

**FIRST SEMI-ANNUAL 2013 GROUNDWATER
MONITORING REPORT
BILL CHUN SERVICE STATION
2301 SANTA CLARA AVENUE
ALAMEDA, CALIFORNIA**

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PREPARED FOR:

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May 29, 2013
Project No. 401896004

Fuel Leak Case # RO0000382
GeoTracker Global ID # T0600100980

May 29, 2013
Project No. 401896004

Ms. Carolyn C. Fong
Trustee, Lily A. Chun 1991 Trust
720 East Hermosa Drive
San Gabriel, California 91775

Subject: First Semi-Annual 2013 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 Semi-Annual Groundwater Monitoring Report for the above-referenced site. This Report discusses the results, and presents conclusions and recommendations of our third semi-annual groundwater monitoring event. We appreciate the opportunity to be of service to you on this project.

Sincerely,
NINYO & MOORE



Sarah F. Price
Staff Environmental Engineer



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May 29, 2013

To: Mr. Jerry Wickham
Senior Hazardous Materials Specialist
Alameda County Department of Environmental Health
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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.

Ms. Carolyn Fong, TEE

Ms. Carolyn Fong
Trustee for Lily A. Chun 1991 Trust
711 E. Hermosa Drive
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1. INTRODUCTION

Ninyo & Moore has conducted semi-annual groundwater monitoring at the Bill Chun Service Station property located at 2301 Santa Clara Avenue in 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 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 site is a rectangular lot which measures approximately 85 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 retail 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 (replaced) 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 recommended by Ninyo & Moore. 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.

In December 2012, Ninyo & Moore prepared a Semi-Annual Groundwater Monitoring Report to document the results of the second semi-annual groundwater monitoring event. Groundwater monitoring results indicated TPHg concentrations ranging 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. 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 report recommended continuation of groundwater monitoring on a semi-annual basis. Additionally, LPH was not observed 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 monthly LPH monitoring events conducted on October 3, November 14, and December 3, 2012. Therefore, measurement of LPH on a monthly basis was discontinued.

2. HISTORICAL CONSTITUENT OF CONCERN CONCENTRATIONS IN GROUNDWATER

In a directive letter dated September 8, 2011, 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 concentrations of contaminants of concern (COCs) are presented in separate tables for each well.

Historically, concentrations of COCs 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 from September 2000 to April 2011. However, concentrations of COCs in these wells have generally shown an increase from February or August 2010 to April 2011. Former onsite wells MW-7 (which was replaced) and EW-12 (which was 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 as below the laboratory detection limits. In offsite well MW-11 (which was replaced), COC concentrations have shown an overall decreasing trend with an increase in

2010. Concentrations of COCs have been reported below the laboratory detection limits in offsite wells MW-12 (formerly BL) and MW-13 (formerly BG) since 2006, and in offsite well MW-14 (formerly BF) since 2009. Concentrations of COCs have been reported near or below laboratory detection limits in offsite well MW-15 (formerly BH) since 2007.

On May 10, 2012, Ninyo & Moore collected groundwater samples from all on site 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.

On November 14, 2012, Ninyo & Moore conducted a second semi-annual groundwater monitoring event, during which monitoring wells MW-4R, MW-5R, MW-6R, MW-7R, MW-8, MW-10, MW-11R, MW-12, MW-14, and MW-16 were sampled. Groundwater monitoring results indicated TPHg concentrations ranging from below the laboratory detection limit of 50 µg/L in wells MW-10, MW-14 and MW-16, to 84,000 µg/L in well MW-7R. Benzene concentrations in groundwater ranged from below the laboratory detection limit of 0.5 µg/L in wells MW-10, MW-14 and MW-16, to 15,000 µg/L in well MW-7R.

In both the May 2012 and December 2012 sampling events, the area with the highest concentrations of TPHg and benzene were reported in wells surrounding the former USTs, with the highest concentrations detected in well MW-7R. Based on the analytical results of these sampling events, 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

On April 17 and 18, 2013, Ninyo & Moore conducted the first semi-annual 2013 groundwater monitoring event for monitoring wells MW-4R, MW-5R, MW-6R, MW-7R, MW-8, MW-10,

MW-11R, MW-12, MW-14, and MW-16. Shallow groundwater elevation contours, flow directions and gradients are illustrated on Figure 4, and detected concentrations of TPHg and benzene are illustrated on Figures 5 and 6, respectively.

3.1. Depth to Groundwater Measurement

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. The water-level meter was decontaminated between wells.

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 disposable bailer. Dedicated pump tubing and new disposable bailers were used in each well to minimize the likelihood of 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 and transported under chain-of-custody 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. Dedicated pump tubing or new bailers were used at 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 which came in contact with groundwater. Decontamination was performed using a triple rinse consisting of a rinse with a non-phosphate based detergent solution, an initial rinse in potable water, and a final rinse in potable water. Nitrile gloves were changed between each sample collection to minimize the likelihood of cross contamination.

3.4. Investigation Derived Waste

Investigation derived waste (IDW) consisting of purged groundwater and decontamination rinsate water was stored in properly labeled 55-gallon steel drums which were left in a secure location on-site. Disposal equipment intended for one time use (nitril gloves, bailers, etc.) were disposed of as municipal waste. Following waste profiling, the 55-gallon drums of IDW will be transported by a licensed hazardous waste hauler to an appropriate facility for disposal.

3.5. Laboratory Analysis

Groundwater samples from each well were analyzed by ATL 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 April 17 and 18, 2013.

4.1. Depth to Groundwater and Groundwater Flow Direction

The depth from TOC to groundwater ranged from 7.04 feet below TOC in MW-10 to 9.10 feet below TOC in MW-12 during the April 2013 sampling event. The groundwater level measurements and the calculated groundwater elevations are presented on Table 1.

Groundwater elevation contours and groundwater flow directions and gradients are indicated on Figure 4. Based on the contours on Figure 4, the groundwater appears to flow northeast on the northern portion of the site boundaries and to the west-southwest on the southern portion of the site boundaries. The calculated groundwater gradient on site is 0.005 feet per foot on the southern portion of the site and 0.012 feet per foot on the northern portion of the site.

4.2. Groundwater Sample Laboratory Results

A summary of the groundwater sample analytical results is presented in Table 2 and a copy of the laboratory analytical report is presented in Appendix C. The laboratory results are compared to Table F-1A of the RWQCB Environmental Screening Levels (ESLs), Residential Land Use, Groundwater is Current or Potential Source of Drinking Water.

4.2.1. TPHg in groundwater

TPHg concentrations in groundwater ranged from 60 µg/L in well MW-14 to 160,000 µg/L in well MW-7R. The ESL for TPHg is 100 µg/L. TPHg concentrations in shallow groundwater are presented on **Figure 5**.

4.2.2. Benzene in Groundwater

Benzene concentrations in groundwater ranged from below the laboratory reporting limit of 0.5 µg/L in wells MW-11 and MW-14 to 17,000 µg/L in well MW-7R. The ESL for benzene is 1.0 µg/L. Benzene concentrations in shallow groundwater are presented on **Figure 6**.

4.2.3. 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 45,000 µg/L of toluene, 4,500 µg/L of ethylbenzene, and 22,300 µg/L of total xylenes in well MW-7R; 1.2 µg/L of

1,2-dichloroethane and 1.8 µg/L di-isopropylether in MW-12; and 400 µg/L of naphthalene in MW-5R.

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, MW-6R, MW-8, MW-11R, MW-12, and MW-16 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.

5.3. Sample Dilutions

Due to the high concentrations of petroleum constituents in some of the samples, dilution factors ranging from 10 to 200 were required prior to analysis of some samples. Because of

the required sample dilution, detection limits were increased for samples collected from wells MW-5R, MW-7R, MW-11R, and MW-12.

5.4. “J Flagged” (Estimated) Results

Because higher detection limits were reported for samples requiring dilution, Ninyo & Moore requested that ATL report concentrations detected between the Method Detection Limit (MDL) and Practical Quantitation Limit (PQL). The MDL is lowest detectable concentration for a given analytical method, and only those concentrations which are detected above the PQL (referred to as the detection limit in this report) are considered to be reliable and accurate. Concentrations between the MDL and PQL are considered estimated values and are indicated with “J Flags” in the laboratory analytical report and in Table 2.

5.5. 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 April 17, 2013, and surveyed TOC data, the groundwater appears to flow southwest on the southern portion of the site and northeast on the northern portion of the site. The calculated groundwater gradient on site is 0.005 foot per feet on the southern portion and 0.012 foot per feet on the northern portion;
- 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-10, MW-11R, MW-12 and MW-16. Concentrations have increased from the November 14, 2012 groundwater sampling event with the exception of decreases in benzene in MW-8 and MW-11R, toluene in MW-11R, ethylbenzene in MW-5R, MW-6R and MW-11R, total xylenes in MW-5R, MW-6R, and MW-11R, and naphthalene in MW-4R, MW-5R, MW-6R, and MW-11R;

- 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:

- Performance of a second round of soil vapor, sub-slab soil vapor, and indoor air sampling to be reported in a Corrective Action Plan (CAP). The CAP will also present, evaluate, and recommend remedial alternatives to address impacts to the site and adjacent properties.
- Groundwater monitoring should continue on a semi-annual basis for monitoring wells MW-4R through MW-7R, MW8 through MW-10, MW-11R, MW-12 through MW-16, and EW-16 to further monitor the location and dissolved concentrations of the TPHg and benzene groundwater plume. In addition, we recommend adding MW-9, MW-13, MW-15, and EW-16 to the list of monitoring wells proposed to be sampled on a semi-annual basis. This is based on concentrations of COCs detected in off-site monitoring wells which indicate that impacts are migrating away from the site.

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, *Semi-Annual Groundwater Monitoring Report*, Alameda, California, dated December 13, 2012.

San Francisco Bay Regional Water Quality Control Board, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final*, Oakland, California, February 2013.

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)	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 LPI
MW-2R	04/17/13	29.56	NM	NM	NM	ND	NA	NA	NA	Not gauged nor sampled
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-4R	04/17/13	28.45	25.10	8.13	8.13	0.00	20.32	Rise	0.45	
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-5R	04/17/13	28.25	23.70	7.65	7.65	0.00	20.60	Rise	0.76	
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-6R	04/17/13	28.07	24.90	7.60	7.60	0.00	20.47	Rise	0.71	
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-7R	04/17/13	28.41	24.95	7.85	7.85	0.00	20.56	Rise	0.83	
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-8	04/17/13	28.01	14.00	7.68	7.68	0.00	20.33	Rise	0.41	
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-9	04/17/13	28.23	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	-0.82	
MW-10	04/18/13	27.45	12.95	7.04	7.04	0.00	20.41	Rise	0.27	
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-11R	04/17/13	28.92	24.4	8.14	8.14	0.00	20.78	Rise	1.04	
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-12	04/17/13	28.73	24.30	9.10	9.10	0.00	19.63	Rise	0.27	
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-13	04/17/13	30.21	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-14	04/17/13	29.02	11.60	8.45	8.45	0.00	20.57	Rise	0.75	
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 gauged nor sampled
MW-15	04/17/13	29.53	NM	NM	NM	NM	NA	NA	NA	Not gauged 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	
MW-16	04/17/13	28.52	24.75	7.63	7.63	0.00	20.89	Rise	1.29	
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 LPI
EW-14	04/17/13	29.89	NM	NM	NM	ND	NA	NA	NA	Not gauged nor sampled
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 LPI
EW-15	04/17/13	28.66	NM	NM	NM	ND	NA	NA	NA	Not gauged nor sampled
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 LPI
EW-16	04/17/13	29.99	NM	NM	NM	ND	NA	NA	NA	Not gauged nor sampled
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 LPI
EW-17	04/17/13	29.89	NM	NM	NM	ND	NA	NA	NA	Not gauged nor sampled
Gradient										
		Date	Gradient and Groundwater Flow Direction	Average Groundwater Elevation (feet MSL)		Change in Average GW Elevation (feet)				
		05/10/12	0.002 SW	20.72		NA				
		11/14/12	0.004 NE	19.78		-0.94				
		04/17/13	0.005/0.012 WSW/N E	20.46		0.68				

Notes:
Top-of-Casing (TOC) elevations were surveyed by Virgil Chavez Land Surveying on May 10, 2011:
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	Analytical Results (ug/L)																	
												Bromoform	Chloroform	Di-isopropylether	Hexachlorobutadiene	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene						
MW-2R	5/10/2012	57,000	9,400	6,500	1,100	5,100	<25	<25	1,100	310	<25	<25	<25	<25	96	380	51	270	<25	<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	<0.50	<0.50	<0.50	42	89	13	91	10	<0.50	<0.50	<0.50						
MW-4R	11/14/2012	420	51	0.66	0.66	2.54	<0.50	<0.50	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	47	68	3.9	7.8	9.1	<0.50	<0.50	<0.50						
MW-4R	4/17/2013	2,000	190	140	46	155	<0.50	1.0	28	7.4	<0.50	<0.50	<0.50	0.33 J	<0.50	30	62	4.6	51	7.0	<0.50	<0.50	<0.50						
MW-5R	5/10/2012	33,000	150	2,700	2,500	11,100	<25	<25	2,400	620	52	<25	<25	<25	<25	210	680	99	630	46	<25	<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	<5.0	<5.0	<5.0	180	620	90	490	33	<5.0	<5.0	<5.0						
MW-5R	4/17/2013	35,000	240	2,400	2,000	9,500	<5.0	<5.0	2,200	510	<5.0	<5.0	<5.0	<5.0	<5.0	140	400	59	390	<5.0	4.7 J	<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	<0.50	<0.50	<0.50	20	79	25	50	9.9	<0.50	<0.50	<0.50						
MW-6R	11/14/2012	900	2.4	7.1	83	131	<0.50	<0.50	61	13	0.61	<0.50	<0.50	<0.50	<0.50	12	30	3.2	28	3.1	<0.50	<0.50	<0.50						
MW-6R	4/17/2013	1,800	220	21	64	157	<0.50	<0.50	60	14	<0.50	<0.50	<0.50	<0.50	<0.50	24	29	2.1	27	7.6	<0.50	<0.50	<0.50						
MW-7R	5/10/2012	160,000	14,000	42,000	3,900	26,700	<25	<25	3,300	960	49	<25	<25	<25	<25	120	660	<25	370	26	<25	<25	<25						
MW-7R	11/14/2012	84,000	15,000	26,000	3,700	19,300	<100	<100	2,300	610	<100	<100	<100	<100	<100	120	480	48 J	370	<100	<100	<100	<100						
MW-7R	4/17/2013	160,000	17,000	45,000	4,500	22,300	<100	<100	2,000	580	<100	<100	<100	<100	<100	98 J	350	<100	300	<100	<100	<100	<100						
MW-8	5/10/2012	2,700	15	20	5.3	34	<1.0	<1.0	<1.0	1.4	<0.50	<1.0	<1.0	<1.0	<1.0	24	72	1.7	24	3.8	<1.0	<1.0	<1.0						
MW-8	11/14/2012	790	14	3.0	0.98	5.83	<0.50	<0.50	0.39 J	0.41 J	<0.50	<0.50	<0.50	<0.50	<0.50	13	14	0.80	13	2.2	<0.50	0.38 J	<0.50						
MW-8	4/17/2013	1,100	6.8	6.4	5.6	16.8	<0.50	<0.50	1.9	1.6	<0.50	2.0	<0.50	<0.50	<0.50	9.9	21	0.89	11	1.6	<0.50	0.25 J	<0.50						
MW-9	5/10/2012	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-10	5/10/2012	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-10	11/14/2012	<50	<0.50	<0.50	<0.50	ND<1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-10	4/18/2013	530	20	110	19	97	<0.50	<0.50	12	3.5	<0.50	<0.50	<0.50	<0.50	<0.50	0.65	2.6	0.23 J	2.1	<0.50	<0.50	<0.50	<0.50						
MW-11R	5/10/2012	22,000	<25	170	910	6,300	<25	<25	2,500	760	58	<25	40	<25	<25	92	440	<25	240	<25	<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	<5.0	36	<5.0	<5.0	170	660	88	450	27	<5.0	<5.0	<5.0						
MW-11R	4/17/2013	22,000	<5.0	6.5	580	3,970	<5.0	<5.0	2,600	720	<5.0	<5.0	25	<5.0	<5.0	110	280	61	320	<5.0	<5.0	<5.0	<5.0						
MW-12	5/10/2012	2,700	600	4.7	160	207	<0.50	<0.50	13	23	0.60	<0.50	<0.50	<0.50	<0.50	10	26	2.3	17	2.3	<0.50	<0.50	<0.50						
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	<1.0	<1.0	<1.0	8.5	26	2.1	14	2.1	<1.0	<1.0	1.2						
MW-12	4/17/2013	5,200	760	3.4	330	409	<2.0	1.2 J	60	49	1.6 J	<2.0	<2.0	<2.0	1.8 J	22	40	3.7	36	7.4	<2.0	<2.0	<2.0						
MW-13	5/10/2012	50	<0.50	<0.50	<0.50	<1.5	8.2	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-14	5/10/2012	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-14	11/14/2012	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
MW-14	4/17/2013	60	<0.50	<0.50	2.9	15.7	<0.50	<0.50	5.6	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	0.27 J	1.0	<0.50	0.60	<0.50	<0.50	<0.50	<0.50						
MW-15	5/10/2012	1,800	1.6	1.4	130	38	4.4	2.2	6.2	23	3.0	<0.50	<0.50	<0.50	<0.50	22	14	3.2	28	7.0	<0.50	<0.50	<0.50						
MW-16	5/10/2012	180	<0.50	<0.50	<0.50	<1.5	2.3	2.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	<0.5	<0.5	<0.5	5.8	<0.50	<0.50	<0.50						
MW-16	11/14/2012	<50	<0.50	<0.50	<0.50	<1.5	1.2	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	1.5	<0.50	<0.50	<0.50						

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	Bromoform	Chloroform	Di-isopropylether	Hexachlorobutadiene	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene
		Analytical Results (ug/L)																					
MW-16	4/17/2013	2,900	3.3	1.1	230	11.3	0.35 J	<0.50	3.4	26	<0.50	<0.50	<0.50	<0.50	<0.50	43	59	12	72	13	<0.50	0.42 J	<0.50
EW-14	5/10/2012	33,000	4,200	3,300	2,200	10,100	<25	<25	1,200	300	<25	<25	<25	<25	<25	73	280	<25	190	<25	<25	<25	<25
EW-15	5/10/2012	34,000	6,300	6,500	1,200	5,600	<25	<25	690	180	<25	<25	<25	<25	<25	41	160	<25	110	<25	<25	<25	<25
EW-16	5/10/2012	360	40	1.6	1.3	11.4	0.86	0.60	3.5	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	9.3	10	<0.5	5.8	1.6	<0.50	<25	<25
EW-17	5/10/2012	11,000	2,800	1,600	240	1,280	<25	<25	160	50	<25	<25	<25	<25	<25	52	210	<25	140	<25	<25	<25	<25
ESLs		100	1.0	40	30	20	5.0	0.5	NE	NE	NE	100	70	NE	0.86	NE	6.2	NE	NE	NE	10	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

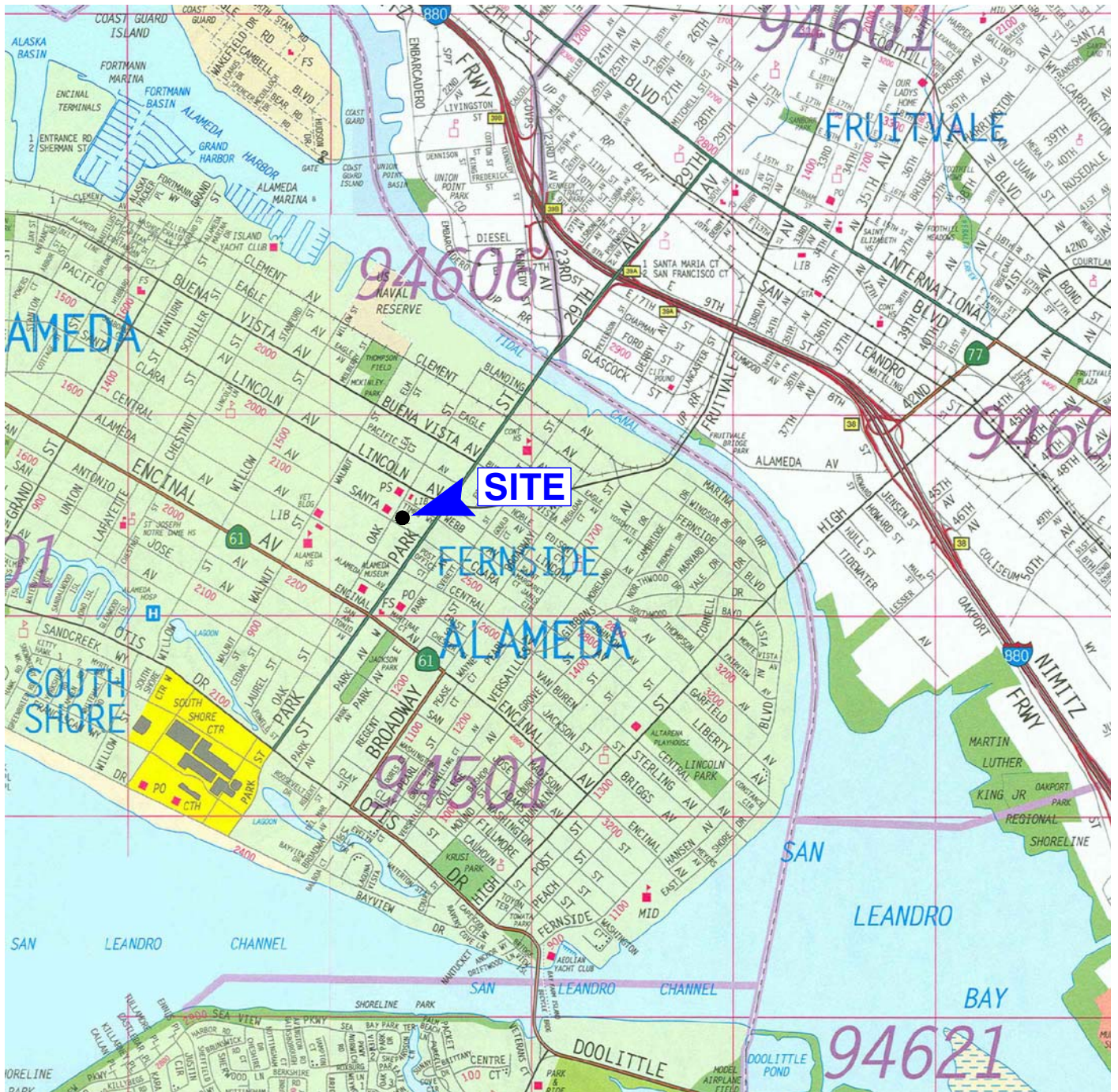
ESL = Regional Water Quality Control Board, Residential Land Use, Environmental Screening Level (groundwater is a current or potential source of drinking water, Table F-1A)

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

2301 SANTA CLARA AVENUE
ALAMEDA, CALIFORNIA

1

401896004

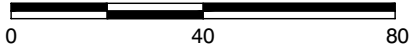
5/13



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.

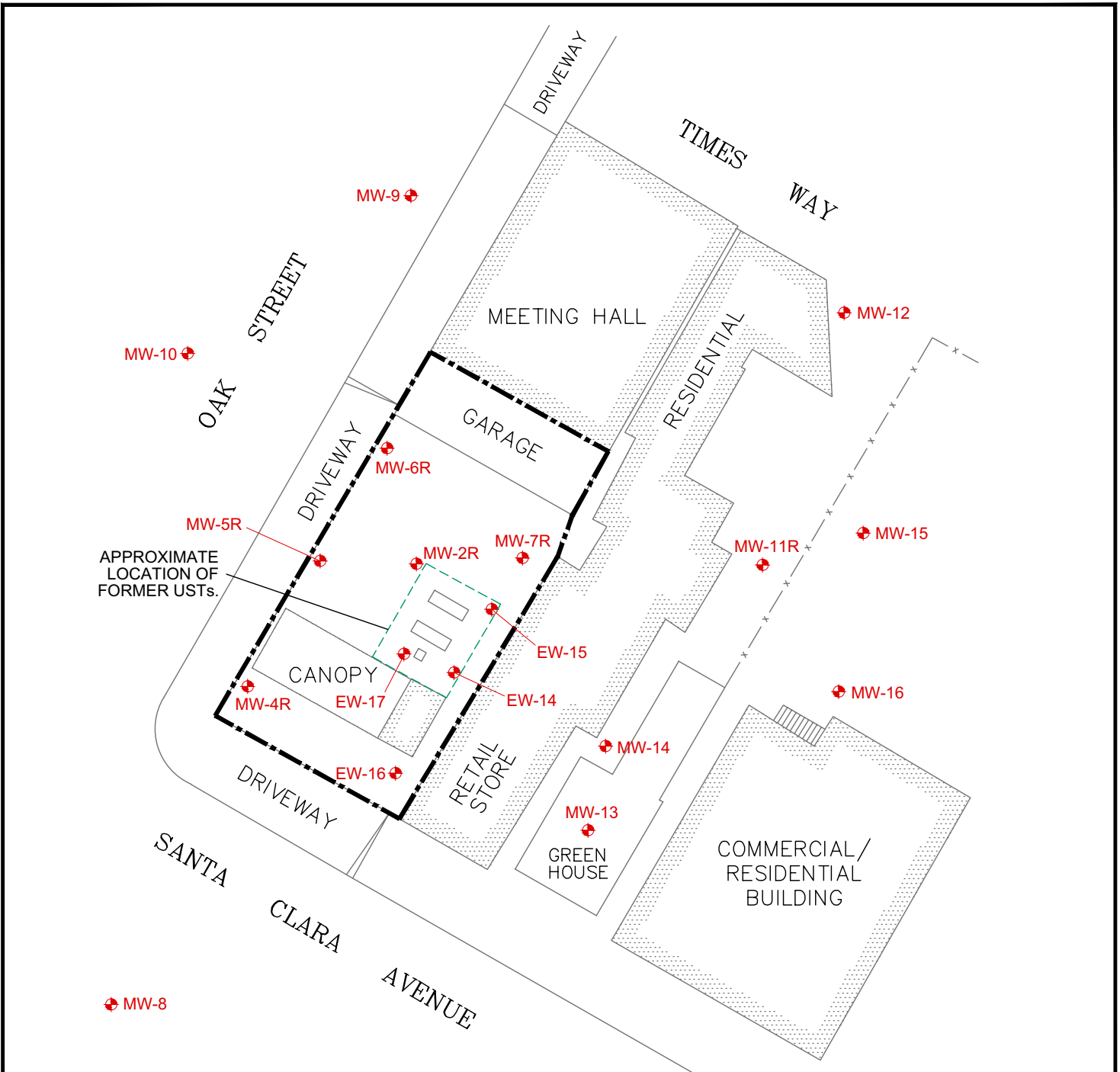
DATE

2301 SANTA CLARA AVENUE
ALAMEDA, CALIFORNIA

2

401896004

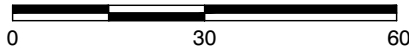
5/13



APPROXIMATE
LOCATION OF
FORMER USTs.



SCALE IN FEET



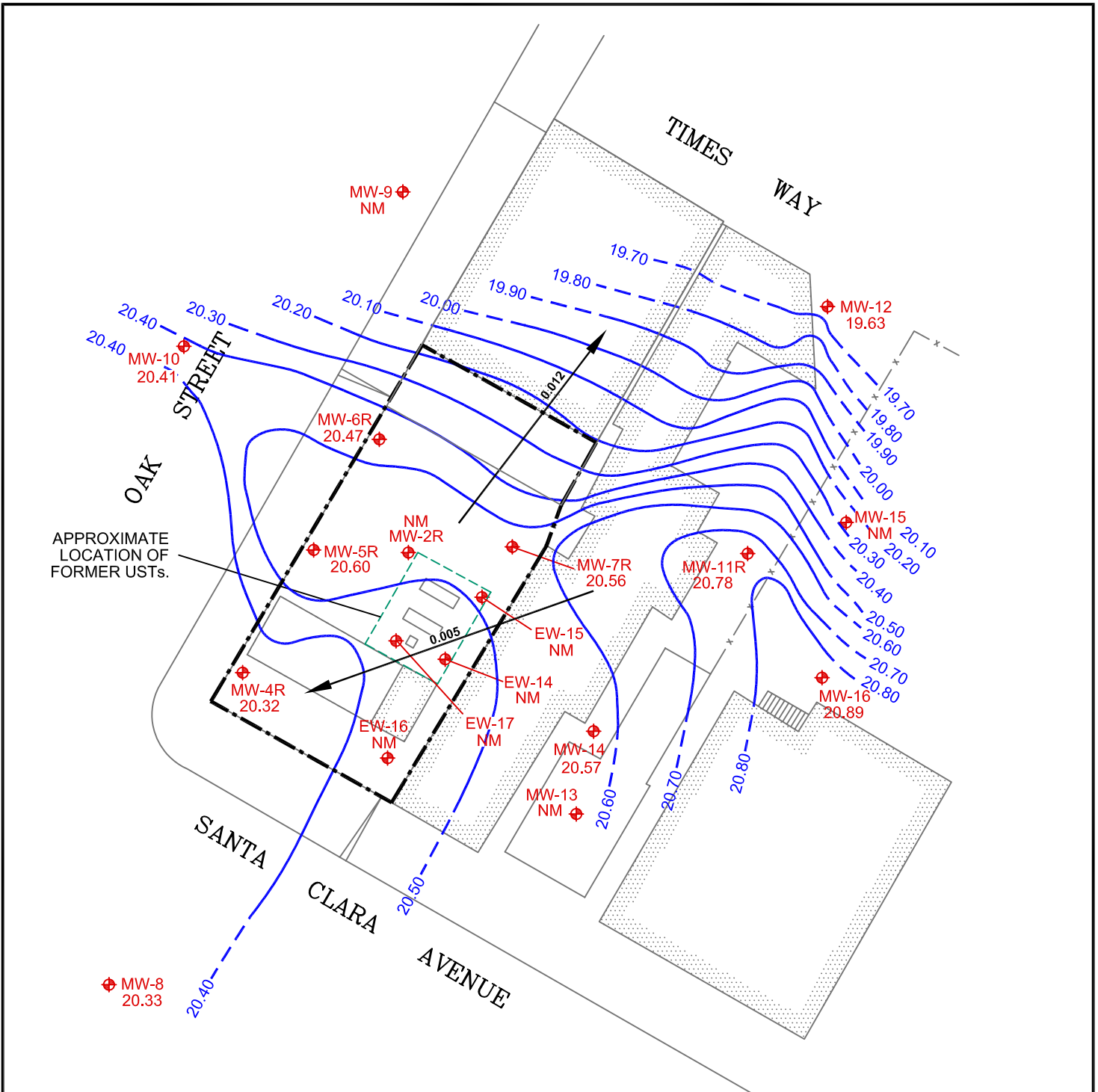
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER
	FENCE

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

401896004-FIG3.dwg, May 07, 2013, 4:46pm, aballane

		SITE PLAN 2301 SANTA CLARA AVENUE ALAMEDA, CALIFORNIA	FIGURE
			3
PROJECT NO.	DATE		
401896004	5/13		



APPROXIMATE LOCATION OF FORMER USTs.

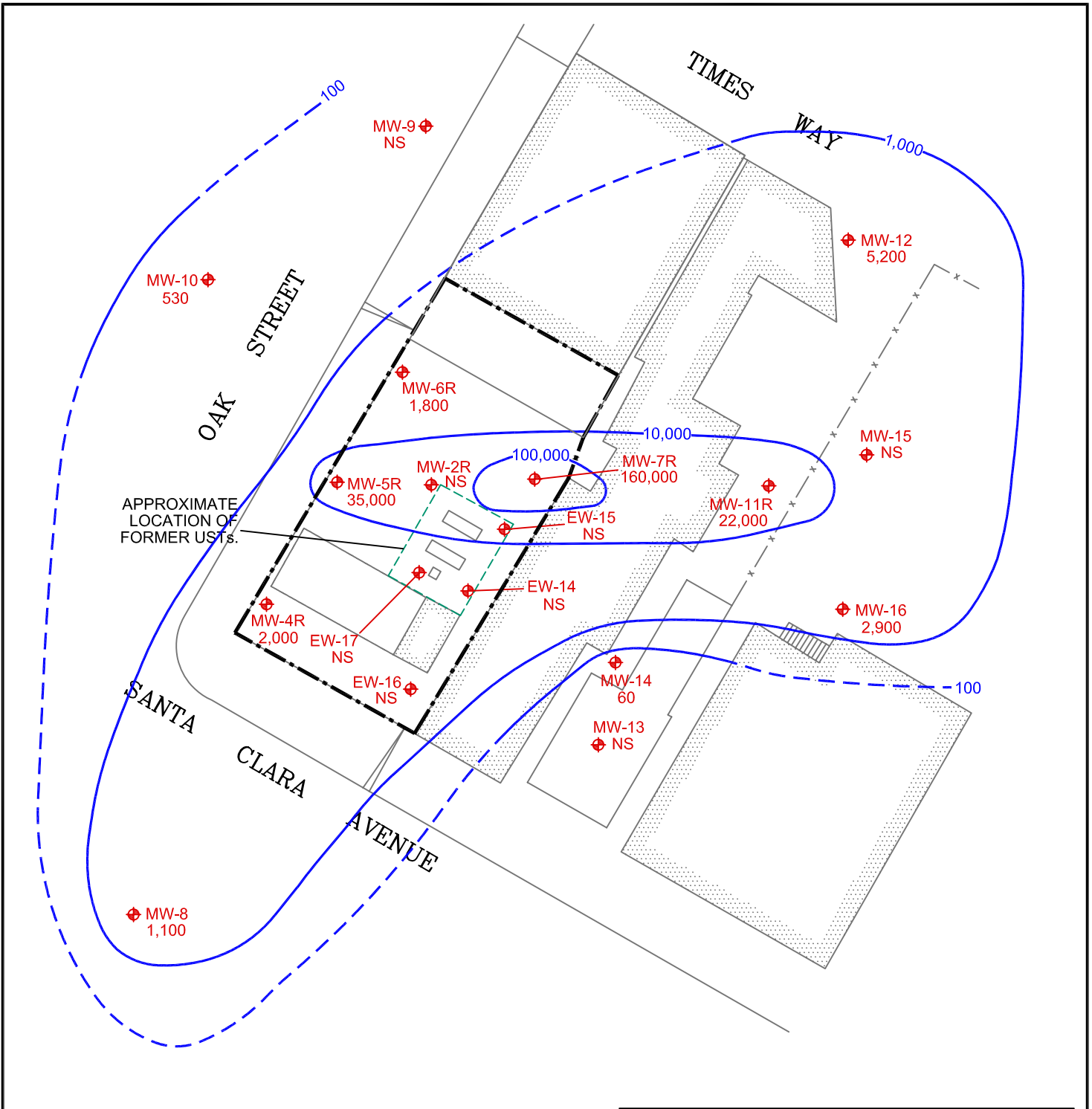
LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
	DEPTH TO GROUNDWATER WAS NOT MEASURED
	FENCE
	GROUNDWATER EQUIPOTENTIAL LINE (DASHED WHERE INFERRED)
	AVERAGE GROUNDWATER FLOW DIRECTION AND GRADIENT IN FEET PER FOOT

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

		SHALLOW GROUNDWATER CONTOUR MAP	FIGURE 4
		2301 SANTA CLARA AVENUE ALAMEDA, CALIFORNIA	

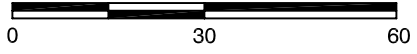
401896004-FIG4.dwg, May 20, 2013, 2:15pm, snguyen



APPROXIMATE LOCATION OF FORMER USGs.



SCALE IN FEET



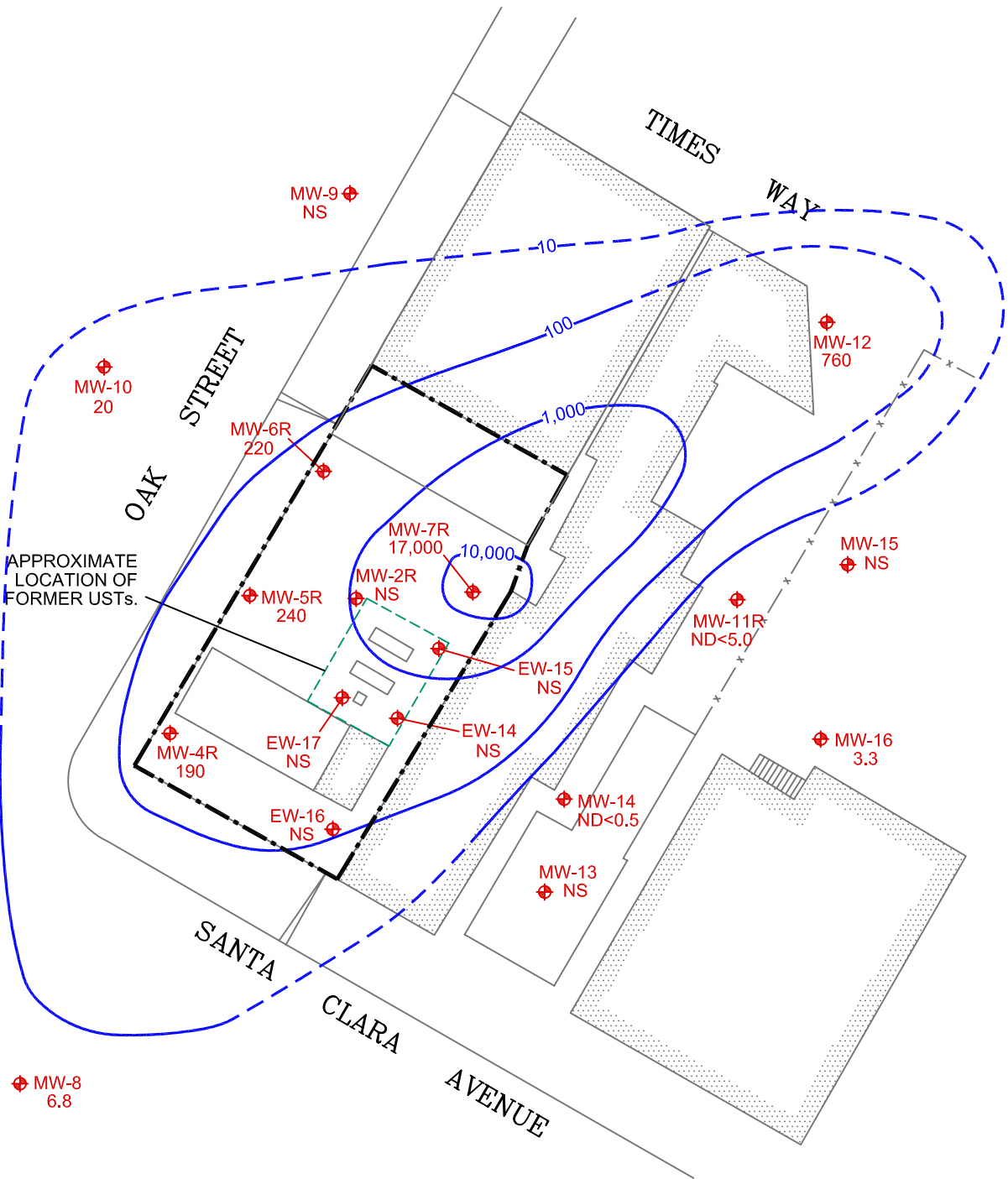
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND	
	APPROXIMATE SITE BOUNDARY
	MONITORING WELL GROUNDWATER CONCENTRATION IN MICROGRAMS PER LITER
	NOT SAMPLED
	FENCE
	TPHg IN GROUNDWATER ISOCONCENTRATION LINE (DASHED WHERE INFERRED) IN MICROGRAMS PER LITER

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.

		TOTAL PETROLEUM HYDROCARBONS AS GASOLINE CONCENTRATIONS IN SHALLOW GROUNDWATER	FIGURE 5
PROJECT NO.	DATE		
401896004	5/13		

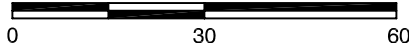
401896004-FIG5.dwg, May 20, 2013, 2:14pm, snguyen



APPROXIMATE LOCATION OF FORMER USTs.



SCALE IN FEET



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
	BENZENE IN GROUNDWATER ISOCONCENTRATION LINE (DASHED WHERE INFERRED) IN MICROGRAMS PER LITER

REFERENCE: VIRGIL CHAVEZ LAND SURVEYING, 2012.



BENZENE CONCENTRATIONS IN SHALLOW GROUNDWATER

FIGURE

PROJECT NO.	DATE
401896004	5/13

2301 SANTA CLARA AVENUE
ALAMEDA, CALIFORNIA

6

401896004-FIG6.dwg, May 20, 2013, 2:10pm, snguyen

2301 Santa Clara Avenue
Alameda, California

May 29, 2013
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 _g	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	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 _g	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 _g	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 _g	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 _g	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	TPHg	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	TPHg	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	
3/14/2006	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	
9/7/2006	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	
7/7/2007	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	
9/5/2008	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	
2/26/2010	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	
4/21/2011	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 _g	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	NA	NA	NA
9/6/2006	36,000	5,900	2,100	3,000	16,000	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
1/5/2007	50,000	2,200	450.0	2,100	13,300	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
7/7/2007	54,000	2,800	1,200.0	3,100	16,400	ND	ND	ND	ND	ND	ND	ND	610	750	2900
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	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	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	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	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	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)														
8/20/2005	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	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)														
8/20/2005	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	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)														
8/20/2005	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 _g	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 _g	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 _g	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 _g	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)														
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	11,000	2,300	11,200	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
9/6/2006	51,000	8,200													
1/5/2007	30,000	9,700													
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 _g	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 _g	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 _g	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	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	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			
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

May 29, 2013
Project No. 401896004
Fuel Leak Case RO0000382

APPENDIX B

FIELD DATA SHEETS

MONITORING WELL SAMPLING FORM

Date:

wed. 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW-4R	Depth to Liquid (DL):
Casing Material: PVC	Depth to Water (DW1): 8.13
Diameter:	Product Thickness (PT=DW1-DL):
Well Head Condition:	Total Well Depth (TD): 25.1
Well Box Condition:	Total head (TH=TD-DW1): 16.97
Purge Method: Pump	Casing Volume (TH*Factor): 2.71 x 3 = 8.1
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
1407	1 gal	20.0	410	6.81		turbid, odor
1412	2	19.8	400	6.85		"
1416	3	19.9	344	6.89		"
1420	4	19.8	357	6.89		clear, odor
1425	5	20.0	368	6.90		
1429	6	19.8	393	6.87		
1434	7	19.8	415	6.87		
1439	8	19.8	430	6.84		
1441	1.5	19.8	433	6.86		

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
MW-4R	1442	19.8	6.86	433							

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

wed, 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW-5R	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): 7.65	
Diameter:	Product Thickness (PT=DW1-DL):	
Well Head Condition:	Total Well Depth (TD): 23.7	
Well Box Condition:	Total head (TH=TD-DW1): 16.05	
Purge Method: Pump	Casing Volume (TH*Factor): $2.56 \times 3 = 7.7$	
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
1456	1 gal	19.3	319	4.99		clear, strong odor ↓
1500	2	19.1	327	8.82		
1505	3	19.1	346	8.84		
1510	4	19.1	341	8.95		
1515	5	19.1	319	9.32		
1519	6	19.2	314	9.43		
1524	7	19.2	322	10.14		
1529	8	19.2	312	10.07		

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)	OTHER				
						TPH-g	TPH-d	BTEX /MTBE	8260	8010
1530	MW-5R	19.2	10.07	312						

Additional Comments

MONITORING WELL SAMPLING FORM

Date: _____

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location: _____

WELL NO. CR	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): 7.6	
Diameter:	Product Thickness (PT=DW1-DL):	
Well Head Condition:	Total Well Depth (TD): 24.9	
Well Box Condition:	Total head (TH=TD-DW1): 17.3	
Purge Method: Pump	Casing Volume (TH*Factor): 2.76 x 3 = 8.3	
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
1545	1	20.1	357	9.11		clear, strong odor
1551	2	19.5	373	7.88		
1555	3	19.5	379	7.51		
1600	4	19.5	367	7.53		
1605	5	19.3	382	7.36		
1609	6	19.4	380	7.23		
1613	7	19.4	380	7.15		
1618	8	19.5	379	7.12		
1619	8.5	19.5	377	7.12		

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)	OTHER				
						TPH-g	TPH-d	BTEX /MTBE	8260	8010
0620	MW-6R	19.5	7.12	377						

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

Wed, 4/14/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW-7R	Depth to Liquid (DL):
Casing Material: PVC	Depth to Water (DW1): 7.85
Diameter:	Product Thickness (PT=DW1-DL):
Well Head Condition:	Total Well Depth (TD): 24.95
Well Box Condition:	Total head (TH=TD-DW1): 17.1
Purge Method: Pump	Casing Volume (TH*Factor): 27.3 x 3 = 8.2
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
1642	1 gal	18.6	464	7.31		clear, very strong odor
1646	2	18.5	437	7.31		
1651	3	18.5	377	6.62		
1655	4	18.4	394	6.45		
1659	5	18.4	400	6.45		
1704	6	18.4	411	6.44		
1709	7	18.5	422	6.45		
1715	8	18.3	439	6.47		
1716	8.5	18.3	434	6.47		

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
1720	MW7R	18.3	6.47	438							

Additional Comments

MONITORING WELL SAMPLING FORM

Date: Wed. 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. <u>MW-8</u>	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): <u>2.68</u>	
Diameter:	Product Thickness (PT=DW1-DL):	
Well Head Condition:	Total Well Depth (TD): <u>14.0</u>	
Well Box Condition:	Total head (TH=TD-DW1): <u>6.32</u>	
Purge Method: Pump	Casing Volume (TH*Factor): <u>1.0 x 3 = 3.0</u>	
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
<u>1323</u>	<u>1 gal</u>	<u>20.4</u>	<u>341</u>	<u>6.92</u>		<u>clear, no odor</u>
<u>1328</u>	<u>2</u>	<u>20.7</u>	<u>314</u>	<u>6.87</u>		<u>"</u>
<u>1334</u>	<u>3</u>	<u>20.7</u>	<u>337</u>	<u>6.79</u>		<u>"</u>

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)	OTHER				
						TPH-g	TPH-d	BTEX /MTBE	8260	8010
<u>1335</u>	<u>MW-8</u>	<u>20.7</u>	<u>6.79</u>	<u>333</u>						

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

Thurs. 4/18/13

Project Name: <u>Chum</u>	Client:	Job No:
Address: <u>2901 Santa Clara Ave</u>	Contact/Phone:	
City/State: <u>Alameda</u>	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. <u>MW-10</u>	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): <u>4.04</u>	
Diameter:	Product Thickness (PT=DW1-DL):	
Well Head Condition:	Total Well Depth (TD): <u>12.95</u>	
Well Box Condition:	Total head (TH=TD-DW1): <u>5.91</u>	
Purge Method: Pump	Casing Volume (TH*Factor): <u>0.95 x 3 = 2.8</u>	
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
<u>0723</u>	<u>1 gal</u>	<u>17.4</u>	<u>324</u>	<u>6.70</u>		<u>clear, very slight odor</u>
<u>0728</u>	<u>2</u>	<u>17.9</u>	<u>320</u>	<u>6.62</u>		
<u>0733</u>	<u>3</u>	<u>17.9</u>	<u>323</u>	<u>6.50</u>		
						"
						"

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
<u>0735</u>	<u>MW-10</u>	<u>17.9</u>	<u>6.50</u>	<u>323</u>							

Additional Comments

MONITORING WELL SAMPLING FORM

Date: wednesday 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

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

WELL NO. <u>MW-11R</u>	Depth to Liquid (DL): <u>-</u>
Casing Material: <u>PVC</u>	Depth to Water (DW1): <u>8.14</u>
Diameter: <u>2"</u>	Product Thickness (PT=DW1-DL): <u>-</u>
Well Head Condition: <u>good</u>	Total Well Depth (TD): <u>24.4</u>
Well Box Condition: <u>good</u>	Total head (TH=TD-DW1): <u>16.26</u>
Purge Method: <u>Pump</u>	Casing Volume (TH*Factor): <u>2.6 * 3 = 7.8</u>
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
0827	1 gall	8.17	164.2	7.4		water mostly clear; slight odor
0834	2 gall	16.0	153.9	7.99		
0840	3 "	15.9	145.9	7.31		
0845	4	16.0	139.5	7.23		
0849	5	16.2	134.5	7.14		
0855	6	16.0	133.5	7.14		
0900	7	16.2	130.9	7.09		
0905	8	16.0	130.8	7.10		totally clear, odor still present

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
0910	MW-11R	16.0	7.12	130.9							

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

Wed. 9/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW-12	Depth to Liquid (DL):
Casing Material: PVC	Depth to Water (DW1): 9.10
Diameter:	Product Thickness (PT=DW1-DL):
Well Head Condition:	Total Well Depth (TD): 24.3
Well Box Condition:	Total head (TH=TD-DW1): 15.2
Purge Method: Pump	Casing Volume (TH*Factor): 24.3 x 3 = 7.29
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
1039	1 gal	18.0	357	6.67		clear, very slight odor ↓
1046	2	18.1	351	6.58		
1051	3	18.2	363	6.56		
1056	4	18.1	380	6.57		
1102	5	18.1	393	6.56		
1109	6	18.1	395	6.56		
1114	7	18.0	395	6.54		
1121	7.5	18.0	395	6.53		

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
MW-12	1125	18.1	6.53	395		X			X		

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

Wed. 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. <i>mw-14</i>	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): <i>8.45</i>	
Diameter: <i>2"</i>	Product Thickness (PT=DW1-DL):	
Well Head Condition: <i>good</i>	Total Well Depth (TD): <i>11.6</i>	
Well Box Condition: <i>good</i>	Total head (TH=TD-DW1): <i>3.15</i>	
Purge Method: Pump	Casing Volume (TH*Factor): <i>0.50 x 3 = 1.512</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>0944</i>	<i>1 gal</i>	<i>17.0</i>	<i>154.4</i>	<i>7.01</i>		<i>clear, slight odor</i>
<i>0948</i>	<i>1.5</i>	<i>16.7</i>	<i>152.9</i>	<i>7.02</i>		
<i>0950</i>	<i>2</i>	<i>16.9</i>	<i>153.0</i>	<i>7.03</i>		<i>u</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>0950</i>	<i>MW-14</i>	<i>17.1</i>	<i>7.04</i>	<i>153.2</i>		<i>X</i>			<i>X</i>		

Additional Comments

MONITORING WELL SAMPLING FORM

Date:

Wed, 4/17/13

Project Name:	Client:	Job No:
Address:	Contact/Phone:	
City/State:	Technician Gauging/Sampling:	

Note: All measurements from top of casing.

Well Location:

WELL NO. MW-16	Depth to Liquid (DL):	
Casing Material: PVC	Depth to Water (DW1): 7.63	
Diameter:	Product Thickness (PT=DW1-DL):	
Well Head Condition:	Total Well Depth (TD): 24.75	
Well Box Condition:	Total head (TH=TD-DW1): 17.12	
Purge Method: Pump	Casing Volume (TH*Factor): 2.74 x 3 = 8.2	
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
1143	1 gal	17.9	165.9	6.88		clear, odor ↓
1148	2	18.2	160.0	6.86		
1154	3	18.3	161.5	6.86		
1159	4	18.6	164.5	6.85		
1206	5	18.6	172.2	6.87		
1212	6	18.8	185.8	6.85		
1217	7	18.8	199.8	6.85		
1223	8	18.8	210	6.86		
1226	8.5	18.8	211	6.86		

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
1230	MW-16	18.8	6.85	208							

Additional Comments

2301 Santa Clara Avenue
Alameda, California

May 29, 2013
Project No. 401896004
Fuel Leak Case RO0000382

APPENDIX C

LABORATORY ANALYTICAL REPORT

April 26, 2013

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 : 1301151
Client Reference : Chun, 401896004

Enclosed are the results for sample(s) received on April 19, 2013 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 : 04/26/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-11R	1301151-01	Water	4/17/13 9:10	4/19/13 7:55
MW-14	1301151-02	Water	4/17/13 9:50	4/19/13 7:55
MW-12	1301151-03	Water	4/17/13 11:25	4/19/13 7:55
MW-16	1301151-04	Water	4/17/13 12:30	4/19/13 7:55
MW-8	1301151-05	Water	4/17/13 13:35	4/19/13 7:55
MW-4R	1301151-06	Water	4/17/13 14:42	4/19/13 7:55
MW-5R	1301151-07	Water	4/17/13 15:30	4/19/13 7:55
MW-6R	1301151-08	Water	4/17/13 16:20	4/19/13 7:55
MW-7R	1301151-09	Water	4/17/13 17:20	4/19/13 7:55
MW-10	1301151-10	Water	4/18/13 7:35	4/19/13 7:55

CASE NARRATIVE

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 : 04/26/2013

Client Sample ID MW-11R

Lab ID: 1301151-01

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	22	0.50	NA	10	B3D0388	04/23/2013	04/23/13 14:01	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>135 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 14:01</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	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1,1-Trichloroethane	ND	5.0	2.5	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1,2,2-Tetrachloroethane	ND	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1,2-Trichloroethane	ND	5.0	2.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1-Dichloroethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1-Dichloroethene	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,1-Dichloropropene	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2,3-Trichloropropane	ND	5.0	3.3	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2,3-Trichlorobenzene	ND	5.0	3.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2,4-Trichlorobenzene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2,4-Trimethylbenzene	2600	50	15	100	B3D0331	04/19/2013	04/19/13 17:46	
1,2-Dibromo-3-chloropropane	ND	5.0	2.1	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2-Dibromoethane	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2-Dichlorobenzene	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2-Dichloroethane	ND	5.0	2.2	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,2-Dichloropropane	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,3,5-Trimethylbenzene	720	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,3-Dichlorobenzene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,3-Dichloropropane	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
1,4-Dichlorobenzene	ND	5.0	2.2	10	B3D0331	04/19/2013	04/19/13 17:22	D6
2,2-Dichloropropane	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
2-Chloroethyl vinyl ether	ND	5.0	3.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
2-Chlorotoluene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
4-Chlorotoluene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
4-Isopropyltoluene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Benzene	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Bromobenzene	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Bromochloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Bromodichloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Bromoform	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6



Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-11R

Lab ID: 1301151-01

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	5.0	4.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Carbon disulfide	ND	10	10	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Carbon tetrachloride	ND	5.0	2.3	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Chlorobenzene	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Chloroethane	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Chloroform	25	5.0	5.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Chloromethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 17:22	D6
cis-1,2-Dichloroethene	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
cis-1,3-Dichloropropene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Di-isopropyl ether	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Dibromochloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Dibromomethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Dichlorodifluoromethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Ethyl Acetate	ND	100	18	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Ethyl Ether	ND	100	16	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Ethyl tert-butyl ether	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Ethylbenzene	580	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Freon-113	ND	5.0	2.4	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Hexachlorobutadiene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Isopropylbenzene	110	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
m,p-Xylene	3200	100	36	100	B3D0331	04/19/2013	04/19/13 17:46	
Methylene chloride	ND	10	10	10	B3D0331	04/19/2013	04/19/13 17:22	D6
MTBE	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
n-Butylbenzene	61	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 17:22	D6
n-Propylbenzene	320	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Naphthalene	280	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6
o-Xylene	770	5.0	1.4	10	B3D0331	04/19/2013	04/19/13 17:22	D6
sec-Butylbenzene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Styrene	ND	5.0	1.4	10	B3D0331	04/19/2013	04/19/13 17:22	D6
tert-Amyl methyl ether	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
tert-Butanol	ND	100	20	10	B3D0331	04/19/2013	04/19/13 17:22	D6
tert-Butylbenzene	ND	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Tetrachloroethene	ND	5.0	2.1	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Toluene	6.5	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 17:22	D6
trans-1,2-Dichloroethene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
trans-1,3-Dichloropropene	ND	5.0	1.3	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Trichloroethene	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 17:22	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-11R

Lab ID: 1301151-01

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	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Vinyl acetate	ND	100	12	10	B3D0331	04/19/2013	04/19/13 17:22	D6
Vinyl chloride	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 17:22	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>81.3 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:46</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>85.7 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.6 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:46</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:22</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>88.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 17:22</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-14

Lab ID: 1301151-02

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	0.06	0.05	NA	1	B3D0388	04/23/2013	04/23/13 15:19	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 15:19</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	B3D0331	04/19/2013	04/19/13 14:57	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 14:57	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 14:57	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 14:57	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 14:57	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2,4-Trimethylbenzene	5.6	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2-Dichloroethane	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 14:57	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 14:57	
1,3,5-Trimethylbenzene	1.5	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 14:57	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 14:57	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 14:57	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
Benzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
Bromoform	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-14

Lab ID: 1301151-02

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	0.50	0.49	1	B3D0331	04/19/2013	04/19/13 14:57	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 14:57	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 14:57	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 14:57	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 14:57	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
Di-isopropyl ether	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 14:57	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 14:57	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 14:57	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 14:57	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
Ethylbenzene	2.9	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 14:57	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 14:57	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
Isopropylbenzene	0.27	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	J
m,p-Xylene	12	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 14:57	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 14:57	
MTBE	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
n-Butylbenzene	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 14:57	
n-Propylbenzene	0.60	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
Naphthalene	1.0	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	
o-Xylene	3.7	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 14:57	
sec-Butylbenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 14:57	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 14:57	
tert-Butylbenzene	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 14:57	
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 14:57	
Toluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 14:57	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 14:57	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 14:57	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-14

Lab ID: 1301151-02

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	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 14:57	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 14:57	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 14:57	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>84.1 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 14:57</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.5 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 14:57</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>89.3 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 14:57</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 14:57</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-12

Lab ID: 1301151-03

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	5.2	0.05	NA	1	B3D0388	04/23/2013	04/23/13 15:39	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>182 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 15:39</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	2.0	0.78	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1,1-Trichloroethane	ND	2.0	1.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1,2,2-Tetrachloroethane	ND	2.0	0.59	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1,2-Trichloroethane	ND	2.0	1.2	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1-Dichloroethane	ND	2.0	0.74	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1-Dichloroethene	ND	2.0	1.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,1-Dichloropropene	ND	2.0	1.1	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2,3-Trichloropropane	ND	2.0	1.3	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2,3-Trichlorobenzene	ND	2.0	1.2	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2,4-Trichlorobenzene	ND	2.0	0.68	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2,4-Trimethylbenzene	60	2.0	0.60	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2-Dibromo-3-chloropropane	ND	2.0	0.84	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2-Dibromoethane	ND	2.0	0.72	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2-Dichlorobenzene	ND	2.0	0.76	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,2-Dichloroethane	1.2	2.0	0.88	4	B3D0358	04/22/2013	04/22/13 13:12	J, D6
1,2-Dichloropropane	ND	2.0	1.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,3,5-Trimethylbenzene	49	2.0	0.62	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,3-Dichlorobenzene	ND	2.0	0.63	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,3-Dichloropropane	ND	2.0	0.80	4	B3D0358	04/22/2013	04/22/13 13:12	D6
1,4-Dichlorobenzene	ND	2.0	0.88	4	B3D0358	04/22/2013	04/22/13 13:12	D6
2,2-Dichloropropane	ND	2.0	0.72	4	B3D0358	04/22/2013	04/22/13 13:12	D6
2-Chloroethyl vinyl ether	ND	2.0	1.2	4	B3D0358	04/22/2013	04/22/13 13:12	D6
2-Chlorotoluene	ND	2.0	0.67	4	B3D0358	04/22/2013	04/22/13 13:12	D6
4-Chlorotoluene	ND	2.0	0.65	4	B3D0358	04/22/2013	04/22/13 13:12	D6
4-Isopropyltoluene	1.6	2.0	0.64	4	B3D0358	04/22/2013	04/22/13 13:12	J, D6
Benzene	760	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 21:22	
Bromobenzene	ND	2.0	0.72	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Bromochloromethane	ND	2.0	0.75	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Bromodichloromethane	ND	2.0	0.75	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Bromoform	ND	2.0	0.79	4	B3D0358	04/22/2013	04/22/13 13:12	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-12

Lab ID: 1301151-03

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	2.0	2.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Carbon disulfide	ND	4.0	4.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Carbon tetrachloride	ND	2.0	0.91	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Chlorobenzene	ND	2.0	0.79	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Chloroethane	ND	2.0	0.81	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Chloroform	ND	2.0	2.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Chloromethane	ND	2.0	1.3	4	B3D0358	04/22/2013	04/22/13 13:12	D6
cis-1,2-Dichloroethene	ND	2.0	0.78	4	B3D0358	04/22/2013	04/22/13 13:12	D6
cis-1,3-Dichloropropene	ND	2.0	0.64	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Di-isopropyl ether	ND	2.0	0.79	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Dibromochloromethane	ND	2.0	0.75	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Dibromomethane	ND	2.0	1.3	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Dichlorodifluoromethane	ND	2.0	1.3	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Ethyl Acetate	ND	40	7.2	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Ethyl Ether	ND	40	6.6	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Ethyl tert-butyl ether	ND	2.0	0.71	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Ethylbenzene	330	2.0	0.77	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Freon-113	ND	2.0	0.94	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Hexachlorobutadiene	1.8	2.0	0.66	4	B3D0358	04/22/2013	04/22/13 13:12	J, D6
Isopropylbenzene	22	2.0	0.68	4	B3D0358	04/22/2013	04/22/13 13:12	D6
m,p-Xylene	370	4.0	1.5	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Methylene chloride	ND	4.0	4.0	4	B3D0358	04/22/2013	04/22/13 13:12	D6
MTBE	ND	2.0	0.70	4	B3D0358	04/22/2013	04/22/13 13:12	D6
n-Butylbenzene	3.7	2.0	0.60	4	B3D0358	04/22/2013	04/22/13 13:12	D6
n-Propylbenzene	36	2.0	0.67	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Naphthalene	40	2.0	0.82	4	B3D0358	04/22/2013	04/22/13 13:12	D6
o-Xylene	39	2.0	0.58	4	B3D0358	04/22/2013	04/22/13 13:12	D6
sec-Butylbenzene	7.4	2.0	0.63	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Styrene	ND	2.0	0.56	4	B3D0358	04/22/2013	04/22/13 13:12	D6
tert-Amyl methyl ether	ND	2.0	0.72	4	B3D0358	04/22/2013	04/22/13 13:12	D6
tert-Butanol	ND	40	7.9	4	B3D0358	04/22/2013	04/22/13 13:12	D6
tert-Butylbenzene	ND	2.0	0.58	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Tetrachloroethene	ND	2.0	0.83	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Toluene	3.4	2.0	0.65	4	B3D0358	04/22/2013	04/22/13 13:12	D6
trans-1,2-Dichloroethene	ND	2.0	0.68	4	B3D0358	04/22/2013	04/22/13 13:12	D6
trans-1,3-Dichloropropene	ND	2.0	0.52	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Trichloroethene	ND	2.0	0.78	4	B3D0358	04/22/2013	04/22/13 13:12	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-12

Lab ID: 1301151-03

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	2.0	0.72	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Vinyl acetate	ND	40	4.7	4	B3D0358	04/22/2013	04/22/13 13:12	D6
Vinyl chloride	ND	2.0	0.67	4	B3D0358	04/22/2013	04/22/13 13:12	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>97.5 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:12</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>81.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 21:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.9 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 21:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.4 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.4 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>88.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 21:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 21:22</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

Client Sample ID MW-16
Lab ID: 1301151-04

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	2.9	0.05	NA	1	B3D0388	04/23/2013	04/23/13 17:14	
<i>Surrogate: 4-Bromofluorobenzene</i>	224 %		70 - 130		B3D0388	04/23/2013	04/23/13 17:14	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	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:09	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2,4-Trimethylbenzene	3.4	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2-Dichloroethane	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 16:09	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:09	
1,3,5-Trimethylbenzene	26	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:09	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 16:09	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 16:09	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
Benzene	3.3	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
Bromoform	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-16

Lab ID: 1301151-04

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	0.50	0.49	1	B3D0331	04/19/2013	04/19/13 16:09	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 16:09	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 16:09	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 16:09	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:09	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
Di-isopropyl ether	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:09	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:09	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:09	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 16:09	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 16:09	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
Ethylbenzene	230	2.5	0.96	5	B3D0358	04/22/2013	04/22/13 13:36	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 16:09	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
Isopropylbenzene	43	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
m,p-Xylene	8.3	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 16:09	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 16:09	
MTBE	0.35	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	J
n-Butylbenzene	12	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:09	
n-Propylbenzene	72	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
Naphthalene	59	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	
o-Xylene	3.0	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 16:09	
sec-Butylbenzene	13	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 16:09	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 16:09	
tert-Butylbenzene	0.42	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:09	J
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 16:09	
Toluene	1.1	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:09	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 16:09	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:09	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-16

Lab ID: 1301151-04

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	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:09	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 16:09	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:09	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:36</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:09</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.1 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:36</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.5 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:09</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.5 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:09</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:36</i>	
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 13:36</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:09</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-8

Lab ID: 1301151-05

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	1.1	0.05	NA	1	B3D0388	04/23/2013	04/23/13 17:34	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>138 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 17:34</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	B3D0331	04/19/2013	04/19/13 16:34	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 16:34	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:34	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 16:34	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:34	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2,4-Trimethylbenzene	1.9	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2-Dichloroethane	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 16:34	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 16:34	
1,3,5-Trimethylbenzene	1.6	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:34	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 16:34	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 16:34	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
Benzene	6.8	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
Bromoform	2.0	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-8

Lab ID: 1301151-05

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	B3D0331	04/19/2013	04/19/13 16:34	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 16:34	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 16:34	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 16:34	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:34	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
Di-isopropyl ether	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:34	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 16:34	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 16:34	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 16:34	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
Ethylbenzene	5.6	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 16:34	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 16:34	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
Isopropylbenzene	9.9	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
m,p-Xylene	15	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 16:34	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 16:34	
MTBE	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
n-Butylbenzene	0.89	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:34	
n-Propylbenzene	11	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
Naphthalene	21	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	
o-Xylene	1.8	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 16:34	
sec-Butylbenzene	1.6	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 16:34	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 16:34	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 16:34	
tert-Butylbenzene	0.25	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 16:34	J
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 16:34	
Toluene	6.4	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 16:34	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 16:34	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 16:34	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-8

Lab ID: 1301151-05

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	B3D0331	04/19/2013	04/19/13 16:34	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 16:34	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 16:34	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:34</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:34</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 16:34</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

Client Sample ID MW-4R
Lab ID: 1301151-06

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	2.0	0.05	NA	1	B3D0388	04/23/2013	04/23/13 17:53	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>200 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	04/23/13 17:53	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	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 18:10	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2,4-Trimethylbenzene	28	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2-Dichloroethane	1.0	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 18:10	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 18:10	
1,3,5-Trimethylbenzene	7.4	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 18:10	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 18:10	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 18:10	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 18:10	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 18:10	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 18:10	
Benzene	190	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:34	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
Bromoform	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-4R

Lab ID: 1301151-06

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	B3D0331	04/19/2013	04/19/13 18:10	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 18:10	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 18:10	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 18:10	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 18:10	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 18:10	
Di-isopropyl ether	0.33	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	J
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 18:10	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 18:10	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 18:10	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 18:10	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
Ethylbenzene	46	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 18:10	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 18:10	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
Isopropylbenzene	30	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
m,p-Xylene	120	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 18:10	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 18:10	
MTBE	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
n-Butylbenzene	4.6	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 18:10	
n-Propylbenzene	51	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
Naphthalene	62	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	
o-Xylene	35	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 18:10	
sec-Butylbenzene	7.0	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 18:10	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 18:10	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 18:10	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 18:10	
tert-Butylbenzene	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 18:10	
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 18:10	
Toluene	140	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:34	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 18:10	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 18:10	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-4R
Lab ID: 1301151-06

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	B3D0331	04/19/2013	04/19/13 18:10	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 18:10	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 18:10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>78.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:34</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>80.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>87.2 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:34</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.5 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.2 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.7 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:34</i>	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:10</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-5R

Lab ID: 1301151-07

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	35	0.50	NA	10	B3D0388	04/23/2013	04/23/13 14:21	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>149 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 14:21</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	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1,1-Trichloroethane	ND	5.0	2.5	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1,2,2-Tetrachloroethane	ND	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1,2-Trichloroethane	ND	5.0	2.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1-Dichloroethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1-Dichloroethene	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,1-Dichloropropene	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2,3-Trichloropropane	ND	5.0	3.3	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2,3-Trichlorobenzene	ND	5.0	3.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2,4-Trichlorobenzene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2,4-Trimethylbenzene	2200	50	15	100	B3D0331	04/19/2013	04/19/13 19:22	
1,2-Dibromo-3-chloropropane	ND	5.0	2.1	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2-Dibromoethane	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2-Dichlorobenzene	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2-Dichloroethane	ND	5.0	2.2	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,2-Dichloropropane	ND	5.0	2.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,3,5-Trimethylbenzene	510	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,3-Dichlorobenzene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,3-Dichloropropane	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
1,4-Dichlorobenzene	ND	5.0	2.2	10	B3D0331	04/19/2013	04/19/13 18:58	D6
2,2-Dichloropropane	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
2-Chloroethyl vinyl ether	ND	5.0	3.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
2-Chlorotoluene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
4-Chlorotoluene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
4-Isopropyltoluene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Benzene	240	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Bromobenzene	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Bromochloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Bromodichloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Bromoform	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-5R

Lab ID: 1301151-07

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	B3D0331	04/19/2013	04/19/13 18:58	D6
Carbon disulfide	ND	10	10	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Carbon tetrachloride	ND	5.0	2.3	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Chlorobenzene	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Chloroethane	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Chloroform	ND	5.0	5.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Chloromethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 18:58	D6
cis-1,2-Dichloroethene	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
cis-1,3-Dichloropropene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Di-isopropyl ether	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Dibromochloromethane	ND	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Dibromomethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Dichlorodifluoromethane	ND	5.0	3.2	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Ethyl Acetate	ND	100	18	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Ethyl Ether	ND	100	16	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Ethyl tert-butyl ether	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Ethylbenzene	2000	50	19	100	B3D0331	04/19/2013	04/19/13 19:22	
Freon-113	ND	5.0	2.4	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Hexachlorobutadiene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Isopropylbenzene	140	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
m,p-Xylene	6700	100	36	100	B3D0331	04/19/2013	04/19/13 19:22	
Methylene chloride	ND	10	10	10	B3D0331	04/19/2013	04/19/13 18:58	D6
MTBE	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
n-Butylbenzene	59	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 18:58	D6
n-Propylbenzene	390	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Naphthalene	400	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6
o-Xylene	2800	50	14	100	B3D0331	04/19/2013	04/19/13 19:22	
sec-Butylbenzene	ND	5.0	1.6	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Styrene	4.7	5.0	1.4	10	B3D0331	04/19/2013	04/19/13 18:58	J, D6
tert-Amyl methyl ether	ND	5.0	1.8	10	B3D0331	04/19/2013	04/19/13 18:58	D6
tert-Butanol	ND	100	20	10	B3D0331	04/19/2013	04/19/13 18:58	D6
tert-Butylbenzene	ND	5.0	1.5	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Tetrachloroethene	ND	5.0	2.1	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Toluene	2400	50	16	100	B3D0331	04/19/2013	04/19/13 19:22	
trans-1,2-Dichloroethene	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
trans-1,3-Dichloropropene	ND	5.0	1.3	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Trichloroethene	ND	5.0	2.0	10	B3D0331	04/19/2013	04/19/13 18:58	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-5R
Lab ID: 1301151-07

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	B3D0331	04/19/2013	04/19/13 18:58	D6
Vinyl acetate	ND	100	12	10	B3D0331	04/19/2013	04/19/13 18:58	D6
Vinyl chloride	ND	5.0	1.7	10	B3D0331	04/19/2013	04/19/13 18:58	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>74.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:22</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>81.2 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:22</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>85.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:58</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.3 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:58</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>84.2 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:22</i>	
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 18:58</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-6R

Lab ID: 1301151-08

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	1.8	0.05	NA	1	B3D0388	04/23/2013	04/23/13 18:13	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>175 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 18:13</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	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 19:46	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2,4-Trimethylbenzene	60	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2-Dichloroethane	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 19:46	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 19:46	
1,3,5-Trimethylbenzene	14	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 19:46	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 19:46	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 19:46	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
Benzene	220	5.0	1.9	10	B3D0331	04/19/2013	04/19/13 20:10	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
Bromoform	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	



Certificate of Analysis

Ninyo & Moore

1956 Webster Street, Suite 400

Oakland, CA 94612

Project Number : Chun, 401896004

Report To : Peter Sims

Reported : 04/26/2013

Client Sample ID MW-6R

Lab ID: 1301151-08

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	0.50	0.49	1	B3D0331	04/19/2013	04/19/13 19:46	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 19:46	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 19:46	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 19:46	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 19:46	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
Di-isopropyl ether	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 19:46	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 19:46	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 19:46	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 19:46	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
Ethylbenzene	64	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 19:46	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 19:46	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
Isopropylbenzene	24	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
m,p-Xylene	94	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 19:46	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 19:46	
MTBE	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
n-Butylbenzene	2.1	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 19:46	
n-Propylbenzene	27	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
Naphthalene	29	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	
o-Xylene	63	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 19:46	
sec-Butylbenzene	7.6	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 19:46	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 19:46	
tert-Butylbenzene	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 19:46	
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 19:46	
Toluene	21	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 19:46	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 19:46	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 19:46	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-6R

Lab ID: 1301151-08

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	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 19:46	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 19:46	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 19:46	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>81.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:10</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>83.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:46</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.3 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:46</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>89.0 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.6 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:46</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:10</i>	
<i>Surrogate: Toluene-d8</i>	<i>110 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 19:46</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

Client Sample ID MW-7R
Lab ID: 1301151-09

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	160	1.0	NA	20	B3D0388	04/23/2013	04/23/13 14:40	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>126 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 14:40</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	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1,1-Trichloroethane	ND	100	50	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1,2,2-Tetrachloroethane	ND	100	29	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1,2-Trichloroethane	ND	100	58	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1-Dichloroethane	ND	100	37	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1-Dichloroethene	ND	100	51	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,1-Dichloropropene	ND	100	53	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2,3-Trichloropropane	ND	100	66	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2,3-Trichlorobenzene	ND	100	60	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2,4-Trichlorobenzene	ND	100	34	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2,4-Trimethylbenzene	2000	100	30	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2-Dibromo-3-chloropropane	ND	100	42	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2-Dibromoethane	ND	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2-Dichlorobenzene	ND	100	38	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2-Dichloroethane	ND	100	44	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,2-Dichloropropane	ND	100	51	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,3,5-Trimethylbenzene	580	100	31	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,3-Dichlorobenzene	ND	100	32	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,3-Dichloropropane	ND	100	40	200	B3D0331	04/19/2013	04/19/13 20:33	D6
1,4-Dichlorobenzene	ND	100	44	200	B3D0331	04/19/2013	04/19/13 20:33	D6
2,2-Dichloropropane	ND	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
2-Chloroethyl vinyl ether	ND	100	61	200	B3D0331	04/19/2013	04/19/13 20:33	D6
2-Chlorotoluene	ND	100	34	200	B3D0331	04/19/2013	04/19/13 20:33	D6
4-Chlorotoluene	ND	100	32	200	B3D0331	04/19/2013	04/19/13 20:33	D6
4-Isopropyltoluene	ND	100	32	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Benzene	17000	100	38	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Bromobenzene	ND	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Bromochloromethane	ND	100	37	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Bromodichloromethane	ND	100	37	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Bromoform	ND	100	40	200	B3D0331	04/19/2013	04/19/13 20:33	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-7R

Lab ID: 1301151-09

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	100	98	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Carbon disulfide	ND	200	200	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Carbon tetrachloride	ND	100	46	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Chlorobenzene	ND	100	39	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Chloroethane	ND	100	40	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Chloroform	ND	100	100	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Chloromethane	ND	100	65	200	B3D0331	04/19/2013	04/19/13 20:33	D6
cis-1,2-Dichloroethene	ND	100	39	200	B3D0331	04/19/2013	04/19/13 20:33	D6
cis-1,3-Dichloropropene	ND	100	32	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Di-isopropyl ether	ND	100	40	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Dibromochloromethane	ND	100	38	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Dibromomethane	ND	100	64	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Dichlorodifluoromethane	ND	100	63	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Ethyl Acetate	ND	2000	360	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Ethyl Ether	ND	2000	330	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Ethyl tert-butyl ether	ND	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Ethylbenzene	4500	100	38	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Freon-113	ND	100	47	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Hexachlorobutadiene	ND	100	33	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Isopropylbenzene	98	100	34	200	B3D0331	04/19/2013	04/19/13 20:33	J, D6
m,p-Xylene	16000	200	73	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Methylene chloride	ND	200	200	200	B3D0331	04/19/2013	04/19/13 20:33	D6
MTBE	ND	100	35	200	B3D0331	04/19/2013	04/19/13 20:33	D6
n-Butylbenzene	ND	100	30	200	B3D0331	04/19/2013	04/19/13 20:33	D6
n-Propylbenzene	300	100	33	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Naphthalene	350	100	41	200	B3D0331	04/19/2013	04/19/13 20:33	D6
o-Xylene	6300	100	29	200	B3D0331	04/19/2013	04/19/13 20:33	D6
sec-Butylbenzene	ND	100	32	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Styrene	ND	100	28	200	B3D0331	04/19/2013	04/19/13 20:33	D6
tert-Amyl methyl ether	ND	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
tert-Butanol	ND	2000	390	200	B3D0331	04/19/2013	04/19/13 20:33	D6
tert-Butylbenzene	ND	100	29	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Tetrachloroethene	ND	100	41	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Toluene	45000	1000	330	2000	B3D0331	04/19/2013	04/19/13 20:58	
trans-1,2-Dichloroethene	ND	100	34	200	B3D0331	04/19/2013	04/19/13 20:33	D6
trans-1,3-Dichloropropene	ND	100	26	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Trichloroethene	ND	100	39	200	B3D0331	04/19/2013	04/19/13 20:33	D6



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-7R

Lab ID: 1301151-09

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	100	36	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Vinyl acetate	ND	2000	240	200	B3D0331	04/19/2013	04/19/13 20:33	D6
Vinyl chloride	ND	100	34	200	B3D0331	04/19/2013	04/19/13 20:33	D6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>76.2 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:58</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>79.3 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:33</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.7 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>89.9 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>87.1 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:33</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>85.4 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:33</i>	
<i>Surrogate: Toluene-d8</i>	<i>103 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 20:58</i>	



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

Client Sample ID MW-10
Lab ID: 1301151-10

Gasoline Range Organics by EPA 8015B

Analyst: TP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	0.53	0.05	NA	1	B3D0388	04/23/2013	04/23/13 18:33	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>		<i>70 - 130</i>		B3D0388	04/23/2013	<i>04/23/13 18:33</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	B3D0331	04/19/2013	04/19/13 15:45	
1,1,1-Trichloroethane	ND	0.50	0.25	1	B3D0331	04/19/2013	04/19/13 15:45	
1,1,2,2-Tetrachloroethane	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 15:45	
1,1,2-Trichloroethane	ND	0.50	0.29	1	B3D0331	04/19/2013	04/19/13 15:45	
1,1-Dichloroethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
1,1-Dichloroethene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 15:45	
1,1-Dichloropropene	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2,3-Trichloropropane	ND	0.50	0.33	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2,3-Trichlorobenzene	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2,4-Trichlorobenzene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2,4-Trimethylbenzene	12	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2-Dibromo-3-chloropropane	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2-Dibromoethane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2-Dichlorobenzene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2-Dichloroethane	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 15:45	
1,2-Dichloropropane	ND	0.50	0.26	1	B3D0331	04/19/2013	04/19/13 15:45	
1,3,5-Trimethylbenzene	3.5	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 15:45	
1,3-Dichlorobenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 15:45	
1,3-Dichloropropane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	
1,4-Dichlorobenzene	ND	0.50	0.22	1	B3D0331	04/19/2013	04/19/13 15:45	
2,2-Dichloropropane	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
2-Chloroethyl vinyl ether	ND	0.50	0.30	1	B3D0331	04/19/2013	04/19/13 15:45	
2-Chlorotoluene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
4-Chlorotoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 15:45	
4-Isopropyltoluene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 15:45	
Benzene	20	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
Bromobenzene	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
Bromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
Bromodichloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
Bromoform	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-10

Lab ID: 1301151-10

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	B3D0331	04/19/2013	04/19/13 15:45	
Carbon disulfide	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 15:45	
Carbon tetrachloride	ND	0.50	0.23	1	B3D0331	04/19/2013	04/19/13 15:45	
Chlorobenzene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	
Chloroethane	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	
Chloroform	ND	0.50	0.50	1	B3D0331	04/19/2013	04/19/13 15:45	
Chloromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 15:45	
cis-1,2-Dichloroethene	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
cis-1,3-Dichloropropene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 15:45	
Di-isopropyl ether	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	
Dibromochloromethane	ND	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
Dibromomethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 15:45	
Dichlorodifluoromethane	ND	0.50	0.32	1	B3D0331	04/19/2013	04/19/13 15:45	
Ethyl Acetate	ND	10	1.8	1	B3D0331	04/19/2013	04/19/13 15:45	
Ethyl Ether	ND	10	1.6	1	B3D0331	04/19/2013	04/19/13 15:45	
Ethyl tert-butyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
Ethylbenzene	19	0.50	0.19	1	B3D0331	04/19/2013	04/19/13 15:45	
Freon-113	ND	0.50	0.24	1	B3D0331	04/19/2013	04/19/13 15:45	
Hexachlorobutadiene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
Isopropylbenzene	0.65	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
m,p-Xylene	70	1.0	0.36	1	B3D0331	04/19/2013	04/19/13 15:45	
Methylene chloride	ND	1.0	1.0	1	B3D0331	04/19/2013	04/19/13 15:45	
MTBE	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
n-Butylbenzene	0.23	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 15:45	J
n-Propylbenzene	2.1	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
Naphthalene	2.6	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	
o-Xylene	27	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 15:45	
sec-Butylbenzene	ND	0.50	0.16	1	B3D0331	04/19/2013	04/19/13 15:45	
Styrene	ND	0.50	0.14	1	B3D0331	04/19/2013	04/19/13 15:45	
tert-Amyl methyl ether	ND	0.50	0.18	1	B3D0331	04/19/2013	04/19/13 15:45	
tert-Butanol	ND	10	2.0	1	B3D0331	04/19/2013	04/19/13 15:45	
tert-Butylbenzene	ND	0.50	0.15	1	B3D0331	04/19/2013	04/19/13 15:45	
Tetrachloroethene	ND	0.50	0.21	1	B3D0331	04/19/2013	04/19/13 15:45	
Toluene	110	2.5	0.82	5	B3D0358	04/22/2013	04/22/13 14:00	
trans-1,2-Dichloroethene	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
trans-1,3-Dichloropropene	ND	0.50	0.13	1	B3D0331	04/19/2013	04/19/13 15:45	
Trichloroethene	ND	0.50	0.20	1	B3D0331	04/19/2013	04/19/13 15:45	



Certificate of Analysis

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

Project Number : Chun, 401896004
Report To : Peter Sims
Reported : 04/26/2013

Client Sample ID MW-10

Lab ID: 1301151-10

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	B3D0331	04/19/2013	04/19/13 15:45	
Vinyl acetate	ND	10	1.2	1	B3D0331	04/19/2013	04/19/13 15:45	
Vinyl chloride	ND	0.50	0.17	1	B3D0331	04/19/2013	04/19/13 15:45	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>90.8 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 14:00</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.7 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 15:45</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.8 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 14:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.8 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 15:45</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.6 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 15:45</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.4 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 14:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70 - 130</i>		B3D0331	04/19/2013	<i>04/19/13 15:45</i>	
<i>Surrogate: Toluene-d8</i>	<i>105 %</i>		<i>70 - 130</i>		B3D0358	04/22/2013	<i>04/22/13 14:00</i>	



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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
Batch B3D0388 - GCVOAW									
Blank (B3D0388-BLK1)				Prepared: 4/23/2013 Analyzed: 4/23/2013					
Gasoline Range Organics	ND	0.05			NR				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.09774		0.100000		97.7	70 - 130			
LCS (B3D0388-BS1)				Prepared: 4/23/2013 Analyzed: 4/23/2013					
Gasoline Range Organics	1.08700	0.05	1.00000		109	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1110		0.100000		111	70 - 130			
LCS Dup (B3D0388-BSD1)				Prepared: 4/23/2013 Analyzed: 4/23/2013					
Gasoline Range Organics	1.07700	0.05	1.00000		108	70 - 130	0.924	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1106		0.100000		111	70 - 130			
Duplicate (B3D0388-DUP1)		Source: 1301151-02		Prepared: 4/23/2013 Analyzed: 4/23/2013					
Gasoline Range Organics	0.052	0.05		0.059	NR		12.6	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1026		0.100000		103	70 - 130			



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Project Number : Chun, 401896004
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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 B3D0331 - MSVOAW_LL

Blank (B3D0331-BLK1)

Prepared: 4/19/2013 Analyzed: 4/19/2013

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	1.0		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 : 04/26/2013

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 B3D0331 - MSVOAW_LL (continued)

Blank (B3D0331-BLK1) - Continued

Prepared: 4/19/2013 Analyzed: 4/19/2013

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>	22.85		25.0000		91.4	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.05		25.0000		92.2	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.18		25.0000		96.7	70 - 130			
<i>Surrogate: Toluene-d8</i>	26.72		25.0000		107	70 - 130			

LCS (B3D0331-BS1)

Prepared: 4/19/2013 Analyzed: 4/19/2013

1,1-Dichloroethene	15.2100		20.0000		76.0	70 - 130			
Benzene	35.1200		40.0000		87.8	70 - 130			
Chlorobenzene	18.9000		20.0000		94.5	70 - 130			
MTBE	16.1400		20.0000		80.7	70 - 130			
Toluene	36.9400		40.0000		92.4	70 - 130			
Trichloroethene	16.5400		20.0000		82.7	70 - 130			



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

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 B3D0331 - MSVOAW_LL (continued)

LCS (B3D0331-BS1) - Continued

Prepared: 4/19/2013 Analyzed: 4/19/2013

Surrogate: 1,2-Dichloroethane-d4	23.22		25.0000		92.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	23.34		25.0000		93.4	70 - 130			
Surrogate: Dibromofluoromethane	24.70		25.0000		98.8	70 - 130			
Surrogate: Toluene-d8	27.53		25.0000		110	70 - 130			

LCS Dup (B3D0331-BS1)

Prepared: 4/19/2013 Analyzed: 4/19/2013

1,1-Dichloroethene	16.1000		20.0000		80.5	70 - 130	5.69	20	
Benzene	34.9700		40.0000		87.4	70 - 130	0.428	20	
Chlorobenzene	19.6400		20.0000		98.2	70 - 130	3.84	20	
MTBE	16.4200		20.0000		82.1	70 - 130	1.72	20	
Toluene	35.8900		40.0000		89.7	70 - 130	2.88	20	
Trichloroethene	16.9600		20.0000		84.8	70 - 130	2.51	20	
Surrogate: 1,2-Dichloroethane-d4	22.75		25.0000		91.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	22.74		25.0000		91.0	70 - 130			
Surrogate: Dibromofluoromethane	23.54		25.0000		94.2	70 - 130			
Surrogate: Toluene-d8	26.77		25.0000		107	70 - 130			

Duplicate (B3D0331-DUP1)

Source: 1301151-02

Prepared: 4/19/2013 Analyzed: 4/19/2013

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	ND	0.50		ND	NR			20	
Surrogate: 1,2-Dichloroethane-d4	20.81		25.0000		83.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	22.07		25.0000		88.3	70 - 130			
Surrogate: Dibromofluoromethane	22.65		25.0000		90.6	70 - 130			
Surrogate: Toluene-d8	25.11		25.0000		100	70 - 130			

Batch B3D0358 - MSVOAW_LL

Blank (B3D0358-BLK1)

Prepared: 4/22/2013 Analyzed: 4/22/2013

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					



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 Oakland, CA 94612

Project Number : Chun, 401896004
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 Reported : 04/26/2013

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 B3D0358 - MSVOAW_LL (continued)

Blank (B3D0358-BLK1) - Continued

Prepared: 4/22/2013 Analyzed: 4/22/2013

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	1.0			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



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

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 B3D0358 - MSVOAW_LL (continued)

Blank (B3D0358-BLK1) - Continued

Prepared: 4/22/2013 Analyzed: 4/22/2013

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>22.45</i>		<i>25.0000</i>		<i>89.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.35</i>		<i>25.0000</i>		<i>89.4</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.54</i>		<i>25.0000</i>		<i>98.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.15</i>		<i>25.0000</i>		<i>105</i>	<i>70 - 130</i>			

LCS (B3D0358-BS1)

Prepared: 4/22/2013 Analyzed: 4/22/2013

1,1-Dichloroethene	16.7200		20.0000		83.6	70 - 130			
Benzene	35.9700		40.0000		89.9	70 - 130			
Chlorobenzene	19.4000		20.0000		97.0	70 - 130			
MTBE	16.0500		20.0000		80.2	70 - 130			
Toluene	37.9100		40.0000		94.8	70 - 130			
Trichloroethene	17.5500		20.0000		87.8	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>22.17</i>		<i>25.0000</i>		<i>88.7</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.59</i>		<i>25.0000</i>		<i>90.4</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>23.31</i>		<i>25.0000</i>		<i>93.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.58</i>		<i>25.0000</i>		<i>106</i>	<i>70 - 130</i>			

LCS Dup (B3D0358-BSD1)

Prepared: 4/22/2013 Analyzed: 4/22/2013

1,1-Dichloroethene	17.8800		20.0000		89.4	70 - 130	6.71	20	
Benzene	36.4900		40.0000		91.2	70 - 130	1.44	20	
Chlorobenzene	19.7700		20.0000		98.8	70 - 130	1.89	20	
MTBE	17.2900		20.0000		86.4	70 - 130	7.44	20	



Certificate of Analysis

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

Project Number : Chun, 401896004
 Report To : Peter Sims
 Reported : 04/26/2013

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 B3D0358 - MSVOAW_LL (continued)

LCS Dup (B3D0358-BSD1) - Continued

Prepared: 4/22/2013 Analyzed: 4/22/2013

Toluene	38.4400		40.0000		96.1	70 - 130	1.39	20	
Trichloroethene	18.1100		20.0000		90.6	70 - 130	3.14	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.41</i>		<i>25.0000</i>		<i>93.6</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.53</i>		<i>25.0000</i>		<i>94.1</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.86</i>		<i>25.0000</i>		<i>99.4</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>26.82</i>		<i>25.0000</i>		<i>107</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 : 04/26/2013

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.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

CHAIN OF CUSTODY RECORD

Page of

 ADVANCED TECHNOLOGY LABORATORIES 3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____	FOR LABORATORY USE ONLY:		
	As the authorized agent of the below named company, I hereby purchase testing services from ATL as dictated below and guarantee payment in full.		Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 4. SEALED <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
	Submitter (Print): _____ Signature: _____			

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

Client: _____	Address: <u>1956 Webster St. # 400</u>	TEL: <u>510 343 3000</u>
Attn: <u>Ninyo & Moore - Peter Sims</u>	City: <u>Oakland</u> State: <u>CA</u> Zip Code: <u>94612</u>	FAX: <u>- 3001</u>

Project Name: <u>Chun</u>	Project #: <u>401896004</u>	Sampler: (Printed Name) <u>Melissa Terry</u>	(Signature) <u>M Terry</u>
Relinquished by: (Signature and Printed Name) <u>M Terry</u>	Date: <u>4/18/13</u> Time: <u>1015</u>	Received by: (Signature and Printed Name) <u>Jeff Siegfried</u>	Date: <u>4/18/13</u> Time: <u>10:15 PM</u>
Relinquished by: (Signature and Printed Name) <u>Jeff Siegfried</u>	Date: <u>4/18/13</u> Time: <u>4:19 PM</u>	Received by: (Signature and Printed Name) <u>GSS</u>	Date: <u>4/18/13</u> Time: <u>4:19 PM</u>
Relinquished by: (Signature and Printed Name) _____	Date: _____ Time: _____	Received by: (Signature and Printed Name) _____	Date: <u>4/19/13</u> Time: <u>7:55</u>

Bill To:	Send Report To:	Special Instructions/Comments:
Attn: <u>Peter Sims</u> E-mail: _____	Attn: _____ E-mail: _____	
Company: <u>Ninyo & Moore</u>	Company: <u>Same</u>	
Address: <u>psims@ninyoandmoore.com</u>	Address: _____	
City: _____ State: _____ Zip: _____	City: _____ State: _____ Zip: _____	

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	CIRCLE APPROPRIATE MATRIX	Q A / Q C RTNE <input type="checkbox"/> CT <input type="checkbox"/> Legal <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode _____ OTHER _____ REMARKS _____
8260-824 (Volatiles) 8019B (GRO) / 8824 (PETEX) TO-15 / TO-14 / TO-3 / RSK-175 8270B-623(BNA) / 8310(PAKs) 8081 (VOC) / 8147 (COPC) 8082 PCBs 6019B-200.7 CAM Metals 6020B-200.7 Metals 7199-218.6 (Hex. Chromium) 300 (Anions) / 314 (Perchlorate)	SOILS/SEDIMENT/SLUDGE SOLIDS/WIPES/FILTERS WATER-DRINKING/GROUND WATER-STORMWASTE AQUEOUS/LAYERED-OIL	PRESERVATION Container(s) TAT # Type

ITEM	BUSINESS HOURS 8:30 am to 5:30 pm	Sample Description		
	Lab No.	Sample I.D. / Location	Date	Time
1	1301151 - 1	MW-11R	4/7	0910
2	- 2	MW-14		0950
3	- 3	MW-12		1125
4	- 4	MW-16		1230
5	- 5	MW-8		1335
6	- 6	MW-4R		1442
7	- 7	MW-5R		1530
8	- 8	MW-6R		1620
9	- 9	MW-7R		1720
10	- 10	MW-10	4/18	0735

■ 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 ₃ 3=H ₂ SO ₄ 4=4°C 5=Zn(Ac) ₂ 6=NaOH 7=NA ₂ S ₂ O ₄
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.		

Rachelle Arada

From: Peter Sims [psims@ninyoandmoore.com]
Sent: Thursday, April 25, 2013 12:03 PM
To: Rachelle Arada; Melissa Terry
Cc: customer.relations@atlglobal.com
Subject: RE: Analytical results for Chun

Yes, please include Geotracker EDD Global ID T0600100980 and analysis of Oxygenates by 8260.

Thank you for catching that.

Peter D. Sims, LEED AP
Project Environmental Geologist
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants
1956 Webster Street, Suite 400
Oakland, California 94612
(510) 343-3000 x5216 (Office)
(510) 327-9335 (Cell Phone)
(510) 343-3001 (Fax)
psims@ninyoandmoore.com

New San Jose office
2149 O'Toole Avenue, Suite 10
San Jose, CA 95131
(408) 435-9000
(408) 435-9006 (Fax)

Experience · Quality · Commitment

-----Original Message-----

From: Rachelle Arada [<mailto:Rachelle@atlglobal.com>]
Sent: Thursday, April 25, 2013 11:53 AM
To: Melissa Terry; Peter Sims
Cc: customer.relations@atlglobal.com
Subject: RE: Analytical results for Chun

Hi Melissa/Peter,

Just checking if you need geotracker EDD for this work order and 8260 Oxygenates reported as per previous work orders.

Rachelle

From: Melissa Terry [<mailto:mterry@ninyoandmoore.com>]
Sent: Thursday, April 25, 2013 9:33 AM
To: Rachelle Arada
Subject: RE: Analytical results for Chun

Ok, thanks Rachelle.

Melissa Terry
Senior Staff Scientist
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants
1956 Webster Street, Suite 400
Oakland, California 94612
(510) 343-3000 (x5230)