Roya C. Kambin
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6270
RKambin@chevron.com

October 17, 2012

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Chevron Facility No. 351642 (Former Unocal Service Station No. 3538)
411 West MacArthur Boulevard Oakland, California

I have reviewed the attached report dated October 17, 2012.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Roya Kambin
Project Manager

Attachment: *Second Semi-Annual 2012 Groundwater Monitoring Report* by AECOM Environment, Inc.

AECOM
10461 Old Placerville Road
Suite 170
Sacramento, CA 95827
www.aecom.com

916 361 6400 tel
916 361 6401 fax

October 17, 2012

Mr. Keith Nowell
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Facility No. 351642 (Former Unocal Service Station No. 3538)
411 West MacArthur Boulevard Oakland, California

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (hereinafter "CEMC"), AECOM Environment, Inc. (AECOM) has been authorized by CEMC to prepare the second semi-annual 2012 groundwater monitoring report for the site located at 411 West MacArthur Boulevard Oakland, California (Site) (**Figure 1**). The locations of former and current site features are illustrated on **Figure 2**. Semi-annual groundwater monitoring is intended to evaluate the distribution of petroleum hydrocarbon constituents in groundwater beneath the site. Groundwater sampling was performed by TRC Solutions (TRC) of Irvine, California. This report summarizes sample results collected from the Site on August 17, 2012.

Site Background and History

The Site is a former 76 Products Service Station located on the southwest corner of West MacArthur Boulevard and Webster Street in Oakland, California. Two generations of fuel station facilities have been removed from the site: the first in 1989 and the second in 1998.

The first generation facilities consisted of two gasoline underground storage tanks (USTs), a used-oil UST, dispenser islands, and associated product piping. In July 1989, Kaprealian Engineering, Inc. (KEI) oversaw replacement of two gasoline USTs with two new gasoline USTs. One 550-gallon used-oil UST and the associated piping for all three tanks were also removed. No apparent holes or cracks were observed in the gasoline USTs; however, holes were observed in the used-oil UST. Groundwater encountered in the former fuel UST pit prohibited the collection of soil samples below the former fuel USTs. Six confirmation sidewall samples were collected from the fuel tank pit at depths of 10 feet below grade (fbg). Additionally a soil sample was collected from the fuel tank pit at 8.5 fbg. KEI also collected four samples from the piping trenches at depths of 5 to 10 fbg. The analytical results of the fuel tank pit soil samples were reported to have levels of total petroleum hydrocarbons (TPH) as gasoline (TPHg) ranging from non-detectable to 11 parts per million (ppm), except for one sample, which had 3,100 ppm TPHg. The soil sample collected from the waste oil pit had non-detectable levels of TPHg, TPH as diesel (TPHd), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). The pit groundwater was purged following the sidewall sampling and did not recharge, therefore a sample of the groundwater was not collected. Subsequent over-excavation of the fuel UST pit was performed by removing a portion of the southern and eastern sidewalls. The approximate soil removal based on historic maps and excavation depths is estimated at 50 cubic yards.

In September 1989, KEI installed groundwater monitoring wells MW-1 through MW-4 and collected soil samples from each location. TPHg concentrations in soil samples ranged from non-detectable to 20 ppm. TPHd was only sampled in MW-1 and the results were non-detectable. Benzene levels were non-detectable in all samples except MW-2 at 19 fbg and MW-3 at 10 fbg, which were detected at 1.5 and 0.29 ppm, respectively.

In November 1992, KEI installed groundwater monitoring wells MW-5 and MW-6 and collected soil samples from both locations. Soil samples were analyzed for TPHg and BTEX. Analytical results of the soil samples collected from the borings for MW-5 at depths of 5, 10, 15, and 21 fbg were non-detectable for TPHg and BTEX. Analytical results of the soil samples collected from the borings for MW-6 at depths of 5, 10, 15, and19.5 fbg were non-detectable for TPHg and BTEX.

The second generation facilities consisted of two gasoline USTs, two dispenser islands, and associated product piping. In September 1998, Gettler-Ryan, Inc. (G-R) oversaw removal of the fuel facilities including the two 12,000-gallon gasoline USTs, two fuel dispenser islands, and associated product piping. No holes or cracks were observed in the USTs. Soil samples were collected from beneath the former fuel USTs and the former product piping. Soil samples contained a maximum TPHg concentration of 360 ppm and benzene of 1.5 ppm at 19.5 feet, MTBE was not detected in any of the soil samples. Approximately 380 cubic yards of trenching and UST backfill materials from the second station reconfiguration were stockpiled and later transported offsite during the 1998 station demolition.

In March 2006, TRC advanced five soil borings around the former USTs and off site to the southeast and collected soil and grab-groundwater samples from each. The maximum concentration of TPHg in soil was from the boring directly east of the former USTs, SB-3, at 6,100 milligrams per kilogram (mg/kg), benzene and methyl tert-butyl ether (MTBE) were below the detection limits. The maximum concentrations in groundwater samples were 13,000 parts per billion (ppb) TPH-g, 5101 ppb benzene and 340 ppb MTBE.

In December 2010, Antea Group installed three soil borings in the vicinity of the former UST pit. Soil and groundwater samples were collected from each boring. Two off site soil borings were not installed due to access issues. TPHg was detected in soil at a maximum of 520 mg/kg in SB-8, directly north of the former USTs, at 20 fbg. Benzene and TPHg were detected in groundwater from SB-9, directly east of the former USTs, at 17-22 fbg at 420 ug/L and 9,500 ug/L, respectively.

The station building and canopy were left in place following station decommissioning. A small used-car dealership currently uses the property. A Valero fuel station operates to the northeast across the intersection of West MacArthur Boulevard and Webster Street.

The site is located in the East Bay Groundwater Basin of San Francisco Bay at an elevation of approximately 72 feet above mean sea level (ft-amsl). Silt and clay mixtures are encountered at the site from the surface to the total depth explored of 30 fbg. In some locations, these sediments are underlain by clayey sand and clayey gravel to 30 fbg. Intermittent, poorly-graded sand layers are encountered from approximately 20 to 27 fbg.

Groundwater Monitoring Field Data

Depth to groundwater was measured in six monitoring wells, MW-1 through MW-6 on August 17, 2012 and converted to groundwater elevation (**Table 1**). Temperature, pH, and electrical conductivity readings were collected during purging. Copies of the groundwater sampling/purge logs are included in **Attachment A**. The groundwater flow direction was calculated to flow to the south/southwest with an average hydraulic gradient of approximately 0.025 feet per foot (**Figure 2)**. The depth to groundwater ranged from 16.08 to 18.50 feet below the top of well casings, and groundwater elevation ranged from 53.14 to 55.29 feet above mean sea level. A summary of historical groundwater elevation through March 2010 is presented in **Attachment B**.

Groundwater Sampling and Analytical Results

Groundwater samples were collected from monitoring wells MW-1 through MW-6 on August 17, 2012. Laboratory analyses were performed by BC Laboratories, Inc. (BC Labs) of Bakersfield, California. The BC Labs analytical report dated August 31, 2012 is included as **Attachment C**. Samples were analyzed for the following analytes based on historic trends in each monitoring well:

- BTEX and MTBE by USEPA method 8260B;
- TPH-g by USEPA method 8015B; and
- Volatile Organic Compounds (VOCs) by USEPA method 8260B

Analytical results for this groundwater monitoring event are consistent with previous reporting periods (**Table 1**). A map depicting dissolved concentrations of benzene, TPH-g, and MTBE in groundwater on August 17, 2012 is included as Figure 3. The following presents a brief summary of the analytical sample results:

- TPHg was detected in one sample at 57 µg/L. (MW-2). This concentration is below the Environmental Screening Level (ESL) of 100 µg/L for TPHg established by the California Regional Water Quality Control Board.
- Benzene was detected in one sample at 1.2 µg/L (MW-2). This concentration is only slightly above the ESL of 1 µg/L.
- MTBE was detected in one sample at 4.7 µg/L (MW-3). This concentration is below the ESL of 5 µg/L.

A summary of historical groundwater analytical data through March 2010 is presented in **Attachment B.** Approximately 36 gallons of groundwater were generated during purging activities. Purged water was transported by TRC to their Concord, California field yard as non-hazardous waste for future disposal.

Conclusions and Recommendations

The sample results of the groundwater monitoring activities at the site indicate the following:

- TPHg and MTBE were detected at concentrations below their respective ESLs.
- Benzene was detected at a concentration only slightly above the ESL in MW-2.
- Based on analytical results from this and previous sampling events, dissolved hydrocarbons remain adequately delineated.

Future Activities

Groundwater Monitoring

AECOM will coordinate monitoring and sampling activities as per the established schedule. AECOM will submit semi-annual groundwater monitoring and sampling reports. The first semi-annual 2012 groundwater monitoring report requested a sampling reduction to annual sampling in the third quarter, ACEH has not yet responded to that request.

Additional Activity

AECOM will update the conceptual site model (CSM) and assess the site with respect to the low-threat closure guidance.

Remarks/Signatures

The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by TRC. These opinions are based on currently available information and are arrived

at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact either of the undersigned at (916) 361-6400.

Sincerely,

James Harms
Project Manager

Tiina Couture, P.E.
Project Engineer

cc: Roya Kambin, CEMC (electronic)
Mr. Kevin Ma & Mr. Arthur Yu, Property Owner

Tables

Table 1	Groundwater Monitoring and Sampling Data

Figures

Figure 1	Site Location Map
Figure 2	Groundwater Elevation Contour Map
Figure 3	Groundwater Concentration Map

Attachments

Attachment A	August 17, 2012 Groundwater Data Field Sheets
Attachment B	Historic Groundwater Data
Attachment C	BC Laboratories Analytical Report #1215630

TABLES

TABLE 1

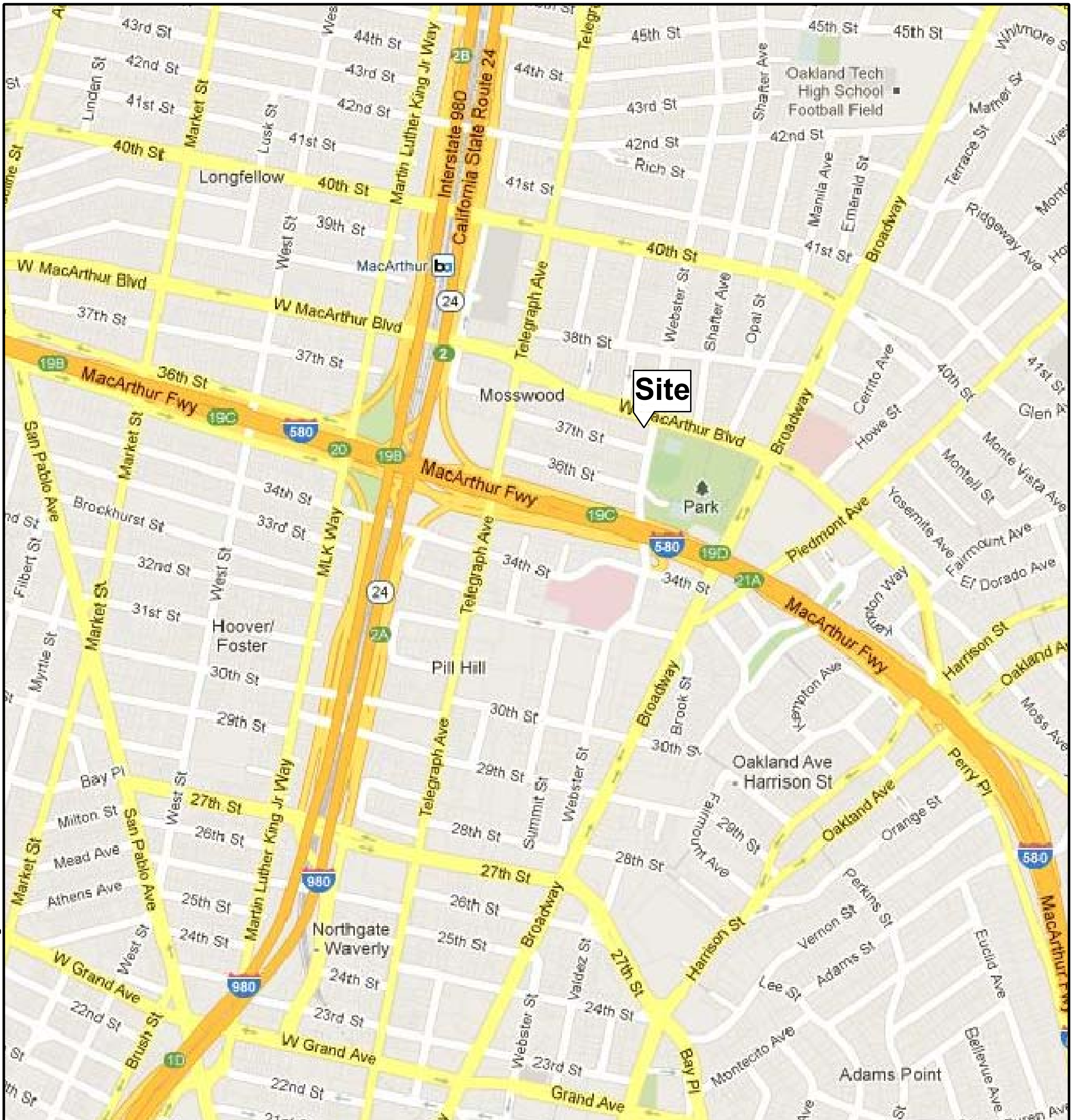
GROUNDWATER MONITORING AND SAMPLING DATA
CHEVRON STATION #351642, FORMER UNOCAL STATION #3538
411 W MACARTHUR BLVD
OAKLAND, CALIFORNIA

					HYDROCARBONS	*PRIMARY VOCS*							
Location	**Date**	***TOC***	***DTW***	***GWE***	***TPH Gasoline***	***Benzene***	***Toluene***	***Ethylbenzene***	***Total Xylene***	***MTBE by SW8021***	***Ethanol***	***EDB***	***EDC***
	Units	***ft***	***ft***	***ft-amsl***	***µg/L***	***µg/L***	***µg/L***	***µg/L***	***µg/L***	***µg/L***	***µg/L***	***µg/L***	***µg/L***
Environmental Screening Level (ESL)[1]					***100***	***1***	***40***	***30***	***20***	***5***	***--***	***--***	***--***
MW-1	09/06/2011	72.12	18.36	53.76	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-1	02/03/2012	72.12	18.02	54.10	Sampled Annually in the Third Quarter								
MW-1	08/17/2012	72.12	18.50	53.62	<50	<0.30	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50
MW-2	09/06/2011	71.34	18.14	53.20	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-2	02/03/2012	71.34	17.97	53.37	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-2	08/17/2012	71.34	18.20	53.14	57	1.2	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50
MW-3	09/06/2011	71.40	18.03	53.37	<50	<0.30	<0.30	<0.30	<0.60	4.7	--	<0.50	--
MW-3	02/03/2012	71.40	17.83	53.57	<50	<0.30	<0.30	<0.30	<0.60	8.2	--	<0.50	--
MW-3	08/17/2012	71.40	18.07	53.33	<50	<0.30	<0.30	<0.30	<0.60	4.7	<250	<0.50	<0.50
MW-4	09/06/2011	71.54	18.00	53.54	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-4	02/03/2012	71.54	17.81	53.73	Sampled Annually in the Third Quarter								
MW-4	08/17/2012	71.54	18.09	53.45	<50	<0.30	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50
MW-5	09/06/2011	71.16	17.74	53.42	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-5	02/03/2012	71.16	17.69	53.47	Sampled Annually in the Third Quarter								
MW-5	08/17/2012	71.16	17.75	53.41	<50	<0.30	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50
MW-6	09/06/2011	71.37	15.07	56.30	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
MW-6	02/03/2012	71.37	14.88	56.49	Sampled Annually in the Third Quarter								
MW-6	08/17/2012	71.37	16.08	55.29	<50	<0.30	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50

Abbreviations and Notes:

TOC = Top of Casing
DTW = Depth to Water
GWE = Groundwater elevation
(ft-amsl) = Feet Above Mean sea level
ft = Feet
µg/L = Micrograms per Liter
TPH - Total Petroleum Hydrocarbons
VOCS = Volatile Organic Compounds
MTBE = Methyl tert butyl ether
EDB = 1,2-Dibromoethane (Ethylene dibromide)
1,2-DCA = 1,2-Dichloroethane
-- = Not available / not applicable
<x = Not detected above laboratory reported practical quantitation level.
shaded = exceeds ESL
[1] = Environmental Screening Level (Table F-1a) for groundwater that is a current or potential drinking water resource; *Screening for Environmental Concerns at site with Contaminated Soil and Groundwater*; California Regional Water Quality Control Board - San Francisco Bay Region; Interim Final November 2007; revised May 2008.

FIGURES



North

0 500 1000 FT

SCALE

SOURCE: Google Maps (R) dated September 19, 2012

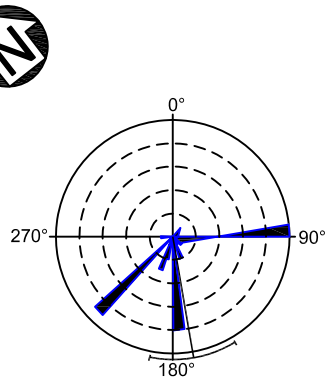
FIGURE 1

SITE LOCATION MAP

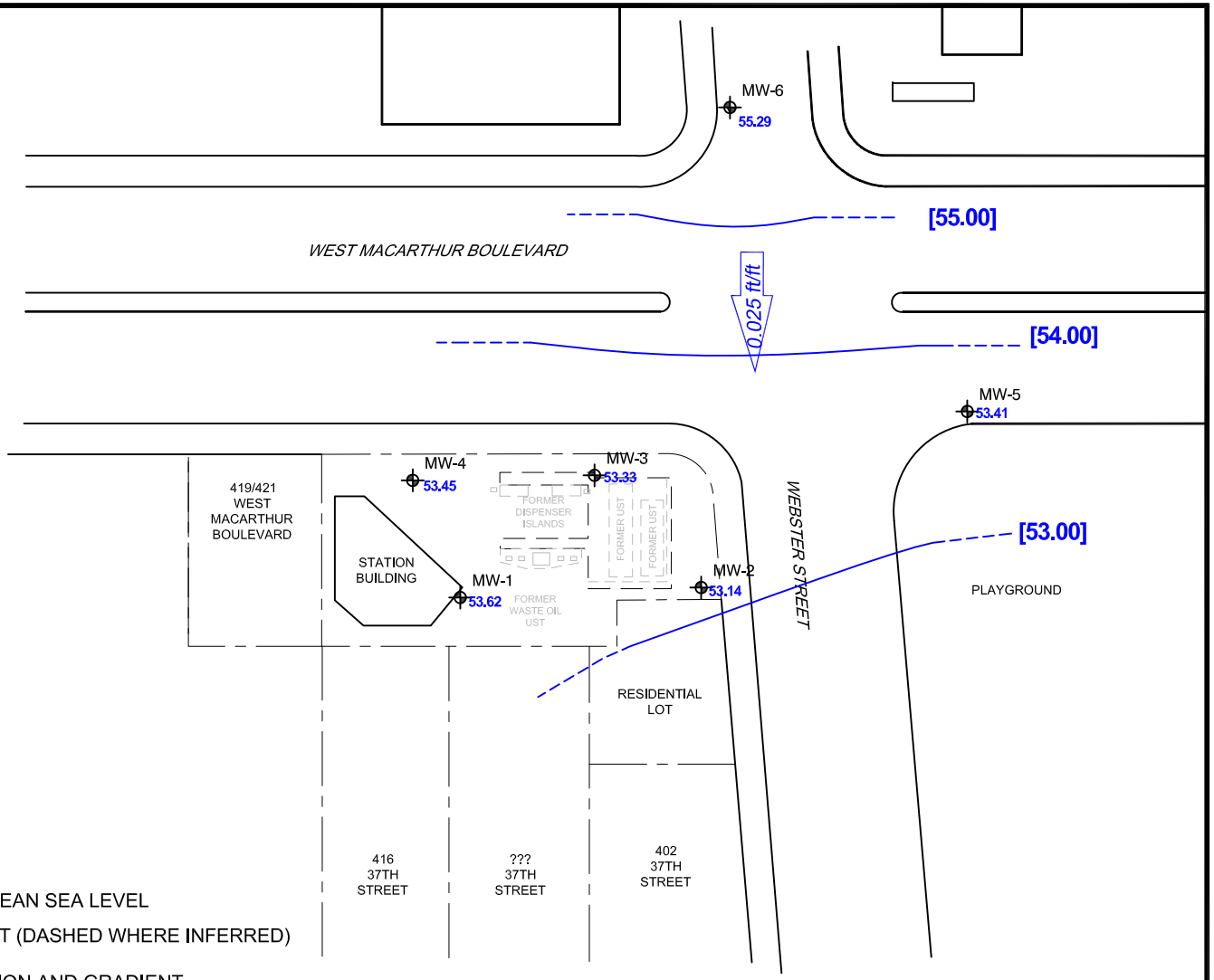
CHEVRON #351642
FORMER UNOCAL SERVICE STATION NO. 3538
411 WEST MACARTHUR BLVD. OAKLAND, CALIFORNIA

PROJECT NO. 60267017	DRAWN BY RM 9/19/12	AECOM
FILE NO. 351642	PREPARED BY RM	
REVISION NO.	REVIEWED BY JH	

C:\Users\harmsj\Desktop\very_temp\Figure 1_SITE LOC_351642.dwg



HISTORICAL GROUNDWATER
FLOW DIRECTION
1990 TO 3Q12



LEGEND:

- APPROXIMATE PROPERTY LINE
- MONITORING WELL
- 53.33 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- [54.00] GROUNDWATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)
- APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT

Notes:
UST = underground storage tank
FT/FT = feet per foot

0 40'
APPROXIMATE SCALE IN FEET

Base map created by Delta Consultants, Inc.

GROUNDWATER CONTOUR MAP

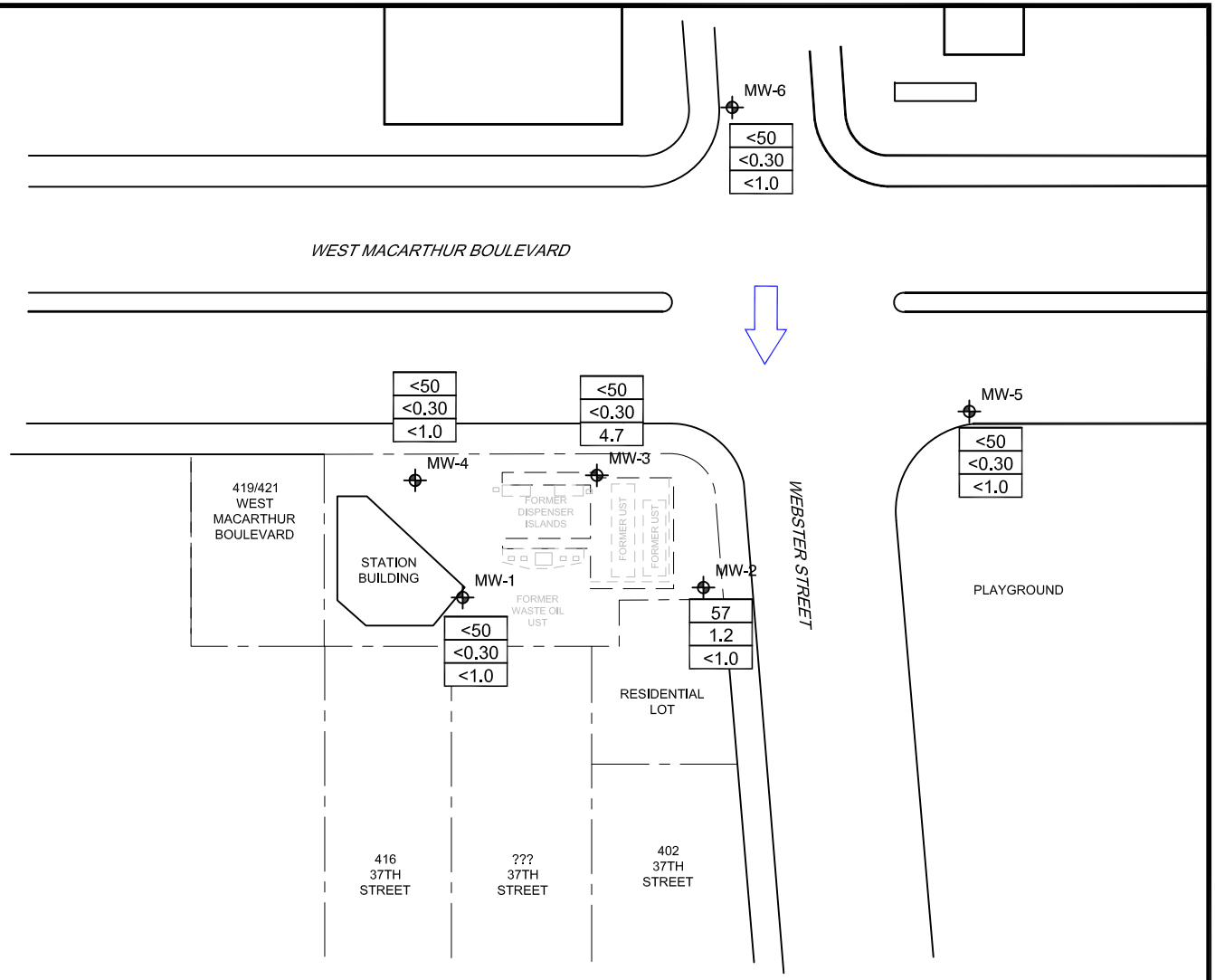
Chevron Site #351642 Former Unocal #3538
411 West MacArthur Blvd., Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	10/01/2012	60267017

AECOM
10461 OLD PLACERVILLE ROAD SUITE 170
SACRAMENTO, CALIFORNIA 95827
PHONE: (916) 361-6400
FAX: (916) 361-6401
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	REVISIONS				FIGURE NUMBER:
	NO.:	DESCRIPTION:	DATE:	BY:	2
DRAWN BY: RM					
CHECKED BY: JH					
APPROVED BY: JH					

P:\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\AECOM Template



LEGEND:

APPROXIMATE PROPERTY LINE

MONITORING WELL

<50	TPH gasoline
<0.30	BENZENE
0.56	MTBE

APPROXIMATE GROUNDWATER FLOW DIRECTION

Notes:
TPH = Total Petroleum Hydrocarbons
MTBE = methyl tertiary-butyl ether
UST = underground storage tank
<0.30 = Not Detected above indicated laboratory practical quantitation level.
Analyte Concentrations expressed in micrograms per liter.

0 40'
APPROXIMATE SCALE IN FEET

Base map created by Delta Consultants, Inc.

GROUNDWATER CONCENTRATION MAP

Chevron Site #351642 Former Unocal #3538
411 West MacArthur Blvd., Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	10/01/2012	60267017

AECOM
10461 OLD PLACERVILLE ROAD SUITE 170
SACRAMENTO, CALIFORNIA 95827
PHONE: (916) 361-6400
FAX: (916) 361-6401
WEB: HTTP://WWW.AECOM.COM

DESIGNED BY:	REVISIONS				FIGURE NUMBER:
	NO.:	DESCRIPTION:	DATE:	BY:	3
DRAWN BY: RM					
CHECKED BY: JH					
APPROVED BY: JH					

P:\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\AECOM Template

ATTACHMENT A

August 17, 2012 Groundwater Data Field Sheets

123 Technology Drive West
Irvine, CA 92618

949.727.9336 PHONE
949.727.7399 FAX

www.TRCsolutions.com

DATE: August 22, 2012

TO: Jim Harms, AECOM

SITE: Unocal Site 3538
Facility 351642
411 West MacArthur Blvd., Oakland, CA

RE: Transmittal of Groundwater Monitoring Data

Dear Mr. Harms,

Please find attached the field data sheets, chain of custody (COC) forms, and technical services request (TSR) form for the monitoring event that was completed on August 17, 2012. Field measurements and collection of samples submitted to the laboratory were completed in general accordance with our usual groundwater monitoring protocol which is also attached for your reference.

Please call me at 949-727-7345 if you have questions.

Sincerely,

TRC

Christina Carrillo
Groundwater Program Coordinator

GENERAL FIELD PROCEDURES

Groundwater Gauging and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater gauging and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

Fluid Level Measurements (Gauging)

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Unless otherwise instructed, a well that is found to contain a measureable amount of LPH (0.01 foot) is not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed.

Purging and Groundwater Parameter Measurement

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps. The pump intake is initially set at about 5 feet below the level of water in the casing, and is lowered as needed to compensate for falling water level. Pump depths are recorded in Field Notes.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously, using a flow cell, until they become stable in general accordance with EPA guidelines.

Groundwater Sample Collection

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

GENERAL FIELD PROCEDURES

Samples are collected by lowering a new, disposable polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

Sample containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

Sequence of Gauging, Purging and Sampling

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well. If wells must be gauged or sampled out of order, alternate interface probes and/or pumps are utilized and are noted in field documentation.

Decontamination

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liquinox and water and rinsing twice. The final rinse is in deionized water.

Purge Water Disposal

Purge water is generally collected in labeled drums for disposal as non-hazardous waste. Drums may be left on site for disposal by others, or transported to a collection location at a TRC field office, in either Fullerton, California or Concord, California, for eventual transfer to a licensed treatment or recycling facility. Alternatively, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

Exceptions

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, are documented in field notes on the following pages.

FIELD MONITORING DATA SHEET

Technician: Banks Job #/Task #: 189791.0035.1642 Date: 8-17-12

Site # 3538 Project Manager AF Page 1 of 1

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-5	✓	0615	30.15	17.75	—	—	1100	2"
MW-6	✓	0630	30.10	16.08	—	—	1015	2"
MW-4	✓	0703	24.75	18.09	—	—	0743	2"
MW-1	✓	0707	23.96	18.50	—	—	0800	2"
MW-2	✓	0711	24.60	18.20	—	—	0852	2"
MW-3	✓	0716	27.18	18.07	—	—	0826	2"

FIELD DATA COMPLETE QA/QC COC WELL BOX CONDITION SHEETS

MANIFEST DRUM INVENTORY TRAFFIC CONTROL

TRC

GROUNDWATER SAMPLING FIELD NOTES

Technician: Basil

Site: 3538 Project No.: 189791.0035.1642 Date: 8.17.12

Well No. MW-6 Purge Method: Sub

Depth to Water (feet): 16.08 Depth to Product (feet): —

Total Depth (feet) 30.10 LPH & Water Recovered (gallons): —

Water Column (feet): 14.02 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 18.88 1 Well Volume (gallons): 3

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, ©)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0912			3	807.5	18.6	6.41			
			6	800.1	19.2	6.31			
	0917		9	778.3	19.4	6.18			

Static at Time Sampled	Total Gallons Purged	Sample Time
17.22	9	1015

Comments: Dry at 9 gls.

Well No. MW-5 Purge Method: Sub

Depth to Water (feet): 17.75 Depth to Product (feet): —

Total Depth (feet) 30.15 LPH & Water Recovered (gallons): —

Water Column (feet): 12.40 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 20.23 1 Well Volume (gallons): 3

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, ©)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0944			3	1094	19.1	6.16			
	0948		6	1091	19.5	6.10			
0954	1000		9	1099	20.1	5.94			

Static at Time Sampled	Total Gallons Purged	Sample Time
20.20	9	1100

Comments: Dry at 7 gls. ; Completed Purge

TRC

GROUNDWATER SAMPLING FIELD NOTES

Technician: Bailo

Site: 3538 Project No.: 189791.0035.1642 Date: 8-17-12

Well No. MW-3 Purge Method: HB

Depth to Water (feet): 18.07 Depth to Product (feet): —

Total Depth (feet) 27.18 LPH & Water Recovered (gallons): —

Water Column (feet): 9.11 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 19.89 1 Well Volume (gallons): 2

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0810			2	794.3	17.8	6.29			
			4	807.9	18.3	6.17			
	0820		6	811.7	18.1	6.02			

Static at Time Sampled	Total Gallons Purged	Sample Time
18.47	6	0826

Comments:

Well No. MW-2 Purge Method: HB

Depth to Water (feet): 18.20 Depth to Product (feet): —

Total Depth (feet) 24.60 LPH & Water Recovered (gallons): —

Water Column (feet): 6.40 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 19.48 1 Well Volume (gallons): 1

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0837			1	822.6	17.6	5.99			
			2	837.5	18.2	5.96			
	0843		3	835.2	18.1	5.91			

Static at Time Sampled	Total Gallons Purged	Sample Time
18.88	3	0852

Comments:

TRC

GROUNDWATER SAMPLING FIELD NOTES

Technician: Bailo

Site: 3538 Project No.: 189791.0035.1642 Date: 8-17-12

Well No. MW-4 Purge Method: HB

Depth to Water (feet): 18.09 Depth to Product (feet): —

Total Depth (feet) 24.75 LPH & Water Recovered (gallons): —

Water Column (feet): 6.66 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 19.42 1 Well Volume (gallons): 2

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0729			2	758.3	17.8	7.21			
			4	745.1	18.1	7.10			
	0739		6	740.3	17.9	6.54			

Static at Time Sampled	Total Gallons Purged	Sample Time
18.71	6	0743

Comments:

Well No. MW-1 Purge Method: HB

Depth to Water (feet): 18.50 Depth to Product (feet): —

Total Depth (feet) 23.96 LPH & Water Recovered (gallons): —

Water Column (feet): 5.46 Casing Diameter (Inches): 2

80% Recharge Depth(feet): 19.59 1 Well Volume (gallons): 1

Time Start	Time Stop	Pump Depth (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
Pre-Purge									
0750			1	606.3	16.9	6.42			
			2	602.7	17.1	6.38			
	0755		3	601.5	17.0	6.20			

Static at Time Sampled	Total Gallons Purged	Sample Time
18.66	3	0800

Comments:

TRC

WELL BOX CONDITION REPORT

SITE NO. 3538

ADDRESS 411 West Mac Arthur

DATE 8-17-12

PERFOMED BY: Basilio

PAGE 1 OF 1

Well Name	Current Well Box Size	# of Ears	# of Stripped Ears	# of Broken Ears	# of Broken Bolts	# of Missing Bolts	Seal Damaged	Missing Lid	Broken Lid	Well Box is Exposed	Well Box is Below Grade	Unable to Access	Unable to Locate	Foundation Damaged	Paved Over	Street Well	Saw Cut Needed	System Well	USA Marked Well	Comments
MW-5	8"	3	1	1																
MW-6	8"	3		~~1~~	1															
MW-4	12"	2																		
MW-1	12"	2																		
MW-2	12"	2																		
MW-3	12"	2																		

TRC

CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583 COC _____ of _____

Union Oil Site ID:	Union Oil Consultant:
Site Global ID:	Consultant Contact:
Site Address:	Consultant Phone No.:
	Sampling Company: TRC
Union Oil PM:	Sampled By (PRINT):
Union Oil PM Phone No.:	
Charge Code: NWRTB- 0 _____ -0- LAB	Sampler Signature:
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	**BC Laboratories, Inc.** **Project Manager: Molly Meyers** 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

ANALYSES REQUIRED

Turnaround Time (TAT):
Standard ☑ 24 Hours ☐
48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID						TPH - Diesel by EPA 8015	TPH - G by GC/MS	BTEX/MTBE/OXYS by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B Full List with OXYS							Notes / Comments
Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers												
MW-1	W-S-A			0900	6		X	X	X								
MW-2	W-S-A			0952													
MW-3	W-S-A			1045													
MW-4	W-S-A			1052													
MW-5	W-S-A			1100													
MW-6	W-S-A			1015			↓	↓	↓								
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																
	W-S-A																

Relinquished By Company Date / Time:	Relinquished By Company Date / Time :	Relinquished By Company Date / Time:
Received By Company Date / Time:	Received By Company Date / Time :	Received By Company Date / Time:

TRC SOLUTIONS

TECHNICAL SERVICES REQUEST FORM

07-Aug-12

Site ID:	3538	**Project No.:**	189791.0035.1642 / 00TA01
Address	411 West MacArthur Blvd.	**Client:**	Roya Kambin
City:	Oakland	**Contact #:**	925-790-6270
Cross Street	Webster St.	**PM:**	Jim Harms AECOM
		PM Contact #:	916-361-6412

Total number of wells:	6	**Min. Well Diameter (in.):**	2	**# of Techs, # of Hrs:**	1, 5
Depth to Water (ft.):	15	**Max. Well Diameter (in.):**	2	**Travel Time (hrs):**	
		Max. Well Depth (ft):	30	**Hotel PO#:**	

ACTIVITIES:		**Frequency**	**Notes**
Gauging:	☑	Semi Q1/Q3	
Purge/Sampling:	☑	Semi Q1/Q3	
No Purge/Sampl	☐		

RELATED ACTIVITIES		**Note**
Drums:	☑	
Other Activities:	☑	No parking signs
Traffic Control:	☑	City of Oakland

PERMIT INFORMATION:

Post no parking signs at least 48 hours before event.

NOTIFICATIONS: Wrong #

Arthur Yu, A&P Service Center: ~~510-685-0611~~ or 510-658-2940
He rents parking spaces onsite and needs to make sure no one parks over MW-2 day of event.

SITE INFORMATION:

TRC SOLUTIONS

TECHNICAL SERVICES REQUEST FORM

07-Aug-12

Site ID:	3538	**Project No.:**	189791.0035.1642 / 00TA01
Address	411 West MacArthur Blvd.	**Client:**	Roya Kambin
City:	Oakland	**Contact #:**	925-790-6270
Cross Street	Webster St.	**PM:**	Jim Harms AECOM
		PM Contact #:	916-361-6412

LAB INFORMATION:

Global ID: T0600101472

Lab WO: 351642

Lab Used: BC Labs

Lab Notes: Lab Analyses:
TPH-G by 8015M, BTEX/MTBE by 8021 [Containers: 3 voas w/ HCl]
EDB/EDC by 8260B, Ethanol by 8260B [Containers: 3 voas w/ HCl]

TRC SOLUTIONS

TECHNICAL SERVICES REQUEST FORM

07-Aug-12

Site ID.: 3538
Address 411 West MacArthur Blvd.
City: Oakland
Cross Street Webster St.

			Gauging				Sampling				Field Measurements			
Well IDs	**Benz.**	**MTBE**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Pre-Purge**	**Post-Purge**	**Type**	**Comments**
MW-6	0	0	☑	☐	☑	☐	☐	☐	☑	☐	☐	☐		2" casing/8" lid
MW-5	0	0	☑	☐	☑	☐	☐	☐	☑	☐	☐	☐		2" casing/8" lid
MW-4	0	0	☑	☐	☑	☐	☐	☐	☑	☐	☐	☐		2" casing/12" lid
MW-2	0	0	☑	☐	☑	☐	☑	☐	☑	☐	☐	☐		2" casing/12" lid
MW-1	0	0	☑	☐	☑	☐	☐	☐	☑	☐	☐	☐		2" casing/12" lid
MW-3	0	8.2	☑	☐	☑	☐	☑	☐	☑	☐	☐	☐		2" casing/12" lid

ATTACHMENT B

Historic Groundwater Data

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1													
9/15/1989	--	--	--	--	--	ND	ND	0.61	ND	ND	--	--	
1/23/1990	--	--	--	--	--	ND	1.5	2.3	ND	4.3	--	--	
4/19/1990	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
7/17/1990	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
10/16/1990	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/15/1991	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
4/12/1991	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
7/15/1991	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
7/14/1992	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
4/13/1993	72.43	17.70	0	54.73	--	--	--	--	--	--	--	--	Sampled Q3 only
7/14/1993	72.43	18.49	0	53.94	-0.79	ND	2.2	2.1	1.1	6.2	--	--	
10/14/1993	72.10	18.32	0	53.78	-0.16	--	--	--	--	--	--	--	Sampled Q3 only
1/12/1994	72.10	18.18	0	53.92	0.14	--	--	--	--	--	--	--	Sampled Q3 only
4/11/1994	72.10	17.80	0	54.30	0.38	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	72.10	18.28	0	53.82	-0.48	ND	ND	ND	ND	ND	--	--	
10/5/1994	72.10	18.55	0	53.55	-0.27	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	72.10	17.90	0	54.20	0.65	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	72.10	17.22	0	54.88	0.68	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	72.10	18.03	0	54.07	-0.81	ND	ND	ND	ND	ND	--	--	
10/26/1995	72.10	18.67	0	53.43	-0.64	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	72.10	17.20	0	54.90	1.47	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	72.10	17.40	0	54.70	-0.20	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	72.10	18.03	0	54.07	-0.63	ND	ND	ND	ND	ND	ND	--	
1/17/1997	72.10	16.54	0	55.56	1.49	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	72.10	18.16	0	53.94	-1.62	ND	ND	ND	ND	ND	ND	--	
1/14/1998	72.10	16.05	0	56.05	2.11	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	72.10	16.46	0	55.64	-0.41	ND	ND	ND	ND	ND	ND	--	
1/13/1999	72.10	17.37	0	54.73	-0.91	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	72.12	17.00	0	55.12	0.39	ND	ND	ND	ND	ND	ND	--	
1/21/2000	72.12	17.04	0	55.08	-0.04	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	72.12	18.10	0	54.02	-1.06	ND	ND	ND	ND	ND	ND	--	
1/4/2001	72.12	17.95	0	54.17	0.15	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	72.12	18.03	0	54.09	-0.08	ND	ND	ND	ND	ND	ND	--	
1/28/2002	72.12	17.31	0	54.81	0.72	--	--	--	--	--	--	--	Sampled Q3 only
7/12/2002	72.12	18.15	0	53.97	-0.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
1/14/2003	72.12	17.66	0	54.46	0.49	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	72.12	17.86	0	54.26	-0.20	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
2/4/2004	72.12	17.43	0	54.69	0.43	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	72.12	18.12	0	54.00	-0.69	ND<50	ND<0.3	0.38	ND<0.3	ND<0.6	ND<1	ND<0.5	
3/2/2005	72.12	16.15	0	55.97	1.97	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	72.12	18.04	0	54.08	-1.89	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/23/2006	72.12	--	--	--	--	--	--	--	--	--	--	--	Inaccessible due to gate; Sampled Q3 only
9/26/2006	72.12	17.90	0	54.22	--	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/15/2007	72.12	17.22	0	54.90	0.68	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	72.12	18.49	0	53.63	-1.27	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/2008	72.12	17.57	0	54.55	0.92	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	72.12	18.20	0	53.92	-0.63	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/2009	72.12	16.75	0	55.37	1.45	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2009	72.12	18.18	0	53.94	-1.43	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2010	72.12	17.34	0	54.78	0.84	--	--	--	--	--	--	--	Sampled Q3 only
MW-2													
9/15/1989	--	--	--	--	--	290	ND	12	ND	ND	--	--	
1/23/1990	--	--	--	--	--	400	73	36	10	40	--	--	
4/19/1990	--	--	--	--	--	3900	550	5.1	91	390	--	--	
7/17/1990	--	--	--	--	--	490	76	0.59	11	46	--	--	
10/16/1990	--	--	--	--	--	1400	430	2.0	48	240	--	--	
1/15/1991	--	--	--	--	--	680	170	0.7	19	81	--	--	
4/12/1991	--	--	--	--	--	2200	160	4.3	23	62	--	--	
7/15/1991	--	--	--	--	--	2200	770	12	72	370	--	--	
10/15/1991	--	--	--	--	--	140	44	0.56	1.5	12	--	--	
1/15/1992	--	--	--	--	--	220	37	0.52	1.1	7	--	--	
4/14/1992	--	--	--	--	--	150	6.2	ND	ND	1.4	--	--	
7/14/1992	--	--	--	--	--	130	3.7	ND	ND	ND	--	--	
10/12/1992	--	--	--	--	--	370	3.4	0.56	ND	11	--	--	
1/8/1993	--	--	--	--	--	510	ND	ND	ND	ND	--	--	
4/13/1993	71.63	17.86	0	53.77	--	410	42	7.7	6.4	28	200	--	
7/14/1993	71.63	18.38	0	53.25	-0.52	110	6.5	ND	ND	1.1	250	--	
10/14/1993	71.38	18.20	0	53.18	-0.07	230	5.3	ND	ND	2.1	--	--	
1/12/1994	71.38	18.08	0	53.30	0.12	300	7.8	3.8	1.8	10	--	--	
4/9/1994	71.38	17.97	0	53.41	0.11	120	10	0.88	1.1	4.9	--	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
4/11/1994	71.38	17.88	0	53.50	0.09	--	--	--	--	--	--	--	
7/7/1994	71.38	17.81	0	53.57	0.07	110	4.4	ND	ND	ND	--	--	
10/5/1994	71.38	18.33	0	53.05	-0.52	720	20	ND	ND	3.1	--	--	
1/9/1995	71.38	17.40	0	53.98	0.93	ND	ND	ND	ND	ND	--	--	
4/17/1995	71.38	17.50	0	53.88	-0.10	93	5.6	0.62	1.7	5.5	--	--	
7/19/1995	71.38	18.01	0	53.37	-0.51	77	32	0.58	1.7	4.1	--	--	
10/26/1995	71.38	18.21	0	53.17	-0.20	54	13	ND	ND	0.72	220	--	
1/16/1996	71.38	16.58	0	54.80	1.63	120	23	ND	ND	0.99	--	--	
4/15/1996	71.38	17.61	0	53.77	-1.03	340	21	ND	2.2	3.7	45	--	
7/11/1996	71.38	17.98	0	53.40	-0.37	540	34	ND	4.3	12	150	--	
1/17/1997	71.38	17.08	0	54.30	0.90	320	63	2.4	9.4	26	260	--	
7/21/1997	71.38	18.06	0	53.32	-0.98	160	13	ND	1.3	1.6	180	--	
1/14/1998	71.38	16.52	0	54.86	1.54	66	6.3	ND	ND	0.98	100	--	
7/6/1998	71.38	16.87	0	54.51	-0.35	ND	2.3	ND	ND	ND	11	--	
1/13/1999	71.38	17.88	0	53.50	-1.01	53	24	ND	0.52	0.98	120	--	
8/31/1999	71.34	18.45	0	52.89	-0.61	86	14	ND	0.63	ND	21	--	
1/21/2000	71.34	17.73	0	53.61	0.72	ND	1.94	ND	ND	ND	10.1	--	
7/10/2000	71.34	18.14	0	53.20	-0.41	ND	ND	ND	ND	ND	46.6	--	
1/4/2001	71.34	18.02	0	53.32	0.12	ND	0.925	ND	ND	ND	ND	--	
7/16/2001	71.34	18.02	0	53.32	0.00	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.34	17.57	0	53.77	0.45	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
7/12/2002	71.34	18.05	0	53.29	-0.48	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
1/14/2003	71.34	17.44	0	53.90	0.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
7/10/2003	71.34	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
2/4/2004	71.34	17.22	0	54.12	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
7/29/2004	71.34	--	--	--	--	--	--	--	--	--	--	--	Sampled Q3 only
3/2/2005	71.34	16.63	0	54.71	--	99	26	ND<0.50	3.5	2.8	ND<5.0	--	
9/30/2005	71.34	17.94	0	53.40	-1.31	ND<50	1.2	ND<0.30	ND<0.30	ND<0.60	1.6	--	
3/23/2006	71.34	16.74	0	54.60	1.20	ND<50	3.6	ND<0.30	0.35	ND<0.60	2.5	--	
9/26/2006	71.34	17.91	0	53.43	-1.17	ND<50	1.2	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/15/2007	71.34	17.45	0	53.89	0.46	110	6.5	ND<0.30	0.70	ND<0.60	1.7	--	
9/27/2007	71.34	18.23	0	53.11	-0.78	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/27/2008	71.34	17.77	0	53.57	0.46	ND<50	1.8	ND<0.30	ND<0.30	ND<0.60	1.3	--	
9/17/2008	71.34	18.06	0	53.28	-0.29	ND<50	1.6	ND<0.30	ND<0.30	ND<0.60	3.1	--	
3/27/2009	71.34	17.43	0	53.91	0.63	ND<50	3.5	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
9/17/2009	71.34	18.01	0	53.33	-0.58	ND<50	2.7	ND<0.30	ND<0.30	ND<0.60	1.1	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
3/23/2010	71.34	17.47	0	53.87	0.54	ND<50	0.68	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
MW-3													
9/15/1989	--	--	--	--	--	32	ND	ND	ND	ND	--	--	
1/23/1990	--	--	--	--	--	450	110	1.2	4.4	11	--	--	
4/19/1990	--	--	--	--	--	3100	600	27	54	220	--	--	
7/17/1990	--	--	--	--	--	4000	270	48	130	250	--	--	
10/16/1990	--	--	--	--	--	740	210	1.4	2.5	82	--	--	
1/15/1991	--	--	--	--	--	3200	460	1.5	120	270	--	--	
4/12/1991	--	--	--	--	--	880	170	1.1	34	110	--	--	
7/15/1991	--	--	--	--	--	9200	1300	230	490	1900	--	--	
10/15/1991	--	--	--	--	--	3100	390	34	150	390	--	--	
1/15/1992	--	--	--	--	--	3000	590	14	310	750	--	--	
4/14/1992	--	--	--	--	--	14000	660	48	560	2000	--	--	
7/14/1992	--	--	--	--	--	21000	890	200	1200	4300	--	--	
10/12/1992	--	--	--	--	--	3200	160	10	230	540	--	--	
1/8/1993	--	--	--	--	--	1100	48	0.99	0.9	93	--	--	
4/13/1993	72.06	17.96	0	54.10	--	12000	290	38	760	2300	1400	--	
7/14/1993	72.06	18.54	0	53.52	-0.58	6300	190	ND	430	1000	860	--	
10/14/1993	71.86	18.45	0	53.41	-0.11	2500	52	ND	110	250	--	--	
1/12/1994	71.86	18.34	0	53.52	0.11	3800	78	ND	180	390	--	--	
4/9/1994	71.86	18.19	0	53.67	0.15	1800	22	ND	140	280	--	--	
4/11/1994	71.86	18.12	0	53.74	0.07	--	--	--	--	--	--	--	
7/7/1994	71.86	18.21	0	53.65	-0.09	110	4.5	ND	ND	ND	--	--	
10/5/1994	71.86	18.58	0	53.28	-0.37	ND	ND	ND	ND	ND	--	--	
1/9/1995	71.86	17.69	0	54.17	0.89	ND	0.68	ND	ND	ND	--	--	
4/17/1995	71.86	17.68	0	54.18	0.01	3700	80	10	270	510	--	--	
7/19/1995	71.86	18.20	0	53.66	-0.52	15000	330	27	990	2400	--	--	
10/26/1995	71.86	18.32	0	53.54	-0.12	14000	420	180	750	1600	4800	--	
1/16/1996	71.86	17.95	0	53.91	0.37	920	38	ND	30	57	--	--	
4/15/1996	71.86	17.78	0	54.08	0.17	9700	240	ND	570	860	3200	--	
7/11/1996	71.86	18.19	0	53.67	-0.41	13000	69	5.5	430	900	740	--	
1/17/1997	71.86	17.23	0	54.63	0.96	4400	25	ND	270	580	1600	--	
7/21/1997	71.86	18.29	0	53.57	-1.06	9000	36	ND	450	800	950	--	
1/14/1998	71.86	16.71	0	55.15	1.58	7100	40	ND	380	360	930	--	
7/6/1998	71.86	17.03	0	54.83	-0.32	6800	39	ND	320	360	370	--	
1/13/1999	71.86	18.00	0	53.86	-0.97	1800	9.4	ND	58	36	180	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
8/31/1999	71.40	--	0	--	--	--	--	--	--	--	--	--	Well obstructed at 0.5 feet.
1/21/2000	71.40	17.58	0	53.82	--	ND	ND	ND	ND	ND	21.4	--	
7/10/2000	71.40	18.05	0	53.35	-0.47	ND	ND	ND	ND	ND	162	--	
8/25/2000	71.40	17.82	0	53.58	0.23	--	--	--	--	--	--	180	
1/4/2001	71.40	18.16	0	53.24	-0.34	ND	ND	ND	ND	ND	193	--	
7/16/2001	71.40	17.98	0	53.42	0.18	ND	ND	ND	ND	ND	660	--	
1/28/2002	71.40	17.84	0	53.56	0.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	34	--	
7/12/2002	71.40	17.87	0	53.53	-0.03	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	11	19	
1/14/2003	71.40	17.28	0	54.12	0.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	12	--	
7/10/2003	71.40	17.64	0	53.76	-0.36	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	23	--	
2/4/2004	71.40	17.05	0	54.35	0.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	26	--	
7/29/2004	71.40	17.82	0	53.58	-0.77	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
3/2/2005	71.40	16.47	0	54.93	1.35	93	ND<0.50	ND<0.50	ND<0.50	ND<0.50	140	--	
9/30/2005	71.40	17.79	0	53.61	-1.32	65	ND<0.30	ND<0.30	ND<0.30	ND<0.60	61	--	
3/23/2006	71.40	16.61	0	54.79	1.18	54	ND<0.30	0.41	ND<0.30	0.98	63	--	
9/26/2006	71.40	17.77	0	53.63	-1.16	51	ND<0.30	ND<0.30	ND<0.30	ND<0.60	41	--	
3/15/2007	71.40	17.27	0	54.13	0.50	140	ND<0.30	ND<0.30	ND<0.30	ND<0.60	110	--	
9/27/2007	71.40	18.48	0	52.92	-1.21	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	20	--	
3/27/2008	71.40	17.67	0	53.73	0.81	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	19	--	
9/17/2008	71.40	17.91	0	53.49	-0.24	56	ND<0.30	ND<0.30	ND<0.30	ND<0.60	43	--	
3/27/2009	71.40	17.34	0	54.06	0.57	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	15	--	
9/17/2009	71.40	17.88	0	53.52	-0.54	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	30	--	
3/23/2010	71.40	17.33	0	54.07	0.55	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	22	--	
MW-4													
9/15/1989	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/23/1990	--	--	--	--	--	ND	ND	0.4	ND	ND	--	--	
4/19/1990	--	--	--	--	--	ND	ND	0.48	ND	ND	--	--	
7/17/1990	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
10/16/1990	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/15/1991	--	--	--	--	--	ND	ND	ND	--	ND	--	--	
4/12/1991	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
7/15/1991	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
7/14/1992	--	--	--	--	--	ND	1.3	2.5	ND	1.0	--	--	
4/13/1993	71.98	17.67	0	54.31	--	--	--	--	--	--	--	--	Sampled Q3 only
7/14/1993	71.98	18.31	0	53.67	-0.64	ND	ND	ND	ND	ND	--	--	
10/14/1993	71.64	18.08	0	53.56	-0.11	--	--	--	--	--	--	--	Sampled Q3 only

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
1/12/1994	71.64	17.97	0	53.67	0.11	--	--	--	--	--	--	--	Sampled Q3 only
4/11/1994	71.64	17.70	0	53.94	0.27	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.64	17.80	0	53.84	-0.10	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.64	18.28	0	53.36	-0.48	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.64	17.38	0	54.26	0.90	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.64	17.21	0	54.43	0.17	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.64	17.82	0	53.82	-0.61	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.64	18.17	0	53.47	-0.35	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.64	16.45	0	55.19	1.72	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.64	17.35	0	54.29	-0.90	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.64	17.81	0	53.83	-0.46	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.64	16.73	0	54.91	1.08	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.64	17.91	0	53.73	-1.18	ND	ND	ND	ND	ND	ND	--	
1/14/1998	71.64	16.18	0	55.46	1.73	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.64	16.49	0	55.15	-0.31	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.64	17.29	0	54.35	-0.80	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.54	--	0	--	--	--	--	--	--	--	--	--	Well obstructed at 10.4 feet.
1/21/2000	71.54	17.51	0	54.03	--	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	71.54	17.93	0	53.61	-0.42	ND	ND	ND	ND	ND	ND	--	
1/4/2001	71.54	18.10	0	53.44	-0.17	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.54	17.76	0	53.78	0.34	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.54	17.20	0	54.34	0.56	--	--	--	--	--	--	--	Sampled Q3 only
7/12/2002	71.54	17.81	0	53.73	-0.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
1/14/2003	71.54	17.30	0	54.24	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.54	17.58	0	53.96	-0.28	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
2/4/2004	71.54	17.07	0	54.47	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.54	17.81	0	53.73	-0.74	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<1	--	
3/2/2005	71.54	16.25	0	55.29	1.56	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.54	17.74	0	53.80	-1.49	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2006	71.54	--	--	--	--	--	--	--	--	--	--	--	Inaccessible due to gate; Sampled Q3 only
9/26/2006	71.54	17.71	0	53.83	--	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/15/2007	71.54	17.56	0	53.98	0.15	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.54	18.16	0	53.38	-0.60	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/27/2008	71.54	17.58	0	53.96	0.58	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.54	17.87	0	53.67	-0.29	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
3/27/2009	71.54	17.17	0	54.37	0.70	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2009	71.54	17.86	0	53.68	-0.69	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2010	71.54	17.25	0	54.29	0.61	--	--	--	--	--	--	--	Sampled Q3 only
MW-5													
11/30/1992	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/8/1993	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
4/13/1993	71.51	17.49	0	54.02	--	ND	ND	ND	ND	ND	--	--	
7/14/1993	71.51	18.02	0	53.49	-0.53	ND	ND	0.57	ND	ND	--	--	
10/14/1993	71.23	17.82	0	53.41	-0.08	ND	ND	ND	ND	ND	--	--	
1/12/1994	71.23	17.74	0	53.49	0.08	ND	ND	0.84	ND	1.6	--	--	
4/11/1994	71.23	17.56	0	53.67	0.18	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.23	17.50	0	53.73	0.06	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.23	17.98	0	53.25	-0.48	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.23	17.13	0	54.10	0.85	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.23	17.05	0	54.18	0.08	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.23	17.59	0	53.64	-0.54	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.23	18.10	0	53.13	-0.51	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.23	17.11	0	54.12	0.99	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.23	17.22	0	54.01	-0.11	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.23	17.59	0	53.64	-0.37	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.23	16.75	0	54.48	0.84	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.23	17.59	0	53.64	-0.84	ND	ND	ND	ND	ND	ND	--	
1/14/1998	71.23	16.16	0	55.07	1.43	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.23	16.52	0	54.71	-0.36	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.23	17.62	0	53.61	-1.10	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.16	17.76	0	53.40	-0.21	ND	ND	ND	ND	ND	ND	--	
1/21/2000	71.16	16.83	0	54.33	0.93	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	71.16	17.46	0	53.70	-0.63	ND	ND	ND	ND	ND	ND	--	
1/4/2001	71.16	17.51	0	53.65	-0.05	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.16	17.32	0	53.84	0.19	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.16	17.12	0	54.04	0.20	--	--	--	--	--	--	--	Sampled Q3 only
7/12/2002	71.16	17.12	0	54.04	0.00	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
1/14/2003	71.16	16.67	0	54.49	0.45	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.16	17.39	0	53.77	-0.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
2/4/2004	71.16	16.23	0	54.93	1.16	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.16	16.02	0	55.14	0.21	ND<50	ND<0.3	0.64	ND<0.3	0.79	ND<1	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
3/2/2005	71.16	16.43	0	54.73	-0.41	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.16	17.41	0	53.75	-0.98	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2006	71.16	16.37	0	54.79	1.04	--	--	--	--	--	--	--	Sampled Q3 only
9/26/2006	71.16	15.54	0	55.62	0.83	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/15/2007	71.16	17.20	0	53.96	-1.66	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.16	18.01	0	53.15	-0.81	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/27/2008	71.16	17.57	0	53.59	0.44	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.16	17.68	0	53.48	-0.11	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/27/2009	71.16	17.14	0	54.02	0.54	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2009	71.16	17.60	0	53.56	-0.46	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2010	71.16	17.84	0	53.32	-0.24	--	--	--	--	--	--	--	Sampled Q3 only
MW-6													
11/30/1992	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/8/1993	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
4/13/1993	71.79	11.94	0	59.85	--	ND	ND	ND	ND	ND	--	--	
7/14/1993	71.79	17.20	0	54.59	-5.26	ND	0.99	2.4	ND	1.9	--	--	
10/14/1993	71.44	17.21	0	54.23	-0.36	ND	ND	0.64	ND	ND	--	--	
1/12/1994	71.44	17.44	0	54.00	-0.23	ND	ND	1.2	ND	2.9	--	--	
4/11/1994	71.44	13.66	0	57.78	3.78	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.44	14.05	0	57.39	-0.39	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.44	14.16	0	57.28	-0.11	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.44	13.73	0	57.71	0.43	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.44	11.30	0	60.14	2.43	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.44	12.32	0	59.12	-1.02	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.44	17.88	0	53.56	-5.56	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.44	16.38	0	55.06	1.50	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.44	14.00	0	57.44	2.38	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.44	13.58	0	57.86	0.42	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.44	15.42	0	56.02	-1.84	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.44	13.78	0	57.66	1.64	ND	ND	ND	ND	ND	ND	--	
1/14/1998	71.44	13.65	0	57.79	0.13	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.44	13.90	0	57.54	-0.25	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.44	14.93	0	56.51	-1.03	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.37	15.81	0	55.56	-0.95	ND	ND	ND	ND	ND	ND	--	
1/21/2000	71.37	16.13	0	55.24	-0.32	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	71.37	16.95	0	54.42	-0.82	ND	ND	ND	ND	ND	ND	--	

ATTACHMENT B-Table A
ADDITIONAL HISTORIC ANALYTICAL RESULTS
UNOCAL STATION #3538
Through March 2010

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-Water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
1/4/2001	71.37	17.09	0	54.28	-0.14	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.37	16.83	0	54.54	0.26	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.37	14.58	0	56.79	2.25	--	--	--	--	--	--	--	Sampled Q3 only
7/12/2002	71.37	16.76	0	54.61	-2.18	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
1/14/2003	71.37	16.25	0	55.12	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.37	12.97	0	58.40	3.28	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	
2/4/2004	71.37	16.20	0	55.17	-3.23	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.37	14.98	0	56.39	1.22	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	1.3	--	
3/2/2005	71.37	14.51	0	56.86	0.47	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.37	14.45	0	56.92	0.06	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	1.7	--	
3/23/2006	71.37	16.55	0	54.82	-2.10	--	--	--	--	--	--	--	Sampled Q3 only
9/26/2006	71.37	17.58	0	53.79	-1.03	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/15/2007	71.37	13.72	0	57.65	3.86	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.37	14.18	0	57.19	-0.46	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/27/2008	71.37	14.83	0	56.54	-0.65	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.37	14.70	0	56.67	0.13	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	2.8	--	
3/27/2009	71.37	15.66	0	55.71	-0.96	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2009	71.37	15.31	0	56.06	0.35	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
3/23/2010	71.37	15.42	0	55.95	-0.11	--	--	--	--	--	--	--	Sampled Q3 only

ATTACHMENT C

BC Laboratories Analytical Report #1215630

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 08/31/2012

Jim Harms

AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Project:	3538
BC Work Order:	1215630
Invoice ID:	B128965

Enclosed are the results of analyses for samples received by the laboratory on 8/17/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Table of Contents

12-15630

CHAIN OF CUSTODY FORM

Union Oil Company of California ▪ 6101 Bollinger Canyon Road ▪ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: 3538	Union Oil Consultant: AECOM
Site Global ID: T0600101472	Consultant Contact: Jim Harms
Site Address: 411 West MacArthur Blvd. Oakland	Consultant Phone No.: 916-361-6412
	Sampling Company: TRC
Union Oil PM: Roya Kambin	Sampled By (PRINT): Basilio
Union Oil PM Phone No.: 925-790-6270	Sampler Signature: [signature]
Charge Code: NWRTB-0 351642 -0- LAB	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911

This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.

ANALYSES REQUIRED

Turnaround Time (TAT): Standard ☑ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐

Special Instructions

SAMPLE ID

Field Point Name	Matrix	DTW	Date (yymmdd)	Sample Time	# of Containers	TPH - Diesel by EPA 8015	TPH - G by ~~GC/MS~~ 8015M	BTEX/MTBE/~~OXYS by EPA 8260B~~ 8021	Ethanol by EPA 8260B; EDB/EDC 8260B	EPA 8260B Full List with OXYS						Notes / Comments
1 MW-1	(W)-S-A		12-08-17	0800	6		X	X	X							
2 MW-2	W-S-A		↓	0852	↓		↓	↓	↓							
3 MW-3	W-S-A		↓	0826	↓		↓	↓	↓							
4 MW-4	W-S-A		↓	0743	↓		↓	↓	↓							
5 MW-5	W-S-A		↓	1100	↓		↓	↓	↓							
6 MW-6	W-S-A		↓	1015	↓		↓	↓	↓							
	W-S-A															
	W-S-A															
	W-S-A															
	W-S-A															
	W-S-A															
	W-S-A															

CHK BY [initials] DISTRIBUTION [initials] SUB-OUT ☐

Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time:	Relinquished By	Company	Date / Time:
[signature]	TRC	8/17/12 1200	Harry Bogan	BC Lab	8-17-12 1540	R L Reyna	BCL	8.17.12 2000
Received By	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time:**	**Received By**	**Company**	**Date / Time:**
Harry Bogan	BC Lab	8-17-12 1205	R L Reyna	BCL	8.17.12 1540	KOM	BCL	8.17.12 2000

Chain of Custody and Cooler Receipt Form for 1215630 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 12 12/30/10 Page 1 Of 1

Submission #: 12-15630

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Vog Thermometer ID: 207

Temperature: (A) 1.1 °C / (C) 1.2 °C

Date/Time 8/17/12 2000

Analyst Init KIQ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A·LA	A·LA	A·LA	A·LA	A·LA	A·LA				
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: _____ Date/Time: 8/20/12 0808

A = Actual / C = Corrected

C:\MyDOCS\WordPerfect 6.0 DOCS\FORMS\SAMREC2I

AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1215630-01	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-1-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101472			
	Location ID (FieldPoint): MW-1			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1215630-02	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 08:52
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-2-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101472			
	Location ID (FieldPoint): MW-2			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1215630-03	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 08:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: T0600101472			
	Location ID (FieldPoint): MW-3			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1215630-04	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 07:43
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101472	
			Location ID (FieldPoint): MW-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1215630-05	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101472	
			Location ID (FieldPoint): MW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1215630-06	**COC Number:**	---	**Receive Date:**	08/17/2012 20:00
	Project Number:	3538	**Sampling Date:**	08/17/2012 10:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6-W-120817	**Lab Matrix:**	Water
	Sampled By:	TRCI	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600101472	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

AECOM
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Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-01 | **Client Sample Name:** 3538, MW-1-W-120817, 8/17/2012 8:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	92.9	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	92.7	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/21/12 01:08	JMC	MS-V12	1	BVH1619

AECOM
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Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-01 | **Client Sample Name:** 3538, MW-1-W-120817, 8/17/2012 8:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021	ND	V11	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	72.2	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	97.8	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 15:06	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 15:06	jjh	GC-V4	1	BVH2365

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Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-02 | **Client Sample Name:** 3538, MW-2-W-120817, 8/17/2012 8:52:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/21/12 00:50	JMC	MS-V12	1	BVH1619

AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-02 | **Client Sample Name:** 3538, MW-2-W-120817, 8/17/2012 8:52:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**1.2**	**ug/L**	**0.30**	**EPA-8021**	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021	ND	V11	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	**57**	**ug/L**	**50**	**EPA-8015B**	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	73.9	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	91.8	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 15:28	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 15:28	jjh	GC-V4	1	BVH2365

AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-03 | **Client Sample Name:** 3538, MW-3-W-120817, 8/17/2012 8:26:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/21/12 00:32	JMC	MS-V12	1	BVH1619

AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 08/31/2012 4:13
Project: 3538
Project Number: 351642
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-03 | **Client Sample Name:** 3538, MW-3-W-120817, 8/17/2012 8:26:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	**4.7**	**ug/L**	**1.0**	**EPA-8021**	ND	**V11**	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	71.1	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	95.8	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 15:51	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 15:51	jjh	GC-V4	1	BVH2365

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Project Number: 351642
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-04 | **Client Sample Name:** 3538, MW-4-W-120817, 8/17/2012 7:43:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	94.3	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/21/12 00:14	JMC	MS-V12	1	BVH1619

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-04 | **Client Sample Name:** 3538, MW-4-W-120817, 8/17/2012 7:43:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021	ND	V11	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	70.5	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	97.9	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 16:13	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 16:13	jjh	GC-V4	1	BVH2365

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-05 | **Client Sample Name:** 3538, MW-5-W-120817, 8/17/2012 11:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.4	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/20/12 23:57	JMC	MS-V12	1	BVH1619

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-05 | **Client Sample Name:** 3538, MW-5-W-120817, 8/17/2012 11:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021	ND	V11	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	75.9	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	97.4	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 16:35	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 16:35	jjh	GC-V4	1	BVH2365

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1215630-06 | **Client Sample Name:** 3538, MW-6-W-120817, 8/17/2012 10:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	08/20/12	08/20/12 23:39	JMC	MS-V12	1	BVH1618

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1215630-06 | **Client Sample Name:** 3538, MW-6-W-120817, 8/17/2012 10:15:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	EPA-8021	ND		1
Toluene	ND	ug/L	0.30	EPA-8021	ND		1
Ethylbenzene	ND	ug/L	0.30	EPA-8021	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	EPA-8021	ND	V11	1
Total Xylenes	ND	ug/L	0.60	EPA-8021	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	EPA-8015B	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	74.6	%	70 - 130 (LCL - UCL)	EPA-8021			1
a,a,a-Trifluorotoluene (FID Surrogate)	94.4	%	70 - 130 (LCL - UCL)	EPA-8015B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021	08/29/12	08/29/12 16:57	jjh	GC-V4	1	BVH2365
2	EPA-8015B	08/29/12	08/29/12 16:57	jjh	GC-V4	1	BVH2365

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVH1618						
1,2-Dibromoethane	BVH1618-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BVH1618-BLK1	ND	ug/L	0.50		
Ethanol	BVH1618-BLK1	ND	ug/L	250		
1,2-Dichloroethane-d4 (Surrogate)	BVH1618-BLK1	105	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVH1618-BLK1	102	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BVH1618-BLK1	97.9	%	80 - 120 (LCL - UCL)		
QC Batch ID: BVH1619						
1,2-Dibromoethane	BVH1619-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BVH1619-BLK1	ND	ug/L	0.50		
Ethanol	BVH1619-BLK1	ND	ug/L	250		
1,2-Dichloroethane-d4 (Surrogate)	BVH1619-BLK1	99.2	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVH1619-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BVH1619-BLK1	93.1	%	80 - 120 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVH1618										
1,2-Dichloroethane-d4 (Surrogate)	BVH1618-BS1	LCS	10.240	10.000	ug/L	102		75 - 125		
Toluene-d8 (Surrogate)	BVH1618-BS1	LCS	10.360	10.000	ug/L	104		80 - 120		
4-Bromofluorobenzene (Surrogate)	BVH1618-BS1	LCS	10.820	10.000	ug/L	108		80 - 120		
QC Batch ID: BVH1619										
1,2-Dichloroethane-d4 (Surrogate)	BVH1619-BS1	LCS	9.6300	10.000	ug/L	96.3		75 - 125		
Toluene-d8 (Surrogate)	BVH1619-BS1	LCS	10.170	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	BVH1619-BS1	LCS	10.310	10.000	ug/L	103		80 - 120		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVH1618	Used client sample: N										
1,2-Dichloroethane-d4 (Surrogate)	MS	1215629-02	ND	10.150	10.000	ug/L		102		75 - 125	
	MSD	1215629-02	ND	10.270	10.000	ug/L	1.2	103		75 - 125	
Toluene-d8 (Surrogate)	MS	1215629-02	ND	10.190	10.000	ug/L		102		80 - 120	
	MSD	1215629-02	ND	10.190	10.000	ug/L	0	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1215629-02	ND	10.740	10.000	ug/L		107		80 - 120	
	MSD	1215629-02	ND	10.800	10.000	ug/L	0.6	108		80 - 120	
QC Batch ID: BVH1619	Used client sample: N										
1,2-Dichloroethane-d4 (Surrogate)	MS	1215629-01	ND	9.7200	10.000	ug/L		97.2		75 - 125	
	MSD	1215629-01	ND	10.040	10.000	ug/L	3.2	100		75 - 125	
Toluene-d8 (Surrogate)	MS	1215629-01	ND	9.9900	10.000	ug/L		99.9		80 - 120	
	MSD	1215629-01	ND	10.360	10.000	ug/L	3.6	104		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1215629-01	ND	10.730	10.000	ug/L		107		80 - 120	
	MSD	1215629-01	ND	10.870	10.000	ug/L	1.3	109		80 - 120	

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVH2365						
Benzene	BVH2365-BLK1	ND	ug/L	0.30		
Toluene	BVH2365-BLK1	ND	ug/L	0.30		
Ethylbenzene	BVH2365-BLK1	ND	ug/L	0.30		
Methyl t-butyl ether	BVH2365-BLK1	ND	ug/L	1.0		
Total Xylenes	BVH2365-BLK1	ND	ug/L	0.60		
Gasoline Range Organics (C4 - C12)	BVH2365-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (PID Surrogate)	BVH2365-BLK1	81.9	%	70 - 130 (LCL - UCL)		
a,a,a-Trifluorotoluene (FID Surrogate)	BVH2365-BLK1	93.7	%	70 - 130 (LCL - UCL)		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVH2365										
Benzene	BVH2365-BS1	LCS	38.772	40.000	ug/L	96.9		85 - 115		
Toluene	BVH2365-BS1	LCS	41.021	40.000	ug/L	103		85 - 115		
Ethylbenzene	BVH2365-BS1	LCS	38.870	40.000	ug/L	97.2		85 - 115		
Methyl t-butyl ether	BVH2365-BS1	LCS	29.848	40.000	ug/L	74.6		85 - 115		
Total Xylenes	BVH2365-BS1	LCS	123.74	120.00	ug/L	103		85 - 115		
Gasoline Range Organics (C4 - C12)	BVH2365-BS1	LCS	1036.7	1000.0	ug/L	104		85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BVH2365-BS1	LCS	34.755	40.000	ug/L	86.9		70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BVH2365-BS1	LCS	38.493	40.000	ug/L	96.2		70 - 130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVH2365	Used client sample: N										
Benzene	MS	1213312-95	ND	38.566	40.000	ug/L		96.4		70 - 130	
	MSD	1213312-95	ND	37.669	40.000	ug/L	2.4	94.2	20	70 - 130	
Toluene	MS	1213312-95	ND	40.752	40.000	ug/L		102		70 - 130	
	MSD	1213312-95	ND	39.541	40.000	ug/L	3.0	98.9	20	70 - 130	
Ethylbenzene	MS	1213312-95	ND	38.898	40.000	ug/L		97.2		70 - 130	
	MSD	1213312-95	ND	37.567	40.000	ug/L	3.5	93.9	20	70 - 130	
Methyl t-butyl ether	MS	1213312-95	ND	30.594	40.000	ug/L		76.5		70 - 130	
	MSD	1213312-95	ND	28.564	40.000	ug/L	6.9	71.4	20	70 - 130	
Total Xylenes	MS	1213312-95	ND	123.30	120.00	ug/L		103		70 - 130	
	MSD	1213312-95	ND	118.73	120.00	ug/L	3.8	98.9	20	70 - 130	
Gasoline Range Organics (C4 - C12)	MS	1213312-95	ND	930.52	1000.0	ug/L		93.1		70 - 130	
	MSD	1213312-95	ND	977.57	1000.0	ug/L	4.9	97.8	20	70 - 130	
a,a,a-Trifluorotoluene (PID Surrogate)	MS	1213312-95	ND	34.706	40.000	ug/L		86.8		70 - 130	
	MSD	1213312-95	ND	35.044	40.000	ug/L	1.0	87.6		70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1213312-95	ND	36.460	40.000	ug/L		91.2		70 - 130	
	MSD	1213312-95	ND	38.300	40.000	ug/L	4.9	95.8		70 - 130	

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Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.