW-5		3/21	1057	
	MW-6		3/22	1217	
	MW-6 Duce		3/22	1217	
	MW-6D1		3/22	1038	
	MW-6D2		3/22	1001	
	MW-6D3		3/22	917	
	MW-7		3/19	1359	

**Container Types:** T=Tube V=VOA L=Liter P=Pint J=Jar B=Beaker P=Plastic M=Metal  
**Urgent:** 3 Workdays **Critical:** 2 Workdays **Emergency Next Workday:** 1 Workday  
**Preservatives:** H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories, Inc.**  
 3151-3155 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport:  Client,  ATL,  CA OverN,  FedEx,  Other: \_\_\_\_\_

Sample Condition Upon Receipt:  
 1. CHILLED  Y  N  4. SEALED  Y  N   
 2. HEADSPACE (VOA)  Y  N  5. # OF SPLS MATCH COC  Y  N   
 3. CONTAINER INTACT  Y  N  6. PRESERVED  Y  N

P.O. #: \_\_\_\_\_ Date: \_\_\_\_\_

Logged By: \_\_\_\_\_

Address: **2925 E. Patrick Lane, Suite 101**  
 City: **Las Vegas** State: **NV** Zip Code: **89120**  
 Project #: **085-42622-0001**

Client: **CARDNO AVE**  
 Attention: **Andrew Stuart**  
 Project Name: **Maryland Square Shopping Center**

Relinquishing By: (Signature and Printed Name) *Norman Acosta* Date: **3/20/13** Time: **1550**  
 Relinquished By: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Set & Report To: \_\_\_\_\_  
 Bill To: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

I hereby authorize ATL to perform the work indicated below:  
 Project: **Same as Page 1**  
 Project Manager / Submitter: *Norman Acosta* Date: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Samples/Records - Archival & Disposal: Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
 Storage Fees (applies when storage is requested):  
 Sample: \$2.00 / sample / mo (after 45 days)  
 Records: \$1 / ATL workorder / mo (after 1 year)

LAB USE ONLY	Sample ID / Location	Date	Time	SPECIFY APPROPRIATE MATRIX		CONTAINER(S)	TAT #	Type	PREPARATION	REMARKS
				SOIL	GROUND WATER					
	MW-8	3/19	1211				33	V	H	
	MW-9	3/19	1308							
	MW-10	3/19	933							
	MW-11	3/18	1220							
	MW-12	3/19	1122							
	MW-13	3/21	929							
	MW-14	3/22	432							
	MW-14I	3/22	1405							
	MW-15	3/19	1026							
	MW-16	3/18	415							

Special Instructions/Comments: \_\_\_\_\_

QA/QC:  RTNE  CT   
 SWRCB   OTHER: \_\_\_\_\_  
 Agency

Preservatives:  
 H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C  
 Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Container Types: T=Tube V=VOA L=Liter P=Plastic G=Glass M=Metal  
 J=Jar B=Bedlar P=Pin L=Liter P=Pin L=Liter  
 U=Urgent 3 Workdays C=Critical 2 Workdays  
 E=Emergency Next Workday D=Urgent 3 Workdays  
 F=Field 7 Workdays

TAT:  A = 5.24 hrs.  B =  C =  D =  E =

■ TAT starts 8AM the following day if samples received after 3 PM

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories Inc.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport:  Client,  ATL,  CA OverN,  FedEx,  Other

Sample Condition Upon Receipt:  1. CHILLED,  4. SEALED,  N,  D

2. HEADSPACE (VOA),  N,  5. # OF SPLS MATCH COC,  Y,  N,  D

3. CONTAINER INTACT,  Y,  N,  6. PRESERVED,  Y,  N,  D

Client: **CARDNO AVE**  
 Attention: **Andrew Stuart**  
 Project Name: **Maryland Square Shopping Center**

Address: **2925 E Patrick Lane, Suite M**  
 City: **Las Vegas** State: **NV** Zip Code: **89120**  
 Project #: **085.42620.0001**

Received by: (Signature and Printed Name) **Norman Ascano** Date: **3/22/13** Time: **1350**

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr (Submitter): **Norman Ascano** Date: **3/22/13**  
 Print Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Special Instructions/Comments: \_\_\_\_\_

Send Report To: \_\_\_\_\_  
 Alt#: \_\_\_\_\_  
 Co: **Same as Pg. 1**  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Circle or Add Analysis(es) Requested: **8208 - (Metals)**, **8015M - GRO**, **8018B - DPRODRO**

Sample/Records - Archival & Disposal: Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
 Storage Fees (applies when storage is requested): Sample: \$2.00 / sample / mo (after 45 days) Records: \$1 / ATL worksheet / mo (after 1 year)

LAB USE ONLY:	Lab No.	Sample ID / Location	Sample Description	Date		Time	SPECIFY APPROPRIATE MATRIX	CONTAINER(S)	TAT #	Type	REMARKS
				Date	Time						
	MW-17			3/19	1252		SOIL	3	U		
	MW-18			3/22	1313		GROUND WATER				
	MW-21			3/21	1142		WATER				
	MW-22			3/20	808		WASTE WATER				
	MW-23			3/21	1616						
	MW-24			3/18	1345						
	MW-25			3/21	1535						
	MW-26			3/21	1458						
	MW-27			3/21	1326						
	MW-27DUP			3/21	1326						

TAT starts 8AM the following day if samples received after 3 PM

TAT: **TA** = Overnight **524 hrs.** **FB** = Emergency Next Workday **FC** = Critical **2 Workdays** **FD** = Urgent **3 Workdays** **FE** = Routine **7 Workdays**

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

Preservatives: H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4°C Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories Inc.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport  
 Client  
 ATL  
 CA Overly  
 FedEx  
 Other

Sample Condition Upon Receipt  
 1. CHILLED  
 2. HEADSPACE (NOA)  
 3. CONTAINER INTACT  
 4. SEALED  
 5. # OF SPLS MATCH COC  
 6. PRESERVED

P.O. # \_\_\_\_\_ Date: \_\_\_\_\_

Logged By: \_\_\_\_\_

Address: **2925 E. Patrick Lane, Suite 101**  
 City: **Las Vegas** State: **NV** Zip Code: **89120**  
 Project #: **085-42620-0001**

Client: **CARDNO AVE**  
 Attention: **Andrew Stuart**  
 Project Name: **Maryland Square Shopping Center**

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: **3/20/13** Time: **15:50**

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Send Report To:  
 Attn: \_\_\_\_\_  
 Cor: **Same as by**  
 Addr: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

I hereby authorize ATL to perform the work indicated below:  
 Project Mgr./Submitter: **Norman Ascano** Date: **3/20/13**

Samples/Records - Archival & Disposal  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):  
 Sample: \$2.00 / sample /mo (after 45 days)  
 Records: \$1 /ATL workorder /mo (after 1 year)

LAB USE ONLY:	LAB No.	Sample ID / Location	Date	Time	Sample Description	SPECIFY APPROPRIATE MATRIX		CONTAINER(S)	TAT #	Type	PRESERVATION	REMARKS
						SOIL	GROUND WATER					
			3/18	1445					3	U	H	
		MW-28	3/18	1445					3	U	H	
		MW-28DUP2	3/18	1604					3	U	H	
		MW-29	3/20	1313					3	U	H	
		MW-30	3/20	1228					3	U	H	
		MW-31	3/20	1228					3	U	H	
		MW-31DUPE	3/21	1417					3	U	H	
		MW-32	3/20	1504					3	U	H	
		MW-34	3/20	1421					3	U	H	
		MW-35	3/21	1228					3	U	H	
		MW-36	3/21	1228					3	U	H	

QA/QC RTNE CT

SWRCB Logcode

OTHER

Special Instructions/Comments:

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Preservatives:  
 H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=4PC  
 Z=Zn(Ac)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

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

Urgent:  3 Workdays  
 Critical:  2 Workdays  
 Routine:  7 Workdays



# CHAIN OF CUSTODY RECORD

**Advanced Technology Laboratories INC.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY**

Method of Transport:  Client,  ATL,  CA OverN,  FedEx,  Other: \_\_\_\_\_

Sample Condition Upon Receipt:  1. CHILLED,  2. HEADSPACE (VOA),  3. CONTAINER INTACT,  4. SEALED,  5. # OF SPLS MATCH DOC,  6. PRESERVED

Project #: **085-42622-0001**

Address: **2925 E. Patrick Lane, Suite 101**  
 City: **Las Vegas**, State: **NV**, Zip Code: **89120**

Sampler: \_\_\_\_\_ (I attest to the validity and authenticity of this sample, I am aware that tampering with or infamously mislabeling this sample location, date or time of collection is considered fraud and may be grounds for legal action.)

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: **3/22/13** Time: **1550**

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Send Report To: \_\_\_\_\_

Print Name: **Norman Ascano Jr** Signature: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Special Instructions/Comments: \_\_\_\_\_

LAB USE ONLY:

LAB USE ONLY	Sample ID / Location	Date	Time
	MW-37	3/20	1736
	MW-37	3/20	950
	MW-38	3/20	1039
	MW-39	3/22	702
	Trip Blank	3/18	930
	Field Blank	3/18	1519
	Equipment Blank	3/18	1515
	Trip Blank	3/19	750
	Field Blank	3/19	1100
	Equipment Blank	3/19	1230

Analysis Requested: **9015M-GRO, 9018B-PRO/RO, 9260B (N/AI/OC)**

Container(s): \_\_\_\_\_

Matrix: \_\_\_\_\_

QAI/OC:  RTNE,  GT,  SWRCS,  Logcode,  OTHER: \_\_\_\_\_

Preservatives:  H=HCl,  N=HNO<sub>3</sub>,  S=H<sub>2</sub>SO<sub>4</sub>,  C=FC,  Z=Zn(Ac)<sub>2</sub>,  O=NaOH,  T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

I hereby authorize ATL to perform the work indicated below:

Project Mgr/Submitter: **Norman Ascano Jr**

Signature: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Sample/Records - Archival & Disposal: Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested): Sample \$2.00 / sample /mo (after 45 days) Records: \$1 /ATL workload /mo (after 1 year)

TAT starts 8AM the following day if samples received after 3 PM

Container Types: T=Tube V=VOA L=Liter P=Pint U=Jar B=Beaker G=Glass P=Plastic M=Metal

Emergency Next Workday:  C = 2 Workdays,  D = 3 Workdays,  E = 7 Workdays



CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY

Advanced Technology Laboratories Inc.

3151-3153 W. Post Rd. Las Vegas, NV 89118

Tel: (702) 307-2659 Fax: (702) 307-2691

Client: GARDNO ATE

Attention: Andrew Stuart

Project Name: Maryland Square Shopping Center

Project #:

085.42622-0001

Address: 2925 E Patrick Lane, Suite M

City: Las Vegas

State: NV

Zip Codes: 89120

Tel: 702 798 5750

Fax: 702 798 5752

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample (including, but not limited to, the use of tamper-evident devices) is considered fraud and may be grounds for legal action.

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

Relinquished by: (Signature and Printed Name)

I hereby authorize ATL to perform the work indicated below:

Project Mgr./Submitter:

Norman Asciano 3/20/13

Print Name Date

Send Report To:

Attn:

Co: Sand Aspg.

Addr:

City:

State:

Zip:

City or Add Analyst(s) Requested:

City:

State:

Zip:

Special Instructions/Comments:

Sample Records - Archival & Disposal Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested): Sample: \$2.00 / sample / mo (after 45 days) Records: \$1 / ATL workload / mo (after 1 year)

Table with columns: LAB USE ONLY, Lab No., Sample ID / Location, Date, Time, Sample Description. Rows include Trip Blank, Field Blank, Equipment Blank, Trip Blank, Field Blank, Equipment Blank, Trip Blank, Field Blank, Equipment Blank, Trip Blank, Field Blank, Equipment Blank.

LAB USE ONLY: TAT starts 8AM the following day if samples received after 3 PM

Container Types: T=Tube V=VDA L=Liter P=Print J=Jar B=Bedlar G=Glass P=Plastic M=Metal

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

March 20, 2013

Rob Manriquez  
Tetra Tech  
1230 Columbia Street, Suite 1000  
San Diego, CA 92101  
TEL: (858) 527-8803  
FAX:

CA-ELAP No.:2676  
NV Cert. No.:NV-009222007A

Workorder No.: N009791

RE: MSSC, 103P172829

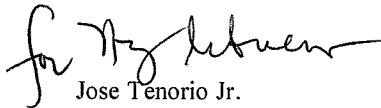
Attention: Rob Manriquez

Enclosed are the results for sample(s) received on March 11, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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,



Jose Tenorio Jr.

Laboratory Director

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.



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

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**CLIENT:** Tetra Tech  
**Project:** MSSC, 103P172829  
**Lab Order:** N009791

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**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 6020\_Dissolved:**

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium and Manganese possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**Analytical Comments for EPA 8260B\_Soil:**

Dilution was necessary on composited samples N009791-008, N009791-009, N009791-011 and N009791-012 due to matrix.

**Analytical Comments for EPA 8260B\_Water:**

Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) recovery bias high for 1,2-Dibromo-3-chloropropane and Bromoform . Sample results were non- detect (ND) for these analytes, therefore reanalysis was not necessary.



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-001

**Client Sample ID:** MW-191  
**Collection Date:** 3/8/2013 1:25:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**PERMANGANATE BY COLORIMETRY**

**COLORIMETRIC**

RunID: WETCHEM_130311B	QC Batch: R87984	PrepDate:	Analyst: JT
Permanganate as KMnO4	ND	1.0 mg/L	1
			3/11/2013

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/12/2013 03:31 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
2-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
4-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Benzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Bromobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Bromodichloromethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Bromoform	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Bromomethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Carbon tetrachloride	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Chlorobenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM
Chloroethane	ND	0.50	µg/L	1	3/12/2013 03:31 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-001

**Client Sample ID:** MW-191  
**Collection Date:** 3/8/2013 1:25:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst:	QBM
Chloroform	2.7	0.50	µg/L	1	3/12/2013 03:31 PM	
Chloromethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
cis-1,2-Dichloroethene	0.74	0.50	µg/L	1	3/12/2013 03:31 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Dibromomethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/12/2013 03:31 PM	
Methylene chloride	ND	2.0	µg/L	1	3/12/2013 03:31 PM	
MTBE	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Naphthalene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
o-Xylene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Styrene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Tetrachloroethene	710	10	µg/L	20	3/13/2013 01:47 PM	
Toluene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Trichloroethene	5.2	0.50	µg/L	1	3/12/2013 03:31 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/12/2013 03:31 PM	
Surr: 1,2-Dichloroethane-d4	104	56-120	%REC	1	3/12/2013 03:31 PM	
Surr: 1,2-Dichloroethane-d4	106	56-120	%REC	20	3/13/2013 01:47 PM	
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	3/12/2013 03:31 PM	
Surr: 4-Bromofluorobenzene	101	80-120	%REC	20	3/13/2013 01:47 PM	
Surr: Dibromofluoromethane	101	72-120	%REC	1	3/12/2013 03:31 PM	
Surr: Dibromofluoromethane	102	72-120	%REC	20	3/13/2013 01:47 PM	
Surr: Toluene-d8	99.7	80-123	%REC	1	3/12/2013 03:31 PM	
Surr: Toluene-d8	98.6	80-123	%REC	20	3/13/2013 01:47 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130314A	QC Batch:	R88075	PrepDate:	Analyst:	QBM
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**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



**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-001

**Client Sample ID:** MW-191  
**Collection Date:** 3/8/2013 1:25:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID: IC2_130314A	QC Batch: R88075				PrepDate:	Analyst: <b>QBM</b>
Chloride	160	25		mg/L	50	3/14/2013 09:40 AM

**DISSOLVED METALS BY ICP**

**EPA 3010A**

**EPA 6010B**

RunID: ICP2_130312A	QC Batch: 42416				PrepDate:	3/12/2013 Analyst: <b>CEI</b>
Potassium	13	5.0		mg/L	10	3/12/2013 04:12 PM

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A**

**EPA 6020**

RunID: ICP7_130314A	QC Batch: 42424				PrepDate:	3/14/2013 Analyst: <b>CEI</b>
Arsenic	2.0	0.10		µg/L	1	3/14/2013 04:19 PM
Chromium	1.6	1.0		µg/L	1	3/14/2013 04:19 PM
Manganese	ND	0.50		µg/L	1	3/14/2013 04:19 PM

<b>Qualifiers:</b>	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		



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-002

**Client Sample ID:** MW-19D3  
**Collection Date:** 3/8/2013 3:20:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**PERMANGANATE BY COLORIMETRY**

**COLORIMETRIC**

RunID: WETCHEM_130311B	QC Batch: R87984	PrepDate:	Analyst: JT
Permanganate as KMnO4	ND	1.0 mg/L	1
			3/11/2013

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_130313A	QC Batch:	P13VW040	PrepDate:	Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/13/2013 01:18 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
2-Chlorotoluene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
4-Chlorotoluene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Benzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Bromobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Bromodichloromethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Bromoform	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Bromomethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Carbon tetrachloride	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Chlorobenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM
Chloroethane	ND	0.50	µg/L	1	3/13/2013 01:18 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-002

**Client Sample ID:** MW-19D3  
**Collection Date:** 3/8/2013 3:20:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130313A	QC Batch:	P13VW040	PrepDate:	Analyst:	QBM
Chloroform	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Chloromethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Dibromomethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/13/2013 01:18 PM	
Methylene chloride	ND	2.0	µg/L	1	3/13/2013 01:18 PM	
MTBE	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Naphthalene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
o-Xylene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Styrene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Tetrachloroethene	0.50	0.50	µg/L	1	3/13/2013 01:18 PM	
Toluene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Trichloroethene	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/13/2013 01:18 PM	
Surr: 1,2-Dichloroethane-d4	106	56-120	%REC	1	3/13/2013 01:18 PM	
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	3/13/2013 01:18 PM	
Surr: Dibromofluoromethane	101	72-120	%REC	1	3/13/2013 01:18 PM	
Surr: Toluene-d8	103	80-123	%REC	1	3/13/2013 01:18 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130314A	QC Batch:	R88075	PrepDate:	Analyst:	QBM
Chloride	7.8	1.0	mg/L	2	3/14/2013 10:14 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





**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-002

**Client Sample ID:** MW-19D3  
**Collection Date:** 3/8/2013 3:20:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DISSOLVED METALS BY ICP</b>						
	<b>EPA 3010A</b>			<b>EPA 6010B</b>		
RunID: ICP2_130312A	QC Batch: 42416				PrepDate: 3/12/2013	Analyst: <b>CEI</b>
Potassium	3.4	1.0		mg/L	2	3/12/2013 04:37 PM
<b>DISSOLVED METALS BY ICP-MS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130314A	QC Batch: 42424				PrepDate: 3/14/2013	Analyst: <b>CEI</b>
Arsenic	1.8	0.10		µg/L	1	3/14/2013 04:43 PM
Chromium	2.9	1.0		µg/L	1	3/14/2013 04:43 PM
Manganese	27	0.50		µg/L	1	3/14/2013 04:43 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



**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-003

**Client Sample ID:** MW-19D2  
**Collection Date:** 3/8/2013 4:10:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**PERMANGANATE BY COLORIMETRY**

**COLORIMETRIC**

RunID: WETCHEM\_130311B      QC Batch: R87984      PrepDate:      Analyst: **JT**  
 Permanganate as KMnO4      ND      1.0      mg/L      1      3/11/2013

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst: <b>QBM</b>
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/12/2013 04:29 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
2-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
4-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Benzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Bromobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Bromodichloromethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Bromoform	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Bromomethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Carbon tetrachloride	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Chlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM
Chloroethane	ND	0.50	µg/L	1	3/12/2013 04:29 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



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-003

**Client Sample ID:** MW-19D2  
**Collection Date:** 3/8/2013 4:10:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst:	QBM
Chloroform	4.8	0.50	µg/L	1	3/12/2013 04:29 PM	
Chloromethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Dibromomethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/12/2013 04:29 PM	
Methylene chloride	ND	2.0	µg/L	1	3/12/2013 04:29 PM	
MTBE	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Naphthalene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
o-Xylene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Styrene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Tetrachloroethene	170	2.5	µg/L	5	3/12/2013 09:31 PM	
Toluene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Trichloroethene	1.5	0.50	µg/L	1	3/12/2013 04:29 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/12/2013 04:29 PM	
Surr: 1,2-Dichloroethane-d4	109	56-120	%REC	1	3/12/2013 04:29 PM	
Surr: 1,2-Dichloroethane-d4	108	56-120	%REC	5	3/12/2013 09:31 PM	
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	3/12/2013 04:29 PM	
Surr: 4-Bromofluorobenzene	103	80-120	%REC	5	3/12/2013 09:31 PM	
Surr: Dibromofluoromethane	104	72-120	%REC	5	3/12/2013 09:31 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	1	3/12/2013 04:29 PM	
Surr: Toluene-d8	102	80-123	%REC	1	3/12/2013 04:29 PM	
Surr: Toluene-d8	102	80-123	%REC	5	3/12/2013 09:31 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130314A	QC Batch:	R88075	PrepDate:	Analyst:	QBM
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<b>Qualifiers:</b>	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		



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-003

**Client Sample ID:** MW-19D2  
**Collection Date:** 3/8/2013 4:10:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID: IC2_130314A	QC Batch: R88075				PrepDate:	Analyst: <b>QBM</b>
Chloride	140	25		mg/L	50	3/14/2013 10:26 AM

**DISSOLVED METALS BY ICP**

**EPA 3010A**

**EPA 6010B**

RunID: ICP2_130312A	QC Batch: 42416				PrepDate: 3/12/2013	Analyst: <b>CEI</b>
Potassium	11	5.0		mg/L	10	3/12/2013 04:17 PM

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A**

**EPA 6020**

RunID: ICP7_130314A	QC Batch: 42424				PrepDate: 3/14/2013	Analyst: <b>CEI</b>
Arsenic	1.8	0.10		µg/L	1	3/14/2013 04:49 PM
Chromium	1.3	1.0		µg/L	1	3/14/2013 04:49 PM
Manganese	60	0.50		µg/L	1	3/14/2013 04:49 PM

<b>Qualifiers:</b>	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		



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-004

**Client Sample ID:** MW-19D1  
**Collection Date:** 3/8/2013 5:10:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**PERMANGANATE BY COLORIMETRY**

**COLORIMETRIC**

RunID: WETCHEM_130311B	QC Batch: R87984	PrepDate:	Analyst: JT
Permanganate as KMnO4	ND	1.0 mg/L	1
			3/11/2013

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/12/2013 04:58 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
2-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
4-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Benzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Bromobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Bromodichloromethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Bromoform	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Bromomethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Carbon tetrachloride	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Chlorobenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM
Chloroethane	ND	0.50	µg/L	1	3/12/2013 04:58 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-004

**Client Sample ID:** MW-19D1  
**Collection Date:** 3/8/2013 5:10:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst:	QBM
Chloroform	1.5	0.50	µg/L	1	3/12/2013 04:58 PM	
Chloromethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Dibromomethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/12/2013 04:58 PM	
Methylene chloride	ND	2.0	µg/L	1	3/12/2013 04:58 PM	
MTBE	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Naphthalene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
o-Xylene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Styrene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Tetrachloroethene	300	2.5	µg/L	5	3/12/2013 10:00 PM	
Toluene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Trichloroethene	2.9	0.50	µg/L	1	3/12/2013 04:58 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/12/2013 04:58 PM	
Surr: 1,2-Dichloroethane-d4	111	56-120	%REC	1	3/12/2013 04:58 PM	
Surr: 1,2-Dichloroethane-d4	110	56-120	%REC	5	3/12/2013 10:00 PM	
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	3/12/2013 04:58 PM	
Surr: 4-Bromofluorobenzene	103	80-120	%REC	5	3/12/2013 10:00 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	5	3/12/2013 10:00 PM	
Surr: Dibromofluoromethane	107	72-120	%REC	1	3/12/2013 04:58 PM	
Surr: Toluene-d8	101	80-123	%REC	1	3/12/2013 04:58 PM	
Surr: Toluene-d8	99.6	80-123	%REC	5	3/12/2013 10:00 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130314A	QC Batch:	R88075	PrepDate:	Analyst:	QBM
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**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



**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-004

**Client Sample ID:** MW-19D1  
**Collection Date:** 3/8/2013 5:10:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID: IC2_130314A	QC Batch: R88075				PrepDate:	Analyst: <b>QBM</b>
Chloride	82	10		mg/L	20	3/14/2013 10:49 AM

**DISSOLVED METALS BY ICP**

**EPA 3010A**

**EPA 6010B**

RunID: ICP2_130312A	QC Batch: 42416				PrepDate: 3/12/2013	Analyst: <b>CEI</b>
Potassium	9.1	5.0		mg/L	10	3/12/2013 04:19 PM

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A**

**EPA 6020**

RunID: ICP7_130314A	QC Batch: 42424				PrepDate: 3/14/2013	Analyst: <b>CEI</b>
Arsenic	2.2	0.10		µg/L	1	3/14/2013 04:55 PM
Chromium	2.8	1.0		µg/L	1	3/14/2013 04:55 PM
Manganese	41	0.50		µg/L	1	3/14/2013 04:55 PM

<b>Qualifiers:</b>	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		



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-005

**Client Sample ID:** MW-19  
**Collection Date:** 3/8/2013 6:00:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**PERMANGANATE BY COLORIMETRY**

**COLORIMETRIC**

RunID: WETCHEM_130311B	QC Batch: R87984	PrepDate:	Analyst: JT
Permanganate as KMnO4	ND	1.0 mg/L	1
			3/11/2013

**VOLATILE ORGANIC COMPOUNDS BY GC/MS**

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/12/2013 05:27 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
2-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
4-Chlorotoluene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Benzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Bromobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Bromodichloromethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Bromoform	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Bromomethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Carbon tetrachloride	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Chlorobenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM
Chloroethane	ND	0.50	µg/L	1	3/12/2013 05:27 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 20-Mar-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009791  
**Project:** MSSC, 103P172829  
**Lab ID:** N009791-005

**Client Sample ID:** MW-19  
**Collection Date:** 3/8/2013 6:00:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130312B	QC Batch:	P13VW039	PrepDate:	Analyst:	QBM
Chloroform	1.7	0.50	µg/L	1	3/12/2013 05:27 PM	
Chloromethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Dibromomethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/12/2013 05:27 PM	
Methylene chloride	ND	2.0	µg/L	1	3/12/2013 05:27 PM	
MTBE	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Naphthalene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
o-Xylene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Styrene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Tetrachloroethene	520	5.0	µg/L	10	3/13/2013 02:16 PM	
Toluene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Trichloroethene	3.2	0.50	µg/L	1	3/12/2013 05:27 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/12/2013 05:27 PM	
Surr: 1,2-Dichloroethane-d4	110	56-120	%REC	1	3/12/2013 05:27 PM	
Surr: 1,2-Dichloroethane-d4	107	56-120	%REC	10	3/13/2013 02:16 PM	
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	3/12/2013 05:27 PM	
Surr: 4-Bromofluorobenzene	105	80-120	%REC	10	3/13/2013 02:16 PM	
Surr: Dibromofluoromethane	103	72-120	%REC	10	3/13/2013 02:16 PM	
Surr: Dibromofluoromethane	102	72-120	%REC	1	3/12/2013 05:27 PM	
Surr: Toluene-d8	100	80-123	%REC	1	3/12/2013 05:27 PM	
Surr: Toluene-d8	99.9	80-123	%REC	10	3/13/2013 02:16 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130314A	QC Batch:	R88075	PrepDate:	Analyst:	QBM
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**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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<b>CLIENT:</b>	Tetra Tech	<b>Client Sample ID:</b>	MW-19
<b>Lab Order:</b>	N009791	<b>Collection Date:</b>	3/8/2013 6:00:00 PM
<b>Project:</b>	MSSC, 103P172829	<b>Matrix:</b>	GROUNDWATER
<b>Lab ID:</b>	N009791-005		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID: IC2_130314A	QC Batch: R88075	PrepDate:	Analyst: <b>QBM</b>		
Chloride	190	25	mg/L	50	3/14/2013 11:01 AM

**DISSOLVED METALS BY ICP**

**EPA 3010A**

**EPA 6010B**

RunID: ICP2_130312A	QC Batch: 42416	PrepDate:	3/12/2013	Analyst: <b>CEI</b>	
Potassium	25	5.0	mg/L	10	3/12/2013 04:22 PM

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A**

**EPA 6020**

RunID: ICP7_130314A	QC Batch: 42424	PrepDate:	3/14/2013	Analyst: <b>CEI</b>	
Arsenic	7.4	0.50	µg/L	5	3/14/2013 03:22 PM
Chromium	17	5.0	µg/L	5	3/14/2013 03:22 PM
Manganese	170	2.5	µg/L	5	3/14/2013 03:22 PM

<b>Qualifiers:</b>	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		



**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 300\_W\_CL**

Sample ID: <b>MB-R88075_CL</b>	SampType: <b>MBLK</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88075</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R88075</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541138</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: <b>LCS-R88075_CL</b>	SampType: <b>LCS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88075</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R88075</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541139</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.573	0.50	2.500	0	103	90	110				

Sample ID: <b>N009791-001CMS</b>	SampType: <b>MS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88075</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88075</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541141</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	288.100	25	125.0	160.5	102	80	120				

Sample ID: <b>N009791-001CMSD</b>	SampType: <b>MSD</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88075</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88075</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541142</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	286.550	25	125.0	160.5	101	80	120	288.1	0.539	20	

Sample ID: <b>N009791-003CDUP</b>	SampType: <b>DUP</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88075</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88075</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541145</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	139.250	25						138.6	0.432	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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_WD**

Sample ID: <b>MB-42416</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_WD</b>	Units: <b>mg/L</b>	Prep Date: <b>3/12/2013</b>	RunNo: <b>88035</b>						
Client ID: <b>PBW</b>	Batch ID: <b>42416</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539403</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium ND 0.50

Sample ID: <b>LCS-42416</b>	SampType: <b>LCS</b>	TestCode: <b>6010_WD</b>	Units: <b>mg/L</b>	Prep Date: <b>3/12/2013</b>	RunNo: <b>88035</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>42416</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539404</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium 2.346 0.50 2.500 0 93.8 85 115

Sample ID: <b>N009791-001C-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_WD</b>	Units: <b>mg/L</b>	Prep Date: <b>3/12/2013</b>	RunNo: <b>88035</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42416</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539414</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium 18.367 5.0 5.000 12.90 109 75 125

Sample ID: <b>N009791-001C-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_WD</b>	Units: <b>mg/L</b>	Prep Date: <b>3/12/2013</b>	RunNo: <b>88035</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42416</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539415</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium 18.588 5.0 5.000 12.90 114 75 125 18.37 1.19 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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CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 6020\_DIS

Sample ID: <b>MB-42424</b>	SampType: <b>MBLK</b>	TestCode: <b>6020_DIS</b>	Units: <b>µg/L</b>	Prep Date: <b>3/14/2013</b>	RunNo: <b>88061</b>						
Client ID: <b>PBW</b>	Batch ID: <b>42424</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1540522</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Chromium	ND	1.0									
Manganese	ND	0.50									

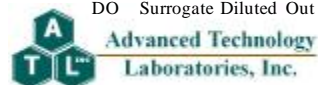
Sample ID: <b>LCS-42424</b>	SampType: <b>LCS</b>	TestCode: <b>6020_DIS</b>	Units: <b>µg/L</b>	Prep Date: <b>3/14/2013</b>	RunNo: <b>88061</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>42424</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1540523</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.854	0.10	10.00	0	98.5	85	115				
Chromium	9.302	1.0	10.00	0	93.0	85	115				
Manganese	94.256	0.50	100.0	0	94.3	85	115				

Sample ID: <b>N009791-001B-MS</b>	SampType: <b>MS</b>	TestCode: <b>6020_DIS</b>	Units: <b>µg/L</b>	Prep Date: <b>3/14/2013</b>	RunNo: <b>88061</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42424</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541102</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.577	0.10	10.00	2.041	105	75	125				
Chromium	8.359	1.0	10.00	1.600	67.6	75	125				S
Manganese	68.709	0.50	100.0	0	68.7	75	125				S

Sample ID: <b>N009791-001B-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6020_DIS</b>	Units: <b>µg/L</b>	Prep Date: <b>3/14/2013</b>	RunNo: <b>88061</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42424</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>3/14/2013</b>	SeqNo: <b>1541103</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.318	0.10	10.00	2.041	103	75	125	12.58	2.08	20	
Chromium	8.465	1.0	10.00	1.600	68.6	75	125	8.359	1.27	20	S
Manganese	67.998	0.50	100.0	0	68.0	75	125	68.71	1.04	20	S

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S**

Sample ID: <b>D130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>
Client ID: <b>LCSS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541998</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	35.070	5.0	40.00	0	87.7	76	120				
1,1,1-Trichloroethane	36.040	5.0	40.00	0	90.1	67	120				
1,1,2,2-Tetrachloroethane	40.570	5.0	40.00	0	101	79	120				
1,1,2-Trichloroethane	38.630	5.0	40.00	0	96.6	79	120				
1,1-Dichloroethane	38.350	5.0	40.00	0	95.9	80	120				
1,1-Dichloroethene	40.250	5.0	40.00	0	101	80	120				
1,1-Dichloropropene	36.550	5.0	40.00	0	91.4	80	120				
1,2,3-Trichlorobenzene	38.160	5.0	40.00	0	95.4	80	125				
1,2,3-Trichloropropane	40.690	5.0	40.00	0	102	80	120				
1,2,4-Trichlorobenzene	39.140	5.0	40.00	0	97.9	80	128				
1,2,4-Trimethylbenzene	38.360	5.0	40.00	0	95.9	80	124				
1,2-Dibromo-3-chloropropane	35.110	10	40.00	0	87.8	67	120				
1,2-Dibromoethane	37.400	5.0	40.00	0	93.5	74	120				
1,2-Dichlorobenzene	38.270	5.0	40.00	0	95.7	80	120				
1,2-Dichloroethane	38.450	5.0	40.00	0	96.1	78	120				
1,2-Dichloropropane	38.920	5.0	40.00	0	97.3	79	120				
1,3,5-Trimethylbenzene	38.460	5.0	40.00	0	96.2	80	124				
1,3-Dichlorobenzene	38.420	5.0	40.00	0	96.0	80	120				
1,3-Dichloropropane	38.170	5.0	40.00	0	95.4	80	120				
1,4-Dichlorobenzene	38.760	5.0	40.00	0	96.9	80	120				
2,2-Dichloropropane	28.910	5.0	40.00	0	72.3	53	120				
2-Chlorotoluene	38.770	5.0	40.00	0	96.9	80	124				
4-Chlorotoluene	38.490	5.0	40.00	0	96.2	80	120				
4-Isopropyltoluene	38.520	5.0	40.00	0	96.3	80	126				
Benzene	37.950	5.0	40.00	0	94.9	80	120				
Bromobenzene	39.100	5.0	40.00	0	97.8	80	120				
Bromodichloromethane	37.330	5.0	40.00	0	93.3	69	120				
Bromoform	36.210	5.0	40.00	0	90.5	66	121				
Bromomethane	40.330	5.0	40.00	0	101	67	136				
Carbon tetrachloride	32.410	5.0	40.00	0	81.0	62	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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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S**

Sample ID: <b>D130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541998</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	37.800	5.0	40.00	0	94.5	80	120				
Chloroethane	40.610	5.0	40.00	0	102	70	149				
Chloroform	37.320	5.0	40.00	0	93.3	80	120				
Chloromethane	39.430	5.0	40.00	0	98.6	59	123				
cis-1,2-Dichloroethene	37.520	5.0	40.00	0	93.8	80	120				
Dibromochloromethane	38.170	5.0	40.00	0	95.4	71	123				
Dibromomethane	38.780	5.0	40.00	0	97.0	78	120				
Dichlorodifluoromethane	38.380	5.0	40.00	0	96.0	62	120				
Ethylbenzene	37.340	5.0	40.00	0	93.4	80	120				
Hexachlorobutadiene	39.090	5.0	40.00	0	97.7	80	128				
Isopropylbenzene	39.170	5.0	40.00	0	97.9	80	126				
m,p-Xylene	74.280	10	80.00	0	92.8	80	120				
Methylene chloride	34.630	5.0	40.00	0	86.6	69	120				
MTBE	32.490	5.0	40.00	0	81.2	67	120				
n-Butylbenzene	38.010	5.0	40.00	0	95.0	80	135				
n-Propylbenzene	38.480	5.0	40.00	0	96.2	80	127				
Naphthalene	38.970	5.0	40.00	0	97.4	70	132				
o-Xylene	37.320	5.0	40.00	0	93.3	80	120				
sec-Butylbenzene	38.510	5.0	40.00	0	96.3	80	127				
Styrene	37.640	5.0	40.00	0	94.1	80	120				
tert-Butylbenzene	38.710	5.0	40.00	0	96.8	80	124				
Tetrachloroethene	37.490	5.0	40.00	0	93.7	80	122				
Toluene	37.530	5.0	40.00	0	93.8	80	120				
trans-1,2-Dichloroethene	38.860	5.0	40.00	0	97.2	79	120				
Trichloroethene	37.380	5.0	40.00	0	93.5	80	120				
Trichlorofluoromethane	39.100	5.0	40.00	0	97.8	69	145				
Vinyl chloride	39.650	5.0	40.00	0	99.1	75	122				
Surr: 1,2-Dichloroethane-d4	44.450		50.00		88.9	58	125				
Surr: 4-Bromofluorobenzene	49.480		50.00		99.0	52	138				
Surr: Dibromofluoromethane	45.070		50.00		90.1	57	121				

**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: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID: <b>D130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541998</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	45.170	50.00	90.3	66	130
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Sample ID: <b>D130313LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541999</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	33.840	5.0	40.00	0	84.6	76	120	35.07	3.57	20
1,1,1-Trichloroethane	33.560	5.0	40.00	0	83.9	67	120	36.04	7.13	20
1,1,2,2-Tetrachloroethane	43.340	5.0	40.00	0	108	79	120	40.57	6.60	20
1,1,2-Trichloroethane	38.650	5.0	40.00	0	96.6	79	120	38.63	0.0518	20
1,1-Dichloroethane	36.190	5.0	40.00	0	90.5	80	120	38.35	5.80	20
1,1-Dichloroethene	38.830	5.0	40.00	0	97.1	80	120	40.25	3.59	20
1,1-Dichloropropene	38.540	5.0	40.00	0	96.4	80	120	36.55	5.30	20
1,2,3-Trichlorobenzene	39.300	5.0	40.00	0	98.2	80	125	38.16	2.94	20
1,2,3-Trichloropropane	42.260	5.0	40.00	0	106	80	120	40.69	3.79	20
1,2,4-Trichlorobenzene	38.590	5.0	40.00	0	96.5	80	128	39.14	1.42	20
1,2,4-Trimethylbenzene	38.130	5.0	40.00	0	95.3	80	124	38.36	0.601	20
1,2-Dibromo-3-chloropropane	40.300	10	40.00	0	101	67	120	35.11	13.8	20
1,2-Dibromoethane	37.620	5.0	40.00	0	94.1	74	120	37.40	0.587	20
1,2-Dichlorobenzene	38.940	5.0	40.00	0	97.4	80	120	38.27	1.74	20
1,2-Dichloroethane	39.130	5.0	40.00	0	97.8	78	120	38.45	1.75	20
1,2-Dichloropropane	38.290	5.0	40.00	0	95.7	79	120	38.92	1.63	20
1,3,5-Trimethylbenzene	38.770	5.0	40.00	0	96.9	80	124	38.46	0.803	20
1,3-Dichlorobenzene	38.750	5.0	40.00	0	96.9	80	120	38.42	0.855	20
1,3-Dichloropropane	38.530	5.0	40.00	0	96.3	80	120	38.17	0.939	20
1,4-Dichlorobenzene	38.620	5.0	40.00	0	96.6	80	120	38.76	0.362	20
2,2-Dichloropropane	26.960	5.0	40.00	0	67.4	53	120	28.91	6.98	20
2-Chlorotoluene	38.980	5.0	40.00	0	97.5	80	124	38.77	0.540	20
4-Chlorotoluene	39.760	5.0	40.00	0	99.4	80	120	38.49	3.25	20
4-Isopropyltoluene	39.370	5.0	40.00	0	98.4	80	126	38.52	2.18	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691



CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID: <b>D130313LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541999</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.710	5.0	40.00	0	94.3	80	120	37.95	0.634	20	
Bromobenzene	39.450	5.0	40.00	0	98.6	80	120	39.10	0.891	20	
Bromodichloromethane	35.190	5.0	40.00	0	88.0	69	120	37.33	5.90	20	
Bromoform	36.380	5.0	40.00	0	91.0	66	121	36.21	0.468	20	
Bromomethane	38.470	5.0	40.00	0	96.2	67	136	40.33	4.72	20	
Carbon tetrachloride	32.750	5.0	40.00	0	81.9	62	120	32.41	1.04	20	
Chlorobenzene	37.690	5.0	40.00	0	94.2	80	120	37.80	0.291	20	
Chloroethane	38.790	5.0	40.00	0	97.0	70	149	40.61	4.58	20	
Chloroform	35.210	5.0	40.00	0	88.0	80	120	37.32	5.82	20	
Chloromethane	37.800	5.0	40.00	0	94.5	59	123	39.43	4.22	20	
cis-1,2-Dichloroethene	36.140	5.0	40.00	0	90.4	80	120	37.52	3.75	20	
Dibromochloromethane	37.320	5.0	40.00	0	93.3	71	123	38.17	2.25	20	
Dibromomethane	37.310	5.0	40.00	0	93.3	78	120	38.78	3.86	20	
Dichlorodifluoromethane	37.800	5.0	40.00	0	94.5	62	120	38.38	1.52	20	
Ethylbenzene	37.570	5.0	40.00	0	93.9	80	120	37.34	0.614	20	
Hexachlorobutadiene	40.040	5.0	40.00	0	100	80	128	39.09	2.40	20	
Isopropylbenzene	39.680	5.0	40.00	0	99.2	80	126	39.17	1.29	20	
m,p-Xylene	75.400	10	80.00	0	94.3	80	120	74.28	1.50	20	
Methylene chloride	33.880	5.0	40.00	0	84.7	69	120	34.63	2.19	20	
MTBE	31.030	5.0	40.00	0	77.6	67	120	32.49	4.60	20	
n-Butylbenzene	38.650	5.0	40.00	0	96.6	80	135	38.01	1.67	20	
n-Propylbenzene	38.750	5.0	40.00	0	96.9	80	127	38.48	0.699	20	
Naphthalene	41.740	5.0	40.00	0	104	70	132	38.97	6.86	20	
o-Xylene	36.520	5.0	40.00	0	91.3	80	120	37.32	2.17	20	
sec-Butylbenzene	39.430	5.0	40.00	0	98.6	80	127	38.51	2.36	20	
Styrene	37.440	5.0	40.00	0	93.6	80	120	37.64	0.533	20	
tert-Butylbenzene	39.200	5.0	40.00	0	98.0	80	124	38.71	1.26	20	
Tetrachloroethene	38.820	5.0	40.00	0	97.0	80	122	37.49	3.49	20	
Toluene	37.000	5.0	40.00	0	92.5	80	120	37.53	1.42	20	
trans-1,2-Dichloroethene	37.370	5.0	40.00	0	93.4	79	120	38.86	3.91	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   |  |



**Advanced Technology  
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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S**

Sample ID: <b>D130313LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1541999</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	37.490	5.0	40.00	0	93.7	80	120	37.38	0.294	20	
Trichlorofluoromethane	37.690	5.0	40.00	0	94.2	69	145	39.10	3.67	20	
Vinyl chloride	38.980	5.0	40.00	0	97.5	75	122	39.65	1.70	20	
Surr: 1,2-Dichloroethane-d4	40.960		50.00		81.9	58	125		0		
Surr: 4-Bromofluorobenzene	50.700		50.00		101	52	138		0		
Surr: Dibromofluoromethane	43.290		50.00		86.6	57	121		0		
Surr: Toluene-d8	45.500		50.00		91.0	66	130		0		

Sample ID: <b>D130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>PBS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1542000</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S**

Sample ID: <b>D130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>PBS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1542000</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,2-Dichloroethene	ND	5.0									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methylene chloride	ND	5.0									
MTBE	ND	5.0									
n-Butylbenzene	ND	5.0									
n-Propylbenzene	ND	5.0									
Naphthalene	ND	5.0									
o-Xylene	ND	5.0									

**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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**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_S**

Sample ID: <b>D130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_S</b>	Units: <b>µg/Kg</b>	Prep Date:	RunNo: <b>88103</b>						
Client ID: <b>PBS</b>	Batch ID: <b>D13VS020</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1542000</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									
Surr: 1,2-Dichloroethane-d4	47.320		50.00		94.6	58	125				
Surr: 4-Bromofluorobenzene	44.880		50.00		89.8	52	138				
Surr: Dibromofluoromethane	47.130		50.00		94.3	57	121				
Surr: Toluene-d8	49.600		50.00		99.2	66	130				

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130312LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539548</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.370	0.50	20.00	0	112	74	122				
1,1,1-Trichloroethane	17.710	0.50	20.00	0	88.6	65	120				
1,1,2,2-Tetrachloroethane	20.460	0.50	20.00	0	102	80	120				
1,1,2-Trichloroethane	21.870	0.50	20.00	0	109	80	120				
1,1-Dichloroethane	16.780	0.50	20.00	0	83.9	80	120				
1,1-Dichloroethene	20.590	0.50	20.00	0	103	80	120				
1,1-Dichloropropene	20.810	0.50	20.00	0	104	80	120				
1,2,3-Trichlorobenzene	20.850	0.50	20.00	0	104	80	124				
1,2,3-Trichloropropane	20.580	0.50	20.00	0	103	80	120				
1,2,4-Trichlorobenzene	20.460	0.50	20.00	0	102	80	126				
1,2,4-Trimethylbenzene	19.010	0.50	20.00	0	95.1	80	123				
1,2-Dibromo-3-chloropropane	24.490	1.0	20.00	0	122	70	120				S
1,2-Dibromoethane	21.420	0.50	20.00	0	107	80	120				
1,2-Dichlorobenzene	19.740	0.50	20.00	0	98.7	80	120				
1,2-Dichloroethane	22.370	0.50	20.00	0	112	80	120				
1,2-Dichloropropane	20.130	0.50	20.00	0	101	80	120				
1,3,5-Trimethylbenzene	19.090	0.50	20.00	0	95.4	80	121				
1,3-Dichlorobenzene	19.590	0.50	20.00	0	98.0	80	120				
1,3-Dichloropropane	21.090	0.50	20.00	0	105	80	120				
1,4-Dichlorobenzene	18.740	0.50	20.00	0	93.7	80	120				
2,2-Dichloropropane	19.960	0.50	20.00	0	99.8	54	120				
2-Chlorotoluene	18.370	0.50	20.00	0	91.9	80	122				
4-Chlorotoluene	18.460	0.50	20.00	0	92.3	80	120				
4-Isopropyltoluene	18.820	0.50	20.00	0	94.1	80	122				
Benzene	18.950	0.50	20.00	0	94.8	80	120				
Bromobenzene	20.570	0.50	20.00	0	103	80	120				
Bromodichloromethane	21.600	0.50	20.00	0	108	70	120				
Bromoform	24.020	0.50	20.00	0	120	66	120				S
Bromomethane	20.420	0.50	20.00	0	102	48	155				
Carbon tetrachloride	22.580	0.50	20.00	0	113	60	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130312LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539548</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.200	0.50	20.00	0	101	80	120				
Chloroethane	22.280	0.50	20.00	0	111	62	147				
Chloroform	17.240	0.50	20.00	0	86.2	80	120				
Chloromethane	16.810	0.50	20.00	0	84.0	63	121				
cis-1,2-Dichloroethene	17.470	0.50	20.00	0	87.4	80	120				
Dibromochloromethane	22.550	0.50	20.00	0	113	67	123				
Dibromomethane	22.210	0.50	20.00	0	111	80	120				
Dichlorodifluoromethane	18.520	0.50	20.00	0	92.6	70	121				
Ethylbenzene	18.610	0.50	20.00	0	93.0	80	120				
Hexachlorobutadiene	21.410	0.50	20.00	0	107	80	123				
Isopropylbenzene	18.240	0.50	20.00	0	91.2	80	121				
m,p-Xylene	37.530	1.0	40.00	0	93.8	80	120				
Methylene chloride	16.770	2.0	20.00	0	83.9	75	120				
MTBE	17.060	0.50	20.00	0	85.3	70	120				
n-Butylbenzene	18.400	0.50	20.00	0	92.0	80	129				
n-Propylbenzene	17.820	0.50	20.00	0	89.1	80	122				
Naphthalene	20.240	0.50	20.00	0	101	73	127				
o-Xylene	19.730	0.50	20.00	0	98.6	80	120				
sec-Butylbenzene	18.010	0.50	20.00	0	90.1	80	120				
Styrene	20.460	0.50	20.00	0	102	80	120				
tert-Butylbenzene	19.290	0.50	20.00	0	96.5	80	120				
Tetrachloroethene	22.020	0.50	20.00	0	110	80	121				
Toluene	19.210	0.50	20.00	0	96.0	80	120				
trans-1,2-Dichloroethene	17.210	0.50	20.00	0	86.1	80	120				
Trichloroethene	21.350	0.50	20.00	0	107	80	120				
Trichlorofluoromethane	21.490	0.50	20.00	0	107	71	148				
Vinyl chloride	17.740	0.50	20.00	0	88.7	80	120				
Surr: 1,2-Dichloroethane-d4	24.120		25.00		96.5	56	120				
Surr: 4-Bromofluorobenzene	27.390		25.00		110	80	120				
Surr: Dibromofluoromethane	23.390		25.00		93.6	72	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: <b>P130312LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539548</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	25.850	25.00	103	80	123
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Sample ID: <b>P130312LCS D</b>	SampType: <b>LCS D</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539548</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	22.510	0.50	20.00	0	113	74	122	22.37	0.624	20	
1,1,1-Trichloroethane	17.900	0.50	20.00	0	89.5	65	120	17.71	1.07	20	
1,1,2,2-Tetrachloroethane	20.200	0.50	20.00	0	101	80	120	20.46	1.28	20	
1,1,2-Trichloroethane	22.220	0.50	20.00	0	111	80	120	21.87	1.59	20	
1,1-Dichloroethane	16.680	0.50	20.00	0	83.4	80	120	16.78	0.598	20	
1,1-Dichloroethene	20.690	0.50	20.00	0	103	80	120	20.59	0.484	20	
1,1-Dichloropropene	20.540	0.50	20.00	0	103	80	120	20.81	1.31	20	
1,2,3-Trichlorobenzene	21.310	0.50	20.00	0	107	80	124	20.85	2.18	20	
1,2,3-Trichloropropane	21.300	0.50	20.00	0	106	80	120	20.58	3.44	20	
1,2,4-Trichlorobenzene	20.420	0.50	20.00	0	102	80	126	20.46	0.196	20	
1,2,4-Trimethylbenzene	18.880	0.50	20.00	0	94.4	80	123	19.01	0.686	20	
1,2-Dibromo-3-chloropropane	25.150	1.0	20.00	0	126	70	120	24.49	2.66	20	S
1,2-Dibromoethane	22.620	0.50	20.00	0	113	80	120	21.42	5.45	20	
1,2-Dichlorobenzene	19.670	0.50	20.00	0	98.4	80	120	19.74	0.355	20	
1,2-Dichloroethane	22.010	0.50	20.00	0	110	80	120	22.37	1.62	20	
1,2-Dichloropropane	20.280	0.50	20.00	0	101	80	120	20.13	0.742	20	
1,3,5-Trimethylbenzene	18.770	0.50	20.00	0	93.8	80	121	19.09	1.69	20	
1,3-Dichlorobenzene	19.440	0.50	20.00	0	97.2	80	120	19.59	0.769	20	
1,3-Dichloropropane	20.680	0.50	20.00	0	103	80	120	21.09	1.96	20	
1,4-Dichlorobenzene	18.920	0.50	20.00	0	94.6	80	120	18.74	0.956	20	
2,2-Dichloropropane	19.340	0.50	20.00	0	96.7	54	120	19.96	3.16	20	
2-Chlorotoluene	18.320	0.50	20.00	0	91.6	80	122	18.37	0.273	20	
4-Chlorotoluene	18.160	0.50	20.00	0	90.8	80	120	18.46	1.64	20	
4-Isopropyltoluene	18.940	0.50	20.00	0	94.7	80	122	18.82	0.636	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: P130312LCSD	SampType: LCSD	TestCode: 8260_WP_LL Units: µg/L				Prep Date:			RunNo: 88039		
Client ID: LCSS02	Batch ID: P13VW039	TestNo: EPA 8260B				Analysis Date: 3/12/2013			SeqNo: 1539549		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.950	0.50	20.00	0	94.8	80	120	18.95	0	20	
Bromobenzene	20.900	0.50	20.00	0	104	80	120	20.57	1.59	20	
Bromodichloromethane	21.550	0.50	20.00	0	108	70	120	21.60	0.232	20	
Bromoform	24.540	0.50	20.00	0	123	66	120	24.02	2.14	20	S
Bromomethane	20.510	0.50	20.00	0	103	48	155	20.42	0.440	20	
Carbon tetrachloride	22.510	0.50	20.00	0	113	60	120	22.58	0.310	20	
Chlorobenzene	20.220	0.50	20.00	0	101	80	120	20.20	0.0990	20	
Chloroethane	21.890	0.50	20.00	0	109	62	147	22.28	1.77	20	
Chloroform	17.160	0.50	20.00	0	85.8	80	120	17.24	0.465	20	
Chloromethane	16.320	0.50	20.00	0	81.6	63	121	16.81	2.96	20	
cis-1,2-Dichloroethene	17.020	0.50	20.00	0	85.1	80	120	17.47	2.61	20	
Dibromochloromethane	23.240	0.50	20.00	0	116	67	123	22.55	3.01	20	
Dibromomethane	22.320	0.50	20.00	0	112	80	120	22.21	0.494	20	
Dichlorodifluoromethane	18.370	0.50	20.00	0	91.9	70	121	18.52	0.813	20	
Ethylbenzene	18.920	0.50	20.00	0	94.6	80	120	18.61	1.65	20	
Hexachlorobutadiene	21.230	0.50	20.00	0	106	80	123	21.41	0.844	20	
Isopropylbenzene	18.360	0.50	20.00	0	91.8	80	121	18.24	0.656	20	
m,p-Xylene	38.080	1.0	40.00	0	95.2	80	120	37.53	1.45	20	
Methylene chloride	16.890	2.0	20.00	0	84.4	75	120	16.77	0.713	20	
MTBE	17.490	0.50	20.00	0	87.5	70	120	17.06	2.49	20	
n-Butylbenzene	18.030	0.50	20.00	0	90.2	80	129	18.40	2.03	20	
n-Propylbenzene	17.860	0.50	20.00	0	89.3	80	122	17.82	0.224	20	
Naphthalene	20.780	0.50	20.00	0	104	73	127	20.24	2.63	20	
o-Xylene	19.800	0.50	20.00	0	99.0	80	120	19.73	0.354	20	
sec-Butylbenzene	17.890	0.50	20.00	0	89.4	80	120	18.01	0.669	20	
Styrene	20.840	0.50	20.00	0	104	80	120	20.46	1.84	20	
tert-Butylbenzene	19.000	0.50	20.00	0	95.0	80	120	19.29	1.51	20	
Tetrachloroethene	22.390	0.50	20.00	0	112	80	121	22.02	1.67	20	
Toluene	19.310	0.50	20.00	0	96.6	80	120	19.21	0.519	20	
trans-1,2-Dichloroethene	17.290	0.50	20.00	0	86.5	80	120	17.21	0.464	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

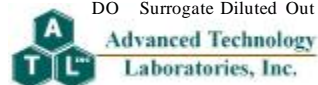
**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130312LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539549</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	21.330	0.50	20.00	0	107	80	120	21.35	0.0937	20	
Trichlorofluoromethane	20.930	0.50	20.00	0	105	71	148	21.49	2.64	20	
Vinyl chloride	17.650	0.50	20.00	0	88.2	80	120	17.74	0.509	20	
Surr: 1,2-Dichloroethane-d4	23.830		25.00		95.3	56	120		0		
Surr: 4-Bromofluorobenzene	27.000		25.00		108	80	120		0		
Surr: Dibromofluoromethane	22.630		25.00		90.5	72	120		0		
Surr: Toluene-d8	25.200		25.00		101	80	123		0		

Sample ID: <b>P130312MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539551</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	1.0									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130312MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539551</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									

**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   |  |



**Advanced Technology  
 Laboratories, Inc.**

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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130312MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88039</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW039</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/12/2013</b>	SeqNo: <b>1539551</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.280		25.00		101	56	120				
Surr: 4-Bromofluorobenzene	25.750		25.00		103	80	120				
Surr: Dibromofluoromethane	24.450		25.00		97.8	72	120				
Surr: Toluene-d8	24.710		25.00		98.8	80	123				

**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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b> Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540080</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	22.290	0.50	20.00	0	111	74	122				
1,1,1-Trichloroethane	19.070	0.50	20.00	0	95.4	65	120				
1,1,2,2-Tetrachloroethane	21.850	0.50	20.00	0	109	80	120				
1,1,2-Trichloroethane	22.670	0.50	20.00	0	113	80	120				
1,1-Dichloroethane	17.840	0.50	20.00	0	89.2	80	120				
1,1-Dichloroethene	22.150	0.50	20.00	0	111	80	120				
1,1-Dichloropropene	20.490	0.50	20.00	0	102	80	120				
1,2,3-Trichlorobenzene	21.560	0.50	20.00	0	108	80	124				
1,2,3-Trichloropropane	22.060	0.50	20.00	0	110	80	120				
1,2,4-Trichlorobenzene	20.340	0.50	20.00	0	102	80	126				
1,2,4-Trimethylbenzene	18.940	0.50	20.00	0	94.7	80	123				
1,2-Dibromo-3-chloropropane	26.190	1.0	20.00	0	131	70	120				S
1,2-Dibromoethane	23.020	0.50	20.00	0	115	80	120				
1,2-Dichlorobenzene	19.950	0.50	20.00	0	99.8	80	120				
1,2-Dichloroethane	22.450	0.50	20.00	0	112	80	120				
1,2-Dichloropropane	20.540	0.50	20.00	0	103	80	120				
1,3,5-Trimethylbenzene	19.050	0.50	20.00	0	95.2	80	121				
1,3-Dichlorobenzene	19.380	0.50	20.00	0	96.9	80	120				
1,3-Dichloropropane	21.110	0.50	20.00	0	106	80	120				
1,4-Dichlorobenzene	19.170	0.50	20.00	0	95.9	80	120				
2,2-Dichloropropane	20.860	0.50	20.00	0	104	54	120				
2-Chlorotoluene	18.370	0.50	20.00	0	91.9	80	122				
4-Chlorotoluene	18.340	0.50	20.00	0	91.7	80	120				
4-Isopropyltoluene	19.050	0.50	20.00	0	95.2	80	122				
Benzene	19.060	0.50	20.00	0	95.3	80	120				
Bromobenzene	21.070	0.50	20.00	0	105	80	120				
Bromodichloromethane	21.820	0.50	20.00	0	109	70	120				
Bromoform	24.450	0.50	20.00	0	122	66	120				S
Bromomethane	21.900	0.50	20.00	0	110	48	155				
Carbon tetrachloride	22.400	0.50	20.00	0	112	60	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

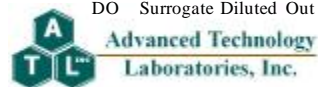
TestCode: 8260\_WP\_LL

Sample ID: <b>P130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540080</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.440	0.50	20.00	0	102	80	120				
Chloroethane	23.050	0.50	20.00	0	115	62	147				
Chloroform	18.350	0.50	20.00	0	91.8	80	120				
Chloromethane	17.750	0.50	20.00	0	88.8	63	121				
cis-1,2-Dichloroethene	18.200	0.50	20.00	0	91.0	80	120				
Dibromochloromethane	22.720	0.50	20.00	0	114	67	123				
Dibromomethane	23.310	0.50	20.00	0	117	80	120				
Dichlorodifluoromethane	19.760	0.50	20.00	0	98.8	70	121				
Ethylbenzene	18.900	0.50	20.00	0	94.5	80	120				
Hexachlorobutadiene	21.380	0.50	20.00	0	107	80	123				
Isopropylbenzene	18.270	0.50	20.00	0	91.4	80	121				
m,p-Xylene	37.400	1.0	40.00	0	93.5	80	120				
Methylene chloride	18.350	2.0	20.00	0	91.8	75	120				
MTBE	18.300	0.50	20.00	0	91.5	70	120				
n-Butylbenzene	18.280	0.50	20.00	0	91.4	80	129				
n-Propylbenzene	18.040	0.50	20.00	0	90.2	80	122				
Naphthalene	21.230	0.50	20.00	0	106	73	127				
o-Xylene	19.810	0.50	20.00	0	99.0	80	120				
sec-Butylbenzene	18.220	0.50	20.00	0	91.1	80	120				
Styrene	20.670	0.50	20.00	0	103	80	120				
tert-Butylbenzene	19.160	0.50	20.00	0	95.8	80	120				
Tetrachloroethene	22.230	0.50	20.00	0	111	80	121				
Toluene	19.530	0.50	20.00	0	97.6	80	120				
trans-1,2-Dichloroethene	18.630	0.50	20.00	0	93.2	80	120				
Trichloroethene	21.190	0.50	20.00	0	106	80	120				
Trichlorofluoromethane	22.720	0.50	20.00	0	114	71	148				
Vinyl chloride	19.610	0.50	20.00	0	98.0	80	120				
Surr: 1,2-Dichloroethane-d4	25.620		25.00		102	56	120				
Surr: 4-Bromofluorobenzene	26.860		25.00		107	80	120				
Surr: Dibromofluoromethane	24.530		25.00		98.1	72	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   |  |



3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: <b>P130313LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540080</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	25.180	25.00	101	80	123
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Sample ID: <b>P130313LCS D</b>	SampType: <b>LCS D</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540081</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	22.540	0.50	20.00	0	113	74	122	22.29	1.12	20	
1,1,1-Trichloroethane	19.370	0.50	20.00	0	96.9	65	120	19.07	1.56	20	
1,1,2,2-Tetrachloroethane	21.290	0.50	20.00	0	106	80	120	21.85	2.60	20	
1,1,2-Trichloroethane	22.580	0.50	20.00	0	113	80	120	22.67	0.398	20	
1,1-Dichloroethane	17.570	0.50	20.00	0	87.9	80	120	17.84	1.52	20	
1,1-Dichloroethene	22.600	0.50	20.00	0	113	80	120	22.15	2.01	20	
1,1-Dichloropropene	20.620	0.50	20.00	0	103	80	120	20.49	0.632	20	
1,2,3-Trichlorobenzene	21.590	0.50	20.00	0	108	80	124	21.56	0.139	20	
1,2,3-Trichloropropane	22.130	0.50	20.00	0	111	80	120	22.06	0.317	20	
1,2,4-Trichlorobenzene	20.380	0.50	20.00	0	102	80	126	20.34	0.196	20	
1,2,4-Trimethylbenzene	18.970	0.50	20.00	0	94.8	80	123	18.94	0.158	20	
1,2-Dibromo-3-chloropropane	27.160	1.0	20.00	0	136	70	120	26.19	3.64	20	S
1,2-Dibromoethane	22.850	0.50	20.00	0	114	80	120	23.02	0.741	20	
1,2-Dichlorobenzene	19.990	0.50	20.00	0	100	80	120	19.95	0.200	20	
1,2-Dichloroethane	22.320	0.50	20.00	0	112	80	120	22.45	0.581	20	
1,2-Dichloropropane	20.890	0.50	20.00	0	104	80	120	20.54	1.69	20	
1,3,5-Trimethylbenzene	18.880	0.50	20.00	0	94.4	80	121	19.05	0.896	20	
1,3-Dichlorobenzene	19.470	0.50	20.00	0	97.4	80	120	19.38	0.463	20	
1,3-Dichloropropane	21.650	0.50	20.00	0	108	80	120	21.11	2.53	20	
1,4-Dichlorobenzene	19.100	0.50	20.00	0	95.5	80	120	19.17	0.366	20	
2,2-Dichloropropane	20.190	0.50	20.00	0	101	54	120	20.86	3.26	20	
2-Chlorotoluene	18.400	0.50	20.00	0	92.0	80	122	18.37	0.163	20	
4-Chlorotoluene	18.630	0.50	20.00	0	93.2	80	120	18.34	1.57	20	
4-Isopropyltoluene	18.890	0.50	20.00	0	94.4	80	122	19.05	0.843	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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CLIENT: Tetra Tech  
 Work Order: N009791  
 Project: MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: P130313LCSD	SampType: LCSD	TestCode: 8260_WP_LL Units: µg/L				Prep Date:			RunNo: 88053		
Client ID: LCSS02	Batch ID: P13VW040	TestNo: EPA 8260B				Analysis Date: 3/13/2013			SeqNo: 1540081		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.250	0.50	20.00	0	96.2	80	120	19.06	0.992	20	
Bromobenzene	20.810	0.50	20.00	0	104	80	120	21.07	1.24	20	
Bromodichloromethane	21.800	0.50	20.00	0	109	70	120	21.82	0.0917	20	
Bromoform	24.940	0.50	20.00	0	125	66	120	24.45	1.98	20	S
Bromomethane	23.080	0.50	20.00	0	115	48	155	21.90	5.25	20	
Carbon tetrachloride	22.140	0.50	20.00	0	111	60	120	22.40	1.17	20	
Chlorobenzene	20.580	0.50	20.00	0	103	80	120	20.44	0.683	20	
Chloroethane	24.180	0.50	20.00	0	121	62	147	23.05	4.79	20	
Chloroform	18.630	0.50	20.00	0	93.2	80	120	18.35	1.51	20	
Chloromethane	17.800	0.50	20.00	0	89.0	63	121	17.75	0.281	20	
cis-1,2-Dichloroethene	18.870	0.50	20.00	0	94.4	80	120	18.20	3.61	20	
Dibromochloromethane	23.060	0.50	20.00	0	115	67	123	22.72	1.49	20	
Dibromomethane	22.950	0.50	20.00	0	115	80	120	23.31	1.56	20	
Dichlorodifluoromethane	19.900	0.50	20.00	0	99.5	70	121	19.76	0.706	20	
Ethylbenzene	19.130	0.50	20.00	0	95.7	80	120	18.90	1.21	20	
Hexachlorobutadiene	21.260	0.50	20.00	0	106	80	123	21.38	0.563	20	
Isopropylbenzene	18.330	0.50	20.00	0	91.7	80	121	18.27	0.328	20	
m,p-Xylene	38.460	1.0	40.00	0	96.2	80	120	37.40	2.79	20	
Methylene chloride	18.640	2.0	20.00	0	93.2	75	120	18.35	1.57	20	
MTBE	18.590	0.50	20.00	0	93.0	70	120	18.30	1.57	20	
n-Butylbenzene	18.320	0.50	20.00	0	91.6	80	129	18.28	0.219	20	
n-Propylbenzene	17.970	0.50	20.00	0	89.8	80	122	18.04	0.389	20	
Naphthalene	21.100	0.50	20.00	0	106	73	127	21.23	0.614	20	
o-Xylene	19.820	0.50	20.00	0	99.1	80	120	19.81	0.0505	20	
sec-Butylbenzene	18.240	0.50	20.00	0	91.2	80	120	18.22	0.110	20	
Styrene	20.800	0.50	20.00	0	104	80	120	20.67	0.627	20	
tert-Butylbenzene	19.250	0.50	20.00	0	96.2	80	120	19.16	0.469	20	
Tetrachloroethene	22.590	0.50	20.00	0	113	80	121	22.23	1.61	20	
Toluene	19.650	0.50	20.00	0	98.2	80	120	19.53	0.613	20	
trans-1,2-Dichloroethene	18.840	0.50	20.00	0	94.2	80	120	18.63	1.12	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   |  |



**Advanced Technology  
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**CLIENT:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130313LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540081</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	21.910	0.50	20.00	0	110	80	120	21.19	3.34	20	
Trichlorofluoromethane	22.820	0.50	20.00	0	114	71	148	22.72	0.439	20	
Vinyl chloride	19.540	0.50	20.00	0	97.7	80	120	19.61	0.358	20	
Surr: 1,2-Dichloroethane-d4	25.300		25.00		101	56	120		0		
Surr: 4-Bromofluorobenzene	27.380		25.00		110	80	120		0		
Surr: Dibromofluoromethane	24.120		25.00		96.5	72	120		0		
Surr: Toluene-d8	25.390		25.00		102	80	123		0		

Sample ID: <b>P130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540083</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	1.0									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540083</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									

**Qualifiers:**

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



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**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130313MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88053</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW040</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/13/2013</b>	SeqNo: <b>1540083</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	27.340		25.00		109	56	120				
Surr: 4-Bromofluorobenzene	26.340		25.00		105	80	120				
Surr: Dibromofluoromethane	25.970		25.00		104	72	120				
Surr: Toluene-d8	25.340		25.00		101	80	123				

**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:** Tetra Tech  
**Work Order:** N009791  
**Project:** MSSC, 103P172829

## ANALYTICAL QC SUMMARY REPORT

**TestCode: PERMANGANATE**

Sample ID: <b>MB-R87984</b>	SampType: <b>MBLK</b>	TestCode: <b>PERMANGAN</b> Units: <b>mg/L</b>	Prep Date:	RunNo: <b>87984</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R87984</b>	TestNo: <b>Colorimetric</b>	Analysis Date: <b>3/11/2013</b>	SeqNo: <b>1541951</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Permanganate as KMnO4                      ND                      1.0

Sample ID: <b>LCS-R87984</b>	SampType: <b>LCS</b>	TestCode: <b>PERMANGAN</b> Units: <b>mg/L</b>	Prep Date:	RunNo: <b>87984</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R87984</b>	TestNo: <b>Colorimetric</b>	Analysis Date: <b>3/11/2013</b>	SeqNo: <b>1541952</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Permanganate as KMnO4                      20.390                      1.0                      20.00                      0                      102                      80                      120

Sample ID: <b>N009791-001CMS</b>	SampType: <b>MS</b>	TestCode: <b>PERMANGAN</b> Units: <b>mg/L</b>	Prep Date:	RunNo: <b>87984</b>							
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R87984</b>	TestNo: <b>Colorimetric</b>	Analysis Date: <b>3/11/2013</b>	SeqNo: <b>1541954</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Permanganate as KMnO4                      19.060                      1.0                      20.00                      0                      95.3                      80                      120

Sample ID: <b>N009791-001CMSD</b>	SampType: <b>MSD</b>	TestCode: <b>PERMANGAN</b> Units: <b>mg/L</b>	Prep Date:	RunNo: <b>87984</b>							
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R87984</b>	TestNo: <b>Colorimetric</b>	Analysis Date: <b>3/11/2013</b>	SeqNo: <b>1541955</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Permanganate as KMnO4                      19.040                      1.0                      20.00                      0                      95.2                      80                      120                      19.06                      0.105                      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   |  |



**Advanced Technology  
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# Chain of Custody Record No. 5121

26 1P1

Project name: <b>MSSC</b>	Lab PO#:	Lab: <b>ATL</b>	Field samplers: <b>Geoff Richards</b> <b>Becki Dano</b>	
Project (CTO) number: <b>108P17089</b>	TIEMI technical contact: <b>Rob Manriquez</b>	TIEMI project manager: <b>Rob Manriquez</b>	Field samplers' signatures: <b>Geoff Richards</b>	
Sample ID	Point ID/Depth	Date	Time	Matrix
MW-19I	MW-19I	3/13	1325	GW
MW-19J	↓		1325	↓
MW-19K	MW-19D3		1520	↓
MW-19D3	↓		1520	↓
MW-19D2	MW-19D2		1610	↓
MW-19D2	↓		1610	↓
MW-19D1	MW-19D1		1710	↓
MW-19D1	↓		1710	↓

Preservative Added	

No./Container Types		Analysis Required									
40 ml VOA	X	VOA	X	SVOA	X	Pest	Metals	TPH Purgeables	TPH Extractables	PCB	ATL
1 liter Amber	X										
500 ml Poly	X										
Glass Jar											
250 ml Poly											
Encore											

Relinquished by: <i>Geoff Richards</i>	Name (print) <b>Geoff Richards</b>	Company Name <b>TetraTech</b>	Date <b>3/13</b>	Time <b>1000</b>
Received by: <i>Becki Dano</i>	<b>Becki Dano</b>	<b>ATL</b>	<b>3/13</b>	<b>1100</b>
Relinquished by: <i>Geoff Richards</i>	<b>Geoff Richards</b>	<b>ATL</b>	<b>3/13</b>	<b>1138</b>
Received by: <i>Becki Dano</i>	<b>Becki Dano</b>	<b>ATL</b>	<b>3/13</b>	<b>1138</b>
Relinquished by:				
Received by:				

Turnaround time/remarks: **Standard TAT**

\*CLP or K\* should be analyzed if possible from the 500 cc plastic permeate sample

Contact **Rob Manriquez** @ tetratech.com  
**Lisa Medved** @ tetratech.com



**Tetra Tech EM Inc.**  
San Diego Office

1230 Columbia Street, Suite 1000  
San Diego, CA 92101  
619.525.7188 Phone  
619.525.7186 Fax

# Chain of Custody Record No. 5113

Project name: <b>MS5C</b>	Lab PO#: <b>ATL</b>	Lab: <b>ATL</b>	No./Container Types <b>26 1RA</b>		Preservative Added													
Project (CTO) number: <b>103072628</b>	TTEMI technical contact: <b>Rob.Merrihue@tetratech.com</b>	Field samplers: <b>Geoff Richards Becki Dano</b>	Analysis Required															
Sample ID	TTEMI project manager: <b>Rob Merrihue</b>	Field samplers' signatures: <b>Geoff Richards</b>	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass jar	250 ml Poly	Encore	VOA	SVOA	Pest	Metals	TPH Purgeables	TPH Extractables	PCB	KMnO4 PCE TCE	
<b>MW-19</b>	<b>MW-19</b>	<b>3/4/13 1800</b>	<b>GW</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>MW-19</b>	<b>MW-19</b>	<b>3/7/13 1810</b>	<b>W</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>MW-19</b>	<b>MW-19</b>	<b>3/6/13 1340</b>	<b>GW</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Decon</b>	<b>Decon</b>	<b>3/6/13 1130</b>	<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>THP1616WS1</b>	<b>THP well @ SIRT</b>	<b>3/6/13 1300</b>	<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>VM1-030613</b>	<b>TPW composite</b>	<b>3/6/13 1030</b>	<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>VM2-030613</b>	<b>TPW composite</b>	<b>3/6/13 1450</b>	<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>SVE1030713</b>	<b>TPW composite</b>	<b>3/6/13 1610</b>	<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>AK-030613</b>	<b>TPW composite</b>		<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>PET030613</b>	<b>TPW composite</b>		<b>S</b>	<b>MS / MSD</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>

Relinquished by: <b>Geoff Richards</b>	Name (print) <b>Geoff Richards</b>	Company Name <b>TetraTech</b>	Date <b>3/11/13</b>	Time <b>1100</b>
Received by: <b>Becki Dano</b>	Name (print) <b>Becki Dano</b>	Company Name <b>ATL</b>	Date <b>3/11/13</b>	Time <b>1100</b>
Relinquished by: <b>Geoff Richards</b>	Name (print) <b>Geoff Richards</b>	Company Name <b>ATL</b>	Date <b>3/11/13</b>	Time <b>1138</b>
Received by: <b>Becki Dano</b>	Name (print) <b>Becki Dano</b>	Company Name <b>ATL</b>	Date <b>3/11/13</b>	Time <b>1138</b>
Relinquished by:	Name (print):	Company Name:	Date:	Time:
Received by:	Name (print):	Company Name:	Date:	Time:

Turnaround time/remarks: **Standard TAT**

**cc contact -> Lisa.Merrihue@tetratech.com**

\* **KMnO4** by cobalt method

\* **TPW** - soil samples are composites & should be analyzed as one (1) sample per location (i.e. 3 clearance glass jars per VM1-030613 -> 1 analysis of composite)

Fed Ex #:

## Advanced Technology Laboratories, Inc.

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: 3/11/2013

Workorder: N009791

Rep sample Temp (Deg C): 2.6

IR Gun ID: 1

Temp Blank:  Yes  No

Carrier name: ATL

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?<br>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?<br>Was Client notified?                 | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
|   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

Comments:

Checklist Completed B

MBC

3/17/13

Reviewed By:

*[Signature]*

April 04, 2013

Rob Manriquez  
Tetra Tech  
1230 Columbia Street, Suite 1000  
San Diego, CA 92101  
TEL: (858) 527-8803  
FAX:

CA-ELAP No.:2676  
NV Cert. No.:NV-009222007A

Workorder No.: N009889

RE: Maryland Square, 103P172829.01

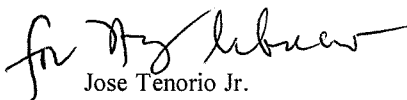
Attention: Rob Manriquez

Enclosed are the results for sample(s) received on March 26, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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,



Jose Tenorio Jr.  
Laboratory Director

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.



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

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**CLIENT:** Tetra Tech  
**Project:** Maryland Square, 103P172829.01  
**Lab Order:** N009889

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**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.





**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-001

**Client Sample ID:** CMT-1-1  
**Collection Date:** 3/25/2013 11:41:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 12:10 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Bromomethane	0.54	0.50	µg/L	1	3/31/2013 12:10 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Chloroform	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 12:10 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-001

**Client Sample ID:** CMT-1-1  
**Collection Date:** 3/25/2013 11:41:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 12:10 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 12:10 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Styrene	1.4	0.50	µg/L	1	3/31/2013 12:10 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Tetrachloroethene	4.7	0.50	µg/L	1	3/31/2013 12:10 PM	
Toluene	0.50	0.50	µg/L	1	3/31/2013 12:10 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Trichloroethene	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 12:10 PM	
Surr: 1,2-Dichloroethane-d4	103	56-120	%REC	1	3/31/2013 12:10 PM	
Surr: 4-Bromofluorobenzene	94.7	80-120	%REC	1	3/31/2013 12:10 PM	
Surr: Dibromofluoromethane	107	72-120	%REC	1	3/31/2013 12:10 PM	
Surr: Toluene-d8	100	80-123	%REC	1	3/31/2013 12:10 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	200	25	mg/L	50	3/28/2013 05:47 PM	

**ICP-MS METALS**

**EPA 3010A**

**EPA 6020**

RunID:	ICP7_130402A	QC Batch:	42550	PrepDate:	3/28/2013	Analyst:	CEI
Arsenic	4.0	0.10	µg/L	1	4/2/2013 12:39 PM		
Chromium	ND	1.0	µg/L	1	4/2/2013 12:39 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-002

**Client Sample ID:** CMT-1-2  
**Collection Date:** 3/25/2013 1:00:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 12:39 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Chloroform	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 12:39 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-002

**Client Sample ID:** CMT-1-2  
**Collection Date:** 3/25/2013 1:00:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 12:39 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 12:39 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Styrene	0.72	0.50	µg/L	1	3/31/2013 12:39 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Tetrachloroethene	48	0.50	µg/L	1	3/31/2013 12:39 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Trichloroethene	3.1	0.50	µg/L	1	3/31/2013 12:39 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 12:39 PM	
Surr: 1,2-Dichloroethane-d4	98.8	56-120	%REC	1	3/31/2013 12:39 PM	
Surr: 4-Bromofluorobenzene	96.2	80-120	%REC	1	3/31/2013 12:39 PM	
Surr: Dibromofluoromethane	103	72-120	%REC	1	3/31/2013 12:39 PM	
Surr: Toluene-d8	98.6	80-123	%REC	1	3/31/2013 12:39 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	200	25	mg/L	50	3/28/2013 06:24 PM	

**ICP-MS METALS**

**EPA 3010A**

**EPA 6020**

RunID:	ICP7_130402A	QC Batch:	42550	PrepDate:	3/28/2013	Analyst:	CEI
Arsenic	14	0.10	µg/L	1	4/2/2013 12:45 PM		
Chromium	ND	1.0	µg/L	1	4/2/2013 12:45 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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**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-003

**Client Sample ID:** CMT-1-3  
**Collection Date:** 3/25/2013 2:45:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 01:08 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Chloroform	1.2	0.50	µg/L	1	3/31/2013 01:08 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 01:08 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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**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-003

**Client Sample ID:** CMT-1-3  
**Collection Date:** 3/25/2013 2:45:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 01:08 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 01:08 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Tetrachloroethene	270	5.0	µg/L	10	4/1/2013 12:41 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Trichloroethene	1.6	0.50	µg/L	1	3/31/2013 01:08 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 01:08 PM	
Surr: 1,2-Dichloroethane-d4	101	56-120	%REC	1	3/31/2013 01:08 PM	
Surr: 1,2-Dichloroethane-d4	99.8	56-120	%REC	10	4/1/2013 12:41 PM	
Surr: 4-Bromofluorobenzene	95.2	80-120	%REC	1	3/31/2013 01:08 PM	
Surr: 4-Bromofluorobenzene	93.2	80-120	%REC	10	4/1/2013 12:41 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	10	4/1/2013 12:41 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	1	3/31/2013 01:08 PM	
Surr: Toluene-d8	98.3	80-123	%REC	10	4/1/2013 12:41 PM	
Surr: Toluene-d8	100	80-123	%REC	1	3/31/2013 01:08 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	170	25	mg/L	50	3/28/2013 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



**Advanced Technology  
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3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-003

**Client Sample ID:** CMT-1-3  
**Collection Date:** 3/25/2013 2:45:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013		Analyst: CEI
Arsenic	2.5	0.10		µg/L	1	4/2/2013 12:51 PM
Chromium	3.2	1.0		µg/L	1	4/2/2013 12:51 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



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-004

**Client Sample ID:** CMT-1-4  
**Collection Date:** 3/25/2013 4:28:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 01:37 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Chloroform	1.1	0.50	µg/L	1	3/31/2013 01:37 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 01:37 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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**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-004

**Client Sample ID:** CMT-1-4  
**Collection Date:** 3/25/2013 4:28:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 01:37 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 01:37 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Tetrachloroethene	310	5.0	µg/L	10	4/1/2013 01:10 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Trichloroethene	1.6	0.50	µg/L	1	3/31/2013 01:37 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 01:37 PM	
Surr: 1,2-Dichloroethane-d4	101	56-120	%REC	1	3/31/2013 01:37 PM	
Surr: 1,2-Dichloroethane-d4	103	56-120	%REC	10	4/1/2013 01:10 PM	
Surr: 4-Bromofluorobenzene	93.5	80-120	%REC	1	3/31/2013 01:37 PM	
Surr: 4-Bromofluorobenzene	92.7	80-120	%REC	10	4/1/2013 01:10 PM	
Surr: Dibromofluoromethane	103	72-120	%REC	10	4/1/2013 01:10 PM	
Surr: Dibromofluoromethane	104	72-120	%REC	1	3/31/2013 01:37 PM	
Surr: Toluene-d8	97.0	80-123	%REC	10	4/1/2013 01:10 PM	
Surr: Toluene-d8	99.6	80-123	%REC	1	3/31/2013 01:37 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	160	25	mg/L	50	3/28/2013 06:50 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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**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-004

**Client Sample ID:** CMT-1-4  
**Collection Date:** 3/25/2013 4:28:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013		Analyst: CEI
Arsenic	2.4	0.10		µg/L	1	4/2/2013 12:57 PM
Chromium	ND	1.0		µg/L	1	4/2/2013 12:57 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



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-005

**Client Sample ID:** CMT-1-5  
**Collection Date:** 3/25/2013 6:00:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 02:06 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Chloroform	1.0	0.50	µg/L	1	3/31/2013 02:06 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 02:06 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**  
 Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-005

**Client Sample ID:** CMT-1-5  
**Collection Date:** 3/25/2013 6:00:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 02:06 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 02:06 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Tetrachloroethene	280	5.0	µg/L	10	4/1/2013 01:39 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Trichloroethene	2.4	0.50	µg/L	1	3/31/2013 02:06 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 02:06 PM	
Surr: 1,2-Dichloroethane-d4	103	56-120	%REC	1	3/31/2013 02:06 PM	
Surr: 1,2-Dichloroethane-d4	102	56-120	%REC	10	4/1/2013 01:39 PM	
Surr: 4-Bromofluorobenzene	93.4	80-120	%REC	1	3/31/2013 02:06 PM	
Surr: 4-Bromofluorobenzene	93.9	80-120	%REC	10	4/1/2013 01:39 PM	
Surr: Dibromofluoromethane	107	72-120	%REC	10	4/1/2013 01:39 PM	
Surr: Dibromofluoromethane	104	72-120	%REC	1	3/31/2013 02:06 PM	
Surr: Toluene-d8	101	80-123	%REC	10	4/1/2013 01:39 PM	
Surr: Toluene-d8	100	80-123	%REC	1	3/31/2013 02:06 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	170	25	mg/L	50	3/28/2013 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-005

**Client Sample ID:** CMT-1-5  
**Collection Date:** 3/25/2013 6:00:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013		Analyst: CEI
Arsenic	4.1	0.10		µg/L	1	4/2/2013 01:21 PM
Chromium	ND	1.0		µg/L	1	4/2/2013 01:21 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



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-006

**Client Sample ID:** CMT-1-6  
**Collection Date:** 3/25/2013 7:15:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 02:35 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Chloroform	1.8	0.50	µg/L	1	3/31/2013 02:35 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
cis-1,2-Dichloroethene	1.7	0.50	µg/L	1	3/31/2013 02:35 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 02:35 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-006

**Client Sample ID:** CMT-1-6  
**Collection Date:** 3/25/2013 7:15:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 02:35 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 02:35 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Tetrachloroethene	390	5.0	µg/L	10	4/1/2013 02:08 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Trichloroethene	4.1	0.50	µg/L	1	3/31/2013 02:35 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 02:35 PM	
Surr: 1,2-Dichloroethane-d4	101	56-120	%REC	1	3/31/2013 02:35 PM	
Surr: 1,2-Dichloroethane-d4	101	56-120	%REC	10	4/1/2013 02:08 PM	
Surr: 4-Bromofluorobenzene	94.4	80-120	%REC	1	3/31/2013 02:35 PM	
Surr: 4-Bromofluorobenzene	93.2	80-120	%REC	10	4/1/2013 02:08 PM	
Surr: Dibromofluoromethane	103	72-120	%REC	10	4/1/2013 02:08 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	1	3/31/2013 02:35 PM	
Surr: Toluene-d8	98.5	80-123	%REC	10	4/1/2013 02:08 PM	
Surr: Toluene-d8	99.6	80-123	%REC	1	3/31/2013 02:35 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	160	25	mg/L	50	3/28/2013 07:15 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-006

**Client Sample ID:** CMT-1-6  
**Collection Date:** 3/25/2013 7:15:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013		Analyst: CEI
Arsenic	1.5	0.10		µg/L	1	4/2/2013 01:27 PM
Chromium	ND	1.0		µg/L	1	4/2/2013 01:27 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





**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-007

**Client Sample ID:** CMT-1-7  
**Collection Date:** 3/25/2013 8:55:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 03:04 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Chloroform	2.3	0.50	µg/L	1	3/31/2013 03:04 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
cis-1,2-Dichloroethene	6.0	0.50	µg/L	1	3/31/2013 03:04 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 03:04 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



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-007

**Client Sample ID:** CMT-1-7  
**Collection Date:** 3/25/2013 8:55:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 03:04 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 03:04 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Tetrachloroethene	1200	25	µg/L	50	4/1/2013 02:37 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Trichloroethene	9.5	0.50	µg/L	1	3/31/2013 03:04 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 03:04 PM	
Surr: 1,2-Dichloroethane-d4	99.8	56-120	%REC	1	3/31/2013 03:04 PM	
Surr: 1,2-Dichloroethane-d4	100	56-120	%REC	50	4/1/2013 02:37 PM	
Surr: 4-Bromofluorobenzene	95.1	80-120	%REC	1	3/31/2013 03:04 PM	
Surr: 4-Bromofluorobenzene	89.6	80-120	%REC	50	4/1/2013 02:37 PM	
Surr: Dibromofluoromethane	104	72-120	%REC	50	4/1/2013 02:37 PM	
Surr: Dibromofluoromethane	108	72-120	%REC	1	3/31/2013 03:04 PM	
Surr: Toluene-d8	97.5	80-123	%REC	50	4/1/2013 02:37 PM	
Surr: Toluene-d8	98.2	80-123	%REC	1	3/31/2013 03:04 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	150	25	mg/L	50	3/28/2013 07:27 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-007

**Client Sample ID:** CMT-1-7  
**Collection Date:** 3/25/2013 8:55:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013		Analyst: CEI
Arsenic	1.8	0.10		µg/L	1	4/2/2013 01:33 PM
Chromium	ND	1.0		µg/L	1	4/2/2013 01:33 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



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-008

**Client Sample ID:** MW-20D3  
**Collection Date:** 3/26/2013 9:55:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 10:44 AM
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Benzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Bromoform	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Bromomethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Chloroethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Chloroform	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Chloromethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 10:44 AM
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 10:44 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-008

**Client Sample ID:** MW-20D3  
**Collection Date:** 3/26/2013 9:55:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 10:44 AM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 10:44 AM	
MTBE	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Styrene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Tetrachloroethene	0.66	0.50	µg/L	1	3/31/2013 10:44 AM	
Toluene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Trichloroethene	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 10:44 AM	
Surr: 1,2-Dichloroethane-d4	102	56-120	%REC	1	3/31/2013 10:44 AM	
Surr: 4-Bromofluorobenzene	93.0	80-120	%REC	1	3/31/2013 10:44 AM	
Surr: Dibromofluoromethane	106	72-120	%REC	1	3/31/2013 10:44 AM	
Surr: Toluene-d8	99.9	80-123	%REC	1	3/31/2013 10:44 AM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130329A	QC Batch:	R88268	PrepDate:	Analyst:	QBM
Chloride	7.4	1.0	mg/L	2	3/29/2013 04:25 PM	

**ICP-MS METALS**

**EPA 3010A**

**EPA 6020**

RunID:	ICP7_130402A	QC Batch:	42550	PrepDate:	3/28/2013	Analyst:	CEI
Arsenic	2.6	0.10	µg/L	1	4/2/2013 01:39 PM		
Chromium	5.8	1.0	µg/L	1	4/2/2013 01:39 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-009

**Client Sample ID:** MW-20D2  
**Collection Date:** 3/26/2013 10:45:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 04:30 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Chloroform	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 04:30 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-009

**Client Sample ID:** MW-20D2  
**Collection Date:** 3/26/2013 10:45:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 04:30 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 04:30 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Tetrachloroethene	25	0.50	µg/L	1	3/31/2013 04:30 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Trichloroethene	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 04:30 PM	
Surr: 1,2-Dichloroethane-d4	99.2	56-120	%REC	1	3/31/2013 04:30 PM	
Surr: 4-Bromofluorobenzene	92.8	80-120	%REC	1	3/31/2013 04:30 PM	
Surr: Dibromofluoromethane	104	72-120	%REC	1	3/31/2013 04:30 PM	
Surr: Toluene-d8	99.1	80-123	%REC	1	3/31/2013 04:30 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130329A	QC Batch:	R88268	PrepDate:	Analyst:	QBM
Chloride	11	1.0	mg/L	2	3/29/2013 04:38 PM	

**ICP-MS METALS**

**EPA 3010A**

**EPA 6020**

RunID:	ICP7_130402A	QC Batch:	42550	PrepDate:	3/28/2013	Analyst:	CEI
Arsenic	2.7	0.10	µg/L	1	4/2/2013 01:45 PM		
Chromium	3.4	1.0	µg/L	1	4/2/2013 01:45 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-010

**Client Sample ID:** MW-20D1  
**Collection Date:** 3/26/2013 11:27:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 04:59 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Bromomethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Chloroform	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
cis-1,2-Dichloroethene	3.6	0.50	µg/L	1	3/31/2013 04:59 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 04:59 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691



**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-010

**Client Sample ID:** MW-20D1  
**Collection Date:** 3/26/2013 11:27:00 AM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 04:59 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 04:59 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Tetrachloroethene	69	0.50	µg/L	1	3/31/2013 04:59 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Trichloroethene	2.8	0.50	µg/L	1	3/31/2013 04:59 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 04:59 PM	
Surr: 1,2-Dichloroethane-d4	102	56-120	%REC	1	3/31/2013 04:59 PM	
Surr: 4-Bromofluorobenzene	93.1	80-120	%REC	1	3/31/2013 04:59 PM	
Surr: Dibromofluoromethane	108	72-120	%REC	1	3/31/2013 04:59 PM	
Surr: Toluene-d8	100	80-123	%REC	1	3/31/2013 04:59 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	190	25	mg/L	50	3/28/2013 08:05 PM	

**ICP-MS METALS**

**EPA 3010A**

**EPA 6020**

RunID:	ICP7_130402A	QC Batch:	42550	PrepDate:	3/28/2013	Analyst:	CEI
Arsenic	14	0.10	µg/L	1	4/2/2013 01:50 PM		
Chromium	21	1.0	µg/L	1	4/2/2013 01:50 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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**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-011

**Client Sample ID:** MW-20  
**Collection Date:** 3/26/2013 12:56:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2-Dibromo-3-chloropropane	ND	1.0	µg/L	1	3/31/2013 05:28 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Benzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Bromobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Bromodichloromethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Bromoform	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Bromomethane	0.57	0.50	µg/L	1	3/31/2013 05:28 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Chlorobenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Chloroethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Chloroform	0.80	0.50	µg/L	1	3/31/2013 05:28 PM	
Chloromethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Dibromochloromethane	ND	0.50	µg/L	1	3/31/2013 05:28 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**Advanced Technology Laboratories, Inc.**

**ANALYTICAL RESULTS**

Print Date: 04-Apr-13

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-011

**Client Sample ID:** MW-20  
**Collection Date:** 3/26/2013 12:56:00 PM  
**Matrix:** GROUNDWATER

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

**EPA 8260B**

RunID:	MS5_130331A	QC Batch:	P13VW053	PrepDate:	Analyst:	QBM
Dibromomethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Ethylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Isopropylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
m,p-Xylene	ND	1.0	µg/L	1	3/31/2013 05:28 PM	
Methylene chloride	ND	2.0	µg/L	1	3/31/2013 05:28 PM	
MTBE	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
n-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
n-Propylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Naphthalene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
o-Xylene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Styrene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Tetrachloroethene	290	5.0	µg/L	10	4/1/2013 03:05 PM	
Toluene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Trichloroethene	1.8	0.50	µg/L	1	3/31/2013 05:28 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Vinyl chloride	ND	0.50	µg/L	1	3/31/2013 05:28 PM	
Surr: 1,2-Dichloroethane-d4	97.2	56-120	%REC	1	3/31/2013 05:28 PM	
Surr: 1,2-Dichloroethane-d4	98.6	56-120	%REC	10	4/1/2013 03:05 PM	
Surr: 4-Bromofluorobenzene	93.0	80-120	%REC	1	3/31/2013 05:28 PM	
Surr: 4-Bromofluorobenzene	91.5	80-120	%REC	10	4/1/2013 03:05 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	10	4/1/2013 03:05 PM	
Surr: Dibromofluoromethane	105	72-120	%REC	1	3/31/2013 05:28 PM	
Surr: Toluene-d8	99.1	80-123	%REC	10	4/1/2013 03:05 PM	
Surr: Toluene-d8	99.6	80-123	%REC	1	3/31/2013 05:28 PM	

**ANIONS BY ION CHROMATOGRAPHY**

**EPA 300.0**

RunID:	IC2_130328A	QC Batch:	R88230	PrepDate:	Analyst:	QBM
Chloride	190	25	mg/L	50	3/28/2013 08:18 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



**Advanced Technology Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Lab Order:** N009889  
**Project:** Maryland Square, 103P172829.01  
**Lab ID:** N009889-011

**Client Sample ID:** MW-20  
**Collection Date:** 3/26/2013 12:56:00 PM  
**Matrix:** GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>ICP-MS METALS</b>						
	<b>EPA 3010A</b>			<b>EPA 6020</b>		
RunID: ICP7_130402A	QC Batch: 42550			PrepDate: 3/28/2013	Analyst: CEI	
Arsenic	4.7	0.10		µg/L	1	4/2/2013 01:56 PM
Chromium	4.3	1.0		µg/L	1	4/2/2013 01:56 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



**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 300\_W\_CL**

Sample ID: <b>MB-R88230_CL</b>	SampType: <b>MBLK</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88230</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R88230</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547226</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: <b>LCS-R88230_CL</b>	SampType: <b>LCS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88230</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R88230</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547227</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.469	0.50	2.500	0	98.8	90	110				

Sample ID: <b>N009900-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88230</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88230</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547229</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	353.500	25	125.0	229.5	99.2	80	120				

Sample ID: <b>N009900-001DMSD</b>	SampType: <b>MSD</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88230</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88230</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/28/2013</b>	SeqNo: <b>1547230</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	357.000	25	125.0	229.5	102	80	120	353.5	0.985	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:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 300\_W\_CL**

Sample ID: <b>MB-R88268_CL</b>	SampType: <b>MBLK</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88268</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R88268</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1548389</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.50

Sample ID: <b>LCS-R88268_CL</b>	SampType: <b>LCS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88268</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R88268</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1548390</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2.443 0.50 2.500 0 97.7 90 110

Sample ID: <b>N009910-002DMS</b>	SampType: <b>MS</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88268</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88268</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1548392</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

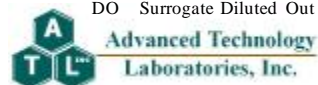
Chloride 287.150 25 125.0 165.1 97.6 80 120

Sample ID: <b>N009910-002DMSD</b>	SampType: <b>MSD</b>	TestCode: <b>300_W_CL</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>88268</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R88268</b>	TestNo: <b>EPA 300.0</b>		Analysis Date: <b>3/29/2013</b>	SeqNo: <b>1548393</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 292.550 25 125.0 165.1 102 80 120 287.2 1.86 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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**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020\_W**

Sample ID: <b>MB-42550</b>	SampType: <b>MBLK</b>	TestCode: <b>6020_W</b>	Units: <b>µg/L</b>	Prep Date: <b>3/28/2013</b>	RunNo: <b>88278</b>						
Client ID: <b>PBW</b>	Batch ID: <b>42550</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>4/2/2013</b>	SeqNo: <b>1548699</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.10								
Chromium	ND	1.0								

Sample ID: <b>LCS-42550</b>	SampType: <b>LCS</b>	TestCode: <b>6020_W</b>	Units: <b>µg/L</b>	Prep Date: <b>3/28/2013</b>	RunNo: <b>88278</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>42550</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>4/2/2013</b>	SeqNo: <b>1548700</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	10.331	0.10	10.00	0	103	85	115			
Chromium	9.780	1.0	10.00	0	97.8	85	115			

Sample ID: <b>N009897-003C-MS</b>	SampType: <b>MS</b>	TestCode: <b>6020_W</b>	Units: <b>µg/L</b>	Prep Date: <b>3/28/2013</b>	RunNo: <b>88286</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42550</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>4/3/2013</b>	SeqNo: <b>1549440</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	11.282	0.50	10.00	0.9317	104	75	125			
Chromium	54.635	5.0	10.00	44.47	102	75	125			

Sample ID: <b>N009897-003C-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6020_W</b>	Units: <b>µg/L</b>	Prep Date: <b>3/28/2013</b>	RunNo: <b>88286</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>42550</b>	TestNo: <b>EPA 6020</b>	<b>EPA 3010A</b>	Analysis Date: <b>4/3/2013</b>	SeqNo: <b>1549441</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	11.628	0.50	10.00	0.9317	107	75	125	11.28	3.01	20
Chromium	55.508	5.0	10.00	44.47	110	75	125	54.63	1.59	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   |  |



**Advanced Technology  
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3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130331LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548317</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.650	0.50	20.00	0	103	74	122				
1,1,1-Trichloroethane	20.280	0.50	20.00	0	101	65	120				
1,1,2,2-Tetrachloroethane	19.270	0.50	20.00	0	96.4	80	120				
1,1,2-Trichloroethane	19.250	0.50	20.00	0	96.2	80	120				
1,1-Dichloroethane	18.360	0.50	20.00	0	91.8	80	120				
1,1-Dichloroethene	21.770	0.50	20.00	0	109	80	120				
1,1-Dichloropropene	19.310	0.50	20.00	0	96.6	80	120				
1,2,3-Trichlorobenzene	22.540	0.50	20.00	0	113	80	124				
1,2,3-Trichloropropane	18.780	0.50	20.00	0	93.9	80	120				
1,2,4-Trichlorobenzene	22.370	0.50	20.00	0	112	80	126				
1,2,4-Trimethylbenzene	20.500	0.50	20.00	0	103	80	123				
1,2-Dibromo-3-chloropropane	21.090	1.0	20.00	0	105	70	120				
1,2-Dibromoethane	19.870	0.50	20.00	0	99.4	80	120				
1,2-Dichlorobenzene	21.720	0.50	20.00	0	109	80	120				
1,2-Dichloroethane	19.590	0.50	20.00	0	98.0	80	120				
1,2-Dichloropropane	17.700	0.50	20.00	0	88.5	80	120				
1,3,5-Trimethylbenzene	20.710	0.50	20.00	0	104	80	121				
1,3-Dichlorobenzene	21.290	0.50	20.00	0	106	80	120				
1,3-Dichloropropane	19.140	0.50	20.00	0	95.7	80	120				
1,4-Dichlorobenzene	21.200	0.50	20.00	0	106	80	120				
2,2-Dichloropropane	20.580	0.50	20.00	0	103	54	120				
2-Chlorotoluene	20.020	0.50	20.00	0	100	80	122				
4-Chlorotoluene	19.790	0.50	20.00	0	99.0	80	120				
4-Isopropyltoluene	20.900	0.50	20.00	0	104	80	122				
Benzene	19.240	0.50	20.00	0	96.2	80	120				
Bromobenzene	21.630	0.50	20.00	0	108	80	120				
Bromodichloromethane	20.270	0.50	20.00	0	101	70	120				
Bromoform	23.450	0.50	20.00	0	117	66	120				
Bromomethane	26.980	0.50	20.00	0	135	48	155				
Carbon tetrachloride	22.110	0.50	20.00	0	111	60	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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**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

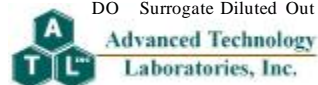
**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130331LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548317</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.460	0.50	20.00	0	102	80	120				
Chloroethane	20.190	0.50	20.00	0	101	62	147				
Chloroform	19.830	0.50	20.00	0	99.2	80	120				
Chloromethane	13.780	0.50	20.00	0	68.9	63	121				
cis-1,2-Dichloroethene	19.420	0.50	20.00	0	97.1	80	120				
Dibromochloromethane	21.500	0.50	20.00	0	108	67	123				
Dibromomethane	19.720	0.50	20.00	0	98.6	80	120				
Dichlorodifluoromethane	16.310	0.50	20.00	0	81.6	70	121				
Ethylbenzene	19.550	0.50	20.00	0	97.8	80	120				
Hexachlorobutadiene	22.200	0.50	20.00	0	111	80	123				
Isopropylbenzene	20.640	0.50	20.00	0	103	80	121				
m,p-Xylene	39.510	1.0	40.00	0	98.8	80	120				
Methylene chloride	18.800	2.0	20.00	0	94.0	75	120				
MTBE	18.100	0.50	20.00	0	90.5	70	120				
n-Butylbenzene	20.730	0.50	20.00	0	104	80	129				
n-Propylbenzene	20.080	0.50	20.00	0	100	80	122				
Naphthalene	22.360	0.50	20.00	0	112	73	127				
o-Xylene	19.700	0.50	20.00	0	98.5	80	120				
sec-Butylbenzene	20.400	0.50	20.00	0	102	80	120				
Styrene	20.660	0.50	20.00	0	103	80	120				
tert-Butylbenzene	20.750	0.50	20.00	0	104	80	120				
Tetrachloroethene	20.430	0.50	20.00	0	102	80	121				
Toluene	19.640	0.50	20.00	0	98.2	80	120				
trans-1,2-Dichloroethene	19.820	0.50	20.00	0	99.1	80	120				
Trichloroethene	20.670	0.50	20.00	0	103	80	120				
Trichlorofluoromethane	22.420	0.50	20.00	0	112	71	148				
Vinyl chloride	16.850	0.50	20.00	0	84.2	80	120				
Surr: 1,2-Dichloroethane-d4	23.850		25.00		95.4	56	120				
Surr: 4-Bromofluorobenzene	23.880		25.00		95.5	80	120				
Surr: Dibromofluoromethane	25.290		25.00		101	72	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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CLIENT: Tetra Tech  
 Work Order: N009889  
 Project: Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: <b>P130331LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548317</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	24.830		25.00		99.3	80	123				

Sample ID: <b>P130331LCS D</b>	SampType: <b>LCS D</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548318</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.550	0.50	20.00	0	103	74	122	20.65	0.485	20	
1,1,1-Trichloroethane	20.070	0.50	20.00	0	100	65	120	20.28	1.04	20	
1,1,2,2-Tetrachloroethane	19.300	0.50	20.00	0	96.5	80	120	19.27	0.156	20	
1,1,2-Trichloroethane	19.140	0.50	20.00	0	95.7	80	120	19.25	0.573	20	
1,1-Dichloroethane	18.240	0.50	20.00	0	91.2	80	120	18.36	0.656	20	
1,1-Dichloroethene	20.790	0.50	20.00	0	104	80	120	21.77	4.61	20	
1,1-Dichloropropene	19.430	0.50	20.00	0	97.2	80	120	19.31	0.620	20	
1,2,3-Trichlorobenzene	22.640	0.50	20.00	0	113	80	124	22.54	0.443	20	
1,2,3-Trichloropropane	19.040	0.50	20.00	0	95.2	80	120	18.78	1.37	20	
1,2,4-Trichlorobenzene	21.870	0.50	20.00	0	109	80	126	22.37	2.26	20	
1,2,4-Trimethylbenzene	20.420	0.50	20.00	0	102	80	123	20.50	0.391	20	
1,2-Dibromo-3-chloropropane	21.910	1.0	20.00	0	110	70	120	21.09	3.81	20	
1,2-Dibromoethane	20.080	0.50	20.00	0	100	80	120	19.87	1.05	20	
1,2-Dichlorobenzene	21.480	0.50	20.00	0	107	80	120	21.72	1.11	20	
1,2-Dichloroethane	19.820	0.50	20.00	0	99.1	80	120	19.59	1.17	20	
1,2-Dichloropropane	17.590	0.50	20.00	0	88.0	80	120	17.70	0.623	20	
1,3,5-Trimethylbenzene	20.460	0.50	20.00	0	102	80	121	20.71	1.21	20	
1,3-Dichlorobenzene	21.360	0.50	20.00	0	107	80	120	21.29	0.328	20	
1,3-Dichloropropane	19.160	0.50	20.00	0	95.8	80	120	19.14	0.104	20	
1,4-Dichlorobenzene	20.900	0.50	20.00	0	104	80	120	21.20	1.43	20	
2,2-Dichloropropane	19.560	0.50	20.00	0	97.8	54	120	20.58	5.08	20	
2-Chlorotoluene	19.730	0.50	20.00	0	98.6	80	122	20.02	1.46	20	
4-Chlorotoluene	19.990	0.50	20.00	0	100	80	120	19.79	1.01	20	
4-Isopropyltoluene	20.840	0.50	20.00	0	104	80	122	20.90	0.287	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Tetra Tech  
 Work Order: N009889  
 Project: Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: P130331LCSD	SampType: LCSD	TestCode: 8260_WP_LL Units: µg/L				Prep Date:			RunNo: 88265		
Client ID: LCSS02	Batch ID: P13VW053	TestNo: EPA 8260B				Analysis Date: 3/31/2013			SeqNo: 1548318		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.950	0.50	20.00	0	94.8	80	120	19.24	1.52	20	
Bromobenzene	21.140	0.50	20.00	0	106	80	120	21.63	2.29	20	
Bromodichloromethane	20.730	0.50	20.00	0	104	70	120	20.27	2.24	20	
Bromoform	23.570	0.50	20.00	0	118	66	120	23.45	0.510	20	
Bromomethane	27.320	0.50	20.00	0	137	48	155	26.98	1.25	20	
Carbon tetrachloride	21.780	0.50	20.00	0	109	60	120	22.11	1.50	20	
Chlorobenzene	20.470	0.50	20.00	0	102	80	120	20.46	0.0489	20	
Chloroethane	21.490	0.50	20.00	0	107	62	147	20.19	6.24	20	
Chloroform	19.580	0.50	20.00	0	97.9	80	120	19.83	1.27	20	
Chloromethane	13.430	0.50	20.00	0	67.2	63	121	13.78	2.57	20	
cis-1,2-Dichloroethene	19.380	0.50	20.00	0	96.9	80	120	19.42	0.206	20	
Dibromochloromethane	21.910	0.50	20.00	0	110	67	123	21.50	1.89	20	
Dibromomethane	19.610	0.50	20.00	0	98.0	80	120	19.72	0.559	20	
Dichlorodifluoromethane	15.750	0.50	20.00	0	78.8	70	121	16.31	3.49	20	
Ethylbenzene	19.690	0.50	20.00	0	98.4	80	120	19.55	0.714	20	
Hexachlorobutadiene	22.360	0.50	20.00	0	112	80	123	22.20	0.718	20	
Isopropylbenzene	20.230	0.50	20.00	0	101	80	121	20.64	2.01	20	
m,p-Xylene	39.870	1.0	40.00	0	99.7	80	120	39.51	0.907	20	
Methylene chloride	18.090	2.0	20.00	0	90.4	75	120	18.80	3.85	20	
MTBE	18.250	0.50	20.00	0	91.2	70	120	18.10	0.825	20	
n-Butylbenzene	20.370	0.50	20.00	0	102	80	129	20.73	1.75	20	
n-Propylbenzene	19.960	0.50	20.00	0	99.8	80	122	20.08	0.599	20	
Naphthalene	22.060	0.50	20.00	0	110	73	127	22.36	1.35	20	
o-Xylene	19.780	0.50	20.00	0	98.9	80	120	19.70	0.405	20	
sec-Butylbenzene	20.210	0.50	20.00	0	101	80	120	20.40	0.936	20	
Styrene	20.570	0.50	20.00	0	103	80	120	20.66	0.437	20	
tert-Butylbenzene	20.800	0.50	20.00	0	104	80	120	20.75	0.241	20	
Tetrachloroethene	20.290	0.50	20.00	0	101	80	121	20.43	0.688	20	
Toluene	19.450	0.50	20.00	0	97.3	80	120	19.64	0.972	20	
trans-1,2-Dichloroethene	19.260	0.50	20.00	0	96.3	80	120	19.82	2.87	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   |  |



**Advanced Technology  
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**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130331LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548318</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	20.280	0.50	20.00	0	101	80	120	20.67	1.90	20	
Trichlorofluoromethane	21.940	0.50	20.00	0	110	71	148	22.42	2.16	20	
Vinyl chloride	16.970	0.50	20.00	0	84.8	80	120	16.85	0.710	20	
Surr: 1,2-Dichloroethane-d4	24.060		25.00		96.2	56	120		0		
Surr: 4-Bromofluorobenzene	24.550		25.00		98.2	80	120		0		
Surr: Dibromofluoromethane	24.900		25.00		99.6	72	120		0		
Surr: Toluene-d8	24.660		25.00		98.6	80	123		0		

Sample ID: <b>P130331MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548319</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	1.0									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									

**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:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130331MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548319</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									

**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   |  |



**Advanced Technology  
 Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130331MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88265</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW053</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>3/31/2013</b>	SeqNo: <b>1548319</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.150		25.00		101	56	120				
Surr: 4-Bromofluorobenzene	23.480		25.00		93.9	80	120				
Surr: Dibromofluoromethane	26.070		25.00		104	72	120				
Surr: Toluene-d8	24.980		25.00		99.9	80	123				

**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:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

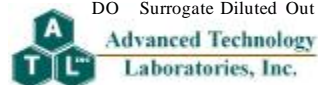
**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130401LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548362</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.760	0.50	20.00	0	104	74	122				
1,1,1-Trichloroethane	20.180	0.50	20.00	0	101	65	120				
1,1,2,2-Tetrachloroethane	18.890	0.50	20.00	0	94.4	80	120				
1,1,2-Trichloroethane	18.830	0.50	20.00	0	94.2	80	120				
1,1-Dichloroethane	17.520	0.50	20.00	0	87.6	80	120				
1,1-Dichloroethene	21.130	0.50	20.00	0	106	80	120				
1,1-Dichloropropene	19.020	0.50	20.00	0	95.1	80	120				
1,2,3-Trichlorobenzene	22.020	0.50	20.00	0	110	80	124				
1,2,3-Trichloropropane	18.080	0.50	20.00	0	90.4	80	120				
1,2,4-Trichlorobenzene	21.260	0.50	20.00	0	106	80	126				
1,2,4-Trimethylbenzene	19.860	0.50	20.00	0	99.3	80	123				
1,2-Dibromo-3-chloropropane	20.640	1.0	20.00	0	103	70	120				
1,2-Dibromoethane	19.670	0.50	20.00	0	98.4	80	120				
1,2-Dichlorobenzene	21.180	0.50	20.00	0	106	80	120				
1,2-Dichloroethane	19.180	0.50	20.00	0	95.9	80	120				
1,2-Dichloropropane	17.090	0.50	20.00	0	85.4	80	120				
1,3,5-Trimethylbenzene	20.060	0.50	20.00	0	100	80	121				
1,3-Dichlorobenzene	20.910	0.50	20.00	0	105	80	120				
1,3-Dichloropropane	18.880	0.50	20.00	0	94.4	80	120				
1,4-Dichlorobenzene	20.540	0.50	20.00	0	103	80	120				
2,2-Dichloropropane	20.300	0.50	20.00	0	102	54	120				
2-Chlorotoluene	19.470	0.50	20.00	0	97.4	80	122				
4-Chlorotoluene	19.320	0.50	20.00	0	96.6	80	120				
4-Isopropyltoluene	20.320	0.50	20.00	0	102	80	122				
Benzene	18.820	0.50	20.00	0	94.1	80	120				
Bromobenzene	20.920	0.50	20.00	0	105	80	120				
Bromodichloromethane	19.780	0.50	20.00	0	98.9	70	120				
Bromoform	23.700	0.50	20.00	0	118	66	120				
Bromomethane	27.670	0.50	20.00	0	138	48	155				
Carbon tetrachloride	21.640	0.50	20.00	0	108	60	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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**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

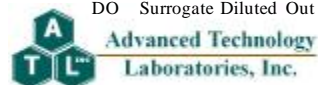
**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130401LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548362</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.980	0.50	20.00	0	99.9	80	120				
Chloroethane	20.620	0.50	20.00	0	103	62	147				
Chloroform	19.720	0.50	20.00	0	98.6	80	120				
Chloromethane	12.830	0.50	20.00	0	64.2	63	121				
cis-1,2-Dichloroethene	18.990	0.50	20.00	0	95.0	80	120				
Dibromochloromethane	21.830	0.50	20.00	0	109	67	123				
Dibromomethane	19.740	0.50	20.00	0	98.7	80	120				
Dichlorodifluoromethane	15.170	0.50	20.00	0	75.8	70	121				
Ethylbenzene	19.180	0.50	20.00	0	95.9	80	120				
Hexachlorobutadiene	22.630	0.50	20.00	0	113	80	123				
Isopropylbenzene	19.730	0.50	20.00	0	98.6	80	121				
m,p-Xylene	39.160	1.0	40.00	0	97.9	80	120				
Methylene chloride	18.070	2.0	20.00	0	90.4	75	120				
MTBE	17.910	0.50	20.00	0	89.6	70	120				
n-Butylbenzene	20.300	0.50	20.00	0	102	80	129				
n-Propylbenzene	19.320	0.50	20.00	0	96.6	80	122				
Naphthalene	21.790	0.50	20.00	0	109	73	127				
o-Xylene	19.520	0.50	20.00	0	97.6	80	120				
sec-Butylbenzene	19.850	0.50	20.00	0	99.2	80	120				
Styrene	20.520	0.50	20.00	0	103	80	120				
tert-Butylbenzene	20.230	0.50	20.00	0	101	80	120				
Tetrachloroethene	20.100	0.50	20.00	0	101	80	121				
Toluene	19.590	0.50	20.00	0	98.0	80	120				
trans-1,2-Dichloroethene	19.310	0.50	20.00	0	96.6	80	120				
Trichloroethene	19.760	0.50	20.00	0	98.8	80	120				
Trichlorofluoromethane	22.140	0.50	20.00	0	111	71	148				
Vinyl chloride	17.030	0.50	20.00	0	85.2	80	120				
Surr: 1,2-Dichloroethane-d4	24.430		25.00		97.7	56	120				
Surr: 4-Bromofluorobenzene	24.610		25.00		98.4	80	120				
Surr: Dibromofluoromethane	25.400		25.00		102	72	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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CLIENT: Tetra Tech  
 Work Order: N009889  
 Project: Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: <b>P130401LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548362</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	25.370	25.00	101	80	123
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Sample ID: <b>P130401LCS D</b>	SampType: <b>LCS D</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>LCS S02</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548363</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	21.020	0.50	20.00	0	105	74	122	20.76	1.24	20
1,1,1-Trichloroethane	19.320	0.50	20.00	0	96.6	65	120	20.18	4.35	20
1,1,2,2-Tetrachloroethane	19.060	0.50	20.00	0	95.3	80	120	18.89	0.896	20
1,1,2-Trichloroethane	18.570	0.50	20.00	0	92.8	80	120	18.83	1.39	20
1,1-Dichloroethane	17.370	0.50	20.00	0	86.9	80	120	17.52	0.860	20
1,1-Dichloroethene	21.070	0.50	20.00	0	105	80	120	21.13	0.284	20
1,1-Dichloropropene	19.240	0.50	20.00	0	96.2	80	120	19.02	1.15	20
1,2,3-Trichlorobenzene	22.140	0.50	20.00	0	111	80	124	22.02	0.543	20
1,2,3-Trichloropropane	19.020	0.50	20.00	0	95.1	80	120	18.08	5.07	20
1,2,4-Trichlorobenzene	21.560	0.50	20.00	0	108	80	126	21.26	1.40	20
1,2,4-Trimethylbenzene	20.050	0.50	20.00	0	100	80	123	19.86	0.952	20
1,2-Dibromo-3-chloropropane	21.790	1.0	20.00	0	109	70	120	20.64	5.42	20
1,2-Dibromoethane	19.680	0.50	20.00	0	98.4	80	120	19.67	0.0508	20
1,2-Dichlorobenzene	21.140	0.50	20.00	0	106	80	120	21.18	0.189	20
1,2-Dichloroethane	20.030	0.50	20.00	0	100	80	120	19.18	4.34	20
1,2-Dichloropropane	17.510	0.50	20.00	0	87.6	80	120	17.09	2.43	20
1,3,5-Trimethylbenzene	19.990	0.50	20.00	0	100	80	121	20.06	0.350	20
1,3-Dichlorobenzene	20.580	0.50	20.00	0	103	80	120	20.91	1.59	20
1,3-Dichloropropane	18.860	0.50	20.00	0	94.3	80	120	18.88	0.106	20
1,4-Dichlorobenzene	20.500	0.50	20.00	0	103	80	120	20.54	0.195	20
2,2-Dichloropropane	19.770	0.50	20.00	0	98.8	54	120	20.30	2.65	20
2-Chlorotoluene	19.340	0.50	20.00	0	96.7	80	122	19.47	0.670	20
4-Chlorotoluene	19.590	0.50	20.00	0	98.0	80	120	19.32	1.39	20
4-Isopropyltoluene	20.490	0.50	20.00	0	102	80	122	20.32	0.833	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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CLIENT: Tetra Tech  
 Work Order: N009889  
 Project: Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_WP\_LL

Sample ID: P130401LCSD	SampType: LCSD	TestCode: 8260_WP_LL Units: µg/L				Prep Date:			RunNo: 88267		
Client ID: LCSS02	Batch ID: P13VW054	TestNo: EPA 8260B				Analysis Date: 4/1/2013			SeqNo: 1548363		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.770	0.50	20.00	0	93.8	80	120	18.82	0.266	20	
Bromobenzene	20.830	0.50	20.00	0	104	80	120	20.92	0.431	20	
Bromodichloromethane	19.840	0.50	20.00	0	99.2	70	120	19.78	0.303	20	
Bromoform	23.320	0.50	20.00	0	117	66	120	23.70	1.62	20	
Bromomethane	26.640	0.50	20.00	0	133	48	155	27.67	3.79	20	
Carbon tetrachloride	20.990	0.50	20.00	0	105	60	120	21.64	3.05	20	
Chlorobenzene	20.270	0.50	20.00	0	101	80	120	19.98	1.44	20	
Chloroethane	20.560	0.50	20.00	0	103	62	147	20.62	0.291	20	
Chloroform	19.120	0.50	20.00	0	95.6	80	120	19.72	3.09	20	
Chloromethane	12.720	0.50	20.00	0	63.6	63	121	12.83	0.861	20	
cis-1,2-Dichloroethene	18.730	0.50	20.00	0	93.6	80	120	18.99	1.38	20	
Dibromochloromethane	21.980	0.50	20.00	0	110	67	123	21.83	0.685	20	
Dibromomethane	19.180	0.50	20.00	0	95.9	80	120	19.74	2.88	20	
Dichlorodifluoromethane	14.570	0.50	20.00	0	72.9	70	121	15.17	4.03	20	
Ethylbenzene	19.560	0.50	20.00	0	97.8	80	120	19.18	1.96	20	
Hexachlorobutadiene	22.710	0.50	20.00	0	114	80	123	22.63	0.353	20	
Isopropylbenzene	19.910	0.50	20.00	0	99.6	80	121	19.73	0.908	20	
m,p-Xylene	39.120	1.0	40.00	0	97.8	80	120	39.16	0.102	20	
Methylene chloride	17.580	2.0	20.00	0	87.9	75	120	18.07	2.75	20	
MTBE	17.990	0.50	20.00	0	90.0	70	120	17.91	0.446	20	
n-Butylbenzene	20.240	0.50	20.00	0	101	80	129	20.30	0.296	20	
n-Propylbenzene	19.530	0.50	20.00	0	97.6	80	122	19.32	1.08	20	
Naphthalene	22.080	0.50	20.00	0	110	73	127	21.79	1.32	20	
o-Xylene	19.520	0.50	20.00	0	97.6	80	120	19.52	0	20	
sec-Butylbenzene	19.560	0.50	20.00	0	97.8	80	120	19.85	1.47	20	
Styrene	20.250	0.50	20.00	0	101	80	120	20.52	1.32	20	
tert-Butylbenzene	20.180	0.50	20.00	0	101	80	120	20.23	0.247	20	
Tetrachloroethene	19.940	0.50	20.00	0	99.7	80	121	20.10	0.799	20	
Toluene	19.370	0.50	20.00	0	96.9	80	120	19.59	1.13	20	
trans-1,2-Dichloroethene	19.510	0.50	20.00	0	97.6	80	120	19.31	1.03	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   |  |



**Advanced Technology  
Laboratories, Inc.**

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**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130401LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548363</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene	19.950	0.50	20.00	0	99.8	80	120	19.76	0.957	20	
Trichlorofluoromethane	21.850	0.50	20.00	0	109	71	148	22.14	1.32	20	
Vinyl chloride	16.510	0.50	20.00	0	82.6	80	120	17.03	3.10	20	
Surr: 1,2-Dichloroethane-d4	24.700		25.00		98.8	56	120		0		
Surr: 4-Bromofluorobenzene	24.360		25.00		97.4	80	120		0		
Surr: Dibromofluoromethane	24.630		25.00		98.5	72	120		0		
Surr: Toluene-d8	25.080		25.00		100	80	123		0		

Sample ID: <b>P130401MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>	Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548364</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	1.0									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									

**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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>P130401MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>
Client ID: <b>PBW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548364</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									
MTBE	ND	0.50									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									

**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: 8260\_WP\_LL**

Sample ID: <b>P130401MB2</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>PBW</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548364</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	24.340		25.00		97.4	56	120				
Surr: 4-Bromofluorobenzene	22.740		25.00		91.0	80	120				
Surr: Dibromofluoromethane	25.560		25.00		102	72	120				
Surr: Toluene-d8	25.050		25.00		100	80	123				

Sample ID: <b>N009901-004ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548372</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,1-Trichloroethane	ND	0.50						0	0	20	
1,1,2,2-Tetrachloroethane	ND	0.50						0	0	20	
1,1,2-Trichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethane	ND	0.50						0	0	20	
1,1-Dichloroethene	ND	0.50						0	0	20	
1,1-Dichloropropene	ND	0.50						0	0	20	
1,2,3-Trichlorobenzene	ND	0.50						0	0	20	
1,2,3-Trichloropropane	ND	0.50						0	0	20	
1,2,4-Trichlorobenzene	ND	0.50						0	0	20	
1,2,4-Trimethylbenzene	ND	0.50						0	0	20	
1,2-Dibromo-3-chloropropane	ND	1.0						0	0	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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Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009901-004ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548372</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.50						0	0	20	
1,2-Dichlorobenzene	ND	0.50						0	0	20	
1,2-Dichloroethane	ND	0.50						0	0	20	
1,2-Dichloropropane	ND	0.50						0	0	20	
1,3,5-Trimethylbenzene	ND	0.50						0	0	20	
1,3-Dichlorobenzene	ND	0.50						0	0	20	
1,3-Dichloropropane	ND	0.50						0	0	20	
1,4-Dichlorobenzene	ND	0.50						0	0	20	
2,2-Dichloropropane	ND	0.50						0	0	20	
2-Chlorotoluene	ND	0.50						0	0	20	
4-Chlorotoluene	ND	0.50						0	0	20	
4-Isopropyltoluene	ND	0.50						0	0	20	
Benzene	ND	0.50						0	0	20	
Bromobenzene	ND	0.50						0	0	20	
Bromodichloromethane	ND	0.50						0	0	20	
Bromoform	ND	0.50						0	0	20	
Bromomethane	ND	0.50						0	0	20	
Carbon tetrachloride	ND	0.50						0	0	20	
Chlorobenzene	ND	0.50						0	0	20	
Chloroethane	ND	0.50						0	0	20	
Chloroform	ND	0.50						0	0	20	
Chloromethane	ND	0.50						0	0	20	
cis-1,2-Dichloroethene	ND	0.50						0	0	20	
Dibromochloromethane	ND	0.50						0	0	20	
Dibromomethane	ND	0.50						0	0	20	
Dichlorodifluoromethane	ND	0.50						0	0	20	
Ethylbenzene	ND	0.50						0	0	20	
Hexachlorobutadiene	ND	0.50						0	0	20	
Isopropylbenzene	ND	0.50						0	0	20	
m,p-Xylene	ND	1.0						0	0	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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

**CLIENT:** Tetra Tech  
**Work Order:** N009889  
**Project:** Maryland Square, 103P172829.01

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260\_WP\_LL**

Sample ID: <b>N009901-004ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>8260_WP_LL</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>88267</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>P13VW054</b>	TestNo: <b>EPA 8260B</b>		Analysis Date: <b>4/1/2013</b>	SeqNo: <b>1548372</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	2.0						0	0	20	
MTBE	ND	0.50						0	0	20	
n-Butylbenzene	ND	0.50						0	0	20	
n-Propylbenzene	ND	0.50						0	0	20	
Naphthalene	0.880	0.50						0.7000	22.8	20	R
o-Xylene	ND	0.50						0	0	20	
sec-Butylbenzene	ND	0.50						0	0	20	
Styrene	ND	0.50						0	0	20	
tert-Butylbenzene	ND	0.50						0	0	20	
Tetrachloroethene	ND	0.50						0	0	20	
Toluene	ND	0.50						0	0	20	
trans-1,2-Dichloroethene	ND	0.50						0	0	20	
Trichloroethene	0.990	0.50						1.030	3.96	20	
Trichlorofluoromethane	ND	0.50						0	0	20	
Vinyl chloride	ND	0.50						0	0	20	
Surr: 1,2-Dichloroethane-d4	25.810		25.00		103	56	120		0		
Surr: 4-Bromofluorobenzene	23.150		25.00		92.6	80	120		0		
Surr: Dibromofluoromethane	26.410		25.00		106	72	120		0		
Surr: Toluene-d8	24.360		25.00		97.4	80	123		0		

**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   |  |



**Advanced Technology  
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

# CHAIN OF CUSTODY RECORD FOR LABORATORY USE ONLY:

Page 1 of 1

**Advanced Technology Laboratories, Inc.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

RO.# 10SP178829.01  
 Logged By: BDANO Date: 3/24

Method of Transport  
 Client  ATL INC  FEDEX  Other: \_\_\_\_\_

Sample Condition Upon Receipt  
 1. CHILLED 2.7°C  N  4. SEALED  N   
 2. HEADSPACE (VOA)  N  5. # OF SPLS MATCH COC  N   
 3. CONTAINER INTACT  N  6. PRESERVED  N

Client: Tetra Tech  
 Attn: Rob Manriquez  
 Project Name: Marginal Square  
 Relinquished by: (Signature and Printed name) BDANO Date: 3/24  
 Relinquished by: (Signature and Printed name) BDANO Date: 3/24  
 Relinquished by: (Signature and Printed name) \_\_\_\_\_ Date: \_\_\_\_\_

Address: 1200 Columbia St #1000 City: San Diego State: CA Zip Code: 92101  
 Project #: 10SP178829.01  
 Sampler: \_\_\_\_\_  
 Received by: (Signature and Printed name) [Signature] Date: 3/24  
 Received by: (Signature and Printed name) \_\_\_\_\_ Date: \_\_\_\_\_  
 Received by: (Signature and Printed name) \_\_\_\_\_ Date: \_\_\_\_\_

Special Instructions/Comments:  
email results when ready  
becki.dano@tetratech.com  
Christ.Christian@tetratech.com  
Liz.Medler@tetratech.com


LAB USE ONLY: Batch #:	Lab No.	Sample Description	Sample I.D. / Location		Date	Time	ANALYSIS REQUESTED		PRESERVATION		QA/QC	REMARKS
			8360B (NO3)	8360B (BTEX) (MTBE)			8015B (GRO)	8015B (DRO) (Motor Oil/RO)	RCRA6 (60108/700)	Water		
	N009889-1	AMT-1-1			3/25	1141	X	X	X	X	X	
	-2	AMT-1-2			3/25	1300	X	X	X	X	X	
	-3	AMT-1-3			3/25	1445	X	X	X	X	X	
	-4	AMT-1-4			3/25	1108	X	X	X	X	X	
	-5	AMT-1-5			3/25	1800	X	X	X	X	X	
	-6	AMT-1-6			3/25	1915	X	X	X	X	X	
	-7	AMT-1-7			3/25	2035	X	X	X	X	X	
	-8	MW-20D3			3/26	0955	X	X	X	X	X	
	-9	MW-20D2			3/26	1045	X	X	X	X	X	
	-10	MW-20D1			3/26	1127	X	X	X	X	X	

•TAT starts 8 a.m. following day if samples received after 3 p.m.  
 TAT:  A=Overnight  B=Emergency  C=Critical  D=Urgent  E=Routine  
 Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Bedlar G=Glass F=Plastic M=Metal  
 Preservatives: H=HCl N=HNO3 S=H2SO4 C=4°C Z=Zn(Ac)2 O=NaOH T=Na2S2O3

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter



# CHAIN OF CUSTODY RECORD



**Advanced Technology Laboratories, Inc.**  
 3151-3153 W. Post Rd.  
 Las Vegas, NV 89118  
 Tel: (702) 307-2659 • Fax: (702) 307-2691

**FOR LABORATORY USE ONLY:**

P.O.# 103P17282901      Sample Condition Upon Receipt  
 1. CHILLED  Y  N      4. SEALED  Y  N  N

Logged By: BDew      Date: 3/26/03      2. HEADSPACE (VOA)  Y  N      5. # OF SPLS MATCH COC  Y  N  N

3. CONTAINER INTACT  Y  N      6. PRESERVED  Y  N  N

Client: Tetra Tech      Address: 1250 Columbia St #1020      State: CA      Zip Code: 92101      TEL: (      )

Attn: Rob Henriquez      City: San Diego      State: CA      Zip Code: 92101      FAX: (      )

Project Name: Ward and Spore      Project #: 103P17282901      Samplet: BRANDANO      (Printed Name)  
Attest to the validity and integrity of this Chain of Custody by signing this sample location, date or time of collection is considered fraud and may be grounds for legal action.

Relinquished by: (Signature and Printed name) Rob Henriquez      Date: 3/26/03      Time: 1357      Received by: (Signature and Printed name) [Signature]      Date: 3/26/03      Time: 1357

Relinquished by: (Signature and Printed name) \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_

Relinquished by: (Signature and Printed name) \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_

I hereby authorize ATL INC to perform the work indicated below:

Project Mgr/Submitter: BRANDANO      Date: 3/24      Date: \_\_\_\_\_      Time: \_\_\_\_\_

Print Name: BRANDANO      Signature: [Signature]      Date: \_\_\_\_\_

Send Report To: \_\_\_\_\_      Date: \_\_\_\_\_

Attn: Rob Henriquez      Address: 1250 Columbia St #1020      State: CA      Zip: 92101

Co: \_\_\_\_\_      City: San Diego      State: CA      Zip: 92101

Address: \_\_\_\_\_      City: \_\_\_\_\_      State: \_\_\_\_\_      Zip: \_\_\_\_\_

Special Instructions/Comments: See page 1

**Sample/Records-Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
**Storage Fees (applies when storage is requested):**  
 • Sample : \$ 2.00 / sample / mo (after 45 days)  
 • Records : \$ 1.00 / ATL workorder / mo (after 1 year)

LAB USE ONLY: Batch #:	Sample Description	Sample I.D. / Location		Date	Time	Q/A/QC	PRESERVATION		REMARKS
		Sample I.D.	Location				Container(s)	Type	
1009889-11	MW-20			3/26	1250	RTWE <input type="checkbox"/>	WATER	SOIL	
						CT <input type="checkbox"/>	GROUND WATER		
						RWQCB <input type="checkbox"/>	WASTEWATER		
						LEVEL IV <input type="checkbox"/>			
						OTHER <input type="checkbox"/>			

\*TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT:  A= Overnight ≤ 24 hr       B= Next workday       C= Critical 2 Workdays       D= Urgent 3 Workdays       E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pin L=Jar B=fecllar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO<sub>3</sub> S=H<sub>2</sub>SO<sub>4</sub> C=H<sub>2</sub>O<sub>2</sub>      Z=Zn(AC)<sub>2</sub> O=NaOH T=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter

# Advanced Technology Laboratories, Inc.

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: 3/26/2013 Workorder: N009889  
Rep sample Temp (Deg C): 2.7 IR Gun ID: 1  
Temp Blank:  Yes  No  
Carrier name: ATL  
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?<br>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?<br>Was Client notified?                 | Yes <input type="checkbox"/><br>Yes <input type="checkbox"/> | No <input type="checkbox"/><br>No <input type="checkbox"/> | NA <input checked="" type="checkbox"/><br>NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed B MBC MBC 3/27/13

Reviewed By: *7idi*

Maryland Square PCE Site

**APPENDIX C**  
MANN-KENDALL TEND TEST FOR  
PLUME STABILITY

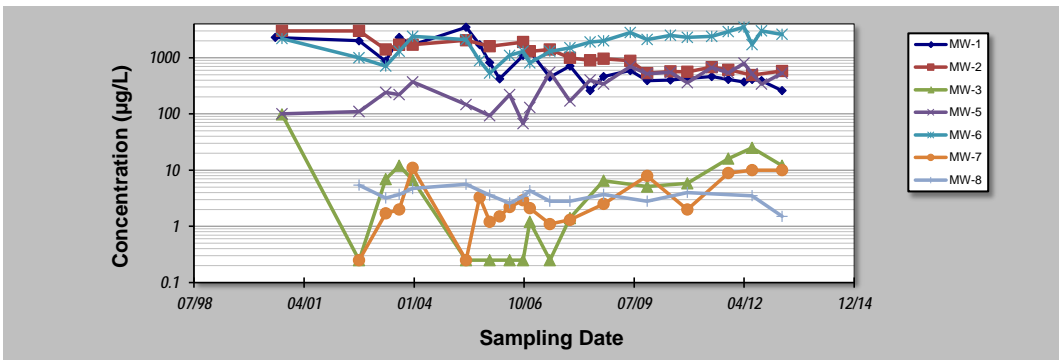
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>28-Apr-13</b>	Job ID: <b>085.42620.0001</b>
Facility Name: <b>Maryland Square PCE Site</b>	Constituent: <b>PCE</b>
Conducted By: <b>Cardno ATC</b>	Concentration Units: <b>µg/L</b>

Sampling Point ID:	<b>MW-1</b>	<b>MW-2</b>	<b>MW-3</b>	<b>MW-5</b>	<b>MW-6</b>	<b>MW-7</b>	<b>MW-8</b>
--------------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

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	Mar 07								
15	Jun 07	450	1,400	0.25	550	1,300	1.1	2.8	
16	Sep 07								
17	Dec 07	710	1,000	1.4	170	1,500	1.3	2.8	
18	Mar 08								
19	Jun 08	260	900		400	1,900			
20	Oct 08	460	960	6.5	340	2,000	2.5	3.7	
21	Feb 09								
22	Jun 09	590	880		700	2,800			
23	Sep 09								
24	Nov 09	390	530	5.1	520	2,100	7.9	2.8	
25	Feb 10								
26	Jun 10	400	570		550	2,500			
27	Oct 10								
28	Nov 10	430	560	5.8	360	2,300	2	4	
29	Mar 11								
30	Jun 11	460	680		670	2,400			
31	Sep 11								
32	Nov 11	410	610	16	540	2,900	8.9		
33	Mar 12	370			800	3,500			
34	Jun 12	410	490	25	520	1,700	10	3.5	
35	Sep 12	390			340	3,000			
36	Nov 12								
37	Mar 13	260	580	12	530	2,600	10	1.5	
38									
39									
40									

Coefficient of Variation:	0.87	0.59	2.07	0.60	0.43	0.97	0.29
Mann-Kendall Statistic (S):	-196	-159	29	130	154	66	-38
Confidence Factor:	>99.9%	>99.9%	85.3%	100.0%	>99.9%	98.9%	95.2%
Concentration Trend:	Decreasing	Decreasing	No Trend	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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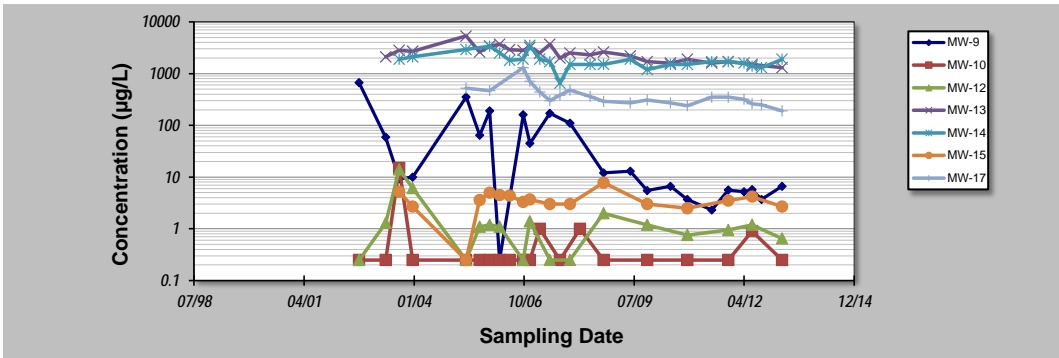
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>28-Apr-13</b>	Job ID: <b>085.42620.0001</b>
Facility Name: <b>Maryland Square PCE Site</b>	Constituent: <b>PCE</b>
Conducted By: <b>Cardo ATC</b>	Concentration Units: <b>µg/L</b>

Sampling Point ID:	<b>MW-9</b>	<b>MW-10</b>	<b>MW-12</b>	<b>MW-13</b>	<b>MW-14</b>	<b>MW-15</b>	<b>MW-17</b>
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Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-9	MW-10	MW-12	MW-13	MW-14	MW-15	MW-17
1	Aug 00							
2	Oct 00							
3	Sep 02	670	0.25	0.25				
4	May 03	59	0.25	1.3	2,100			
5	Sep 03	9.2	15	14	2,800	1,900	5.2	
6	Jan 04	10	0.25	6.1	2,700	2,100	2.7	
7	May 05	353	0.25	0.25	5,310	2,920	0.25	520
8	Sep 05	64	0.25	1.1	2,600		3.6	
9	Dec 05	190	0.25	1.2	3,400	3,400	5	470
10	Mar 06	0.25	0.25	1.1	3,700	2,500	4.5	
11	Jun 06		0.25		2,900	1,800	4.4	
12	Oct 06	160	0.25	0.25	2,800	1,900	3.3	1,300
13	Dec 06	45	0.25	1.4	3,200	3,500	3.7	710
14	Mar 07		1		2,500	1,900		440
15	Jun 07	170		0.25	3,700	1,700	3	300
16	Sep 07		0.25		2,000	650		380
17	Dec 07	110		0.25	2,500	1,500	3	480
18	Mar 08		1					
19	Jun 08				2,300	1,500		360
20	Oct 08	12	0.25	2	2,600	1,500	7.8	290
21	Feb 09							
22	Jun 09	13			2,200	1,900		270
23	Sep 09							
24	Nov 09	5.5	0.25	1.2	1,700	1,200	3	310
25	Feb 10							
26	Jun 10	6.6			1,600	1,500		270
27	Oct 10							
28	Nov 10	3.7	0.25	0.76	1,900	1,500	2.5	240
29	Mar 11							
30	Jun 11	2.3			1,600	1,700		350
31	Sep 11							
32	Nov 11	5.6	0.25	0.95	1,700	1,700	3.5	350
33	Mar 12	5.2			1,600	1,600		320
34	Jun 12	5.7	0.9	1.2	1,500	1,400	4.2	260
35	Sep 12	3.7			1,300			250
36	Nov 12							
37	Mar 13	6.6	0.25	0.65	1,300	1,900	2.7	190
38								
39								
40								

Coefficient of Variation:	1.86	3.00	1.73	0.36	0.35	0.43	0.60
Mann-Kendall Statistic (S):	-117	7	-17	-164	-113	-24	-122
Confidence Factor:	99.9%	57.7%	72.5%	>99.9%	99.8%	82.6%	>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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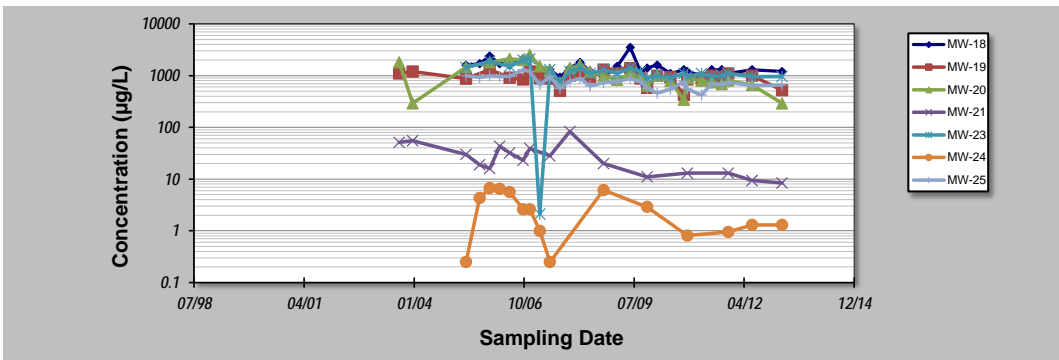
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>28-Apr-13</b>	Job ID: <b>085.42620.0001</b>
Facility Name: <b>Maryland Square PCE Site</b>	Constituent: <b>PCE</b>
Conducted By: <b>Cardno ATC</b>	Concentration Units: <b>µg/L</b>

Sampling Point ID:	<b>MW-18</b>	<b>MW-19</b>	<b>MW-20</b>	<b>MW-21</b>	<b>MW-23</b>	<b>MW-24</b>	<b>MW-25</b>
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Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-18	MW-19	MW-20	MW-21	MW-23	MW-24	MW-25
1	Aug 00							
2	Oct 00							
3	Sep 02							
4	May 03							
5	Sep 03		1,100	1,800	51			
6	Jan 04		1,200	290	55			
7	May 05	1,600	873	1,460	30	1,430	0.25	993
8	Sep 05	1,700			19		4.3	920
9	Dec 05	2,400	1,300	1,800	16	1,900	6.7	1,000
10	Mar 06	1,700			43		6.5	970
11	Jun 06	1,600	910	2,100	32	1,500	5.6	960
12	Oct 06	2,100	840	2,000	23	2,000	2.6	1,300
13	Dec 06	1,400	1,200	2,500	39	2,100	2.6	1,200
14	Mar 07	1,400	890	1,500		2.1	1	670
15	Jun 07	1,300	870	1,300	28	1,300	0.25	960
16	Sep 07	930	510	730		750		560
17	Dec 07	1,400	990	1,400	83	1,200		780
18	Mar 08	1,800	1,200	1,600		1,400		890
19	Jun 08	1,200	930	1,200		1,100		630
20	Oct 08	950	1,300	1,000	20	1,300	6.1	730
21	Feb 09	1,500		830		1,100		770
22	Jun 09	3,500	1,400	1,100		1,400		880
23	Sep 09	1,200	880	940		1,200		770
24	Nov 09	1,400	580	640	11	880	2.9	570
25	Feb 10	1,600	990	990		1,000		460
26	Jun 10	1,100	930	780		900		550
27	Oct 10	1,300	420	340		1,100		760
28	Nov 10	1,200	840	890	13	970	0.81	550
29	Mar 11	1,000	880	800		1,100		420
30	Jun 11	1,300	1,000	740		970		700
31	Sep 11	1,300	950	680		1,000		680
32	Nov 11	1,100	1,100	800	13	1,100	0.95	740
33	Mar 12							
34	Jun 12	1,300	1,000	660	9.4	950	1.3	640
35	Sep 12							
36	Nov 12							
37	Mar 13	1,200	520	290	8.4	960	1.3	660
38								
39								
40								

Coefficient of Variation:	0.35	0.26	0.51	0.69	0.35	0.82	0.27
Mann-Kendall Statistic (S):	-147	-35	-213	-73	-138	-28	-193
Confidence Factor:	99.8%	75.9%	>99.9%	99.9%	99.9%	90.8%	>99.9%
Concentration Trend:	Decreasing	Stable	Decreasing	Decreasing	Decreasing	Prob. 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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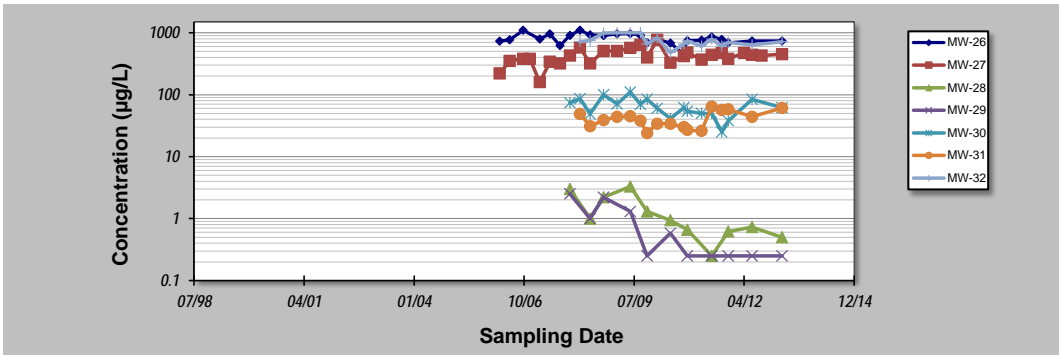
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>28-Apr-13</b>	Job ID: <b>085.42620.0001</b>
Facility Name: <b>Maryland Square PCE Site</b>	Constituent: <b>PCE</b>
Conducted By: <b>Cardno ATC</b>	Concentration Units: <b>µg/L</b>

Sampling Point ID:	<b>MW-26</b>	<b>MW-27</b>	<b>MW-28</b>	<b>MW-29</b>	<b>MW-30</b>	<b>MW-31</b>	<b>MW-32</b>
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Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-26	MW-27	MW-28	MW-29	MW-30	MW-31	MW-32
1	Aug 00							
2	Oct 00							
3	Sep 02							
4	May 03							
5	Sep 03							
6	Jan 04							
7	May 05							
8	Sep 05							
9	Dec 05							
10	Mar 06	730	220					
11	Jun 06	770	350					
12	Oct 06	1,100	380					
13	Dec 06		380					
14	Mar 07	790	160					
15	Jun 07	960	340					
16	Sep 07	620	320					
17	Dec 07	910	430	3	3	74		
18	Mar 08	1,100	580			86	49	720
19	Jun 08	930	320	1	1.0	49	31	750
20	Oct 08	900	510	2.2	2.2	100	39	990
21	Feb 09	960	510			71	44	1,000
22	Jun 09	970	570	3.3	1.3	110	45	1,000
23	Sep 09	910	640			70	38	1,000
24	Nov 09	690	400	1.3	0.25	85	24	660
25	Feb 10	790	770			60	34	830
26	Jun 10	680	330	0.94	0.58	41	34	480
27	Oct 10	450	420			62	30	660
28	Nov 10	750	480	0.66	0.25	54	27	740
29	Mar 11	760	370			50	26	610
30	Jun 11	860	440	0.25	0.25	50	64	790
31	Sep 11	780	470			25	57	610
32	Nov 11	690	380	0.62	0.25	38	58	700
33	Mar 12		470					
34	Jun 12	740	440	0.73	0.25	84	44	640
35	Sep 12		430					
36	Nov 12							
37	Mar 13	740	450	0.50	0.25	62	61	720
38								
39								
40								

Coefficient of Variation:	0.18	0.29	0.79	1.01	0.34	0.31	0.21
Mann-Kendall Statistic (S):	-74	93	-35	-34	-59	16	-42
Confidence Factor:	96.5%	97.3%	99.7%	99.6%	98.7%	72.9%	95.4%
Concentration Trend:	Decreasing	Increasing	Decreasing	Decreasing	Decreasing	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.
- 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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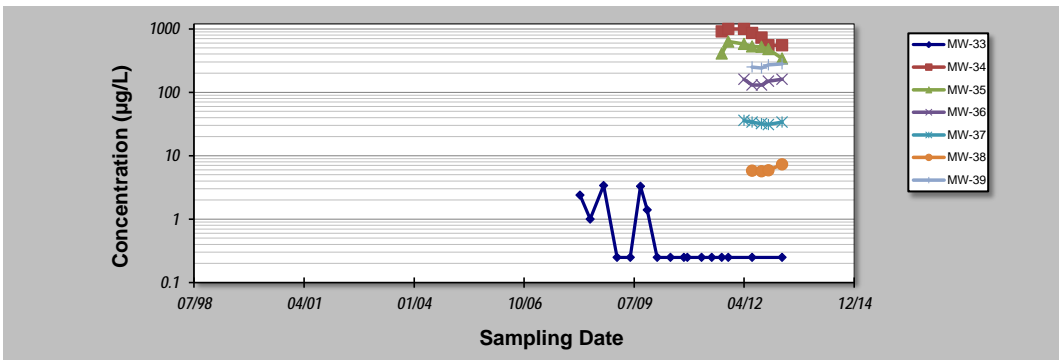
## GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: <b>28-Apr-13</b>	Job ID: <b>085.42620.0001</b>
Facility Name: <b>Maryland Square PCE Site</b>	Constituent: <b>PCE</b>
Conducted By: <b>Cardno ATC</b>	Concentration Units: <b>µg/L</b>

Sampling Point ID:	<b>MW-33</b>	<b>MW-34</b>	<b>MW-35</b>	<b>MW-36</b>	<b>MW-37</b>	<b>MW-38</b>	<b>MW-39</b>
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Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
		MW-33	MW-34	MW-35	MW-36	MW-37	MW-38	MW-39
1	Aug 00							
2	Oct 00							
3	Sep 02							
4	May 03							
5	Sep 03							
6	Jan 04							
7	May 05							
8	Sep 05							
9	Dec 05							
10	Mar 06							
11	Jun 06							
12	Oct 06							
13	Dec 06							
14	Mar 07							
15	Jun 07							
16	Sep 07							
17	Dec 07							
18	Mar 08	2.4						
19	Jun 08	1.0						
20	Oct 08	3.4						
21	Feb 09	0.25						
22	Jun 09	0.25						
23	Sep 09	3.3						
24	Nov 09	1.4						
25	Feb 10	0.25						
26	Jun 10	0.25						
27	Oct 10	0.25						
28	Nov 10	0.25						
29	Mar 11	0.25						
30	Jun 11	0.25						
31	Sep 11	0.25						
32	Nov 11	0.25	910	410				
33	Mar 12	0.25	1,000	580	160	36		
34	Jun 12	0.25	860	530	130	34	5.8	250
35	Sep 12		730	520	130	32	5.7	240
36	Nov 12		550	480	150	31	5.9	270
37	Mar 13	0.25	550	340	160	34	7.3	280
38								
39								
40								

Coefficient of Variation:	1.30	0.24	0.20	0.10	0.06	0.12	0.07
Mann-Kendall Statistic (S):	-52	-15	-11	2	-5	4	4
Confidence Factor:	98.3%	98.5%	93.2%	59.2%	82.1%	83.3%	83.3%
Concentration Trend:	Decreasing	Decreasing	Prob. Decreasing	No Trend	Stable	No Trend	No Trend



- 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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