

**SEMI-ANNUAL GROUNDWATER  
MONITORING REPORT  
BILL CHUN SERVICE STATION  
2301 SANTA CLARA AVENUE  
ALAMEDA, CALIFORNIA**

**RECEIVED**

*By Alameda County Environmental Health at 4:47 pm, Jan 03, 2013*

**PREPARED FOR:**

Ms. Carolyn C. Fong  
Trustee, Lily A. Chun 1991 Trust  
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**PREPARED BY:**

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December 13, 2012  
Project No. 401896004

Fuel Leak Case # RO0000382  
GeoTracker Global ID # T0600100980

December 13, 2012  
Project No. 401896004

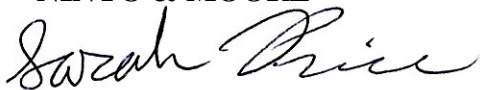
Ms. Carolyn C. Fong  
Trustee, Lily A. Chun 1991 Trust  
720 East Hermosa Drive  
San Gabriel, California 94501

Subject: Semi-Annual Groundwater Monitoring Report  
2301 Santa Clara Avenue  
Alameda, California  
Fuel Leak Case # RO0000382  
GeoTracker Global ID # T0600100980

Dear Ms. Fong:

Ninyo & Moore is pleased to present this Groundwater Monitoring Report for the above-referenced site. This Report discusses the results, and presents conclusions and recommendations of our second semi-annual groundwater monitoring event. We appreciate the opportunity to be of service to you on this project.

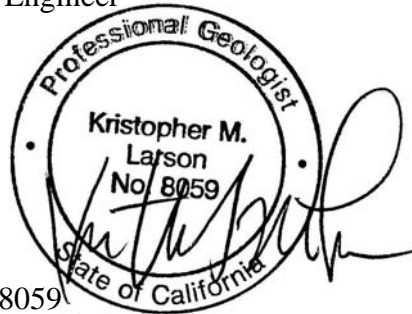
Sincerely,  
**NINYO & MOORE**



Sarah F. Price  
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SFP/PDS/KML/csj

Distribution: (1) Addressee (via e-mail)

December 13, 2012

To: Mr. Jerry Wickham  
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Re: Perjury Statement  
Semi-Annual Groundwater Monitoring Report  
Bill Chun Service Station  
2301 Santa Clara Avenue  
Alameda, California 94501  
SLIC # RO0000382  
Geotracker Global ID # T0600100980

I declare, under penalty of perjury, that the information or recommendations contained in the attached report are true and correct to best of my knowledge.

*Carolyn Fong, Trustee*

Ms. Carolyn Fong  
Trustee for Lily A. Chun 1991 Trust  
711 E. Hermosa Drive  
San Gabriel, California 91775

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## **1. INTRODUCTION**

Ninyo & Moore has conducted Semi-Annual Groundwater Monitoring at the Bill Chun Service property located at 2301 Santa Clara Avenue, in Alameda, County of Alameda, California (site). The attached Report was prepared in general accordance with the proposed groundwater monitoring methodology presented in the Alameda County Environmental Health (ACEH) approved Soil, Soil Gas, and Indoor Air Sampling; Monthly Liquid Phase Petroleum Hydrocarbon (LPH) Monitoring; and Semi-Annual Groundwater Monitoring Work Plan dated August 27, 2012.

### **1.1. Purpose**

The purpose of the Semi-Annual Groundwater Monitoring Report is to monitor LPH in areas where it has been historically measured and to monitor the location and dissolved concentrations of the Total Petroleum Hydrocarbons as gasoline (TPHg) and benzene groundwater plumes.

### **1.2. Site Description**

The site is located at 2301 Santa Clara Avenue, in the City and County of Alameda, California, as presented on Figure 1. The project site is located in a mostly commercial area with some residential buildings. The Site Vicinity is presented on Figure 2. The rectangular lot measures approximately 65 feet long by 40 feet wide. The site is bordered by Oak Street to the northwest, a meeting hall and residences to the northeast and east, a clothing store to the southeast (formerly Towata Flowers) and by Santa Clara Avenue to the southwest.

### **1.3. Site Background**

The site is a former gasoline service station, and has been the subject of numerous subsurface assessments, remedial action plans, groundwater monitoring and closure petitions since 1993, when three underground storage tanks (USTs) were removed from the site. The site is listed as a Leaking Underground Storage Tank (LUST) facility on the Regional Water Quality Control Board (RWQCB) GeoTracker database and as a Leaking

Underground Fuel Tank (LUFT) and Spills, Leaks, Investigation and Cleanup (SLIC) facility on the ACEH database.

In February 2012, Ninyo & Moore conducted a site and well inspection, and subsequently prepared a Well Inspection Report and Groundwater Sampling Plan, dated February 23, 2012. In a letter dated March 20, 2012, the ACEH requested that well installation and groundwater sampling be implemented and that a Well Installation and Groundwater Sampling Report be prepared and submitted.

In June 2012, Ninyo & Moore prepared a Well Installation and Groundwater Sampling Report for the site. The report discussed environmental tasks performed in May 2012, including abandoning or replacing groundwater monitoring wells that were incorrectly screened, blocked, or damaged, and conducting a groundwater monitoring event for new (replacement) and existing site wells. Groundwater monitoring results included reported concentrations of TPHg ranging from less than the laboratory detection limit in wells MW-9, MW-10, and MW-14 to 160,000 micrograms per liter (ug/l) in well MW-7R (well locations are indicated on Figure 3). Reported concentrations of benzene in groundwater ranged from less than the laboratory detection limit in wells MW-9, MW-10, MW-13, MW-14, and MW-16 to 14,000 ug/l in well MW-7R. The area with the highest concentrations of TPHg and benzene were reported in wells surrounding the former USTs, with the highest results detected in well MW-7R. The report recommendations included performing soil, soil gas, and indoor air sampling; monthly LPH monitoring and removal; and semi-annual groundwater monitoring.

Based on recommendations included in the June 2012 Ninyo & Moore report, the ACEH issued a Directive letter in July 2012 requesting a Work Plan for the additional environmental services discussed in the Ninyo & Moore report. Subsequently, Ninyo & Moore prepared the Soil, Soil Gas, and Indoor Air Sampling; Monthly LPH Monitoring; and Semi-Annual Groundwater Monitoring Work Plan, dated August 27, 2012 which included monthly LPH monitoring and semi-annual groundwater monitoring. .

## **2. HISTORICAL CONSTITUENT OF CONCERN CONCENTRATIONS IN GROUNDWATER**

In their directive letter dated September 8, 2011, the ACEH requested that historical COC concentrations in each well be presented in a clear and concise manner. As part of the June 2012 Well Installation and Groundwater Sampling Report, Ninyo & Moore obtained historical data from reports found on the online GeoTracker database and the data is presented in Appendix A. Historical contaminants of concern (COC) concentrations in each well are presented separately.

Historically, concentrations of petroleum constituents in former onsite wells MW-1, MW-2, MW-4, MW-5, MW-6 and EW-13, and existing wells EW-15 and EW-16, had decreased considerably since from September 2000 to April 2011. However, COC concentrations in these wells have generally shown an increase from February or August 2010 to April 2011. Former onsite wells MW-7 (replaced) and EW-12 (abandoned) were last sampled in 2004, and most likely contained LPH. Concentrations of COCs in offsite wells MW-8, MW-9 and MW-10 have historically been reported at concentrations below the laboratory reporting limits. In offsite well MW-11 (replaced), COC concentrations have shown an overall decreasing trend with an increase in 2010. COC concentrations in offsite wells MW-12 (formerly BL) and MW-13 (formerly BG) have been reported below the laboratory reporting limits since 2006, and in offsite well MW-14 (formerly BF) since 2009. In offsite well MW-15 (formerly BH), COC concentrations have been reported near or below laboratory reporting limits since 2007.

On May 10, 2012, Ninyo & Moore collected groundwater samples from all on and off site monitoring wells. Surveyed locations of the monitoring wells are presented on Figure 3. Groundwater monitoring results included reported concentrations of TPHg ranging from less than the laboratory detection limit in wells MW-9, MW-10, and MW-14 to 160,000 ug/l in well MW-7R. Reported concentrations of benzene in groundwater ranged from less than the laboratory detection limit in wells MW-9, MW-10, MW-13, MW-14, and MW-16 to 14,000 ug/l in well MW-7R. The area with the highest concentrations of TPHg and benzene were reported in wells surrounding the former USTs, with the highest results detected in well MW-7R. Based on the analytical results of the May 2011 sampling event, the dissolved-groundwater plume

appeared to be migrating off site toward the southwest and northeast directions from the former UST locations forming a lens-shaped plume.

### **3. GROUNDWATER SAMPLING EVENT**

Ninyo & Moore conducted the second semi-annual groundwater sampling event on monitoring wells MW-4R, MW-5R, MW-6R, MW-7R, MW-8, MW-10, MW-11R, MW-12, MW-14, and MW-16 on November 14, 2012. Shallow groundwater gradient, flow direction and constituent concentrations are illustrated on Figures 4 through 6.

#### **3.1. Depth to Groundwater Measurements and Groundwater Flow Direction**

In order to allow the groundwater level to reach equilibrium in each well, the well caps were removed approximately 20 minutes prior to the measurement of the depth to static groundwater from top of casing using a water level meter accurate to 0.01 feet. A LPH detector was initially lowered into the well to determine if any LPH was present. The water-level indicator and the LPH detector were decontaminated between wells using a triple rinse wash with a non-phosphate detergent and acetone, respectively.

#### **3.2. Groundwater Sampling**

Prior to sample collection, a minimum of three casing volumes of groundwater were purged from each monitoring well using a peristaltic pump or bailer. New and unused tubing or bailers were used in each well to avoid cross contamination between wells. Groundwater parameters (pH, temperature, and electrical conductivity) and physical characteristics were recorded during purging. Copies of the groundwater sampling field data sheets are presented in Appendix B.

Subsequent to purging, groundwater samples were collected from each well using a peristaltic pump or bailer. During sample collection, the pump was run at low speed to minimize disturbance of groundwater. The groundwater samples were collected in the appropriate

sample containers, labeled, wrapped in bubble wrap for protection, and placed into a cooler containing ice under chain-of-custody for delivery to Advanced Technologies Laboratories (ATL); a state certified analytical laboratory located in Signal Hill, California.

### **3.3. Decontamination Procedures**

Equipment that came into contact with potentially contaminated water was decontaminated consistently to assure the quality of samples collected and reduce potential cross contamination. Pump tubing or bailers were replaced between each well during purging to prevent cross contamination. Disposable equipment intended for one-time use was not decontaminated. Decontamination occurred prior to and after each use of a piece of equipment. Nitrile gloves were changed between each sample collection to minimize the likelihood of cross contamination.

### **3.4. Groundwater Sample Analysis**

Groundwater samples from each well were laboratory analyzed for TPHg by United States Environmental Protection Agency (EPA) Method 8015B and full list VOCs by EPA Method 8260.

## **4. GROUNDWATER SAMPLING RESULTS**

The following section summarizes the results of the groundwater sampling event conducted on November 14, 2012.

### **4.1. Liquid Phase Hydrocarbons Monitoring**

On October 3, 2012, November 14, 2012 and December 3, 2012, Ninyo & Moore conducted LPH monitoring on monitoring wells MW-2R, MW-5R, and MW-7R and groundwater extraction wells EW-14, EW-15, EW-16, and EW-17. The site wells did not contain any measurable LPH at the time of the monitoring events.



#### **4.2. Depth to Groundwater and Groundwater Flow Direction**

The depth from TOC to groundwater ranged from 7.31 feet below TOC in MW-10 to 9.37 feet below TOC in MW-12 during the November 14, 2012 sampling event. The groundwater level measurements and the calculated groundwater elevations are presented on Table 1.

Groundwater contours and groundwater flow direction are indicated on Figure 4. Based on the contours on Figure 4, the groundwater appears to flow north-northeast within the site boundaries. The calculated groundwater gradient on site is 0.004 foot per feet.

#### **4.3. Groundwater Sample Laboratory Results**

A summary of the groundwater sample analytical results is presented on Table 2 and a copy of the laboratory analytical report is presented in Appendix C. The laboratory results are compared to the Table A of the RWQCB Environmental Screening Levels (ESLs), Residential Land Use, Groundwater is Current or Potential Source of Drinking Water.

##### **4.3.1. TPHg in groundwater**

TPHg concentrations in groundwater ranged from below the laboratory reporting limit of 50 µg/L in wells MW-10, MW-14 and MW-16, to 84,000 µg/L in well MW-7R. The ESL for TPHg is 100 µg/L. TPHg results in shallow groundwater is presented on **Figure 5**.

##### **4.3.2. Benzene in Groundwater**

Benzene concentrations in groundwater ranged from below the laboratory reporting limit of 0.5 µg/L in wells MW-10, MW-14 and MW-16, to 15,000 µg/L in well MW-7R. The ESL for benzene is 1.0 µg/L. Benzene in shallow groundwater is presented on **Figure 6**.

##### **4.3.3. Other VOCs in Groundwater**

Other VOC concentrations in groundwater which exceeded their respective ESL included toluene, ethylbenzene, total xylenes, 1,2-dichloroethane, and naphthalene. The highest concentrations of these COCs included 26,000 µg/L of toluene, 3,700 µg/L of

ethylbenzene, and 19,300 µg/L of total xylenes in well MW-7R; 2.0 µg/L of 1,2-dichloroethane in MW-16; and 660 µg/L of naphthalene in MW-11R.

## **5. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)**

Upon collection, groundwater samples were immediately placed on ice for storage during field activities, pending transportation to the laboratory. At the conclusion of the sampling event, the samples were transferred to Advanced Technology Laboratories, a California ELAP Certified Laboratory, under the appropriate chain-of-custody documentation.

### **5.1. Surrogate Recoveries**

Notes in the laboratory analytical report include “Surrogate recovery was above laboratory acceptance limit” for samples MW-4R, MW-5R, and MW-11R while analyzing for TPHg. According to the laboratory if the surrogate recovery is high it does not affect the sample result. Surrogate recoveries were within the limits established by the laboratory for the remaining sample analyses, therefore the surrogate recovery results are considered satisfactory and acceptable.

### **5.2. Laboratory QA/QC Samples**

The laboratory analyses followed the approved methods. Laboratory QA/QC samples included method blanks, laboratory control samples (LCS), matrix spikes (MS), and matrix spike duplicates (MSD). The percentage recoveries were within the specific acceptance limits for these types of samples, therefore the relevant QA/QC results were satisfactory and acceptable.

Due to the high concentrations of petroleum constituents in many of the samples, the samples were diluted up to 200 times. Therefore, the reporting limits were increased in samples collected from wells MW-5R, MW-7R, MW-11R, and MW-12.

### 5.3. QA/QC Conclusions

No outstanding issues were identified during the course of the QA/QC review. Overall, the presented data are reliable and useable for project decision making.

## 6. GROUNDWATER SAMPLING CONCLUSIONS

Based on the groundwater sampling activities conducted and the laboratory analytical report, Ninyo & Moore presents the following conclusions:

- Based on depth to water measurements collected on November 14, 2012, and surveyed TOC data, the groundwater appears to flow north-northeast within the site boundaries. The calculated groundwater gradient on site is 0.004 foot per feet;
- Liquid Phase Hydrocarbon was not detected in monitoring wells MW-2R, MW-5R, and MW-7R and extraction wells EW-14, EW-15, EW-16, and EW-17 during October 3, November 14, and December 3, 2012 measurement events.
- Dissolved phase TPHg and/or VOC concentrations in groundwater exceed their respective ESLs in several wells, including MW-4R through MW-7R, MW-8, MW-11R, MW-12 and MW-16. Concentrations have slightly decreased from the May 10, 2012 groundwater sampling event with the exception of increases in benzene in MW-7R and MW-11R; ethylbenzene in MW-5R, MW-7R and MW-11R; total xylenes in MW-5R and MW-7R; toluene in MW11R; and naphthalene in MW-11R. Since active remediation has not been conducted, the downward trend, with the exception of benzene, toluene, ethylbenzene, total xylenes and naphthalene where concentrations have fluctuated, can probably be attributed to natural attenuation;
- The dissolved-groundwater plume appears to be migrating off site toward the west to southwest and east to northeast directions from the former UST locations forming a lens-shaped plume;
- Based on the increasing lateral extent and COC concentrations in the dissolved phase groundwater plume, a source of petroleum remains in the subsurface at the site, most likely as residual petroleum in soil.

## 7. RECOMMENDATIONS

Based on the conclusions discussed above, Ninyo & Moore recommends the following:

- Groundwater monitoring should continue on a semi-annual basis for monitoring wells MW-4R through MW-7R, MW8, MW-10, MW-11R, MW-12, MW-14, and MW-16 to further monitor the location and dissolved concentrations of the TPHg and benzene groundwater plume.
- No measurements of LPH were reported in monitoring wells MW-2R, MW-5R, and MW-7R and extraction wells EW-14, EW-15, EW-16, and EW-17 over three consecutive months. Therefore, measurement of LPH on a monthly basis should be discontinued.

## 8. LIMITATIONS

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities. Please also note that this assessment did not include an evaluation of geotechnical conditions or potential geologic hazards.

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited subsurface assessment and chemical analysis. Further assessment of potential adverse environmental impacts from past on-site and/or nearby use of hazardous materials may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated; however, conditions can vary significantly between sampling locations. Variations in soil and/or groundwater conditions will exist beyond the points explored in this evaluation.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and

analyses have been conducted by an independent laboratory which is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Ninyo & Moore's conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than those noted is undertaken at said parties' sole risk.

## 9. REFERENCES

Goldman, Frank, *Groundwater Monitoring Reports and other Reports*, Santa Rosa, California, dated October 25, 2005 through August 8, 2011.

Ninyo & Moore, *Well Inspection Report and Groundwater Sampling Work Plan*, Alameda, California, dated February 23, 2012.

Ninyo & Moore, *Well Installation and Groundwater Sampling Report*, Alameda, California, dated June 30, 2012.

Ninyo & Moore, *Soil Gas, and Indoor Air Sampling; Monthly Liquid Phase Petroleum Hydrocarbon Monitoring; and Semi-Annual Groundwater Monitoring Work Plan*, Alameda, California, dated August 27, 2012.

Ninyo & Moore, *Well Installation and Groundwater Sampling Report*, Alameda, California, dated June 30, 2012.

San Francisco Bay Regional Water Quality Control Board, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final*, Oakland, California, November 2007 (Revised May 2008).



**TABLE 1**  
**SEMI-ANNUAL GROUNDWATER MONITORING DATA**

Well No.	Date	TOC Elevation (feet MSL)	Total Well Depth (feet)	Depth to Liquid (feet)	Depth to Water (feet)	SPH Thickness (feet)	Corrected Groundwater Elevation (feet MSL)	Change in Groundwater Elevation (feet)		Comments
MW-2R	05/10/12	28.56	25.18	7.81	7.81	0.00	20.75	NA	NA	2" Diameter well
MW-2R	11/14/12	28.56	NM	NM	NM	ND	NA	NA	NA	Not Sampled and only gauged for LPH
MW-4R	05/10/12	28.45	25.13	7.86	7.86	0.00	20.59	NA	NA	2" Diameter well
MW-4R	11/14/12	28.45	25.12	8.58	8.58	0.00	19.87	Decrease	-0.72	
MW-5R	05/10/12	28.25	23.79	7.46	7.46	0.00	20.79	NA	NA	2" Diameter well
MW-5R	11/14/12	28.25	23.78	8.41	8.41	0.00	19.84	Decrease	-0.95	
MW-6R	05/10/12	28.07	25.22	7.21	7.21	0.00	20.86	NA	NA	2" Diameter well
MW-6R	11/14/12	28.07	25.20	8.31	8.31	0.00	19.76	Decrease	-1.10	
MW-7R	05/10/12	28.41	25.33	7.63	7.63	0.00	20.78	NA	NA	4" Diameter well
MW-7R	11/14/12	28.41	25.30	8.68	8.68	0.00	19.73	Decrease	-2.48	
MW-8	05/10/12	28.01	14.16	7.74	7.74	0.00	20.27	NA	NA	2" Diameter well
MW-8	11/14/12	28.01	14.15	8.09	8.09	0.00	19.92	Decrease	-0.35	
MW-9	05/10/12	27.23	15.09	6.25	6.25	0.00	20.98	NA	NA	2" Diameter well
MW-9	11/14/12	27.23	NM	NM	NM	NM	NA	NA	NA	Not gauged nor sampled
MW-10	05/10/12	27.45	13.12	6.49	6.49	0.00	20.96	NA	NA	2" Diameter well
MW-10	11/14/12	27.45	13.12	7.31	7.31	0.00	20.14	Decrease	0.03	
MW-11R	05/10/12	28.92	23.87	8.02	8.02	0.00	20.90	NA	NA	2" Diameter well
MW-11R	11/14/12	28.92	23.95	9.18	9.18	0.00	19.74	Decrease	-1.16	
MW-12	05/10/12	28.73	24.37	7.96	7.96	0.00	20.77	NA	NA	2" Diameter well
MW-12	11/14/12	28.73	24.35	9.37	9.37	0.00	19.36	Decrease	-1.41	
MW-13	05/10/12	29.21	20.02	8.57	8.57	0.00	20.64	NA	NA	2" Diameter well
MW-13	11/14/12	29.21	NM	NM	NM	NM	NA	NA	NA	Not gauged nor sampled
MW-14	05/10/12	29.02	11.62	8.28	8.28	0.00	20.74	NA	NA	2" Diameter well
MW-14	11/14/12	29.02	11.71	9.20	9.20	0.00	19.82	Decrease	-0.92	
MW-15	05/10/12	28.53	29.70	7.90	7.90	0.00	20.63	NA	NA	2" Diameter well
MW-15	11/14/12	28.53	NM	NM	NM	NM	NA	NA	NA	Not gauge nor sampled
MW-16	05/10/12	28.52	29.38	7.86	7.86	0.00	20.66	NA	NA	2" Diameter well
MW-16	11/14/12	28.52	29.37	8.92	8.92	0.00	19.60	Decrease	-1.06	Not gauged nor sampled
EW-14	05/10/12	28.89	24.80	8.15	8.15	0.00	20.74	NA	NA	4" Diameter well
EW-14	11/14/12	28.89	NM	NM	NM	ND	NA	NA	NA	Not Sampled and only gauged for LPH
EW-15	05/10/12	28.66	24.50	8.06	8.06	0.00	20.60	NA	NA	4" Diameter well
EW-15	11/14/12	28.66	NM	NM	NM	ND	NA	NA	NA	Not Sampled and only gauged for LPH
EW-16	05/10/12	28.99	24.80	8.37	8.37	0.00	20.62	NA	NA	4" Diameter well
EW-16	11/14/12	28.99	NM	NM	NM	ND	NA	NA	NA	Not Sampled and only gauged for LPH
EW-17	05/10/12	28.89	25.29	8.19	8.19	0.00	20.70	NA	NA	4" Diameter well
EW-17	11/14/12	28.89	NM	NM	NM	ND	NA	NA	NA	Not Sampled and only gauged for LPH
<b>Gradient</b>										
	<b>Date</b>	<b>Gradient and Groundwater Flow Direction</b>	<b>Average Groundwater Elevation (feet MSL)</b>	<b>Change in Average GW Elevation (feet)</b>						
	05/10/12	0.002 SW	20.72	NA						
	11/14/12	0.004 NE	19.78	-0.94						

Notes:  
Top-of-Casing (TOC) elevations were surveyed by Virgil Chavez Land Surveying on May 10, 2012.  
MSL=Mean Sea Level  
NM = Not Measured  
NA = Not Applicable  
ND = Not Detected

**TABLE 2**  
**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Monitoring Well/Sample ID	Sample Date	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-Dichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Chloroform	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert Butylbenzene	Tetrachloroethene
MW-2R	5/10/2012	57,000	9,400	6,500	1,100	5,100	<25	<25	1,100	310	30	<25	96	380	51	270	<25	<25	<25
MW-4R	5/10/2012	3,300	3.3	17	180	824	<0.50	<0.50	210	63	2.7	<0.50	42	89	13	91	10	<0.50	<0.50
MW-4R	11/14/2012	420	51	0.66	0.66	2.54	<0.5	<0.5	3.0	<0.5	<0.5	<0.5	47	68	3.9	7.8	9.1	<0.5	<0.5
MW-5R	5/10/2012	33,000	150	2,700	2,500	11,100	<25	<25	2,400	620	52	<25	210	680	99	630	46	<25	<25
MW-5R	11/14/2012	32,000	130	2,400	2,900	15,200	<5.0	<5.0	3,600	720	<5.0	<5.0	180	620	90	490	33	<5.0	<5.0
MW-6R	5/10/2012	3,600	8.6	52	120	680	<0.50	<0.50	210	67	16	<0.50	20	79	25	50	9.9	<0.50	<0.50
MW-6R	11/14/2012	900	2.4	7.1	83	131	<0.5	<0.5	61	13	0.61	<0.5	12	30	3.2	28	3.1	<0.5	<0.5
MW-7R	5/10/2012	160,000	14,000	42,000	3,900	26,700	<25	<25	3,300	960	49	<25	120	660	<25	370	26	<25	<25
MW-7R	11/14/2012	84,000	15,000	26,000	3,700	19,300	<100	<100	2,300	610	<100	<100	120	480	48 J	370	<100	<100	<100
MW-8	5/10/2012	2,700	15	20	5.3	34	<1.0	<1.0	<1.0	1.4	<0.5	<1.0	24	72	1.7	24	3.8	<1.0	<1.0
MW-8	11/14/2012	790	14	3.0	0.98	5.83	<0.5	<0.5	0.39 J	0.41 J	<0.5	<0.5	13	14	0.80	13	2.2	0.38 J	<0.5
MW-9	5/10/2012	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-10	5/10/2012	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-10	11/14/2012	<50	<0.5	<0.5	<0.5	ND<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-11R	5/10/2012	22,000	<25	170	910	6,300	<25	<25	2,500	760	58	40	92	440	<25	240	<25	<25	<25
MW-11R	11/14/2012	29,000	2.6	330	1,400	9,700	<5.0	<5.0	4,000	950	<5.0	36	170	660	88	450	27	<5.0	<5.0
MW-12	5/10/2012	2,700	600	4.7	160	207	<0.5	<0.5	13	23	0.60	<0.5	10	26	2.3	17	2.3	<0.5	<0.5
MW-12	11/14/2012	1,600	470	2.1	140	63.4	<1.0	<1.0	2.3	20	0.40 J	<1.0	8.5	26	2.1	14	2.1	<1.0	1.2
MW-13	5/10/2012	50	<0.5	<0.5	<0.5	<1.5	8.2	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-14	5/10/2012	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-14	11/14/2012	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-15	5/10/2012	1,800	1.6	1.4	130	38	4.4	2.2	6.2	23	3.0	<0.5	22	14	3.2	28	7.0	<0.5	<0.5
MW-16	5/10/2012	180	<0.5	<0.5	<0.5	<1.5	2.3	2.6	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	5.8	<0.5	<0.5
MW-16	11/14/2012	<50	<0.5	<0.5	<0.5	<1.5	1.2	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5

**TABLE 2**  
**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Monitoring Well/Sample ID	Sample Date	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-Dichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Chloroform	Isopropylbenzene	Napthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert Butylbenzene	Tetrachloroethene
		Analytical Results (ug/L)																	
EW-14	5/10/2012	<b>33,000</b>	<b>4,200</b>	<b>3,300</b>	<b>2,200</b>	<b>10,100</b>	<25	<25	1,200	300	<25	<25	73	<b>280</b>	<25	190	<25	<25	<25
EW-15	5/10/2012	<b>34,000</b>	<b>6,300</b>	<b>6,500</b>	<b>1,200</b>	<b>5,600</b>	<25	<25	690	180	<25	<25	41	<b>160</b>	<25	110	<25	<25	<25
EW-16	5/10/2012	<b>360</b>	<b>40</b>	1.6	1.3	11.4	0.86	<b>0.60</b>	3.5	1.1	<0.5	<0.5	9.3	10	<0.5	5.8	1.6	<25	<25
EW-17	5/10/2012	<b>11,000</b>	<b>2,800</b>	<b>1,600</b>	<b>240</b>	<b>1,280</b>	<25	<25	160	50	<25	<25	52	<b>210</b>	<25	140	<25	<25	<25
<b>ESLs</b>		100	1.0	40	30	20	5.0	0.5	NE	NE	NE	70	NE	17	NE	NE	NE	NE	5.0

Notes:

**Only constituents with a concentration above laboratory detection limits are presented.**

Total Petroleum Hydrocarbons as gasoline was analyzed using EPA Method 8015B.

Volatile Organic Compounds were analyzed using EPA Method 8260B.

µg/L = micrograms per liter

ESL = Regional Water Quality Control Board, Residential Land Use, Environmental Screening Level (groundwater is a current or potential source of drinking water, Table F-1A)

**BOLD** indicates concentration exceeds the ESL.

NE = ESL not established.

< X = indicates not detected above laboratory detection limit of x (detection limits vary, see lab report).

J = Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.





REFERENCE: METRO AREAS OF ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO, AND SANTA CLARA COUNTIES, THOMAS GUIDE, 2008.



SCALE IN FEET



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

**Ninyo & Moore**

**SITE LOCATION**

FIGURE

PROJECT NO.	DATE
401896004	12/12

2301 SANTA CLARA AVENUE  
ALAMEDA, CALIFORNIA

**1**

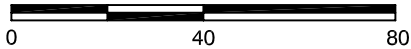




REFERENCE: GOOGLE EARTH, 2012.



SCALE IN FEET



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

**LEGEND**

APPROXIMATE SITE BOUNDARY

**Ninyo & Moore**

**SITE VICINITY**

FIGURE

PROJECT NO.

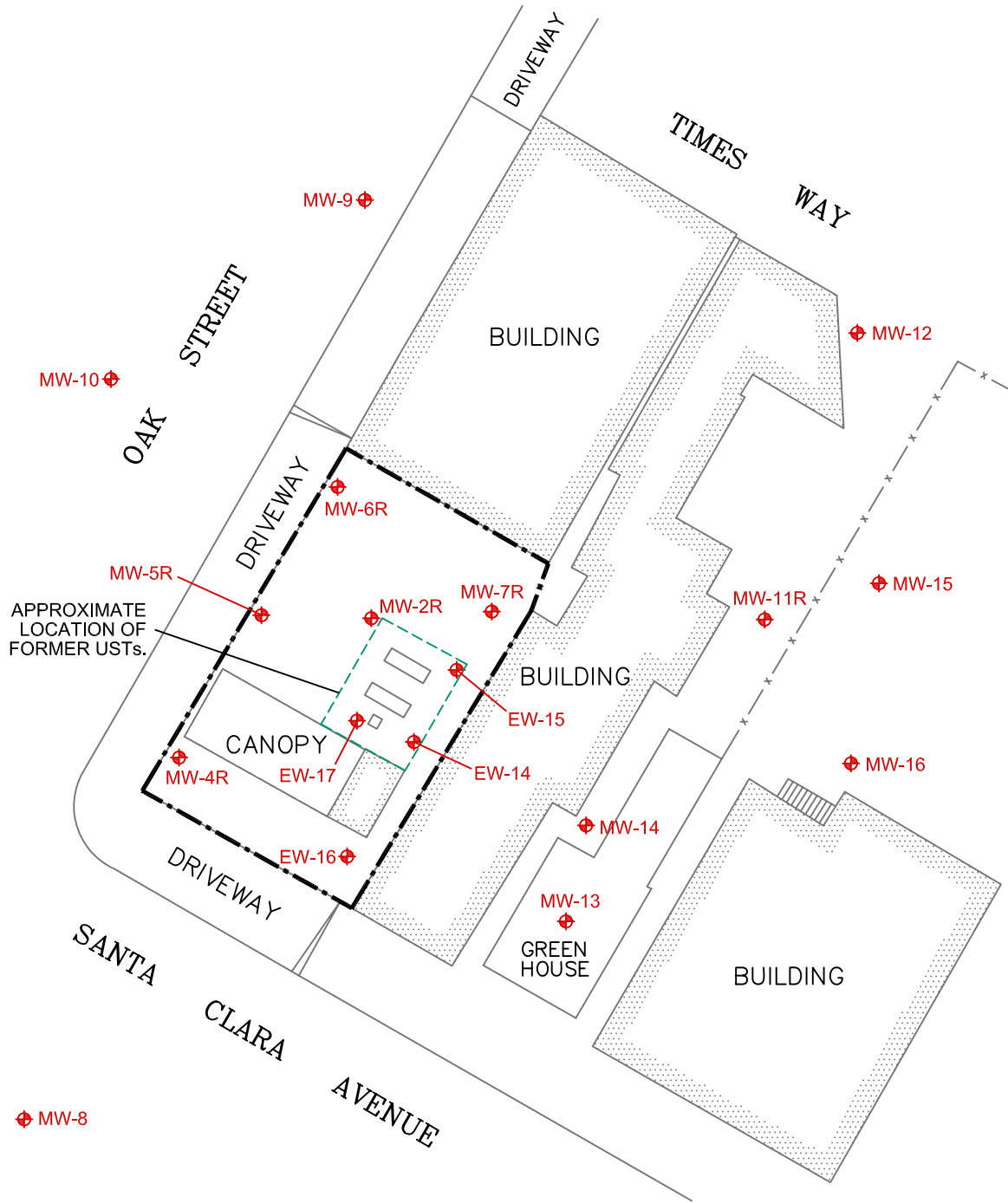
DATE

2301 SANTA CLARA AVENUE  
ALAMEDA, CALIFORNIA

**2**

401896004

12/12



APPROXIMATE LOCATION OF FORMER USTs.

MW-5R

MW-6R

MW-2R

MW-7R

EW-15

EW-14

MW-4R

EW-17

EW-16

MW-14

MW-13

GREEN HOUSE

MW-11R

MW-12

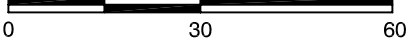
MW-15

MW-16

MW-8



SCALE IN FEET



LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER
	FENCE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

**Ninyo & Moore**

**SITE PLAN**

FIGURE

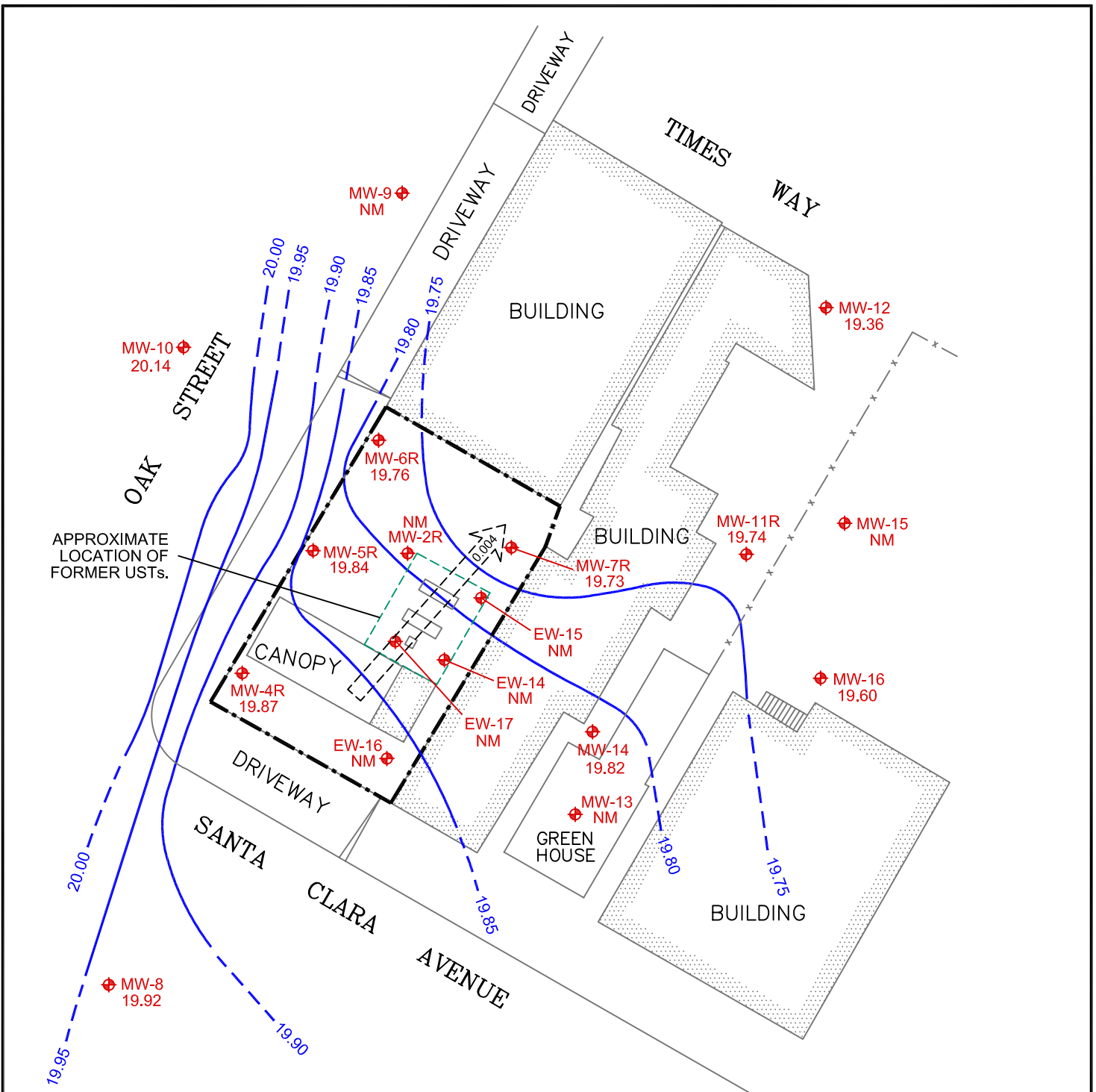
**3**

PROJECT NO.	DATE
401896004	12/12

2301 SANTA CLARA AVENUE  
ALAMEDA, CALIFORNIA

401896004-FIG3.dwg, Dec-13, 2012, 11:57am, srjguyen

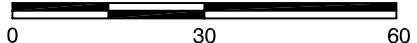




APPROXIMATE LOCATION OF FORMER USTs.



SCALE IN FEET



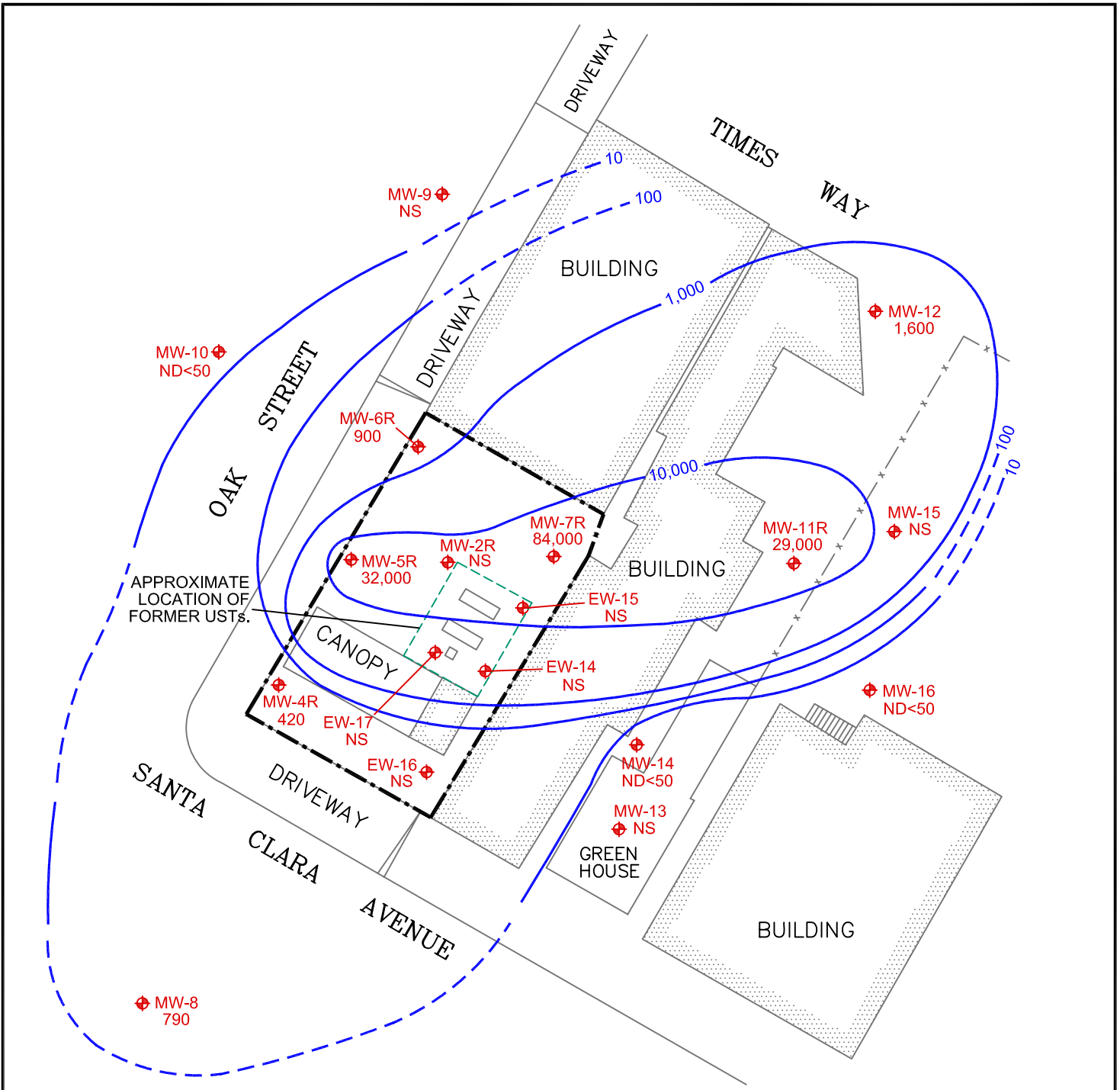
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
	DEPTH TO GROUNDWATER WAS NOT MEASURED
	FENCE
	GROUNDWATER EQUIPOTENTIAL LINE (DASHED WHERE INFERRED)
	AVERAGE GROUNDWATER FLOW DIRECTION AND GRADIENT IN FOOT PER FEET

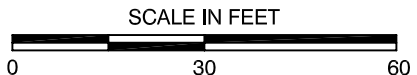
REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

401896004-FIG4.dwg, Dec-13, 2012, 11:58am, srjguyen

		<b>SHALLOW GROUNDWATER CONTOUR MAP</b>		FIGURE  <b>4</b>
PROJECT NO.	DATE			
401896004	12/12			



APPROXIMATE LOCATION OF FORMER USTs.



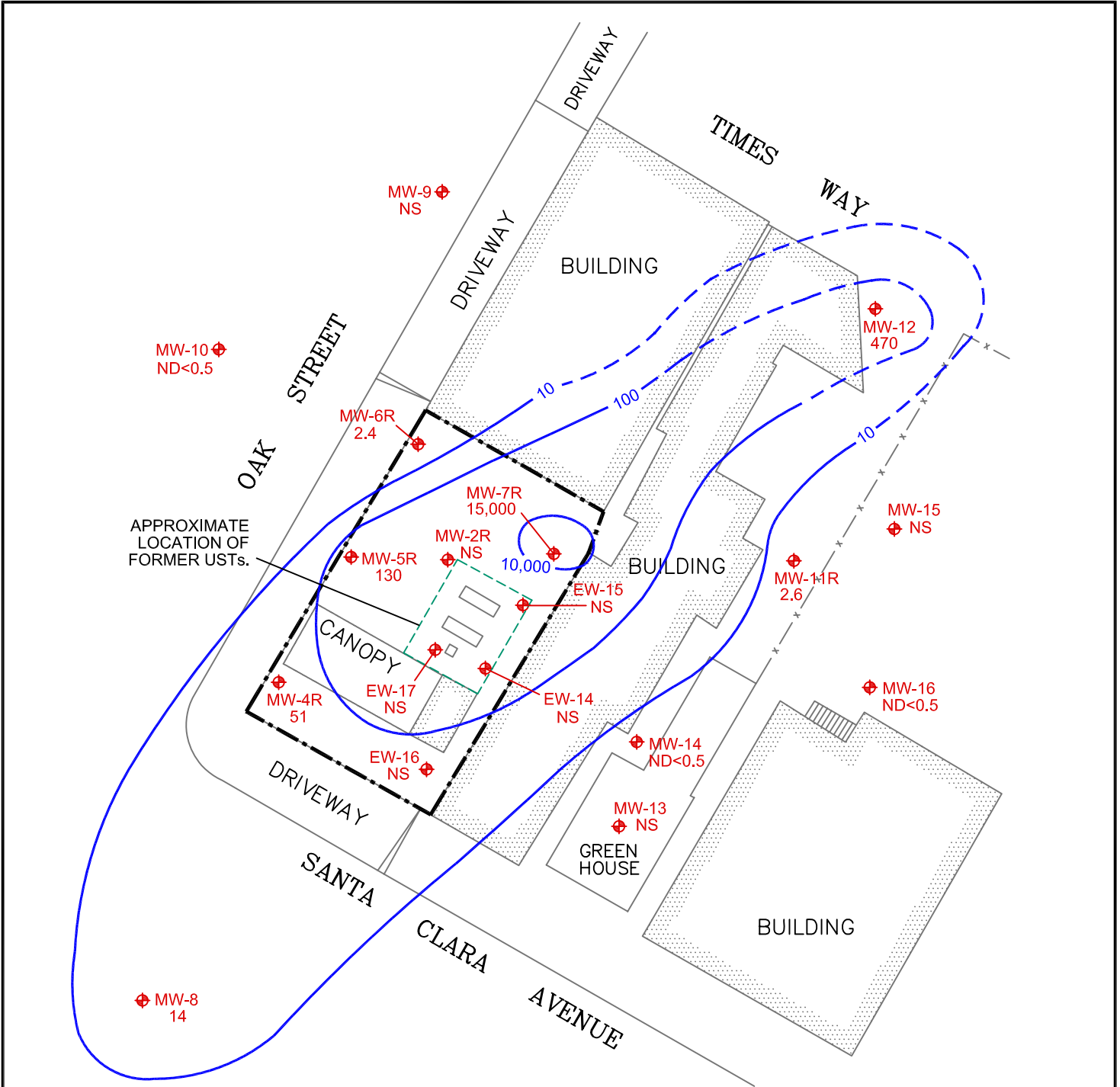
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER CONCENTRATION IN MICROGRAMS PER LITER
	INDICATES NOT DETECTED ABOVE LABORATORY DETECTION LIMIT OF X
	NOT SAMPLED
	FENCE
	GROUNDWATER EQUIPOTENTIAL LINE (DASHED WHERE INFERRED) IN MICROGRAMS PER LITER

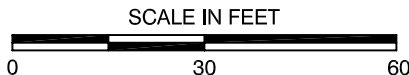
REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

481096004-FIG5.dwg, Dec-13, 2012, 11:59am, smpjw/ven

		<b>TOTAL PETROLEUM HYDROCARBONS AS GASOLINE CONCENTRATIONS IN SHALLOW GROUNDWATER</b>		FIGURE <b>5</b>



APPROXIMATE LOCATION OF FORMER USTs.



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER CONCENTRATION IN MICROGRAMS PER LITER
	INDICATES NOT DETECTED ABOVE LABORATORY DETECTION LIMIT OF X
	NOT SAMPLED
	FENCE
	GROUNDWATER EQUIPOTENTIAL LINE (DASHED WHERE INFERRED) IN MICROGRAMS PER LITER

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

		<b>BENZENE CONCENTRATIONS IN SHALLOW GROUNDWATER</b>	FIGURE <b>6</b>

401896004-FIG6.dwg, Dec-13, 2012, 12:00pm, sngpryem

2301 Santa Clara Avenue  
Alameda, California

December 13, 2012  
Project No. 401896004  
Fuel Leak Case RO0000382

---

## **APPENDIX A**

### **HISTORICAL CONSTITUENTS OF CONCERN CONCENTRATIONS**

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-1  
TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EBBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	65,000	15,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	43,000	7,200													
9/20/2003	19,000	4,900													
12/25/2003	12,000	3,400													
4/24/2004	33,000	8,000													
8/8/2004	29,000	9,700													
8/20/2005	35,000	14,000	6,500	1,600	5,000	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	72,000	17,000	16,000	3,000	10,400	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	65,000	21,000	16,000	2,900	9,900	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	62,000	17,000	12,000	2,300	8,600	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	46,000	6,500	4,200	980	4,890	ND	ND	ND	ND	ND	ND	ND			
7/8/2007	57,000	11,000	11,000	2,200	9,600	ND	ND	ND	ND	ND	ND	ND			
9/23/2007	22,000	4,700	4,100	950	4,100	ND	ND	ND	ND	ND	ND	2.7	390	140	640
9/6/2008	8,300	2,300	740	160	700	ND	ND	ND	ND	ND	ND	ND	200	34	130
9/26/2009	4,100	1,600	310	150	610	ND	ND	ND	ND	ND	ND	ND	75	32	120
2/27/2010	1,600	1,200	110	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/21/2010	3,100	1,300	54	ND	640	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	12,000	5,200	1,700	270	1,790	ND	ND	ND	ND	ND	ND	ND	230	68	230

**Notes:**

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was abandoned in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-2**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	140,000	21,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	41,000	5,600													
9/21/2003	27,000	2,400													
12/25/2003	46,000	6,100													
4/24/2004	44,000	8,400													
8/8/2004	21,000	6,800													
8/20/2005	31,000	10,000	5,100	1,400	7,100	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	50,000	15,000	5,200	970	4,400	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	37,000	12,000	8,500	1,700	6,200	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	24,000	8,100	1,400	840	3,090	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	17,000	4,300	2,400	590	2,100	ND	ND	ND	ND	ND	ND	ND			
7/8/2007	ND	5,400	170	320	750	ND	ND	ND	ND	ND	ND	ND			
9/23/2007	2,500	6,700	540	300	940	ND	ND	ND	3.3	ND	ND	6.6	310	97	260
9/6/2008	6,300	3,000	440	10	290	ND	ND	ND	ND	ND	ND	ND	120	22	12
9/26/2009	5,500	1,800	610	140	680	ND	ND	ND	ND	ND	ND	ND	90	52	180
2/27/2010	3,600	2,500	430	42	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/21/2010	4,700	1,500	550	ND	860	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	11,000	6,300	790	ND	1,230	ND	ND	ND	ND	ND	ND	ND	210	69	170

**Notes:**

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-2R in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-3**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	9,300	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	10,000	2,300													
9/21/2003	2,700	320													
12/25/2003	3,300	290													
4/24/2004	3,100	1,000													
8/8/2004	2,500	400													
8/20/2005	5,500	3,000	27	140	740	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	6,400	2,100	19	150	530	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	7,000	2,000	52	380	940	ND	ND	ND	31	ND	ND	ND			
9/5/2006	6,000	1,500	31	180	720	ND	ND	ND	27	ND	ND	ND			
1/4/2007	5,500	1,400	ND	77	297	ND	ND	ND	ND	ND	ND	ND			
7/8/2007	5,600	1,500	87	180	740	ND	ND	ND	38	ND	ND	ND			
9/22/2007	5,600	1,300	35	57	189	ND	ND	ND	28	ND	ND	ND	120	8.6	30
9/6/2008	2,600	500	13	19	125	ND	ND	ND	20	ND	ND	ND	33	4.1	11
9/26/2009	2,200	240	12	14	104	ND	ND	ND	4.6	ND	ND	ND	69	3.0	11
2/27/2010	7,270	120	5.4	7.9	44	ND	ND	ND	4.6	ND	ND	ND	38	1.3	2.1
8/21/2010	100	ND	ND	ND	4.6	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	1,100	120	2.4	2.4	88	ND	ND	ND	ND	ND	ND	ND	54	7.2	7.2

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was abandoned in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-4**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	ND	ND													
9/20/2003	ND	ND													
12/25/2003	ND	ND													
4/24/2004	3,000	1.0													
8/8/2004	ND	ND													
8/20/2005	1,100	1.5	ND	ND	63	ND	ND	ND	ND	ND	ND	ND			
3/13/2006	320	ND	ND	1.4	17	ND	ND	ND	ND	ND	ND	ND			
6/12/2006	1,500	0.9	3.8	78	236	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	760	ND	ND	1.6	60	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
7/8/2007	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	13	ND	ND
9/23/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/5/2008	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/26/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND	2.6
2/27/2010	130	ND	0.6	3.6	27	ND	ND	ND	ND	ND	ND	ND	ND	1.8	3.2
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-4R in May 2012.



**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-5**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	44,000	490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	16,000	89													
9/21/2003	8,700	ND													
12/25/2003	2,300	140													
4/24/2004	13,000	97													
8/8/2004	13,000	82													
8/20/2005	19,000	130	750	1,000	4,400	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/14/2006	21,000	61	350	700	3,330	ND	ND	ND	ND	ND	ND	ND			
6/12/2006	14,000	91	620	1,000	4,340	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	15,000	56	550	890	3,910	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	20,000	110	680	1,200	4,250	ND	ND	ND	ND	ND	ND	ND			
7/8/2007	23,000	72	1,200	ND	5,300	ND	ND	ND	ND	ND	ND	ND			
9/24/2007	6,100	490	770	950	4,140	ND	ND	ND	ND	ND	ND	ND	360	250	1,300
9/5/2008	740	ND	1.1	0.8	22	ND	ND	ND	ND	ND	ND	ND	27	22	1.2
9/27/2009	4,000	7.9	47	120	670	ND	ND	ND	ND	ND	ND	ND	86	86	370
2/27/2010	2,100	5.8	34	86	400	ND	ND	ND	ND	ND	ND	ND	92	26	130
8/20/2010	840	0.7	0.5	ND	162	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	2,500	6.8	32	13	431	ND	ND	ND	ND	ND	ND	ND	93	45	69

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-5R in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-6**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	
	Analytical Results (µg/L)															
9/17/2000	10,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/4/2002	3,900	29														
9/20/2003	500	15														
12/25/2003	1,200	18														
4/24/2004	110	3.6														
8/8/2004	320	2.7														
8/20/2005	810	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
6/12/2006	9,140	3.3	13	46	173	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
9/5/2006	1,100	4.4	10	50	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1/4/2007	390	2.0	14	23	85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
7/8/2007	720	2.8	3.2	33	42	ND	ND	ND	ND	ND	ND	ND	ND	19	3.0	17
9/23/2007	1,200	2.8	7.3	56	142	ND	ND	ND	ND	ND	ND	ND	ND	17	13	60
9/5/2008	730	2.0	4.0	16	116	ND	ND	ND	ND	ND	ND	ND	ND	24	9.4	41
9/26/2009	170	0.7	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	6.4	ND	0.8
2/27/2010	230	1.3	1.0	5.8	18	ND	ND	ND	ND	ND	ND	ND	ND	23	1.9	6.7
8/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	360	1.2	1.6	ND	9.4	ND	ND	ND	ND	ND	ND	ND	ND	29	3.6	16

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-6R in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-7**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	220,000	32,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/4/2002	140,000	15,000													
9/21/2003	110,000	4,200													
12/25/2003	110,000	12,000													
4/24/2004	100,000	10,000													
8/8/2004	92,000	9,300													

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-7R in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-8**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	ND	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/3/2002	ND	1.1													
9/20/2003	ND	ND													
12/25/2003	ND	ND													
4/24/2004	ND	ND													
8/8/2004	NA	NA													
8/22/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/12/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/6/2006	ND	1.4	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/6/2007	390	4.4	4.7	0.9	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/21/2007	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/5/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/26/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-9**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/3/2002	ND	ND													
9/20/2003	ND	ND													
12/25/2003	ND	ND													
4/24/2004	ND	ND													
8/22/2005	ND	ND													
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/6/2007	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/21/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/5/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/26/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.



**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-10**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/17/2000	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/3/2002	ND	ND													
9/20/2003	ND	ND													
12/25/2003	ND	ND													
4/24/2004	ND	ND													
8/22/2004	ND	ND													
8/22/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/6/2007	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/21/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/5/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/26/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-11**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
10/24/2002	59,000	5,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/22/2003	46,000	1,700													
12/25/2003	14,000	1,400													
4/24/2004	38,000	5,000													
8/8/2004	29,000	3,100													
8/20/2005	31,000	5,100	1,500	3,400	17,800	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/14/2006	47,000	5,600	2,400	1,900	10,100	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
6/12/2006	44,000	5,900	2,200	3,600	15,700	ND	ND	ND	ND	ND	ND	ND			
9/6/2006	36,000	5,900	2,100	3,000	16,000	ND	ND	ND	ND	ND	ND	ND			
1/5/2007	50,000	2,200	450.0	2,100	13,300	ND	ND	ND	ND	ND	ND	ND			
7/7/2007	54,000	2,800	1,200.0	3,100	16,400	ND	ND	ND	ND	ND	ND	ND			
9/22/2007	21,000	2,000	1,000	3,100	9,700	ND	ND	ND	ND	ND	ND	ND	490	310	2,700
9/5/2008	11,000	770	160	940	3,100	ND	ND	ND	ND	ND	ND	ND	440	160	1,300
9/26/2009	14,000	280	2,900	560	4,800	ND	ND	ND	ND	ND	ND	ND	150	170	690
2/27/2010	13,000	53	860	700	4,900	ND	ND	ND	ND	ND	ND	ND	180	150	670
8/20/2010	57,000	ND	97	190	2,120	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/22/2011	19,000	ND	29	30	6,500	ND	ND	ND	ND	ND	ND	ND	410	380	1,500

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was replaced with well MW-11R in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-12 (formerly BL)**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/22/2005	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/14/2006	400	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	11			
6/12/2006	ND	6.8	ND	ND	ND	ND	ND	ND	2.2	ND	ND	2.9			
9/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1/5/2007	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	0.92	ND	ND	ND	ND	ND	ND
9/22/2007	ND	8.6	ND	ND	ND	ND	ND	ND	2.8	ND	ND	3.5	ND	ND	ND
9/4/2008	ND	ND	ND	ND	ND	ND	21	ND	3.6	ND	ND	5.0	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/27/2010	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-13 (formerly BG)  
TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/22/2005	100	5.9	ND	ND	ND	ND	ND	ND	13	ND	ND	39	NA	NA	NA
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7			
6/12/2006	110	7.6	ND	ND	ND	ND	31	ND	16	ND	ND	48			
9/7/2006	ND	3.3	ND	ND	ND	ND	ND	ND	20	ND	ND	40			
1/5/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40			
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	30	ND	ND	ND
9/22/2007	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	37	ND	ND	ND
9/5/2008	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	31	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND	6.2	ND	ND	ND
2/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	NA	NA	NA
4/22/2011	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	6.8	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-14 (formerly BF)**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/20/2005	3,800	89	4.7	150	3.4	ND	80	ND	19	ND	ND	42	NA	NA	NA
3/14/2006	ND	5,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
6/12/2006	14,000	11,000	ND	600	ND	ND	ND	ND	ND	ND	ND	ND			
9/6/2006	ND	6,500	ND	170	ND	ND	ND	ND	ND	ND	ND	ND			
1/5/2007	13,000	5,200	5.7	190	71	ND	ND	ND	ND	ND	ND	ND	97	48	73
7/7/2007	6,900	3,700	54	550	582	ND	ND	ND	ND	ND	ND	ND	49	22	14
9/22/2007	3,200	2,600	19	310	160	ND	ND	ND	ND	ND	ND	3.9	11	ND	3.2
9/5/2008	690	280	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/22/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.



**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-15 (formerly BH)**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/20/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	NA	NA	NA
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	38			
6/12/2006	ND	0.93	ND	ND	ND	ND	130	ND	6.0	ND	ND	55			
9/6/2006	ND	ND	ND	ND	ND	ND	31	ND	3.8	ND	ND	38			
1/5/2007	140	12	44	3.6	19.9	ND	ND	ND	ND	ND	ND	ND			
7/7/2007	ND	ND	ND	ND	ND	ND	90	ND	4.8	ND	ND	60	ND	ND	ND
9/22/2007	ND	ND	ND	ND	ND	ND	29	ND	2.5	ND	ND	27	ND	ND	ND
9/4/2008	ND	1.1	ND	ND	ND	ND	ND	ND	3.0	ND	ND	20	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/26/2010	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	3.6	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - MW-16 (formerly BM)**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/20/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.0	NA	NA	NA
3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10			
6/12/2006	ND	ND	ND	ND	ND	ND	29	ND	5.0	ND	ND	14			
9/6/2006	ND	ND	ND	ND	ND	ND	12	ND	5.8	ND	ND	4.7			
1/6/2007	ND	ND	ND	ND	ND	ND	ND	ND	4.1	ND	ND	11			
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND	4.5	ND	ND	ND
9/22/2007	ND	ND	ND	ND	ND	ND	ND	ND	4.2	ND	ND	6.8	ND	ND	ND
9/4/2008	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	9.1	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/27/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-12**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
10/31/2002	5,840	76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/21/2003	19,000	590													
12/25/2003	9,900	790													
4/24/2004	12,000	920													

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was abandoned in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-13**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
10/31/2002	109,200	9,120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/21/2003	71,000	10,000													
12/25/2003	110,000	17,000													
4/24/2004	100,000	19,000													
8/8/2004	NA	NA													
8/22/2005	130,000	27,000	5,500	4,200	21,700	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	140,000	16,000	46,000	3,300	19,300	ND	ND	ND	ND	ND	ND	1,400			
6/11/2006	130,000	23,000	48,000	3,000	18,800	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	120,000	12,000	40,000	3,200	17,800	ND	ND	ND	ND	ND	ND	ND			
1/5/2007	410,000	57,000	43,000	17,000	75,000	ND	ND	ND	ND	ND	ND	ND			
7/9/2007	140,000	10,000	45,000	4,400	22,800	ND	ND	ND	ND	ND	ND	ND	ND	600	2,200
9/24/2007	27,000	5,400	35,000	3,600	18,600	ND	ND	ND	ND	ND	ND	ND	410	280	1,700
9/6/2008	73,000	7,900	21,000	730	11,300	ND	ND	ND	ND	ND	ND	ND	ND	210	860
9/27/2009	12,000	1,200	3,900	440	2,630	ND	ND	ND	ND	ND	ND	ND	74	71	300
2/27/2010	11,000	3,500	4,300	380	730	ND	ND	ND	ND	ND	ND	ND	57	ND	ND
8/22/2010	14,000	2,600	2,400	30	2,180	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	44,000	7,900	13,000	350	9,500	ND	ND	ND	ND	ND	ND	ND	240	210	890

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This well was abandoned in May 2012.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-14**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
9/22/2003	68,000	4,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/25/2003	26,000	5,300													
4/24/2004	9,400	4,100													
8/8/2004	14,000	6,300													
8/22/2005	26,000	7,100													
3/13/2006	1,300	360	110	35	119	13	ND	ND	ND	ND	ND	ND	NA	NA	NA
6/11/2006	2,300	1,100	260	45	198	ND	ND	ND	3.3	ND	ND	ND			
9/6/2006	20,000	4,700	4,200	980	3,800	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	30,000	7,000	4,500	1,100	5,000	ND	ND	ND	ND	ND	ND	ND			
7/9/2007	54,000	14,000	8,800	2,400	10,000	ND	ND	ND	ND	ND	ND	ND			
9/23/2007	19,000	9,900	7,700	2,100	9,300	ND	ND	ND	ND	ND	ND	12	290	220	1,100
9/6/2008	12,000	4,000	900	66	1,980	ND	ND	ND	ND	ND	ND	ND	110	53	220
9/27/2009	1,700	520	49	41	373	ND	ND	ND	ND	ND	ND	ND	19	15	64
2/27/2010	ND	ND	ND	2.2	373	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9
8/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-15**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
1/21/2004	72,000	8,400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/8/2004	36,000	3,300													
8/22/2005	670,000	11,000													
3/13/2006	12,000	1,900													
6/11/2006	25,000	2,900													
9/6/2006	51,000	8,200	11,000	2,300	11,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/5/2007	30,000	9,700	1,900	1,400	4,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/9/2007	46,000	5,200	3,800	2,500	11,500	ND	ND	ND	ND	ND	ND	ND	500	630	2,300
9/23/2007	59,000	14,000	5,800	3,600	16,000	ND	ND	ND	4.1	ND	ND	2.5	660	440	2,400
9/6/2008	19,000	7,100	1,000	57	2,730	ND	ND	ND	3.1	ND	ND	4.4	180	130	280
9/26/2009	8,800	1,400	530	280	2,650	ND	ND	ND	ND	ND	ND	ND	96	140	480
2/27/2010	720	250	57	50	113	ND	ND	ND	ND	ND	ND	ND	6.3	1.6	1.5
8/22/2010	1,600	200	4.1	ND	357	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	3,600	680	870	27	780	ND	ND	ND	ND	ND	ND	ND	25	21	31

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-16**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
1/21/2004	1,500	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/8/2004	2,500	590													
8/20/2005	1,600	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
3/13/2006	900	400	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	1,400	680	4.1	13	23	ND	ND	ND	ND	ND	ND	ND			
9/5/2006	2,100	210	ND	2.6	ND	ND	ND	ND	14	ND	ND	ND			
1/4/2007	370	2.9	ND	ND	ND	ND	ND	ND	6.6	ND	ND	ND			
7/9/2007	2,300	53	ND	ND	ND	ND	ND	ND	2.0	ND	ND	ND	59	ND	ND
9/22/2007	680	4.2	ND	1.1	1.5	ND	ND	ND	ND	ND	ND	ND	29	ND	ND
9/5/2008	310	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND	7.3	ND	ND
9/26/2009	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	ND	ND
2/27/2010	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	190	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.



**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - EW-17**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
1/21/2004	18,000	2,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/8/2004	30,000	6,800													
8/22/2005	42,000	13,000	9,300	1,700	8,100	ND	ND	ND	ND	ND	ND	ND			
3/13/2006	29,000	6,500	6,500	1,100	5,500	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	38,000	9,700	9,500	1,600	7,300	ND	ND	ND	ND	ND	ND	ND			
9/6/2006	26,000	8,900	6,900	1,300	6,200	ND	ND	ND	ND	ND	ND	ND			
1/4/2007	27,000	8,100	3,200	890	3,410	ND	ND	ND	ND	ND	ND	ND			
7/9/2007	40,000	7,600	6,400	1,400	7,000	ND	ND	ND	ND	ND	ND	ND	430	220	940
9/23/2007	6,800	5,300	5,300	1,300	5,700	ND	ND	ND	4.2	ND	ND	2.0	210	180	920
9/6/2008	7,500	3,200	530	18	680	ND	ND	ND	ND	ND	ND	ND	87	26	85
9/27/2009	4,200	1,400	580	110	730	ND	ND	ND	ND	ND	ND	ND	64	26	130
2/27/2010	2,600	1,500	400	56	614	ND	ND	ND	ND	ND	ND	ND	50	ND	ND
8/21/2010	2,900	1,200	110	ND	570	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/21/2011	6,500	3,000	110	ND	1,300	ND	ND	ND	ND	ND	ND	ND	100	51	150

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - Monitoring Well BJ**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/22/2005	1500	14	100	38	224	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	790	ND	6.6	6.5	57	ND	ND	ND	ND	ND	ND	ND			
6/11/2006	ND	ND	0.9	0.6	4.5	ND	ND	ND	ND	ND	ND	ND			
9/7/2006	ND	1.4	3.8	1.5	9.1	ND	ND	ND	ND	ND	ND	ND			
1/6/2007	ND	ND	2.4	1.4	16	ND	ND	ND	ND	ND	ND	ND			
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/22/2007	150	4.0	2.2	0.5	8.9	ND	ND	ND	ND	ND	ND	ND	ND	1.3	4.2
9/5/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/28/2010	ND	ND	ND	1.1	3.4	ND	ND	ND	ND	ND	ND	ND	3.3	ND	0.9
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/22/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This monitoring well was not located in May 2012

**HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS - Monitoring Well BK**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND VOLATILE ORGANIC COMPOUNDS**

Date	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	EDB	EDC	DIPE	EtBE	MtBE	Naphthalene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
	Analytical Results (µg/L)														
8/22/2005	3,600	22	61	64	330	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
3/13/2006	1,800	ND	14	41	276	ND	ND	ND	ND	ND	ND	28			
6/11/2006	700	ND	0.91	9.8	59	ND	ND	ND	ND	ND	ND	ND			
9/7/2006	1100	0.54	4.9	8.5	70	ND	ND	ND	ND	ND	ND	ND			
1/6/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/7/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/22/2007	ND	ND	ND	ND	7.8	ND	ND	ND	ND	ND	ND	ND	ND	1.8	1.5
9/5/2008	450	18	45	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/25/2009	ND	0.67	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/28/2010	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/20/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
4/22/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

µg/L = micrograms per liter

NA = not analyzed

ND = concentration not detected above laboratory reporting limits

Analytical data was taken from historical monitoring reports in Geotracker.

This monitoring well was not located in May 2012.

2301 Santa Clara Avenue  
Alameda, California

December 13, 2012  
Project No. 401896004  
Fuel Leak Case RO0000382

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**APPENDIX B**  
**FIELD DATA SHEETS**

# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing. Well Location:

WELL NO. MW- <del>4R</del> 4R	Depth to Liquid (DL): —	Well Location:
Casing Material: PVC	Depth to Water (DW1): 8.58	
Diameter: 2-inch	Product Thickness (PT=DW1-DL): —	
Well Head Condition: good	Total Well Depth (TD): 25.12	
Well Box Condition: good	Total head (TH=TD-DW1): 16.54	
Purge Method: Pump	Casing Volume (TH*Factor): 2.65	
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023		

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1340	2.7	22.4	362	6.96		clear, no turb, no odor, no sheen
1350	5.4	22.2	398	6.96		
1400	8.1	22.2	396	6.96		
total	8.1 gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1400	MW- <del>4R</del> 4R										

### Additional Comments




# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing. Well Location:

WELL NO. MW- 5R	Depth to Liquid (DL): -
Casing Material: PVC	Depth to Water (DW1): 8.41
Diameter: 2-inch	Product Thickness (PT=DW1-DL): -
Well Head Condition: good	Total Well Depth (TD): 23.78
Well Box Condition: good	Total head (TH=TD-DW1): 15.37
Purge Method: Pump	Casing Volume (TH*Factor): 2.46
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1422	2.5	21.6	293	9.59		Clear, noturb, nosheen, odor
1435	5.0	21.7	324	9.68		"
1450	7.5	21.7	402	9.70		"
total	7.5 gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1450	MW-5R										

### Additional Comments


# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW- <i>6R</i>	Depth to Liquid (DL): <i>-</i>
Casing Material: PVC	Depth to Water (DW1): <i>8.31</i>
Diameter: 2-inch	Product Thickness (PT=DW1-DL): <i>-</i>
Well Head Condition: <i>good</i>	Total Well Depth (TD): <i>25.20</i>
Well Box Condition: <i>good</i>	Total head (TH=TD-DW1): <i>16.89</i>
Purge Method: Pump	Casing Volume (TH*Factor): <i>2.70</i>
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
<i>1500</i>	<i>2.7</i>	<i>22.0</i>	<i>321</i>	<i>7.67</i>		<i>clear, no turb, odor, no sheen</i>
<i>1509</i>	<i>5.4</i>	<i>21.9</i>	<i>339</i>	<i>7.24</i>		
<i>1525</i>	<i>8.1</i>	<i>21.8</i>	<i>351</i>	<i>7.12</i>		
<i>total</i>	<i>8.1 gal</i>					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
<i>1525</i>	<i>MW-6R</i>										

### Additional Comments




# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing. Well Location:

WELL NO. MW- 7R	Depth to Liquid (DL): —	Well Location:
Casing Material: PVC	Depth to Water (DW1): 8.68	
Diameter: 2-inch	Product Thickness (PT=DW1-DL): —	
Well Head Condition: good	Total Well Depth (TD): 25.30	
Well Box Condition: good	Total head (TH=TD-DW1): 16.62	
Purge Method: Pump	Casing Volume (TH*Factor): 2.66	
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023		

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1535	2.7	20.6	383	6.38		clear/muddy
1542	5.4	20.4	483	6.46		clear/muddy, no turb, no sheen, strong odor
1550	8.1	20.4	467	6.47		clear/muddy, no turb, no sheen, strong odor
total = 8.1 gal						

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1555	MW-7R										

### Additional Comments


# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW- 8	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): 8.09	
Diameter: 2-inch	Product Thickness (PT=DW1-DL):	
Well Head Condition: good	Total Well Depth (TD): 14.15	
Well Box Condition: good	Total head (TH=TD-DW1): 6.06	
Purge Method: Pump	Casing Volume (TH*Factor): 0.97	
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023		

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1235	1.0	23.4	321	6.59		clear, no turb, no sheen, no odor
1242	2.0	23.4	333	6.62		
1250	3.0	23.3	331	6.66		
total	3.0 gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1250	MW-8										

### Additional Comments




<b>MONITORING WELL SAMPLING FORM</b>	Date: 11/14/2012
--------------------------------------	------------------

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW- 10	Depth to Liquid (DL): -
Casing Material: PVC	Depth to Water (DW1): 7.31
Diameter: 2-inch	Product Thickness (PT=DW1-DL): -
Well Head Condition: good	Total Well Depth (TD): 13.12
Well Box Condition: good	Total head (TH=TD-DW1): 5.81
Purge Method: Pump	Casing Volume (TH*Factor): 0.93
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1155	0.93	21.8	341	6.35		clear, turb, no odor, no sheen
1200	1.86	21.8	340	6.32		clear, no turb, no odor, no sheen
1210	2.79	21.8	343	6.30		
total	2.79 gal					

Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1210	MW-10										

Additional Comments


# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW- 16	Depth to Liquid (DL): —
Casing Material: PVC	Depth to Water (DW1): 8.92
Diameter: 2-inch	Product Thickness (PT=DW1-DL): —
Well Head Condition: good	Total Well Depth (TD): 29.37
Well Box Condition: good	Total head (TH=TD-DW1): 20.45
Purge Method: Pump	Casing Volume (TH*Factor): 3.27
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1055	3.3	18.9	188	6.69		clear, no turb, no odor, no skew
1110	6.6	18.9	276	6.61		
1120	9.9	18.8	282	6.61		
total	9.9 gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1120	MW-16										

### Additional Comments




**MONITORING WELL SAMPLING FORM**

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW- 12	Depth to Liquid (DL): —
Casing Material: PVC	Depth to Water (DW1): 9.37
Diameter: 2-inch	Product Thickness (PT=DW1-DL): —
Well Head Condition: good	Total Well Depth (TD): 24.35
Well Box Condition: good	Total head (TH=TD-DW1): 14.98
Purge Method: Pump	Casing Volume (TH*Factor): 2.40
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
0935	2.4	19.5	268	6.62		light brown, turb, no keen, slight odor
0947	4.8	19.7	288	6.49		clear, " " " "
1000	7.2	19.7	306	6.50		" " " "
total	7.2 gal					

Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1000	MW-12										

Additional Comments


# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing. Well Location:

WELL NO. MW- 14	Depth to Liquid (DL): —
Casing Material: PVC	Depth to Water (DW1): 9.20
Diameter: 2-inch	Product Thickness (PT=DW1-DL): —
Well Head Condition: not sealed right	Total Well Depth (TD): 11.71
Well Box Condition: good	Total head (TH=TD-DW1): 2.51
Purge Method: Pump briles	Casing Volume (TH*Factor): 0.40
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
1005	0.4	19.2	180	6.87		slightly brown, turb, no sheen, no odor
1010	0.8	19.1	192	6.81		"
1015	1.2	19.1	195	6.88		"
total	1.2 gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100
1015		

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
1015	MW-14										

### Additional Comments

Well cap was not sealed and is too small for casing



# MONITORING WELL SAMPLING FORM

Date: 11/14/2012

Project Name: Chun's Service Station/GW Monitoring	Client: Carolyn Fong	Job No: 401896004
Address: 2301 Santa Clara Avenue	Contact/Phone: (626) 285-2658	
City/State: Alameda, CA	Technician Gauging/Sampling: SFP	

Note: All measurements from top of casing. Well Location:

WELL NO. MW- 11R	Depth to Liquid (DL): -
Casing Material: PVC	Depth to Water (DW1): 9.18
Diameter: 2-inch	Product Thickness (PT=DW1-DL): -
Well Head Condition: good	Total Well Depth (TD): 23.95
Well Box Condition: good	Total head (TH=TD-DW1): 14.77
Purge Method: Pump	Casing Volume (TH*Factor): 2.36
Casing Vol. Conv. Factors: 2" = 0.16; 3" = 0.36; 4" = 0.65; 6" = 1.5 gal/ft. 1/2" = 0.01; 3/4" = 0.023	

Time	Vol. Purged	Temp (°F/°C)	Cond (uS/cm)	pH	Turb (NTU)	Remarks
0840	2.4	19.2	151	7.22		clear, slightly turb, odor
0850	4.8	19.4	170	7.08		" " "
0900	7.2	19.3	164	7.08		" " "
total	7.2gal					

### Well Recovery Data

Time	Depth to Water (DW2)	% Recovery (1-[DW2-DW1]/DW1)*100

### Sample Information

Time	Sample ID	Temp (°F)	PH	Cond (uS/cm)	Turb (NTU)	TPH-g	TPH-d	BTEX /MTBE	8260	8010	OTHER
0900	MW-11R										

### Additional Comments




2301 Santa Clara Avenue  
Alameda, California

December 13, 2012  
Project No. 401896004  
Fuel Leak Case RO0000382

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## **APPENDIX C**

### **LABORATORY ANALYTICAL REPORT**

November 26, 2012

Peter Sims  
Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612  
Tel: (510) 633-5640  
Fax: (510) 633-5646



Re: ATL Work Order Number : 1204033  
Client Reference : Chun, 401896004

Enclosed are the results for sample(s) received on November 15, 2012 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4R	1204033-01	Water	11/14/12 14:00	11/15/12 13:04
MW-5R	1204033-02	Water	11/14/12 14:50	11/15/12 13:04
MW-6R	1204033-03	Water	11/14/12 15:25	11/15/12 13:04
MW-7R	1204033-04	Water	11/14/12 15:55	11/15/12 13:04
MW-8	1204033-05	Water	11/14/12 12:50	11/15/12 13:04
MW-10	1204033-06	Water	11/14/12 12:10	11/15/12 13:04
MW-11R	1204033-07	Water	11/14/12 9:00	11/15/12 13:04
MW-12	1204033-08	Water	11/14/12 10:00	11/15/12 13:04
MW-14	1204033-09	Water	11/14/12 10:15	11/15/12 13:04
MW-16	1204033-10	Water	11/14/12 11:20	11/15/12 13:04

### CASE NARRATIVE

#### Sample Receiving/General Comments

Per conversation with client on 11/15/12, disregard special instructions on the COC regarding Silica Gel Cleanup before GRO analysis.

EPA 8260 results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

Client Sample ID MW-4R

Lab ID: 1204033-01

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>0.42</b>	0.05	NA	1	B2K0382	11/16/2012	11/16/12 12:34	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>165 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 12:34</i>	<i>S7</i>

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0415	11/16/2012	11/16/12 14:12	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>1,2,4-Trimethylbenzene</b>	<b>3.0</b>	0.50	0.15	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2-Dichloroethane	ND	0.50	0.22	1	B2K0415	11/16/2012	11/16/12 14:12	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0415	11/16/2012	11/16/12 14:12	
1,3,5-Trimethylbenzene	ND	0.50	0.15	1	B2K0415	11/16/2012	11/16/12 14:12	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0415	11/16/2012	11/16/12 14:12	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0415	11/16/2012	11/16/12 14:12	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
4-Isopropyltoluene	ND	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>Benzene</b>	<b>51</b>	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
Bromobenzene	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
Bromochloromethane	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
Bromodichloromethane	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
Bromoform	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

Client Sample ID MW-4R

Lab ID: 1204033-01

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0415	11/16/2012	11/16/12 14:12	
Carbon disulfide	ND	1.0	1.0	1	B2K0415	11/16/2012	11/16/12 14:12	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0415	11/16/2012	11/16/12 14:12	
Chlorobenzene	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
Chloroethane	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
Chloroform	ND	0.50	0.50	1	B2K0415	11/16/2012	11/16/12 14:12	
Chloromethane	ND	0.50	0.32	1	B2K0415	11/16/2012	11/16/12 14:12	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
Dibromochloromethane	ND	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
Dibromomethane	ND	0.50	0.32	1	B2K0415	11/16/2012	11/16/12 14:12	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0415	11/16/2012	11/16/12 14:12	
Ethyl Acetate	ND	10	1.8	1	B2K0415	11/16/2012	11/16/12 14:12	
Ethyl Ether	ND	10	1.6	1	B2K0415	11/16/2012	11/16/12 14:12	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>Ethylbenzene</b>	<b>0.66</b>	0.50	0.19	1	B2K0415	11/16/2012	11/16/12 14:12	
Freon-113	ND	0.50	0.24	1	B2K0415	11/16/2012	11/16/12 14:12	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>Isopropylbenzene</b>	<b>47</b>	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>m,p-Xylene</b>	<b>2.0</b>	1.0	0.36	1	B2K0415	11/16/2012	11/16/12 14:12	
Methylene chloride	ND	1.0	1.0	1	B2K0415	11/16/2012	11/16/12 14:12	
MTBE	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>n-Butylbenzene</b>	<b>3.9</b>	0.50	0.15	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>n-Propylbenzene</b>	<b>7.8</b>	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>Naphthalene</b>	<b>68</b>	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>o-Xylene</b>	<b>0.54</b>	0.50	0.14	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>sec-Butylbenzene</b>	<b>9.1</b>	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
Styrene	ND	0.50	0.14	1	B2K0415	11/16/2012	11/16/12 14:12	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
tert-Butanol	ND	10	2.0	1	B2K0415	11/16/2012	11/16/12 14:12	
tert-Butylbenzene	ND	0.50	0.15	1	B2K0415	11/16/2012	11/16/12 14:12	
Tetrachloroethene	ND	0.50	0.21	1	B2K0415	11/16/2012	11/16/12 14:12	
<b>Toluene</b>	<b>0.66</b>	0.50	0.16	1	B2K0415	11/16/2012	11/16/12 14:12	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0415	11/16/2012	11/16/12 14:12	
Trichloroethene	ND	0.50	0.20	1	B2K0415	11/16/2012	11/16/12 14:12	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-4R**

**Lab ID: 1204033-01**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0415	11/16/2012	11/16/12 14:12	
Vinyl acetate	ND	10	1.2	1	B2K0415	11/16/2012	11/16/12 14:12	
Vinyl chloride	ND	0.50	0.17	1	B2K0415	11/16/2012	11/16/12 14:12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>109 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.8 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.7 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>84.8 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:12</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

**Client Sample ID MW-5R**

**Lab ID: 1204033-02**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>32</b>	0.20	NA	4	B2K0382	11/16/2012	11/16/12 12:54	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>165 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 12:54</i>	S7

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1,1-Trichloroethane	ND	5.0	2.5	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1,2,2-Tetrachloroethane	ND	5.0	1.5	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1,2-Trichloroethane	ND	5.0	2.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1-Dichloroethane	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1-Dichloroethene	ND	5.0	2.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,1-Dichloropropene	ND	5.0	2.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2,3-Trichloropropane	ND	5.0	3.3	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2,3-Trichlorobenzene	ND	5.0	3.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2,4-Trichlorobenzene	ND	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>1,2,4-Trimethylbenzene</b>	<b>3600</b>	50	15	100	B2K0415	11/16/2012	11/16/12 15:04	
1,2-Dibromo-3-chloropropane	ND	5.0	2.1	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2-Dibromoethane	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2-Dichlorobenzene	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2-Dichloroethane	ND	5.0	2.2	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,2-Dichloropropane	ND	5.0	2.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>1,3,5-Trimethylbenzene</b>	<b>720</b>	5.0	1.5	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,3-Dichlorobenzene	ND	5.0	1.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,3-Dichloropropane	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
1,4-Dichlorobenzene	ND	5.0	2.2	10	B2K0415	11/16/2012	11/16/12 14:44	D6
2,2-Dichloropropane	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
2-Chloroethyl vinyl ether	ND	5.0	3.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
2-Chlorotoluene	ND	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
4-Chlorotoluene	ND	5.0	1.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
4-Isopropyltoluene	ND	5.0	1.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>Benzene</b>	<b>130</b>	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Bromobenzene	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Bromochloromethane	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Bromodichloromethane	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Bromoform	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6





## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

Client Sample ID MW-5R

Lab ID: 1204033-02

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	5.0	4.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Carbon disulfide	ND	10	10	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Carbon tetrachloride	ND	5.0	2.3	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Chlorobenzene	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Chloroethane	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Chloroform	ND	5.0	5.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Chloromethane	ND	5.0	3.2	10	B2K0415	11/16/2012	11/16/12 14:44	D6
cis-1,2-Dichloroethene	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
cis-1,3-Dichloropropene	ND	5.0	1.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Di-isopropyl ether	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Dibromochloromethane	ND	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Dibromomethane	ND	5.0	3.2	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Dichlorodifluoromethane	ND	5.0	3.2	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Ethyl Acetate	ND	100	18	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Ethyl Ether	ND	100	16	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Ethyl tert-butyl ether	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>Ethylbenzene</b>	<b>2900</b>	50	19	100	B2K0415	11/16/2012	11/16/12 15:04	
Freon-113	ND	5.0	2.4	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Hexachlorobutadiene	ND	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>Isopropylbenzene</b>	<b>180</b>	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>m,p-Xylene</b>	<b>11000</b>	100	36	100	B2K0415	11/16/2012	11/16/12 15:04	
Methylene chloride	ND	10	10	10	B2K0415	11/16/2012	11/16/12 14:44	D6
MTBE	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>n-Butylbenzene</b>	<b>90</b>	5.0	1.5	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>n-Propylbenzene</b>	<b>490</b>	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>Naphthalene</b>	<b>620</b>	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>o-Xylene</b>	<b>4200</b>	50	14	100	B2K0415	11/16/2012	11/16/12 15:04	
<b>sec-Butylbenzene</b>	<b>33</b>	5.0	1.6	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Styrene	ND	5.0	1.4	10	B2K0415	11/16/2012	11/16/12 14:44	D6
tert-Amyl methyl ether	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
tert-Butanol	ND	100	20	10	B2K0415	11/16/2012	11/16/12 14:44	D6
tert-Butylbenzene	ND	5.0	1.5	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Tetrachloroethene	ND	5.0	2.1	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<b>Toluene</b>	<b>2400</b>	50	16	100	B2K0415	11/16/2012	11/16/12 15:04	
trans-1,2-Dichloroethene	ND	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
trans-1,3-Dichloropropene	ND	5.0	1.3	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Trichloroethene	ND	5.0	2.0	10	B2K0415	11/16/2012	11/16/12 14:44	D6



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-5R**

**Lab ID: 1204033-02**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1.8	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Vinyl acetate	ND	100	12	10	B2K0415	11/16/2012	11/16/12 14:44	D6
Vinyl chloride	ND	5.0	1.7	10	B2K0415	11/16/2012	11/16/12 14:44	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.1 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:04</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:44</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.3 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:04</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.1 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:44</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>83.6 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:44</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.4 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:04</i>	
<i>Surrogate: Toluene-d8</i>	<i>87.6 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:04</i>	
<i>Surrogate: Toluene-d8</i>	<i>90.4 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 14:44</i>	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-6R**

**Lab ID: 1204033-03**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>0.90</b>	0.05	NA	1	B2K0516	11/20/2012	11/20/12 13:18	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>110 %</i>		<i>70 - 130</i>		B2K0516	11/20/2012	<i>11/20/12 13:18</i>	

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:45	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>1,2,4-Trimethylbenzene</b>	<b>61</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2-Dichloroethane	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:45	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>1,3,5-Trimethylbenzene</b>	<b>13</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:45	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:45	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:45	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>4-Isopropyltoluene</b>	<b>0.61</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>Benzene</b>	<b>2.4</b>	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
Bromobenzene	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
Bromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
Bromodichloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
Bromoform	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	



## Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

Client Sample ID MW-6R

Lab ID: 1204033-03

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0446	11/16/2012	11/16/12 21:45	
Carbon disulfide	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:45	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0446	11/16/2012	11/16/12 21:45	
Chlorobenzene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
Chloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
Chloroform	ND	0.50	0.50	1	B2K0446	11/16/2012	11/16/12 21:45	
Chloromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:45	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
Dibromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
Dibromomethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:45	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:45	
Ethyl Acetate	ND	10	1.8	1	B2K0446	11/16/2012	11/16/12 21:45	
Ethyl Ether	ND	10	1.6	1	B2K0446	11/16/2012	11/16/12 21:45	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>Ethylbenzene</b>	<b>83</b>	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:45	
Freon-113	ND	0.50	0.24	1	B2K0446	11/16/2012	11/16/12 21:45	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>Isopropylbenzene</b>	<b>12</b>	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>m,p-Xylene</b>	<b>73</b>	1.0	0.36	1	B2K0446	11/16/2012	11/16/12 21:45	
Methylene chloride	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:45	
MTBE	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>n-Butylbenzene</b>	<b>3.2</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>n-Propylbenzene</b>	<b>28</b>	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>Naphthalene</b>	<b>30</b>	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>o-Xylene</b>	<b>58</b>	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>sec-Butylbenzene</b>	<b>3.1</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
Styrene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:45	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
tert-Butanol	ND	10	2.0	1	B2K0446	11/16/2012	11/16/12 21:45	
tert-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:45	
Tetrachloroethene	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:45	
<b>Toluene</b>	<b>7.1</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:45	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0446	11/16/2012	11/16/12 21:45	
Trichloroethene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:45	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-6R**

**Lab ID: 1204033-03**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:45	
Vinyl acetate	ND	10	1.2	1	B2K0446	11/16/2012	11/16/12 21:45	
Vinyl chloride	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:45	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:45</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.2 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:45</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.5 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:45</i>	
<i>Surrogate: Toluene-d8</i>	<i>85.9 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:45</i>	



# Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

**Client Sample ID MW-7R**

**Lab ID: 1204033-04**

## Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>84</b>	1.0	NA	20	B2K0382	11/16/2012	11/16/12 17:34	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.3 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 17:34</i>	

## Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	100	39	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1,1-Trichloroethane	ND	100	50	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1,2,2-Tetrachloroethane	ND	100	29	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1,2-Trichloroethane	ND	100	58	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1-Dichloroethane	ND	100	37	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1-Dichloroethene	ND	100	51	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,1-Dichloropropene	ND	100	53	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2,3-Trichloropropane	ND	100	66	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2,3-Trichlorobenzene	ND	100	60	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2,4-Trichlorobenzene	ND	100	34	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>1,2,4-Trimethylbenzene</b>	<b>2300</b>	100	30	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2-Dibromo-3-chloropropane	ND	100	42	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2-Dibromoethane	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2-Dichlorobenzene	ND	100	38	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2-Dichloroethane	ND	100	44	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,2-Dichloropropane	ND	100	51	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>1,3,5-Trimethylbenzene</b>	<b>610</b>	100	31	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,3-Dichlorobenzene	ND	100	32	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,3-Dichloropropane	ND	100	40	200	B2K0446	11/16/2012	11/16/12 22:26	D6
1,4-Dichlorobenzene	ND	100	44	200	B2K0446	11/16/2012	11/16/12 22:26	D6
2,2-Dichloropropane	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
2-Chloroethyl vinyl ether	ND	100	61	200	B2K0446	11/16/2012	11/16/12 22:26	D6
2-Chlorotoluene	ND	100	34	200	B2K0446	11/16/2012	11/16/12 22:26	D6
4-Chlorotoluene	ND	100	32	200	B2K0446	11/16/2012	11/16/12 22:26	D6
4-Isopropyltoluene	ND	100	32	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>Benzene</b>	<b>15000</b>	100	38	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Bromobenzene	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Bromochloromethane	ND	100	37	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Bromodichloromethane	ND	100	37	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Bromoform	ND	100	40	200	B2K0446	11/16/2012	11/16/12 22:26	D6



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

Client Sample ID MW-7R

Lab ID: 1204033-04

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	100	98	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Carbon disulfide	ND	200	200	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Carbon tetrachloride	ND	100	46	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Chlorobenzene	ND	100	39	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Chloroethane	ND	100	40	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Chloroform	ND	100	100	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Chloromethane	ND	100	65	200	B2K0446	11/16/2012	11/16/12 22:26	D6
cis-1,2-Dichloroethene	ND	100	39	200	B2K0446	11/16/2012	11/16/12 22:26	D6
cis-1,3-Dichloropropene	ND	100	32	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Di-isopropyl ether	ND	100	40	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Dibromochloromethane	ND	100	38	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Dibromomethane	ND	100	64	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Dichlorodifluoromethane	ND	100	63	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Ethyl Acetate	ND	2000	360	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Ethyl Ether	ND	2000	330	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Ethyl tert-butyl ether	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>Ethylbenzene</b>	<b>3700</b>	100	38	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Freon-113	ND	100	47	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Hexachlorobutadiene	ND	100	33	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>Isopropylbenzene</b>	<b>120</b>	100	34	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>m,p-Xylene</b>	<b>14000</b>	200	73	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Methylene chloride	ND	200	200	200	B2K0446	11/16/2012	11/16/12 22:26	D6
MTBE	ND	100	35	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>n-Butylbenzene</b>	<b>48</b>	100	30	200	B2K0446	11/16/2012	11/16/12 22:26	J, D6
<b>n-Propylbenzene</b>	<b>370</b>	100	33	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>Naphthalene</b>	<b>480</b>	100	41	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>o-Xylene</b>	<b>5300</b>	100	29	200	B2K0446	11/16/2012	11/16/12 22:26	D6
sec-Butylbenzene	ND	100	32	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Styrene	ND	100	28	200	B2K0446	11/16/2012	11/16/12 22:26	D6
tert-Amyl methyl ether	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
tert-Butanol	ND	2000	390	200	B2K0446	11/16/2012	11/16/12 22:26	D6
tert-Butylbenzene	ND	100	29	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Tetrachloroethene	ND	100	41	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<b>Toluene</b>	<b>26000</b>	1000	330	2000	B2K0446	11/16/2012	11/16/12 22:47	
trans-1,2-Dichloroethene	ND	100	34	200	B2K0446	11/16/2012	11/16/12 22:26	D6
trans-1,3-Dichloropropene	ND	100	26	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Trichloroethene	ND	100	39	200	B2K0446	11/16/2012	11/16/12 22:26	D6





## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-7R**

**Lab ID: 1204033-04**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	100	36	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Vinyl acetate	ND	2000	240	200	B2K0446	11/16/2012	11/16/12 22:26	D6
Vinyl chloride	ND	100	34	200	B2K0446	11/16/2012	11/16/12 22:26	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.6 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:47</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.3 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.6 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:47</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.5 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>81.8 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.4 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:47</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.4 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:47</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.4 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 22:26</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

**Client Sample ID MW-8**

**Lab ID: 1204033-05**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>0.79</b>	0.05	NA	1	B2K0516	11/20/2012	11/20/12 13:37	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>112 %</i>		<i>70 - 130</i>		B2K0516	11/20/2012	<i>11/20/12 13:37</i>	

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 23:08	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>1,2,4-Trimethylbenzene</b>	<b>0.39</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 23:08	J
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2-Dichloroethane	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 23:08	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>1,3,5-Trimethylbenzene</b>	<b>0.41</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 23:08	J
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 23:08	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 23:08	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
4-Isopropyltoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>Benzene</b>	<b>14</b>	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
Bromobenzene	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
Bromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
Bromodichloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
Bromoform	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	



## Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

**Client Sample ID MW-8**

**Lab ID: 1204033-05**

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0446	11/16/2012	11/16/12 23:08	
Carbon disulfide	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 23:08	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0446	11/16/2012	11/16/12 23:08	
Chlorobenzene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
Chloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
Chloroform	ND	0.50	0.50	1	B2K0446	11/16/2012	11/16/12 23:08	
Chloromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 23:08	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
Dibromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
Dibromomethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 23:08	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 23:08	
Ethyl Acetate	ND	10	1.8	1	B2K0446	11/16/2012	11/16/12 23:08	
Ethyl Ether	ND	10	1.6	1	B2K0446	11/16/2012	11/16/12 23:08	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>Ethylbenzene</b>	<b>0.98</b>	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 23:08	
Freon-113	ND	0.50	0.24	1	B2K0446	11/16/2012	11/16/12 23:08	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>Isopropylbenzene</b>	<b>13</b>	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>m,p-Xylene</b>	<b>5.3</b>	1.0	0.36	1	B2K0446	11/16/2012	11/16/12 23:08	
Methylene chloride	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 23:08	
MTBE	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>n-Butylbenzene</b>	<b>0.80</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>n-Propylbenzene</b>	<b>13</b>	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>Naphthalene</b>	<b>14</b>	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>o-Xylene</b>	<b>0.53</b>	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>sec-Butylbenzene</b>	<b>2.2</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
Styrene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 23:08	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
tert-Butanol	ND	10	2.0	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>tert-Butylbenzene</b>	<b>0.38</b>	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 23:08	J
Tetrachloroethene	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 23:08	
<b>Toluene</b>	<b>3.0</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 23:08	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0446	11/16/2012	11/16/12 23:08	
Trichloroethene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 23:08	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-8**

**Lab ID: 1204033-05**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 23:08	
Vinyl acetate	ND	10	1.2	1	B2K0446	11/16/2012	11/16/12 23:08	
Vinyl chloride	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 23:08	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:08</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.5 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:08</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>89.2 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:08</i>	
<i>Surrogate: Toluene-d8</i>	<i>84.9 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:08</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

**Client Sample ID MW-10**

**Lab ID: 1204033-06**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B2K0382	11/16/2012	11/16/12 16:55	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>84.2 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 16:55</i>	

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 20:39	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2,4-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2-Dichloroethane	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 20:39	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 20:39	
1,3,5-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 20:39	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 20:39	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 20:39	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
4-Isopropyltoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
Benzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
Bromobenzene	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
Bromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
Bromodichloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
Bromoform	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

Client Sample ID MW-10

Lab ID: 1204033-06

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0446	11/16/2012	11/16/12 20:39	
Carbon disulfide	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 20:39	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0446	11/16/2012	11/16/12 20:39	
Chlorobenzene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
Chloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
Chloroform	ND	0.50	0.50	1	B2K0446	11/16/2012	11/16/12 20:39	
Chloromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 20:39	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
Dibromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
Dibromomethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 20:39	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 20:39	
Ethyl Acetate	ND	10	1.8	1	B2K0446	11/16/2012	11/16/12 20:39	
Ethyl Ether	ND	10	1.6	1	B2K0446	11/16/2012	11/16/12 20:39	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
Ethylbenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 20:39	
Freon-113	ND	0.50	0.24	1	B2K0446	11/16/2012	11/16/12 20:39	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
Isopropylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
m,p-Xylene	ND	1.0	0.36	1	B2K0446	11/16/2012	11/16/12 20:39	
Methylene chloride	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 20:39	
MTBE	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
n-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 20:39	
n-Propylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
Naphthalene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	
o-Xylene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 20:39	
sec-Butylbenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
Styrene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 20:39	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
tert-Butanol	ND	10	2.0	1	B2K0446	11/16/2012	11/16/12 20:39	
tert-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 20:39	
Tetrachloroethene	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 20:39	
Toluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 20:39	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0446	11/16/2012	11/16/12 20:39	
Trichloroethene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 20:39	





## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-10**

**Lab ID: 1204033-06**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 20:39	
Vinyl acetate	ND	10	1.2	1	B2K0446	11/16/2012	11/16/12 20:39	
Vinyl chloride	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 20:39	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 20:39</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.0 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 20:39</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>88.9 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 20:39</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.9 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 20:39</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

**Client Sample ID MW-11R**

**Lab ID: 1204033-07**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>29</b>	0.20	NA	4	B2K0382	11/16/2012	11/16/12 17:15	D6
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>159 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 17:15</i>	S7

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1,1-Trichloroethane	ND	5.0	2.5	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1,2,2-Tetrachloroethane	ND	5.0	1.5	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1,2-Trichloroethane	ND	5.0	2.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1-Dichloroethane	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1-Dichloroethene	ND	5.0	2.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,1-Dichloropropene	ND	5.0	2.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2,3-Trichloropropane	ND	5.0	3.3	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2,3-Trichlorobenzene	ND	5.0	3.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2,4-Trichlorobenzene	ND	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>1,2,4-Trimethylbenzene</b>	<b>4000</b>	50	15	100	B2K0446	11/17/2012	11/17/12 00:09	
1,2-Dibromo-3-chloropropane	ND	5.0	2.1	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2-Dibromoethane	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2-Dichlorobenzene	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2-Dichloroethane	ND	5.0	2.2	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,2-Dichloropropane	ND	5.0	2.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>1,3,5-Trimethylbenzene</b>	<b>950</b>	5.0	1.5	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,3-Dichlorobenzene	ND	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,3-Dichloropropane	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
1,4-Dichlorobenzene	ND	5.0	2.2	10	B2K0446	11/16/2012	11/16/12 23:49	D6
2,2-Dichloropropane	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
2-Chloroethyl vinyl ether	ND	5.0	3.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
2-Chlorotoluene	ND	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
4-Chlorotoluene	ND	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
4-Isopropyltoluene	ND	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Benzene</b>	<b>2.6</b>	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	J, D6
Bromobenzene	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Bromochloromethane	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Bromodichloromethane	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Bromoform	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

Client Sample ID MW-11R

Lab ID: 1204033-07

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	5.0	4.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Carbon disulfide	ND	10	10	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Carbon tetrachloride	ND	5.0	2.3	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Chlorobenzene	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Chloroethane	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Chloroform</b>	<b>36</b>	5.0	5.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Chloromethane	ND	5.0	3.2	10	B2K0446	11/16/2012	11/16/12 23:49	D6
cis-1,2-Dichloroethene	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
cis-1,3-Dichloropropene	ND	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Di-isopropyl ether	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Dibromochloromethane	ND	5.0	1.9	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Dibromomethane	ND	5.0	3.2	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Dichlorodifluoromethane	ND	5.0	3.2	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Ethyl Acetate	ND	100	18	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Ethyl Ether	ND	100	16	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Ethyl tert-butyl ether	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Ethylbenzene</b>	<b>1400</b>	50	19	100	B2K0446	11/17/2012	11/17/12 00:09	
Freon-113	ND	5.0	2.4	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Hexachlorobutadiene	ND	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Isopropylbenzene</b>	<b>170</b>	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>m,p-Xylene</b>	<b>7600</b>	100	36	100	B2K0446	11/17/2012	11/17/12 00:09	
Methylene chloride	ND	10	10	10	B2K0446	11/16/2012	11/16/12 23:49	D6
MTBE	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>n-Butylbenzene</b>	<b>88</b>	5.0	1.5	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>n-Propylbenzene</b>	<b>450</b>	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Naphthalene</b>	<b>660</b>	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>o-Xylene</b>	<b>2100</b>	50	14	100	B2K0446	11/17/2012	11/17/12 00:09	
<b>sec-Butylbenzene</b>	<b>27</b>	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Styrene	ND	5.0	1.4	10	B2K0446	11/16/2012	11/16/12 23:49	D6
tert-Amyl methyl ether	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
tert-Butanol	ND	100	20	10	B2K0446	11/16/2012	11/16/12 23:49	D6
tert-Butylbenzene	ND	5.0	1.5	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Tetrachloroethene	ND	5.0	2.1	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<b>Toluene</b>	<b>330</b>	5.0	1.6	10	B2K0446	11/16/2012	11/16/12 23:49	D6
trans-1,2-Dichloroethene	ND	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
trans-1,3-Dichloropropene	ND	5.0	1.3	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Trichloroethene	ND	5.0	2.0	10	B2K0446	11/16/2012	11/16/12 23:49	D6



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-11R**

**Lab ID: 1204033-07**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	5.0	1.8	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Vinyl acetate	ND	100	12	10	B2K0446	11/16/2012	11/16/12 23:49	D6
Vinyl chloride	ND	5.0	1.7	10	B2K0446	11/16/2012	11/16/12 23:49	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>92.7 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:09</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:49</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.0 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:09</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.1 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:49</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.0 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:09</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.7 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:49</i>	
<i>Surrogate: Toluene-d8</i>	<i>81.8 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:09</i>	
<i>Surrogate: Toluene-d8</i>	<i>90.3 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 23:49</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

**Client Sample ID MW-12**

**Lab ID: 1204033-08**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>Gasoline Range Organics</b>	<b>1.6</b>	0.05	NA	1	B2K0382	11/16/2012	11/16/12 11:37	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>		<i>70 - 130</i>		B2K0382	11/16/2012	<i>11/16/12 11:37</i>	

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	1.0	0.39	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1,1-Trichloroethane	ND	1.0	0.50	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1,2,2-Tetrachloroethane	ND	1.0	0.29	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1,2-Trichloroethane	ND	1.0	0.58	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1-Dichloroethane	ND	1.0	0.37	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1-Dichloroethene	ND	1.0	0.51	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,1-Dichloropropene	ND	1.0	0.53	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2,3-Trichloropropane	ND	1.0	0.66	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2,3-Trichlorobenzene	ND	1.0	0.60	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2,4-Trichlorobenzene	ND	1.0	0.34	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>1,2,4-Trimethylbenzene</b>	<b>2.3</b>	1.0	0.30	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2-Dibromo-3-chloropropane	ND	1.0	0.42	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2-Dibromoethane	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2-Dichlorobenzene	ND	1.0	0.38	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2-Dichloroethane	ND	1.0	0.44	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,2-Dichloropropane	ND	1.0	0.51	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>1,3,5-Trimethylbenzene</b>	<b>20</b>	1.0	0.31	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,3-Dichlorobenzene	ND	1.0	0.32	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,3-Dichloropropane	ND	1.0	0.40	2	B2K0446	11/17/2012	11/17/12 00:29	D6
1,4-Dichlorobenzene	ND	1.0	0.44	2	B2K0446	11/17/2012	11/17/12 00:29	D6
2,2-Dichloropropane	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
2-Chloroethyl vinyl ether	ND	1.0	0.61	2	B2K0446	11/17/2012	11/17/12 00:29	D6
2-Chlorotoluene	ND	1.0	0.34	2	B2K0446	11/17/2012	11/17/12 00:29	D6
4-Chlorotoluene	ND	1.0	0.32	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>4-Isopropyltoluene</b>	<b>0.40</b>	1.0	0.32	2	B2K0446	11/17/2012	11/17/12 00:29	J, D6
<b>Benzene</b>	<b>470</b>	5.0	1.9	10	B2K0415	11/16/2012	11/16/12 15:25	
Bromobenzene	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Bromochloromethane	ND	1.0	0.37	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Bromodichloromethane	ND	1.0	0.37	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Bromoform	ND	1.0	0.40	2	B2K0446	11/17/2012	11/17/12 00:29	D6



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

Client Sample ID MW-12

Lab ID: 1204033-08

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	1.0	0.98	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Carbon disulfide	ND	2.0	2.0	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Carbon tetrachloride	ND	1.0	0.46	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Chlorobenzene	ND	1.0	0.39	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Chloroethane	ND	1.0	0.40	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Chloroform	ND	1.0	1.0	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Chloromethane	ND	1.0	0.65	2	B2K0446	11/17/2012	11/17/12 00:29	D6
cis-1,2-Dichloroethene	ND	1.0	0.39	2	B2K0446	11/17/2012	11/17/12 00:29	D6
cis-1,3-Dichloropropene	ND	1.0	0.32	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Di-isopropyl ether	ND	1.0	0.40	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Dibromochloromethane	ND	1.0	0.38	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Dibromomethane	ND	1.0	0.64	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Dichlorodifluoromethane	ND	1.0	0.63	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Ethyl Acetate	ND	20	3.6	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Ethyl Ether	ND	20	3.3	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Ethyl tert-butyl ether	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>Ethylbenzene</b>	<b>140</b>	1.0	0.38	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Freon-113	ND	1.0	0.47	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Hexachlorobutadiene	ND	1.0	0.33	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>Isopropylbenzene</b>	<b>8.5</b>	1.0	0.34	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>m,p-Xylene</b>	<b>61</b>	2.0	0.73	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Methylene chloride	ND	2.0	2.0	2	B2K0446	11/17/2012	11/17/12 00:29	D6
MTBE	ND	1.0	0.35	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>n-Butylbenzene</b>	<b>2.1</b>	1.0	0.30	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>n-Propylbenzene</b>	<b>14</b>	1.0	0.33	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>Naphthalene</b>	<b>26</b>	1.0	0.41	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>o-Xylene</b>	<b>2.4</b>	1.0	0.29	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>sec-Butylbenzene</b>	<b>2.1</b>	1.0	0.32	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Styrene	ND	1.0	0.28	2	B2K0446	11/17/2012	11/17/12 00:29	D6
tert-Amyl methyl ether	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
tert-Butanol	ND	20	3.9	2	B2K0446	11/17/2012	11/17/12 00:29	D6
tert-Butylbenzene	ND	1.0	0.29	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>Tetrachloroethene</b>	<b>1.2</b>	1.0	0.41	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<b>Toluene</b>	<b>2.1</b>	1.0	0.33	2	B2K0446	11/17/2012	11/17/12 00:29	D6
trans-1,2-Dichloroethene	ND	1.0	0.34	2	B2K0446	11/17/2012	11/17/12 00:29	D6
trans-1,3-Dichloropropene	ND	1.0	0.26	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Trichloroethene	ND	1.0	0.39	2	B2K0446	11/17/2012	11/17/12 00:29	D6





## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-12**

**Lab ID: 1204033-08**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	1.0	0.36	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Vinyl acetate	ND	20	2.4	2	B2K0446	11/17/2012	11/17/12 00:29	D6
Vinyl chloride	ND	1.0	0.34	2	B2K0446	11/17/2012	11/17/12 00:29	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>93.1 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:29</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>95.8 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:25</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>92.0 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:29</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.5 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:25</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>88.6 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:25</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.8 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.2 %</i>		<i>70 - 130</i>		B2K0446	11/17/2012	<i>11/17/12 00:29</i>	
<i>Surrogate: Toluene-d8</i>	<i>88.6 %</i>		<i>70 - 130</i>		B2K0415	11/16/2012	<i>11/16/12 15:25</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

**Client Sample ID MW-14**

**Lab ID: 1204033-09**

### Gasoline Range Organics by EPA 8015B

**Analyst: LT**

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B2K0382	11/16/2012	11/16/12 11:56	
<i>Surrogate: 4-Bromofluorobenzene</i>	82.7 %		70 - 130		B2K0382	11/16/2012	11/16/12 11:56	

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:05	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2,4-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2-Dichloroethane	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:05	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:05	
1,3,5-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:05	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:05	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:05	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
4-Isopropyltoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
Benzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
Bromobenzene	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
Bromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
Bromodichloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
Bromoform	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	



## Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

Client Sample ID MW-14

Lab ID: 1204033-09

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0446	11/16/2012	11/16/12 21:05	
Carbon disulfide	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:05	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0446	11/16/2012	11/16/12 21:05	
Chlorobenzene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
Chloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
Chloroform	ND	0.50	0.50	1	B2K0446	11/16/2012	11/16/12 21:05	
Chloromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:05	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
Dibromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
Dibromomethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:05	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:05	
Ethyl Acetate	ND	10	1.8	1	B2K0446	11/16/2012	11/16/12 21:05	
Ethyl Ether	ND	10	1.6	1	B2K0446	11/16/2012	11/16/12 21:05	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
Ethylbenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:05	
Freon-113	ND	0.50	0.24	1	B2K0446	11/16/2012	11/16/12 21:05	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
Isopropylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
m,p-Xylene	ND	1.0	0.36	1	B2K0446	11/16/2012	11/16/12 21:05	
Methylene chloride	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:05	
MTBE	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
n-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:05	
n-Propylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
Naphthalene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	
o-Xylene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:05	
sec-Butylbenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
Styrene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:05	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
tert-Butanol	ND	10	2.0	1	B2K0446	11/16/2012	11/16/12 21:05	
tert-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:05	
Tetrachloroethene	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:05	
Toluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:05	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0446	11/16/2012	11/16/12 21:05	
Trichloroethene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:05	



## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-14**

**Lab ID: 1204033-09**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:05	
Vinyl acetate	ND	10	1.2	1	B2K0446	11/16/2012	11/16/12 21:05	
Vinyl chloride	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:05	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:05</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.8 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:05</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>93.3 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:05</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.9 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:05</i>	



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

**Client Sample ID MW-16**

**Lab ID: 1204033-10**

### Gasoline Range Organics by EPA 8015B

Analyst: LT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B2K0382	11/16/2012	11/16/12 12:15	
<i>Surrogate: 4-Bromofluorobenzene</i>	83.4 %		70 - 130		B2K0382	11/16/2012	11/16/12 12:15	

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1-Dichloroethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1-Dichloroethene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:25	
1,1-Dichloropropene	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2,4-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2-Dibromoethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
<b>1,2-Dichloroethane</b>	<b>2.0</b>	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:25	
1,2-Dichloropropane	ND	0.50	0.26	1	B2K0446	11/16/2012	11/16/12 21:25	
1,3,5-Trimethylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:25	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
1,3-Dichloropropane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B2K0446	11/16/2012	11/16/12 21:25	
2,2-Dichloropropane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B2K0446	11/16/2012	11/16/12 21:25	
2-Chlorotoluene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
4-Chlorotoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
4-Isopropyltoluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
Benzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
Bromobenzene	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
Bromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
Bromodichloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
Bromoform	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	



## Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

Client Sample ID MW-16

Lab ID: 1204033-10

### Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromomethane	ND	0.50	0.49	1	B2K0446	11/16/2012	11/16/12 21:25	
Carbon disulfide	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:25	
Carbon tetrachloride	ND	0.50	0.23	1	B2K0446	11/16/2012	11/16/12 21:25	
Chlorobenzene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
Chloroethane	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
Chloroform	ND	0.50	0.50	1	B2K0446	11/16/2012	11/16/12 21:25	
Chloromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:25	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
Di-isopropyl ether	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
Dibromochloromethane	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
Dibromomethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:25	
Dichlorodifluoromethane	ND	0.50	0.32	1	B2K0446	11/16/2012	11/16/12 21:25	
Ethyl Acetate	ND	10	1.8	1	B2K0446	11/16/2012	11/16/12 21:25	
Ethyl Ether	ND	10	1.6	1	B2K0446	11/16/2012	11/16/12 21:25	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
Ethylbenzene	ND	0.50	0.19	1	B2K0446	11/16/2012	11/16/12 21:25	
Freon-113	ND	0.50	0.24	1	B2K0446	11/16/2012	11/16/12 21:25	
Hexachlorobutadiene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
Isopropylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
m,p-Xylene	ND	1.0	0.36	1	B2K0446	11/16/2012	11/16/12 21:25	
Methylene chloride	ND	1.0	1.0	1	B2K0446	11/16/2012	11/16/12 21:25	
<b>MTBE</b>	<b>1.2</b>	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
n-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:25	
n-Propylbenzene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
Naphthalene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	
o-Xylene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:25	
<b>sec-Butylbenzene</b>	<b>1.5</b>	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
Styrene	ND	0.50	0.14	1	B2K0446	11/16/2012	11/16/12 21:25	
tert-Amyl methyl ether	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
tert-Butanol	ND	10	2.0	1	B2K0446	11/16/2012	11/16/12 21:25	
tert-Butylbenzene	ND	0.50	0.15	1	B2K0446	11/16/2012	11/16/12 21:25	
Tetrachloroethene	ND	0.50	0.21	1	B2K0446	11/16/2012	11/16/12 21:25	
Toluene	ND	0.50	0.16	1	B2K0446	11/16/2012	11/16/12 21:25	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B2K0446	11/16/2012	11/16/12 21:25	
Trichloroethene	ND	0.50	0.20	1	B2K0446	11/16/2012	11/16/12 21:25	





## Certificate of Analysis

Ninyo & Moore  
1956 Webster Street, Suite 400  
Oakland, CA 94612

Project Number : Chun, 401896004  
Report To : Peter Sims  
Reported : 11/26/2012

**Client Sample ID MW-16**

**Lab ID: 1204033-10**

### Volatile Organic Compounds by EPA 8260

**Analyst: SL**

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Trichlorofluoromethane	ND	0.50	0.18	1	B2K0446	11/16/2012	11/16/12 21:25	
Vinyl acetate	ND	10	1.2	1	B2K0446	11/16/2012	11/16/12 21:25	
Vinyl chloride	ND	0.50	0.17	1	B2K0446	11/16/2012	11/16/12 21:25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:25</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.6 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:25</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.6 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:25</i>	
<i>Surrogate: Toluene-d8</i>	<i>84.4 %</i>		<i>70 - 130</i>		B2K0446	11/16/2012	<i>11/16/12 21:25</i>	



## Certificate of Analysis

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 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
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### QUALITY CONTROL SECTION

#### Gasoline Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B2K0382 - GCVOAW**

**Blank (B2K0382-BLK1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Gasoline Range Organics	ND	0.05				NR			
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*Surrogate: 4-Bromofluorobenzene*      0.08409      0.100000      84.1      70 - 130

**LCS (B2K0382-BS1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Gasoline Range Organics	0.890000	0.05	1.00000		89.0	70 - 130			
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*Surrogate: 4-Bromofluorobenzene*      0.09396      0.100000      94.0      70 - 130

**LCS Dup (B2K0382-BSD1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Gasoline Range Organics	0.893000	0.05	1.00000		89.3	70 - 130	0.337	20	
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*Surrogate: 4-Bromofluorobenzene*      0.09228      0.100000      92.3      70 - 130

**Batch B2K0516 - GCVOAW**

**Blank (B2K0516-BLK1)**

Prepared: 11/20/2012 Analyzed: 11/20/2012

Gasoline Range Organics	ND	0.05				NR			
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*Surrogate: 4-Bromofluorobenzene*      0.08318      0.100000      83.2      70 - 130

**LCS (B2K0516-BS1)**

Prepared: 11/20/2012 Analyzed: 11/20/2012

Gasoline Range Organics	0.817000	0.05	1.00000		81.7	70 - 130			
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*Surrogate: 4-Bromofluorobenzene*      0.09077      0.100000      90.8      70 - 130

**LCS Dup (B2K0516-BSD1)**

Prepared: 11/20/2012 Analyzed: 11/20/2012

Gasoline Range Organics	0.825000	0.05	1.00000		82.5	70 - 130	0.974	20	
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*Surrogate: 4-Bromofluorobenzene*      0.09115      0.100000      91.2      70 - 130



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

### Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	RPD Limit	Notes
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**Batch B2K0415 - MSVOAW\_LL**

**Blank (B2K0415-BLK1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1,1,2-Tetrachloroethane	ND	0.50		NR
1,1,1-Trichloroethane	ND	0.50		NR
1,1,2,2-Tetrachloroethane	ND	0.50		NR
1,1,2-Trichloroethane	ND	0.50		NR
1,1-Dichloroethane	ND	0.50		NR
1,1-Dichloroethene	ND	0.50		NR
1,1-Dichloropropene	ND	0.50		NR
1,2,3-Trichloropropane	ND	0.50		NR
1,2,3-Trichlorobenzene	ND	0.50		NR
1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chloroethyl vinyl ether	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromochloromethane	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon disulfide	ND	2.0		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Di-isopropyl ether	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

### Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B2K0415 - MSVOAW\_LL (continued)**

**Blank (B2K0415-BLK1) - Continued**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Dibromomethane	ND	0.50				NR			
Dichlorodifluoromethane	ND	0.50				NR			
Ethyl Acetate	ND	10				NR			
Ethyl Ether	ND	10				NR			
Ethyl tert-butyl ether	ND	0.50				NR			
Ethylbenzene	ND	0.50				NR			
Freon-113	ND	0.50				NR			
Hexachlorobutadiene	ND	0.50				NR			
Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
MTBE	ND	0.50				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Amyl methyl ether	ND	0.50				NR			
tert-Butanol	ND	10				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
trans-1,3-Dichloropropene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl acetate	ND	10				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.66		25.0000		119	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.08		25.0000		100	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.47		25.0000		102	70 - 130			
<i>Surrogate: Toluene-d8</i>	21.20		25.0000		84.8	70 - 130			

**LCS (B2K0415-BS1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1-Dichloroethene	17.1300		20.0000		85.6	70 - 130			
Benzene	36.1100		40.0000		90.3	70 - 130			
Chlorobenzene	20.2500		20.0000		101	70 - 130			
MTBE	18.6000		20.0000		93.0	70 - 130			
Toluene	38.1500		40.0000		95.4	70 - 130			
Trichloroethene	17.6200		20.0000		88.1	70 - 130			



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

### Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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#### Batch B2K0415 - MSVOAW\_LL (continued)

##### LCS (B2K0415-BS1) - Continued

Prepared: 11/16/2012 Analyzed: 11/16/2012

Surrogate: 1,2-Dichloroethane-d4	26.75	25.0000	107	70 - 130
Surrogate: 4-Bromofluorobenzene	23.35	25.0000	93.4	70 - 130
Surrogate: Dibromofluoromethane	22.96	25.0000	91.8	70 - 130
Surrogate: Toluene-d8	22.00	25.0000	88.0	70 - 130

##### LCS Dup (B2K0415-BS1)

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1-Dichloroethene	16.6900	20.0000	83.4	70 - 130	2.60	20
Benzene	35.8100	40.0000	89.5	70 - 130	0.834	20
Chlorobenzene	20.2400	20.0000	101	70 - 130	0.0494	20
MTBE	18.8100	20.0000	94.0	70 - 130	1.12	20
Toluene	37.5800	40.0000	94.0	70 - 130	1.51	20
Trichloroethene	17.2900	20.0000	86.4	70 - 130	1.89	20

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Surrogate: 1,2-Dichloroethane-d4	26.11	25.0000	104	70 - 130
Surrogate: 4-Bromofluorobenzene	23.59	25.0000	94.4	70 - 130
Surrogate: Dibromofluoromethane	22.84	25.0000	91.4	70 - 130
Surrogate: Toluene-d8	22.25	25.0000	89.0	70 - 130

##### Duplicate (B2K0415-DUP1)

Source: 1204029-05

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1-Dichloroethene	ND	0.50	ND	NR		20
Benzene	ND	0.50	ND	NR		20
Chlorobenzene	ND	0.50	ND	NR		20
MTBE	ND	0.50	ND	NR		20
Toluene	ND	0.50	ND	NR		20
Trichloroethene	1.05000	0.50	1.14000	NR	8.22	20

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Surrogate: 1,2-Dichloroethane-d4	30.24	25.0000	121	70 - 130
Surrogate: 4-Bromofluorobenzene	25.64	25.0000	103	70 - 130
Surrogate: Dibromofluoromethane	25.57	25.0000	102	70 - 130
Surrogate: Toluene-d8	21.64	25.0000	86.6	70 - 130

#### Batch B2K0446 - MSVOAW\_LL

##### Blank (B2K0446-BLK1)

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1,1,2-Tetrachloroethane	ND	0.50	NR
1,1,1-Trichloroethane	ND	0.50	NR
1,1,2,2-Tetrachloroethane	ND	0.50	NR
1,1,2-Trichloroethane	ND	0.50	NR
1,1-Dichloroethane	ND	0.50	NR
1,1-Dichloroethene	ND	0.50	NR
1,1-Dichloropropene	ND	0.50	NR
1,2,3-Trichloropropane	ND	0.50	NR
1,2,3-Trichlorobenzene	ND	0.50	NR



## Certificate of Analysis

Ninyo & Moore  
 1956 Webster Street, Suite 400  
 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

### Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B2K0446 - MSVOAW\_LL (continued)**

**Blank (B2K0446-BLK1) - Continued**

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,2,4-Trichlorobenzene	ND	0.50		NR
1,2,4-Trimethylbenzene	ND	0.50		NR
1,2-Dibromo-3-chloropropane	ND	0.50		NR
1,2-Dibromoethane	ND	0.50		NR
1,2-Dichlorobenzene	ND	0.50		NR
1,2-Dichloroethane	ND	0.50		NR
1,2-Dichloropropane	ND	0.50		NR
1,3,5-Trimethylbenzene	ND	0.50		NR
1,3-Dichlorobenzene	ND	0.50		NR
1,3-Dichloropropane	ND	0.50		NR
1,4-Dichlorobenzene	ND	0.50		NR
2,2-Dichloropropane	ND	0.50		NR
2-Chloroethyl vinyl ether	ND	0.50		NR
2-Chlorotoluene	ND	0.50		NR
4-Chlorotoluene	ND	0.50		NR
4-Isopropyltoluene	ND	0.50		NR
Benzene	ND	0.50		NR
Bromobenzene	ND	0.50		NR
Bromochloromethane	ND	0.50		NR
Bromodichloromethane	ND	0.50		NR
Bromoform	ND	0.50		NR
Bromomethane	ND	0.50		NR
Carbon disulfide	ND	2.0		NR
Carbon tetrachloride	ND	0.50		NR
Chlorobenzene	ND	0.50		NR
Chloroethane	ND	0.50		NR
Chloroform	ND	0.50		NR
Chloromethane	ND	0.50		NR
cis-1,2-Dichloroethene	ND	0.50		NR
cis-1,3-Dichloropropene	ND	0.50		NR
Di-isopropyl ether	ND	0.50		NR
Dibromochloromethane	ND	0.50		NR
Dibromomethane	ND	0.50		NR
Dichlorodifluoromethane	ND	0.50		NR
Ethyl Acetate	ND	10		NR
Ethyl Ether	ND	10		NR
Ethyl tert-butyl ether	ND	0.50		NR
Ethylbenzene	ND	0.50		NR
Freon-113	ND	0.50		NR
Hexachlorobutadiene	ND	0.50		NR
Isopropylbenzene	ND	0.50		NR
m,p-Xylene	ND	1.0		NR



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### Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B2K0446 - MSVOAW\_LL (continued)**

**Blank (B2K0446-BLK1) - Continued**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Methylene chloride	ND	1.0				NR			
MTBE	ND	0.50				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Amyl methyl ether	ND	0.50				NR			
tert-Butanol	ND	10				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
trans-1,3-Dichloropropene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl acetate	ND	10				NR			
Vinyl chloride	ND	0.50				NR			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.92</i>		<i>25.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>26.45</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.47</i>		<i>25.0000</i>		<i>97.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.37</i>		<i>25.0000</i>		<i>85.5</i>	<i>70 - 130</i>			

**LCS (B2K0446-BS1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1-Dichloroethene	19.9500		20.0000		99.8	70 - 130			
Benzene	39.5300		40.0000		98.8	70 - 130			
Chlorobenzene	21.0600		20.0000		105	70 - 130			
MTBE	18.5600		20.0000		92.8	70 - 130			
Toluene	39.4800		40.0000		98.7	70 - 130			
Trichloroethene	19.0900		20.0000		95.4	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>24.88</i>		<i>25.0000</i>		<i>99.5</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.24</i>		<i>25.0000</i>		<i>97.0</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.85</i>		<i>25.0000</i>		<i>87.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.26</i>		<i>25.0000</i>		<i>85.0</i>	<i>70 - 130</i>			

**LCS Dup (B2K0446-BSD1)**

Prepared: 11/16/2012 Analyzed: 11/16/2012

1,1-Dichloroethene	18.3200		20.0000		91.6	70 - 130	8.52	20	
Benzene	37.8900		40.0000		94.7	70 - 130	4.24	20	
Chlorobenzene	20.7400		20.0000		104	70 - 130	1.53	20	
MTBE	18.4000		20.0000		92.0	70 - 130	0.866	20	





## Certificate of Analysis

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 Oakland, CA 94612

Project Number : Chun, 401896004  
 Report To : Peter Sims  
 Reported : 11/26/2012

### Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B2K0446 - MSVOAW\_LL (continued)**

**LCS Dup (B2K0446-BS1) - Continued**

Prepared: 11/16/2012 Analyzed: 11/16/2012

Toluene	38.3300		40.0000		95.8	70 - 130	2.96	20	
Trichloroethene	17.8900		20.0000		89.4	70 - 130	6.49	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>25.09</i>		<i>25.0000</i>		<i>100</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.68</i>		<i>25.0000</i>		<i>94.7</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.65</i>		<i>25.0000</i>		<i>86.6</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.17</i>		<i>25.0000</i>		<i>84.7</i>	<i>70 - 130</i>			



## Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 11/26/2012

### Notes and Definitions

- S7 Surrogate recovery was above laboratory acceptance limit. Chromatogram shows high concentration of heavy hydrocarbons.
- J Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
- D6 Sample required dilution due to high concentration of target analyte.
- ND Analyte not detected at or above reporting limit
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- NR Not Reported
- RPD Relative Percent Difference
- CA1 CA-NELAP (CDPH)
- CA2 CA-ELAP (CDPH)
- OR1 OR-NELAP (OSPHL)
- TX1 TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.

# CHAIN OF CUSTODY RECORD

**ADVANCED TECHNOLOGY LABORATORIES**  
 3275 Walnut Ave., Signal Hill, CA 90755  
 Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: \_\_\_\_\_ Quote #: \_\_\_\_\_  
 As the authorized agent of the below named company, I hereby purchase testing services from ATL as dictated below and guarantee payment in full.  
 Submitter (Print): \_\_\_\_\_  
 Signature: \_\_\_\_\_

**FOR LABORATORY USE ONLY:**

**Method of Transport**  
 Client     ATL  
 FedEx     OnTrac  
 GSO  
 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

Submitter - Please complete all SHADED areas and include QUOTE # above to ensure proper invoicing.

Client: Ninyo + Moore    Address: 1956 Webster St, Ste 400    TEL: 510-343-3000  
 Attn: Sarah Price    City: Oakland    State: CA    Zip Code: 94612    FAX: 510-343-3001

Project Name: Chun    Project #: 401896004    Sampler: Sarah Price (Printed Name)    Sarah Price (Signature)

Relinquished by: Sarah Price (Signature and Printed Name)    Date: 11/14/12    Time: 1:35    Received by: Jeff Siegfried (Signature and Printed Name)    Date: 11/14/12    Time: 3:50  
 Relinquished by: Jeff Siegfried (Signature and Printed Name)    Date: 11/14/12    Time: 4:15    Received by: GSO (Signature and Printed Name)    Date: 11/14/12    Time: 4:50

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

**Bill To:**    **Send Report To:**    **Special Instructions/Comments:**  
 Attn: Peter Sims    E-mail: psims@ninyoandmoore.com    Attn: Peter Sims    E-mail: \_\_\_\_\_  
 Company: Ninyo + Moore    Company: \_\_\_\_\_  
 Address: 1956 Webster St    Address: \_\_\_\_\_  
 City: Oakland    State: CA    Zip: 94612    City: \_\_\_\_\_    State: \_\_\_\_\_    Zip: \_\_\_\_\_  
 Provide EDD in Geotracker Format, Field Point Names = Sample IDs, Log Code = NMO  
 Global ID = T0600100980  
 Silica gel cleanup before GTO analysis

**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all Samples and Hardcopy will be disposed Forty-five(45) days after generation of report - electronic copies retained for five(5) years.  
**Storage Fees (applies when storage is requested):**  
 ■ Sample : Forty-five(45) Days Complimentary - \$2.00 / sample / mo thereafter.  
 Hardcopy Reports \$17.50 per report.

CIRCLE or Write IN Analyses Needed	8260-824 (Volatiles) / I.V.C. Oxid.    8015B (GRO) / 8015B (TEA)    TO-15 / TO-14 / TO-3 / RSK-175    8270B-625(BNA) / 8310(PAHs)    8081 (OrgCl) / 8141 (OrgPO4 Pest)    8010B-200.7 CAM Metals    6020B-200.7 Metals    7199-218.6 (Hex. Chromium)    300(Antoni) / 314 (Perchlorate)    Silica gel cleanup SOIL/SEDIMENT/SLUDGE    SOLDSWIPES/FILTERS    WATER-DRINKING/GROUND    WATER-STORMWASTE    AQUEOUS/LAYERED-OIL	CIRCLE APPROPRIATE MATRIX	PRESERVATION	QA/QC RTNE <input type="checkbox"/> CT <input type="checkbox"/> Legal <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode _____ OTHER _____ REMARKS _____
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ITEM	BUSINESS HOURS 8:30 am to 5:30 pm	Sample Description		
	Lab No.	Sample I.D. / Location	Date	Time
1	1204033 - 1	MW-4R	11/14/12	1400
2	- 2	MW-5R		1450
3	- 3	MW-6R		1525
4	- 4	MW-7R		1550
5	- 5	MW-8		1250
6	- 6	MW-10		1210
7	- 7	MW-11R		0900
8	- 8	MW-12		1000
9	- 9	MW-14		1015
10	- 10	MW-16		1120

Samples Submitted AFTER 3:30 PM, are considered received the following business day at 8:30 AM.    Weekend, Holiday, Off Hours Work ASK for QUOTE    Container Types: 1=Tube 2=VOA 3=Liter 4=Pint 5=Jar 6=Tedlar 7= Canister    Material: 1=Glass 2=Plastic 3=Metal    Preservatives: 1=HCl, 2=HNO<sub>3</sub> 3=H<sub>2</sub>SO<sub>4</sub> 4=4°C 5=Zn(Ac)<sub>2</sub> 6=NaOH 7=NA<sub>2</sub>S<sub>2</sub>O<sub>4</sub>  
 TAT 0 300% SURCHARGE SAME BUSINESS DAY IF RCVD BY 9:00 AM    TAT 1 100% SURCHARGE NEXT BUSINESS DAY 5:30 PM    TAT 2 50% SURCHARGE 2ND BUSINESS DAY 5:30 PM    TAT 3 30% SURCHARGE 3RD BUSINESS DAY 5:30 PM    TAT 4 20% SURCHARGE 4TH BUSINESS DAY 5:30 PM    TAT 5 NO SURCHARGE 5-7 BUSINESS DAYS 5:30 PM    TAT 10 10% DISCOUNT 10th BUSINESS DAY 5:30 PM  
 For RUSH TCLP/STLC, add 2 days to respective TAT.    Subcon. TAT is 10-15 business days, Dioxin and Furans 21 business days.

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