Roya C. Kambin
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
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Tel (925) 790-6270
RKambin@chevron.com

March 27, 2013

RECEIVED
By Alameda County Environmental Health at 8:46 am, Mar 28, 2013

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 March 27, 2013.

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: *Low-Threat Case Closure Request* by AECOM Environment, Inc.

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

(805)388-3775 tel
(805)388-3577 fax

March 27, 2013

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

RE: Chevron Site No. 351642 (Former Unocal Service Station No. 3538)
411 West MacArthur Boulevard, Oakland, California
ACEH Case No. RO0000251

Subject: Low-Threat Case Closure Request

Dear Mr. Nowell:

On behalf of Chevron Environmental Management Company, for itself and as Attorney-in-Fact for Union Oil Company of California (Unocal), AECOM is pleased to submit this low-threat case closure request for Chevron Facility No. 351642 (Former Unocal Service Station No. 3538), located at 411 West MacArthur Boulevard, in Oakland, California.

1.0 Introduction

AECOM is requesting Low-Threat Case Closure for this site in accordance with State Water Resources Control Board (SWRCB) Resolution 2012-0016, Policy for Low-Threat Underground Storage Tank Case Closure (Policy) adopted on August 12, 2012. Low-threat closure is warranted because the site meets both the general- and media-specific criteria identified in the Policy as follows:

- Secondary source removal was completed in two excavations, the first in 1989 and then in 1998, removing all soil that exceeded the environmental screening levels (ESLs) for soil above 10 feet below ground surface (bgs).
- Groundwater concentrations are stable and/or decreasing across the Site.
- The nearest surface water bodies are located over 250 feet downgradient of the defined leading plume edge.
- Benzene was identified in site soils at a maximum concentration of 0.29 milligrams per kilogram (mg/kg) at 10 feet bgs which is below the direct contact and outdoor air exposure screening criteria for commercial/industrial worker scenarios (8.2 mg/kg and 12 mg/kg, respectively).
- The bioattenuation zone is sufficient to prevent vapor intrusion concerns associated with impacts from the former gasoline underground storage tank (UST) system in future land uses.

Attached to this closure request are the 2008 *Site Conceptual Model* and 2011 *Additional Assessment Report,* summarizing historical site activities and current status as part of the closure process for former Unocal Service Station No. 3538 (**Attachment A**). A list of reports associated with this site can be found in the reference section of the site conceptual model in **Attachment A**.

The following paragraphs and attachments present information and data that support AECOM's request for low threat closure under the Policy.

2.0 Site Description

The site is a former 76 Products service station located on the southwestern corner of the intersection of West MacArthur Boulevard and Webster Street in Oakland, California (**Figure 1**). Two generations of fuel station facilities have been removed from the site: the first in 1989 and the second in 1998 (**Figure 2**). The station building and canopy were left in place following station decommissioning. A small alternator repair/distribution shop currently uses the property. Land use in the vicinity consists of multiple-family residences to the south and west, a public church across the street to the north, and Mosswood Park to the east across Webster Street.

3.0 Conceptual Site Model

3.1 Site Geology and Hydrogeology

The site is located in the Santa Clara Valley Groundwater Basin and the East Bay Plain Subbasin, which is a northwest trending plain bounded on the north by San Pablo Bay, on the south by the Niles Cone Groundwater Basin, and on the east by the contact with Franciscan Basement rock. The East Bay Plain Basin extends beneath San Francisco Bay to the west. The subbasin aquifer system consists of unconsolidated Quaternary sediment. These deposits include the early Pleistocene Santa Clara Formation, the late Pleistocene Alameda Formation, the early Holocene Temescal Formation, and artificial fill. The cumulative thickness of the unconsolidated sediments is about 1,000 feet[1].

Silt and clay mixtures are encountered at the site from the surface to the total depth explored of 30 feet bgs. In some locations, these sediments are underlain by clayey sand and clayey gravel to 30 feet bgs. Intermittent, poorly graded sand layers are encountered from approximately 20 to 27 feet bgs.

Numerous creeks cross the subbasin capturing runoff from the foothills east of the Hayward fault. The groundwater flow is east to west, generally reflecting the local topography. Flow direction and velocity are influenced by buried stream channels that are typically oriented in east-west directions The total depths of domestic wells within the subbasin reportedly range from 32 to 525 feet with an average of 206 feet. Total depth of municipal and irrigation wells range from 29 to 630 feet with an average of 191 feet[1].

Regional groundwater flow is typically to the southwest toward San Francisco Bay. Municipal drinking water in the area is provided by East Bay Municipal Utility District (EBMUD). No municipal wells have been identified within a ½-mile radius of the site[2]. Designated beneficial uses for

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[1] Department of Water Resources, 2004,*California's Groundwater Bulletin – Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin*, February.

[2] Delta Consultants, Inc., 2008, Site Conceptual Model, November 21, 2008.

groundwater in this basin include municipal, industrial, and agricultural. However, EBMUD states on their website that *"EBMUD's water supply begins at the Mokelumne River watershed in the Sierra Nevada and extends 90 miles to the East Bay."* Nearly all drinking water in the area comes from surface water. The only groundwater use for EBMUD is at 2600 Grant Avenue in San Leandro, located over 15 miles south of the site. The site operates to supplement the surface water supply during prolonged drought periods and uses the deep aquifer at approximately 500 feet bgs[3]. There are no current or planned uses for shallow groundwater in the EBMUD service area. Therefore, the shallow groundwater aquifer at the site is not currently, or anticipated in the future to be, a potential source of drinking water.

The most recent groundwater monitoring event was conducted on February 14, 2013. Depth to groundwater measurements were recorded in six monitoring wells (MW-1 through MW-6). The depth to groundwater ranged from 13.66 to 17.98 feet below the top of well casings, and groundwater elevation ranged from 53.46 to 57.71 feet above mean sea level. The groundwater flow direction was calculated to flow to the south/southwest with an average hydraulic gradient of approximately 0.04 feet per foot (ft/ft) (**Figure 3**)[4].

3.2 Summary of Previous Work

3.2.1 UST History

The former station facilities consisted of two gasoline USTs, a used-oil UST, dispenser islands, and associated product piping. In July 1989, Kaprealian Engineering, Inc. (KEI) oversaw replacement of two (one 10,000-gallon and one 12,000-gallon) gasoline USTs with two new 12,000-gallon 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, four small holes were observed in the used-oil UST. Groundwater encountered in the gasoline UST pit prohibited the collection of soil samples below the former fuel USTs. Six confirmation sidewall samples were collected from the gasoline UST pit at depths of 10 feet bgs. Additionally a soil sample was collected from the used-oil tank pit at 8.5 feet bgs. KEI also collected four soil samples from the piping trenches at depths of 5 to 10 bgs. The analytical results for the fuel tank pit soil samples indicated low concentrations 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 of TPHg. The soil sample collected from the used-oil pit had no detectable TPHg, TPH as diesel (TPHd), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Following the sidewall sampling, 1,500-gallons of groundwater was removed from the gasoline UST pit. The groundwater did not recharge and no sample was collected. Subsequent overexcavation of the fuel UST pit was performed by removing 4 linear feet (calculated removal of 50 cubic yards) from the southern and eastern sidewalls, near the soil sample location with 3,100 ppm of TPHg. The postexcavation confirmation sample results were non-detect and 11 mg/kg for TPHg in two samples collected from SW-1(4) and SW4(2), respectively. The approximate amount of soil removed in 1989 was 450 cubic yards.

In September 1998, Gettler-Ryan, Inc. (G-R) oversaw removal of the second-generation fuel facilities including 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, and methyl tert-butyl ether (MTBE) was not detected in any of the soil samples. Approximately 380 cubic yards of trenching

[3]Ken Minn, East Bay Municipal Utility District, Engineering Department, telephone conversation on February 7, 2013.
[4] AECOM, 2013, First Semi-Annual 2013 Groundwater Monitoring Report, March 13, 2013.

and UST backfill materials from the second station reconfiguration was stockpiled and later transported off-site during the 1998 station demolition.

3.2.2 Site Assessment History

Environmental investigation and assessment activities have been ongoing since 1989. There are currently seven monitoring wells installed at the site. The wells are monitored and sampled semi-annually in the first and third quarters. Remedial activities conducted at the site include the excavation of approximately 830 cubic yards of soil (450 cubic yards in 1989 and 380 cubic yards in 1998) and the removal of 1,500 gallons of groundwater in 1989.

3.3 Current Environmental Conditions

3.3.1 Soil

Hydrocarbon impacted soil is generally encountered at depths deeper than 15 feet bgs on the east side of the property near the former gasoline USTs. The horizontal extent of hydrocarbons in soil is defined by MW-3 to the north; SB-9 to the east; SB-10, SB-5, and SW1 (4) and SB-1 to the south; and SB-4 and MW-4 to the west as shown in **Figure 4** and the tables in **Attachment B**.

The maximum hydrocarbon concentrations in soil after the excavation activities are listed below and are limited to the area just east of the former gasoline USTs. TPHg, TPHd, and BTEX have been detected in soil above the May 2008 revision to the California Regional Water Quality Control Board, San Francisco Bay Region ESLs.

The maximum hydrocarbon concentrations in soil left in place from 0 to 5 feet bgs after excavation activities in 1989 are:

- TPHd: <1.0 mg/kg (MW-1 at 5 feet bgs)
- TPHg: 3.4 mg/kg; (MW-1 at 5 feet bgs)
- Benzene: <0.05 mg/kg (all borings)
- Toluene: <0.025 mg/kg (all borings)
- Ethylbenzene:0.10 mg/kg (SB-9 at 5 feet bgs)
- Total xylenes: 0.059 mg/kg (SB-9 at 5 feet bgs)

Maximum hydrocarbon concentrations detected in soil left in place from 5 to 10 feet after excavation activities in 1989 are:

- TPHd: <1.0 mg/kg (MW-1 at 10 feet bgs)
- TPHg: 17 mg/kg (MW-4 at 10 feet bgs)
- Benzene: 0.29 mg/kg (MW-3 at 10 feet bgs)
- Toluene: 0.011 mg/kg (SB-9 at 10 feet bgs)
- Ethylbenzene: 0.069 mg/kg (SB-9 at 10 feet bgs)
- Total xylenes: 0.28 mg/kg (SB-9 at 10 feet bgs)

Historic soil boring locations and maximum remaining soil detections are depicted on **Figure 4** and the tables in **Attachment B**. A comparison of soil concentrations to the Policy Direct Contact and Outdoor Air Exposure criteria is presented in Section 4.2.3.

3.3.2 Groundwater

The current monitoring well network indicates that residual hydrocarbon impacts are primarily located on-site and that concentrations are stable and decreasing. The groundwater concentrations are well below the ESLs for groundwater not currently a drinking water resource and mostly below the ESLs with groundwater as a potential drinking water resource (**Attachment C**).

	ESL Table	TPHg (µg/l)	Benzene (µg/l)	MTBE (µg/l)
Maximum Groundwater Concentrations on 2/14/2013		**<50**	**<0.30**	**5.1**
Environmental Screening Level – groundwater is potential drinking water resource	F-1a	100	1.0	5.0
Environmental Screening Level – groundwater is not currently a potential drinking water resource	F-1b	210	46	1,800

MTBE has been identified as the primary constituent of concern. MTBE concentrations are limited to the north-central portion of the site, for monitoring well MW-3. MTBE concentrations have significantly decreased since October 1995 to just above the ESL of 5.0 µg/l as of the first semi-annual 2013 groundwater monitoring event (**Figure 5**). The plume is defined by well MW-5 to the east, MW-2 to the south, MW-1 to the west, and MW-4 and MW-6 to the northwest and northeast, respectively.

The most recent groundwater monitoring and sampling event was conducted in February 2013. Groundwater samples were collected from all the site wells (MW-1 through MW-6). MTBE was the only constituent above its respective ESL (5.0 µg/l) at a concentration of 5.1 µg/l for monitoring well MW-3. TPHg and benzene were not detected above the laboratory reporting limits, which are below the respective ESLs.

Grab groundwater samples collected during March 2006 and December 2010 show significantly higher groundwater concentrations than groundwater samples collected at the same time from the monitoring well network (**Attachment D**). This difference is likely due to the fine-grained nature of site soil and presence of entrained sediments in the samples. The grab groundwater samples do confirm the groundwater impacts around the former gasoline UST pit and show decreasing concentrations with depth. The 2010 grab groundwater samples are much lower in the same area (SB-3 vs. SB-9 and SB-10 vs. SB-5) showing decreasing concentrations over time. SB-1 groundwater concentrations observed off-site in 2006 are below the conservative groundwater ESLs with groundwater not being a water drinking water resource.

3.3.3 Vapor

Soil vapor has not been investigated at this site. The majority of the site soil is not impacted, and hydrocarbon concentrations in groundwater did not warrant screening for vapor intrusion risk. BTEX and MTBE detected in groundwater are well below the ESLs for potential vapor intrusion concern. Oxygen in soil vapor has also not been measured at this site.

	ESL Table	TPHg (µg/l)	Benzene (µg/l)	MTBE (µg/l)
Maximum Groundwater Concentrations on 2/14/2013		**<50**	**<0.30**	**5.1**
Potential Vapor Intrusion – Residential	E-1	NA	540	24,000
Potential Vapor Intrusion – Commercial	E-1	NA	1,800	$8x10^6$

In addition, the site has been redeveloped as a repair/distribution facility and a current petroleum source is not present. Petroleum vapor intrusion to indoor air is discussed in section 4.2.2.

3.4 Identification of Sensitive Receptors and Exposure Pathways

3.4.1 Surface Water

The nearest surface water body of concern is Lake Merritt, which is approximately 1 mile south (downgradient and crossgradient) of the site.

3.4.2 Water Supply Wells

No wells were identified within ½-mile of the Site according to DWR records reviewed by Delta Consultants, Inc. The nearest well identified was a private well located approximately 2,500 feet east/southeast of the site[2].

3.4.3 Potential Human Receptors

The site currently functions as a repair/distribution facility and direct human contact with the soil is prevented by a poured-concrete slab. Additionally, the impacted soil areas are stable in extent and occur primarily at depths greater than 15 feet bgs. No complete exposure pathways have been identified. In 2008, Delta Consultants, Inc. submitted a *Site Conceptual Model* (**Attachment A**) concluding that current hydrocarbon concentrations in groundwater and soil do not present a significant threat or risk to human health or the environment.

4.0 Request for Closure

4.1 General Criteria

The site-specific characteristics and contaminant trends at the site meet the criteria for closure described in the Policy as follows:

- The area surrounding the site is served by a public water system: East Bay Municipal Utility District.
- The release consisted only of petroleum: criteria met and described in section 3.2.1.
- The “primary” release from the UST system has been stopped: criteria met, leaks stopped in 1989 and 1998 when first and second generation USTs were removed.
- Free product has never been observed at the site.
- A Conceptual Site Model has been developed; see **Attachment A** and the update in section 3.0.
- Secondary source has been removed to the extent practicable: criteria met, excavations are described in section 3.2.2.
- Soil or groundwater has been tested for MTBE and results reported in accordance with the State of California Health and Safety Code section 25296.15: criteria met, since 1995 MTBE has been tested for in groundwater and in soil since 1998.
- There is no nuisance at this site as defined by Water Code section 13050.

4.2 Media-Specific Criteria

4.2.1 Groundwater-Specific Criteria

Per the Policy, to be considered “low threat,” a plume that exceeds water quality objectives (WQOs) must be stable or decreasing in aerial extent and must meet the requirements of one of the five criteria classes. This site meets the criteria for a Class 1 site as described below. For the purpose of drawing plume extents, the ESL for groundwater as a potential drinking water resource is used as a

worst-case scenario. Based on the most recent groundwater monitoring data, the only constituent that exceeds WQOs is MTBE, and the estimated maximum extent of the plume is shown on **Figure 5**.

Well MW-3 is the only site well that currently has constituent concentrations above detection limits. Historically, MW-2 has also had elevated concentrations. MW-2 has exhibited a decline in benzene concentration since the highest concentration of 550 µg/l was reported in April 1990. Since September 1995, the concentrations of benzene have stabilized near the ESL of 1.0 µg/l. **Figures 6** and **7** include benzene and MTBE isocontours from four time periods, including the most recent data which illustrate the decrease in groundwater impacts. Hydrographs for MW-2 and MW-3 are included as **Chart 1** and **Chart 2**. These charts show the plume is stable and decreasing in extent. Groundwater concentrations are calculated to reach non-detect levels by 2016 for benzene and 2017 for MTBE.

Class 1 consideration:

1. Plume exceeding WQOs is less than 100 feet in length.
2. There is no free product.
3. The nearest water supply well or surface water body is greater than 250 feet from defined plume boundary.
4. Dissolved concentration of benzene is less than 3,000 µg/l and the dissolved concentration of MTBE is less than 1,000 µg/l.

The site meets these characteristics as follows:

1. Based on the most recent groundwater monitoring data, the largest possible site-related plume is that of MTBE. The exact dimensions of the MTBE plume are difficult to determine; concentrations for monitoring well MW-3 indicate that the plume has been stable in size since 2011 (slightly above the ESL of 5.0 µg/l). Based on the most recent data, the MTBE plume extends approximately 15 feet if measured from edge to edge in the direction of groundwater flow centered on monitoring well MW-3. The MTBE plume gives the worst-case or most-conservative scenario for plume size. The benzene plume meets the low-threat class 1 criteria of less than 100 feet in length. The current dissolved phase MTBE plume is presented on **Figure 5**.

2. Free product has never been detected at this site. Groundwater concentrations have never been indicative of phase-separated hydrocarbons.

3. The nearest surface water body of concern is Lake Merritt approximately 1 mile south (downgradient and crossgradient) of the site.

4. Currently, benzene is below the laboratory method detection limits of 0.30 µg/l for all wells (i.e., less than 3,000 µg/l). The only detected dissolved concentration of MTBE is 5.1 µg/l for MW-3 and all other site wells are below laboratory reporting limits of 1.0 µg/l (i.e., less than 1,000 µg/l). The historically highest benzene concentration was 1,300 µg/l (i.e., less than 3,000 µg/l) for monitoring well MW-3 in July 1991. The historically highest MTBE concentration-site-wide was 4,800 µg/l.

4.2.2 Petroleum Vapor Intrusion to Indoor Air

The Policy provides criteria for evaluating current and future land use scenarios. Soil gas oxygen data are not available for this site. The Policy defines a bioattenuation zone for sites without oxygen data as 5 feet or more of clean soil (less than 100 mg/kg of TPH) between the bottom of existing or

future building's foundation and the shallowest impacted groundwater with benzene concentration less than 100 µg/l. The lateral extent of the bioattenuation zone is intended to extend 30 feet beyond the future building foundation.

The site is a paved parking lot with a commercial building and the soil data clearly define a bioattenuation zone as shown in scenario 3 of the Policy. The highest TPH detection in soil at 5 feet or shallower remaining after overexcavation is 3.4 mg/kg, which was detected on September 6, 1989. Benzene was not detected in groundwater and is therefore below the threshold concentration of100 µg/l, which creates a sufficient bioattentuation zone.

Therefore, based on the low concentration and decreasing trend of benzene in groundwater and a sufficient bioattenuation zone, vapor intrusion is considered a low threat at this site.

4.2.3 Direct Contact and Outdoor Air Exposure

The direct contact and outdoor air exposure risk component of the Policy considers multiple exposure scenarios from 0 to 10 feet bgs. Of these, the residential direct contact exposure scenario is the most restrictive, and screening criteria are provided for benzene (1.9 mg/kg), ethylbenzene (21 mg/kg), naphthalene (9.7 mg/kg), and polycyclic aromatic hydrocarbons (PAHs) (0.063 mg/kg) at various depths.

The few residual hydrocarbon impacts that remain in the site soil are generally at depths deeper than 10 feet bgs. Benzene and ethylbenzene were not detected above the Policy criteria for residential, commercial, or utility worker direct contact exposure scenarios. PAHs and naphthalene have not been analyzed at this site. Because no impacts or evidence of a leak were observed below the used-oil UST, which would have been the only potential PAH and naphthalene source, the presence of PAHs or naphthalene above screening levels is unlikely.

As summarized in section 3.3.1, no remaining soil exceeds the Policy criteria for residential, commercial/industrial, or utility worker exposure scenarios. Therefore, direct contact and outdoor air exposure is considered a low threat at this site.

5.0 Conclusions and Recommendations

Site conditions meet all the general and media-specific criteria established in the Policy and, therefore, pose a low threat to human health, safety, and the environment, and satisfy the case-closure requirements of Health and Safety Code section 25296.10. Case closure is consistent with Resolution 92-49. Based on these criteria, AECOM is requesting low-threat closure for this site.

Groundwater data, as presented in this closure request, support the conclusion that the site and the impacted groundwater pose no significant threat to human health or the environment. Therefore, effective immediately, AECOM requests to cease groundwater monitoring and sampling activities pending a response to this request.

6.0 Limitations

Services performed by AECOM are consistent with the level of care and skill ordinarily exercised by members of the same profession currently practicing in the same locality under similar conditions. No expressed or implied representation or warranty is included or intended in our reports, except that our services were performed within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

Should you have any questions or comments, please feel free to contact James Harms at (916) 361-6412 or by the email address listed below his signature.

Sincerely,

James Harms
Project Manager
James.harms@aecom.com

Tiina Couture, P.E.
Project Engineer
Tiina.Couture@aecom.com

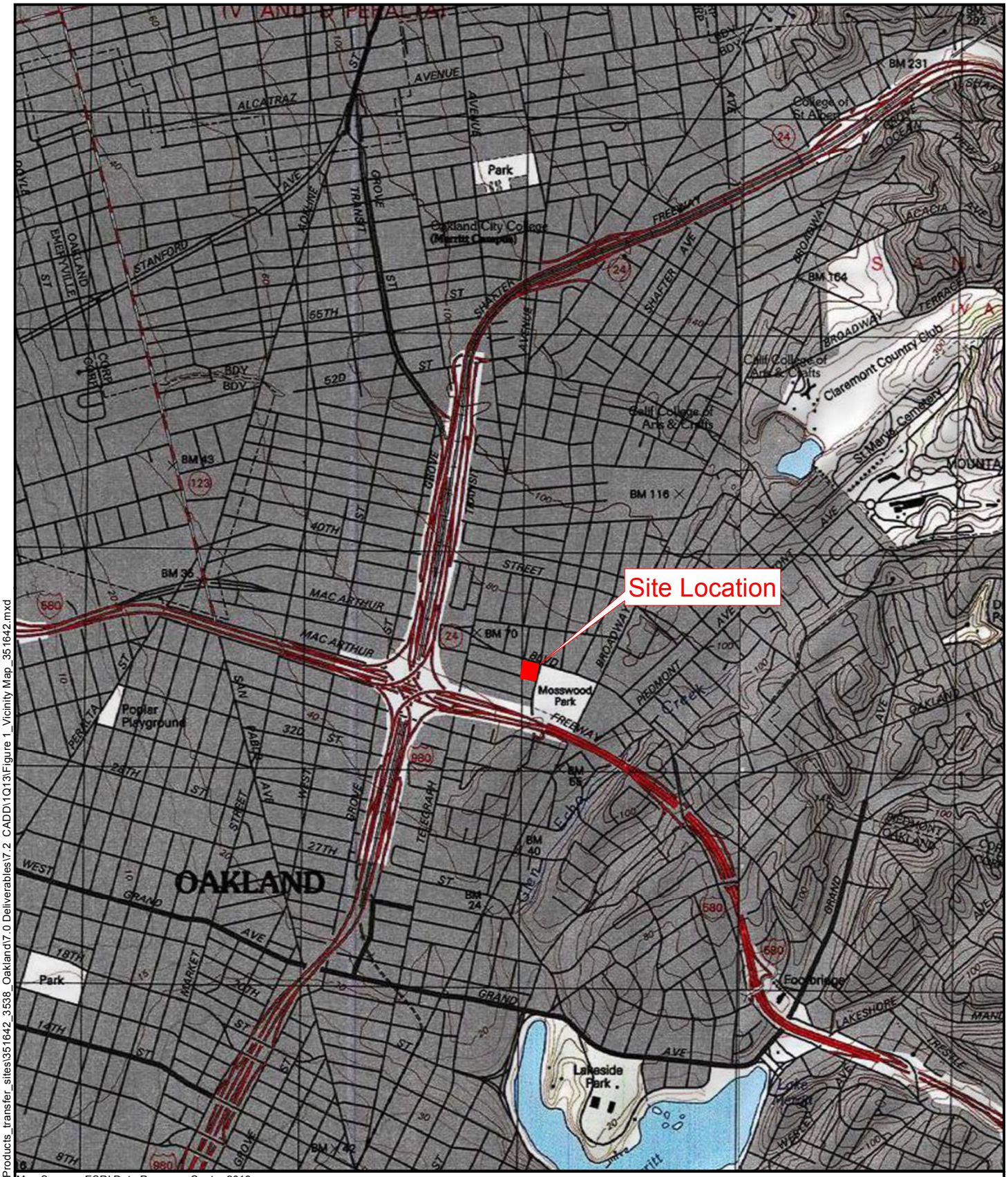
Enclosures:

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Contour Map
Figure 4	Maximum Soil Concentration Map
Figure 5	Groundwater Concentration Map
Figure 6	Groundwater Dissolved Benzene Concentration Map
Figure 7	Groundwater Dissolved MTBE Concentration Map
Chart 1	Point Attenuation for MW-2
Chart 2	Point Attenuation for MW-3

Attachment A	Delta Consultants, Inc. 2008 Site Conceptual Model and 2011 Additional Assessment Report
Attachment B	Historical Soil Data
Attachment C	Site Groundwater Data
Attachment D	Historical Grab Groundwater Data

cc: Mr. Kevin Ma & Mr. Arthur Yu, Property Owners

Figures and Charts



Map Source: ESRI Data Resource Center 2013.

AECOM
10461 Old Placervillle Rd, Suite 170
Sacramento, CA 95827
916.361.6400

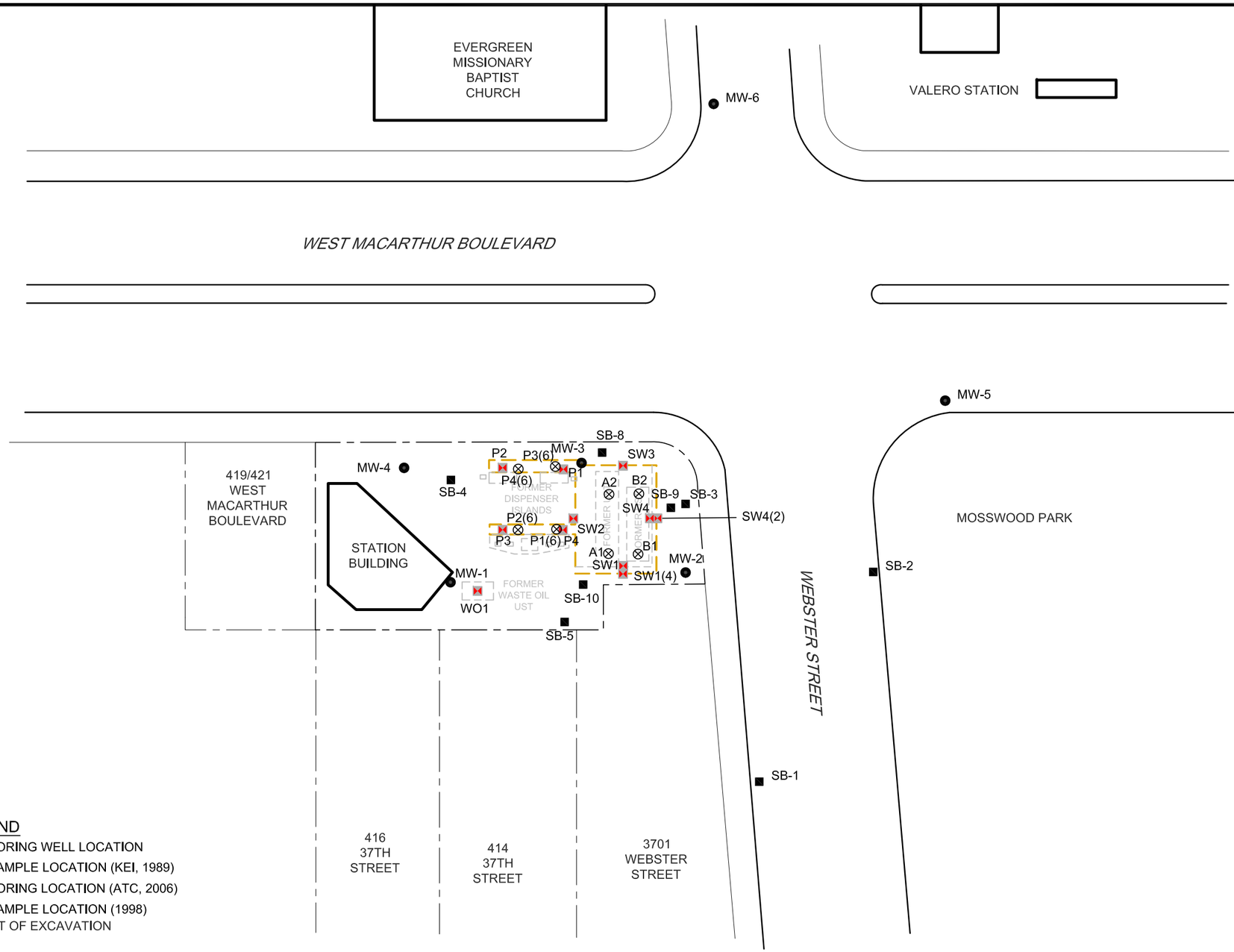
0 0.25 0.5 Miles

N

Figure 1: Site Location Map

Chevron Site #361642
Former Unocal #3538
411 West MacArthur Blvd.,
Oakland, California

Path: P:\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\1Q13\Figure 1_Vicinity Map_351642.mxd



P:\01231-Chevron176Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\LTC\Figure 2_Site Plan_351642.dwg Mar 07, 2013 - 9:37am harmsj

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
	RPR	RPR	JH

AECOM

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

Site Plan

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

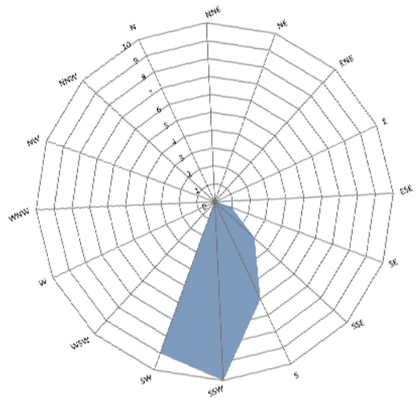
SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	2/12/2013	60284077

FIGURE NUMBER:

2

SHEET NUMBER:

1 of 1



HISTORICAL GROUNDWATER
FLOW DIRECTION
1990 TO 1Q13

EVERGREEN
MISSIONARY
BAPTIST CHURCH

MW-6
57.71

[57.50]

VALERO STATION

WEST MACARTHUR BOULEVARD

[55.50]

0.04 ft/ft

MW-5
53.65

[53.50]

MW-4
53.86

MW-3
53.68

MW-2
53.46

MW-1
54.14

419/421
WEST
MACARTHUR
BOULEVARD

STATION
BUILDING

FORMER
DISPENSER
ISLANDS

FORMER UST

FORMER UST

FORMER
WASTE OIL
UST

MOSSWOOD PARK

WEBSTER STREET

416
37TH
STREET

414
37TH
STREET

3701
WEBSTER
STREET

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITORING WELL
- 53.62 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- [53.50] GROUNDWATER ELEVATION CONTOUR IN FEET (DASHED WHERE INFERRED)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- EXTENT OF EXCAVATION

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

0 40'
SCALE

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
	JH	TC	JH

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

GROUNDWATER CONTOUR MAP

First Semi-Annual 2013
Groundwater Monitoring Event
Chevron Site #351642 Former Unocal #3538
411 West MacArthur Blvd., Oakland, California

SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	3/11/2013	60284077

FIGURE NUMBER:
3

SHEET NUMBER:
1 of 1

P:\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\LTCI\Figures 3_5_351642.dwg Mar 13, 2013 - 12:03pm HarmsJ

EVERGREEN MISSIONARY BAPTIST CHURCH

VALERO STATION

WEST MACARTHUR BOULEVARD

MOSSWOOD PARK

WEBSTER STREET

STATION BUILDING

FORMER DISPENSER ISLANDS

FORMER WASTE OIL UST

FORMER USTs

419/421 WEST MACARTHUR BOULEVARD

416 37TH STREET

414 37TH STREET

3701 WEBSTER STREET

MW-6
<1.0 (19.5)
<0.005 (19.5)
-- (19.5)

P2
<1.0 (6.5)
<0.05 (6.5)
-- (6.5)

P1
<1.0 (6.5)
<0.05 (6.5)
-- (6.5)

MW-3
3.3 (10)
0.29 (15)
-- (18.5)

SB-8
520 (20)
<1.2 (20)
<1.2 (20)

SW-3
5.7 (10)
0.26 (10)
-- (10)

~~SW-4~~
~~2.5 (10)~~
~~<0.05 (10)~~
~~-- (10)~~

SB-9
9.9 (5)
1.4 (15)
0.62 (20)

SB-3
6,100 (16)
<9.7 (16)
<9.7 (16)

SW4(2)
11 (10)
0.61 (10)
-- (10)

MW-5
<1.0 (21)
<0.005 (21)
-- (21)

MW-4
20 (15)
<0.05 (15)
-- (15)

SB-4
<0.92 (15)
<0.0046 (15)
<0.0046 (15)

SW2
1.1 (10)
0.1 (10)
-- (10)

P3
<1.0 (5.5)
<0.05 (5.5)
-- (5.5)

MW-1
5.0 (10)
<0.05 (10)
-- (10)

MW-2
13 (19)
1.5 (19)
-- (19)

SB-2
<0.93 (9)
<0.0047 (9)
<0.0047 (9)

SB-5
<0.93 (13)
<0.0047 (13)
<0.0047 (13)

SW1(4)
<1.0 (10)
<0.05(10)
-- (10)

~~SW1~~
~~3,100 (10)~~
~~13 (10)~~
~~(10)~~

P4
170 (10)
0.71 (10)
-- (10)

W01
<1.0 (8.5)
<0.05(8.5)
-- (8.5)

SB-10
0.47 (10)
<0.005 (10)
<0.005 (10)

SB-1
2.8 (9)
<0.0048 (9)
<0.0048 (9)

P3(6) P4(6) P2(6) P1(6) A2 B2 SW4 A1 B1

LEGEND

- MONITORING WELL LOCATION
- SOIL BORING LOCATION (ATC, 2006)
- SOIL SAMPLE LOCATION (KEI, 1989)
- NEW SOIL SAMPLE LOCATION (1998)
- *17* TPHg CONCENTRATION (mg/kg)
- 0.23 BENZENE CONCENTRATION (mg/kg)
- *<0.0050* MTBE CONCENTRATION (mg/kg)
- EXTENT OF EXCAVATION

NOTE:
ONLY MAXIMUM CONCENTRATIONS ARE SHOWN. FOR SAMPLES WITHOUT CONCENTRATIONS, ONLY THE DEEPEST SAMPLE IS SHOWN. SAMPLE DEPTH IN FEET FOLLOW THE CONCENTRATIONS IN PARENTHESES.

-- = NOT DETECTED
~~STRIKETHROUGH~~ = EXCAVATED SAMPLE

0 40'
SCALE

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
	RPR	RPR	JH

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Maximum Soil Concentration Map

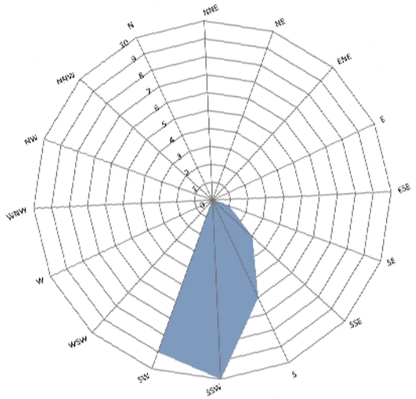
Chevron Site #351642 Former Unocal #3538
411 West MacArthur Blvd., Oakland, California

PROJECT NUMBER:	DATE:	SCALE:
60284077	2/12/2013	1" = 40'

FIGURE NUMBER:
4

SHEET NUMBER:
1 of 1

P:\01231-Chevron\76Products_transfer_sites\351642_3538_Oakland\7.0 Deliverables\7.2 CADD\LTC\Figure 4_Max Soil_351642.dwg Mar 11, 2013 - 5:00pm harmsj



HISTORICAL GROUNDWATER
FLOW DIRECTION
1990 TO 1Q13

EVERGREEN
MISSIONARY
BAPTIST CHURCH

MW-6
NS
NS
NS

VALERO STATION

WEST MACARTHUR BOULEVARD

0.04 ft/ft

NS
NS
NS

<50
<0.30
5.1

MW-4

MW-3

MW-5
NS
NS
NS

419/421
WEST
MACARTHUR
BOULEVARD

FORMER
DISPENSER
ISLANDS

FORMER UST

FORMER UST

FORMER UST

STATION
BUILDING

MW-1

MW-2

FORMER
WASTE OIL
UST

<50
<0.30
<1.0

NS
NS
NS

MOSSWOOD PARK

WEBSTER STREET

416
37TH
STREET

414
37TH
STREET

3701
WEBSTER
STREET

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITORING WELL
- <50 TPH gasoline
- <0.30 BENZENE
- 5.1 MTBE
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- EXTENT OF EXCAVATION
- ESTIMATED PLUME EXTENT

Notes:
TPH = Total Petroleum Hydrocarbons
MTBE = methyl tertiary-butyl ether
UST = underground storage tank
FT/FT = feet per foot
Analyte Concentrations expressed in micrograms per liter.

0 40'
SCALE

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:
DRAWN BY: RPR
CHECKED BY: RPR
APPROVED BY: JH

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GROUNDWATER CONCENTRATION MAP

First Semi-Annual 2013
Groundwater Monitoring Event
Chevron Site #351642 Former Unocal #3538
411 West MacArthur Blvd., Oakland, California

SCALE: 1" = 40'
DATE: 3/11/2013
PROJECT NUMBER: 60284077

FIGURE NUMBER:
5

SHEET NUMBER:
1 of 1

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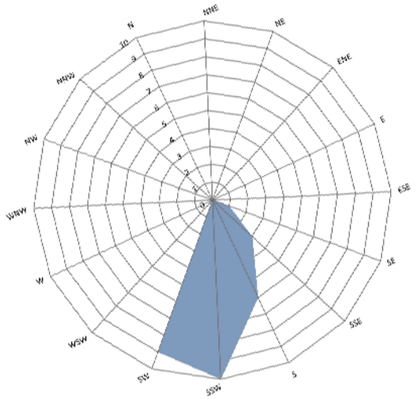

HISTORICAL GROUNDWATER
FLOW DIRECTION
1990 TO 1Q13

EVERGREEN
MISSIONARY
BAPTIST CHURCH

MW-6
--
ND
<0.3
--

VALERO STATION

WEST MACARTHUR BOULEVARD

100
10
1

MW-4
ND
ND
<0.3
--

MW-3
600
330
<0.3
<0.3

MW-2
550
32
1.2
<0.3

MW-1
ND
ND
<0.3
--

FORMER DISPENSER ISLANDS
FORMER UST
FORMER UST
FORMER WASTE OIL UST

419/421
WEST
MACARTHUR
BOULEVARD

STATION
BUILDING

WEBSTER STREET

MW-5
--
ND
<0.3
--

MOSSWOOD PARK

416
37TH
STREET

414
37TH
STREET

3701
WEBSTER
STREET

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITORING WELL
- BENZENE ISOCONTOUR (APRIL 19, 1990)
- BENZENE ISOCONTOUR (JULY 19, 1995)
- BENZENE ISOCONTOUR (SEPTEMBER 30, 2005)
- EXTENT OF EXCAVATION

600	APRIL 19, 1990
330	JULY 19, 1995
<0.3	SEPTEMBER 30, 2005
<0.3	FEBRUARY 14, 2013

Notes:

ND	NOT DETECTED
--	NOT SAMPLED
UST	UNDERGROUND STORAGE TANK
FT/FT	FEET PER FOOT

Analyte Concentrations expressed in micrograms per liter (µg/L).

0 40'
SCALE

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
	RPR	RPR	JH

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GROUNDWATER DISSOLVED BENZENE CONCENTRATION MAP

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

SCALE:	DATE:	PROJECT NUMBER:
1" = 40'	2/12/2013	60284077

FIGURE NUMBER:
6

SHEET NUMBER:
1 of 1

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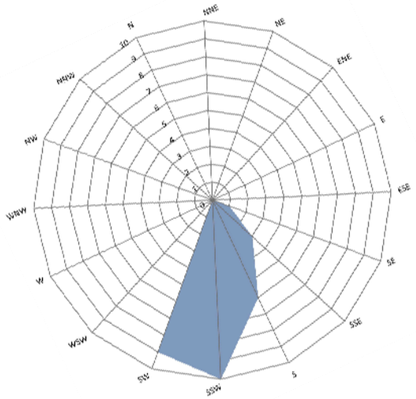

HISTORICAL GROUNDWATER
FLOW DIRECTION
1990 TO 1Q13

EVERGREEN
MISSIONARY
BAPTIST CHURCH

MW-6
--
<1.0
<1.0
--

VALERO STATION

WEST MACARTHUR BOULEVARD

100
50
50
5

MW-4
--
<1.0
<1.0
--

MW-3
860
20
48
5.1

MW-2

MW-1
--
<1.0
<1.0
--

FORMER DISPENSER ISLANDS
FORMER WASTE OIL UST
FORMER UST
FORMER UST

419/421
WEST
MACARTHUR
BOULEVARD

STATION
BUILDING

250
<1.0
1.6
<1.0

MW-5
--
<1.0
<1.0
--

MOSSWOOD PARK

WEBSTER STREET

416
37TH
STREET

414
37TH
STREET

3701
WEBSTER
STREET

LEGEND

- APPROXIMATE PROPERTY LINE
- MONITORING WELL
- MTBE ISOCONTOUR (July 14, 1993)
- MTBE ISOCONTOUR (September 27, 2007)
- MTBE ISOCONTOUR (September 21, 2010)
- MTBE ISOCONTOUR (AUGUST 17, 2012)
- EXTENT OF EXCAVATION

600	July 14, 1993
330	September 27, 2007
<0.3	September 21, 2010
<0.3	AUGUST 17, 2012

Notes:

ND	NOT DETECTED
--	NOT SAMPLED
UST	UNDERGROUND STORAGE TANK
FT/FT	FEET PER FOOT

Analyte Concentrations expressed in micrograms per liter (µg/L).

0 40'
SCALE

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:
DRAWN BY: RPR
CHECKED BY: RPR
APPROVED BY: JH

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GROUNDWATER DISSOLVED MTBE CONCENTRATION MAP

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

SCALE: 1" = 40'
DATE: 2/12/2013
PROJECT NUMBER: 60284077

FIGURE NUMBER:
7

SHEET NUMBER:
1 of 1

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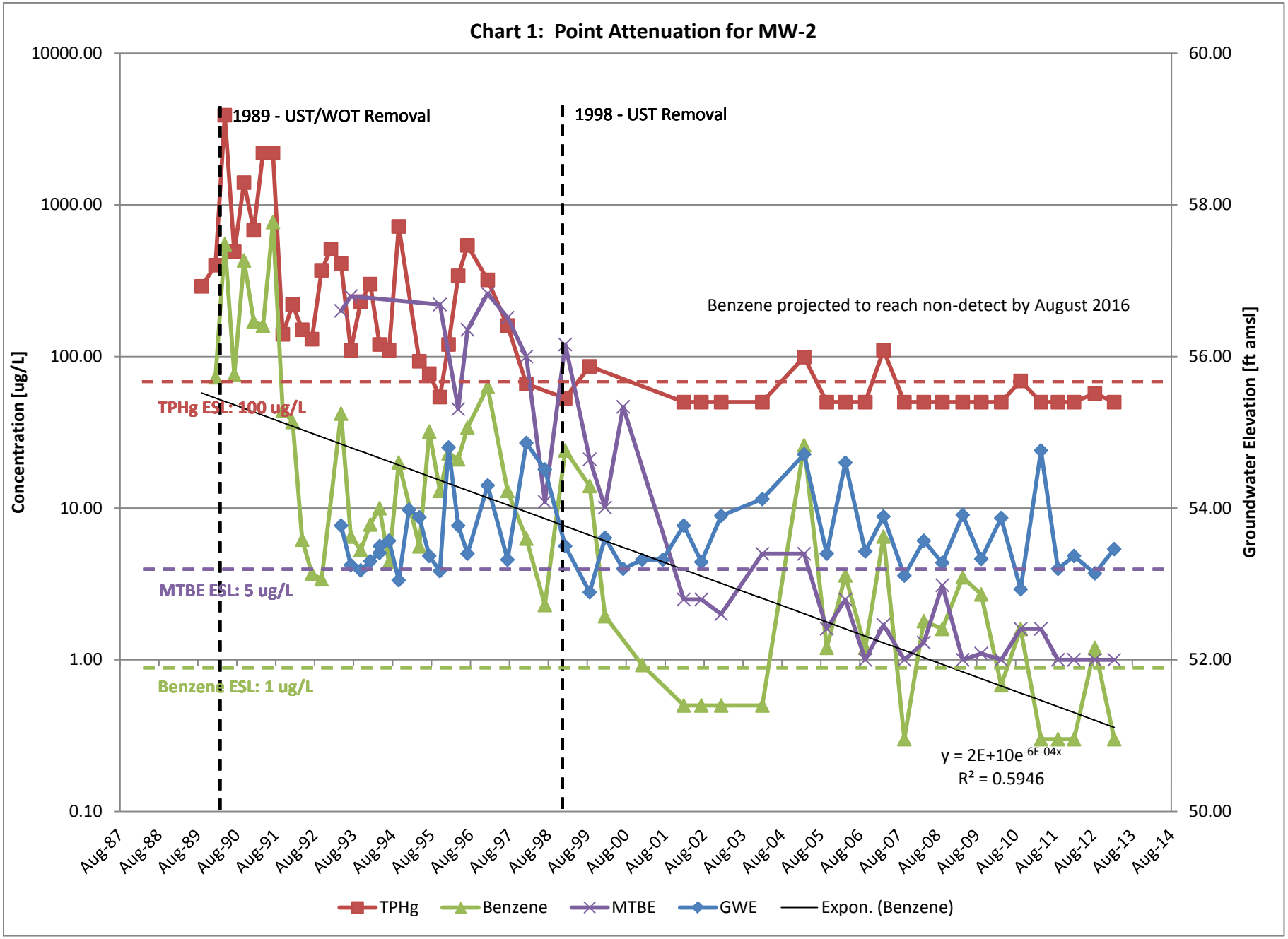
Chart 1: Point Attenuation for MW-2
1989 - UST/WOT Removal
1998 - UST Removal
Benzene projected to reach non-detect by August 2016
TPHg ESL: 100 ug/L
MTBE ESL: 5 ug/L
Benzene ESL: 1 ug/L
y = 2E+10e-6E-04x
R² = 0.5946
Concentration [ug/L]
Groundwater Elevation [ft amsl]
10000.00
1000.00
100.00
10.00
1.00
0.10
60.00
58.00
56.00
54.00
52.00
50.00
Aug-87
Aug-88
Aug-89
Aug-90
Aug-91
Aug-92
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06
Aug-07
Aug-08
Aug-09
Aug-10
Aug-11
Aug-12
Aug-13
Aug-14
TPHg
Benzene
MTBE
GWE
Expon. (Benzene)

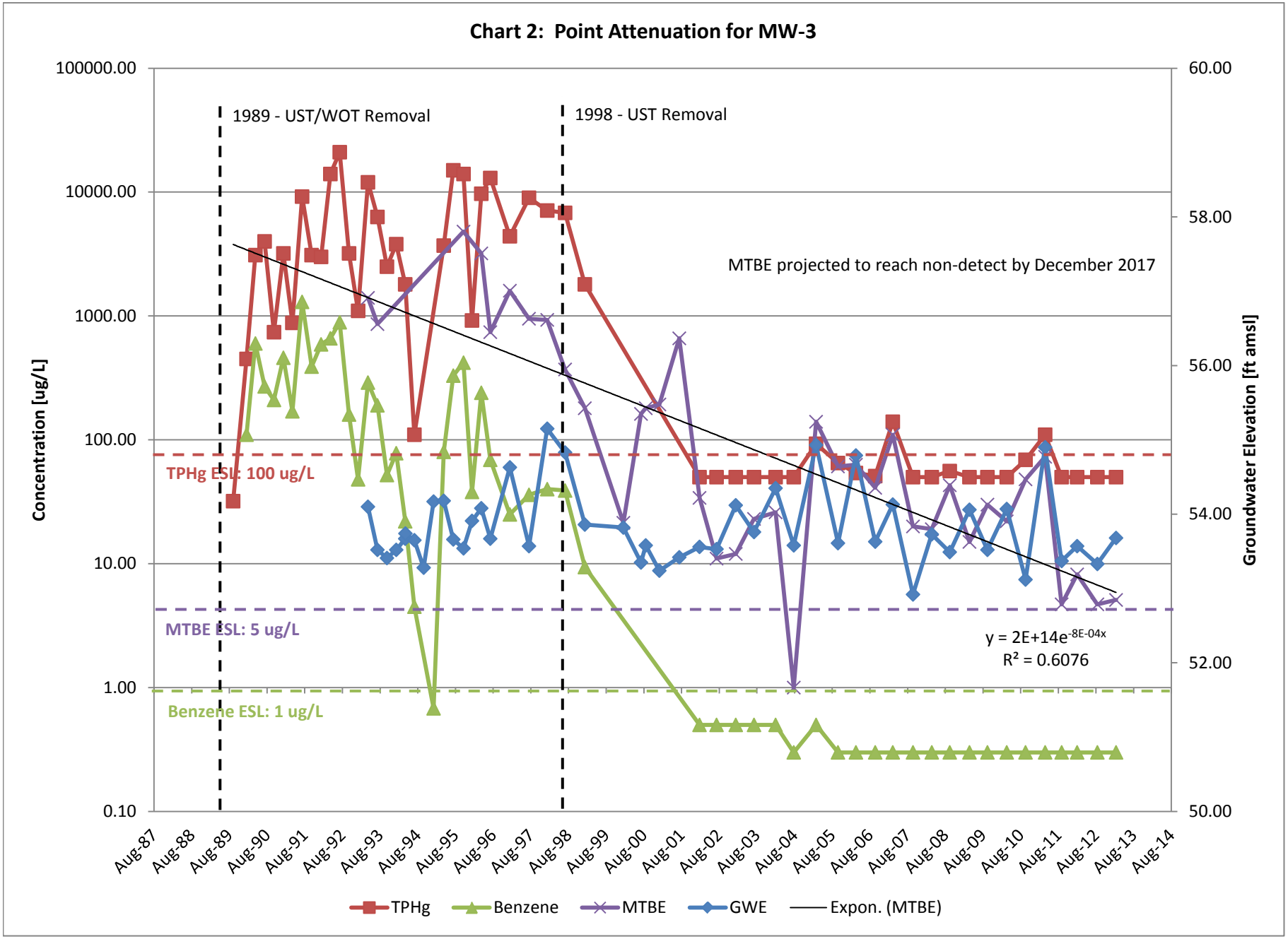
Chart 2: Point Attenuation for MW-3
100000.00
10000.00
1000.00
100.00
10.00
1.00
0.10
Concentration [ug/L]
60.00
58.00
56.00
54.00
52.00
50.00
Groundwater Elevation [ft amsl]
1989 - UST/WOT Removal
1998 - UST Removal
MTBE projected to reach non-detect by December 2017
TPHg ESL: 100 ug/L
MTBE ESL: 5 ug/L
Benzene ESL: 1 ug/L
y = 2E+14e-8E-04x
R² = 0.6076
Aug-87
Aug-88
Aug-89
Aug-90
Aug-91
Aug-92
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06
Aug-07
Aug-08
Aug-09
Aug-10
Aug-11
Aug-12
Aug-13
Aug-14
TPHg
Benzene
MTBE
GWE
Expon. (MTBE)

Attachment A

Delta Consultants, Inc. 2008 Site Conceptual Model and 2011 Additional Assessment Report

ConocoPhillips
76 Broadway
Sacramento, California 95818

October 15, 2008

Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay parkway, Suite250
Alameda, California 94502-577

Re: ***Site Conceptual Model (SCM)***
76 Service Station # 3538 RO # 251
411 W MaCarthur Blvd.
Oakland, CA

Dear Ms. Jakub:

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

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

Terry L. Grayson
Site Manager
Risk Management & Remediation

SITE CONCEPTUAL MODEL

FORMER 76 SERVICE STATION NO. 3538

411 W. MAC ARTHUR BOULEVARD

OAKLAND, CALIFORNIA

Prepared for:

ConocoPhillips Company
76 Broadway
Sacramento, CA 95818

Prepared by:

Delta Consultants, Inc.
312 Piercy Road
San Jose, California 95138

November 21, 2008

CERTIFICATION

The following report was prepared under the supervision and direction of the undersigned California Professional Geologist.

DELTA CONSULTANTS, INC.

Debbie Bryan
California Professional Geologist #7745

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LIST OF APPENDICES

1.0 INTRODUCTION

Delta Consultants, Inc. (Delta), on behalf of ConocoPhillips (COP) has prepared this Site Conceptual Model (SCM) for the 76 Service Station No. 3538 site, located at 411 MacArthur Boulevard in Oakland, California (site) (**Figures 1,2**). The SCM provides a working hypothesis regarding the current and future distribution of total petroleum hydrocarbons as gasoline (TPH-G) and methyl tert-butyl ether (MTBE) detected in soil and groundwater beneath the site.

The key elements of the SCM are:

- Site history and description
- Regional hydrogeologic setting
- Nature and extent of the petroleum hydrocarbon source(s)
- Contaminant fate and transport characteristics
- Potential exposure pathways
- Potential receptors

2.0 SITE LOCATION AND DESCRIPTION

The following sections provide a description of the site and surrounding area.

2.1 Site Location

The site is located in the southwest corner of the intersection of MacArthur Blvd., and Webster Street in Oakland, California. **(Figures 1 and 2)**

2.2 Site Description

The subject site (Alameda County Assessor's Parcel # 12-945-46-1) is a former Tosco (76) service station. The site is currently a used car sales lot and is entirely fenced. All petroleum storage and dispensing equipment were removed in September of 1998, during station demolition activities. Six groundwater-monitoring wells are present at and in the site vicinity. The site elevation is approximately 70 feet above mean sea level (MSL).

2.3 Site Owner

The site property was formerly a service station since 1983 when records show the station facility was purchased by the Union Oil Company of California. In 1997 the station was purchased by the Tosco Corporation. The site was sold in 1999 to Arthur Yu and Kevin Ma, 411 W. MacArthur Blvd, Oakland.

3.0 SITE SETTING

The following sections provide a summary of the regional geologic and hydrogeologic setting.

3.1 Regional Geologic Setting

The site is located approximately 2 miles from the San Francisco Bay (**Figure 3**). Gettler-Ryan Inc., in their report dated December 18, 2000 for a nearby site, provided the following description of the regional geologic setting;

> As mapped by E.J. Helley and others (1979), soil in the site vicinity consists of late Pleistocene alluvium consisting of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel. Based on the site topography, the regional groundwater flow in the vicinity of the site is inferred to be toward the southwest.

3.2 Regional Hydrogeologic Setting

The site is located at the eastern edge of the East Bay Plain Groundwater Subbasin (DWR Bulletin 118). The East Bay Plain subbasin aquifer system consists of unconsolidated sediments of Quaternary age. Numerous creeks cross the subbasin capturing runoff from foothills east of the Hayward fault. In the site area, streams discharge to San Francisco Bay. The total depth of domestic wells reportedly ranges from 32 to 525 feet with an average of 206 feet. Total depth of municipal and irrigation wells range from 29 to 630 feet with an average of 191 feet (DWR Bulletin 118). Groundwater flow is typically to the southwest toward San Francisco Bay. Water agencies in the area include East Bay Municipal Utility District (East Bay MUD) and Alameda County Flood Control and Water Conservation District. No municipal wells have been identified within a one-half mile radius of the site.

4.0 NATURE AND EXTENT OF SOURCE

The following sections describe the source(s) of the petroleum hydrocarbons that have been detected in soil and groundwater beneath and adjacent to the site.

4.1 Former USTs

A Union Oil Company of California drawing dated 11-21-89 shows the site's gasoline USTs to be located in the eastern corner of the site, and one waste oil UST located near the southeast corner of the station building (**Appendix A**).. No USTs have existed on the site since 1998.

4.2 UST Removal (1989)

In July of 1989, two gasoline USTs, one 10,000-gallon and one 12,000-gallon, were removed, along with a 550-gallon waste oil UST and all associated piping. The fuel USTs were removed and replaced with two 12,000-gallon USTs. The waste oil UST was not replaced.

No cracks or holes were found in the gasoline USTs, however, four small holes were found in 550-gallon waste oil UST. Soil samples from the fuel UST pit were collected by Kaprealian Engineering Inc., in July 1989. Water was observed in the pit at a depth of 10.5 feet, limiting the depth of soil samples. Samples taken from the sidewalls were collected at a depth of 10 feet below ground surface (bgs). Soil samples were collected at a depth of 8.5 feet bgs in the waste oil UST pit. Samples were also taken from beneath piping trenches to depths of 5 to 10 feet bgs. Soils samples were tested for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, xylenes and ethylbenzene (BTEX compounds). Samples from the waste oil pit were also tested for total petroleum hydrocarbons as diesel (TPH-D), total oil and grease (TOG).

TPH-G was detected in soil samples taken from the sidewalls of the fuel tank pit at a maximum concentration of 3,100 parts per million (ppm). TOG was detected in the soil sample from the waste oil pit showed a TOG at 36 ppm. All other parameters were found to be in low concentrations or not detected at the laboratory reporting limit (**Appendix B**). Areas of impacted soil were subsequently removed by over-excavation. No confirmation soil data is available.

Four monitoring wells (MW-1 through MW-4, **Figure 2**) were installed following the UST removals. Soil and groundwater analytical data from these wells is contained in **Appendix B** and **Appendix C.** Initial groundwater samples were collected on September 15, 1989. TPH-G was detected only in wells MW-2 and MW-3 at 290 micrograms per liter (ug/l) and 32 ug/l.

4.3 UST REMOVAL (1998)

In 1998, both 12,000-gallon fuel USTs and associated product piping were removed during site demolition. No holes or cracks were found in the two USTs. Confirmation soil sample analytical data is contained in **Appendix B**. Soil samples contained maximum concentrations of TPH-G (360 ug/l)and benzene (1.5ug/l). Methyl tert-butyl ether (MTBE) was not detected (Gettler Ryan, 2002).

4.4 Residual Soils as On-Going Source

The most current on-site soil analytical data is from soil borings for SB-3, SB-4, and SB-5 installed in March 2006 (**Appendix D**). With the exception of soil samples from boring SB-3, TPH-G and BTEX compounds were at or near the detection limit. In SB-3, located adjacent to the fuel USTs, TPH-G, benzene, toluene, ethylbenzene, xylenes and MTBE were found to be 6,100 mg/kg, <9.7 mg/kg, 53 mg/kg, 86 mg/kg, 420 mg/kg and <9.7 mg/kg, respectively. Borings SB-1 and SB-2 were located off-site. Boring logs for SB-1 through SB-5 are contained in **Appendix E.**

Historic groundwater data in **Appendix C,** shows that water samples contained maximum concentrations of TPH-G, benzene, xylenes, ethylbenzene, and MTBE in well MW-3 at 21,000 ug/l (MW-3), 1,300 ug/l (MW-3), 4,300 ug/l (MW-3), 1,200 ug/l (MW-3), 4,800 ug/l respectively, with the latest maxima occurring in 1995. Currently, TPH-G, xylenes and ethylbenzene are not detected in either wells MW-3 or MW-2. Current maximum concentrations of MTBE and benzene are 19 ug/l (MW-3) and 1.8 ug/l (MW-2), respectively.

4.5 Summary

A release of gasoline and waste oil from the site USTs occurred sometime before 1989, when soil samples from the UST excavation pit showed a maximum TPH-G concentration of 3,100 ppm and maximum TOG concentration of 36 ppm. No potential sources of petroleum hydrocarbons remain on site. The only area of potential leaching of contaminants to groundwater is in the area of boring SB-3.

5.0 FATE AND TRANSPORT CHARACTERISTICS

The following sections describe potential contaminant migration pathways for petroleum hydrocarbons and MTBE. Plume migration and contaminant concentration trends are discussed.

5.1 Underground Utility Conduits

The exact location and depth information of utility trenches both on-site and in the site vicinity has not been determined. Based on the documents in Delta files, a survey of nearby utilities for the purpose of a preferential pathway evaluation has not been performed. However, depth to groundwater (average of 19 feet bgs) is below the depth of utility trenches, and no survey is now deemed necessary.

5.2 Soil Migration Pathways

Soils beneath the site area are generally fine-grained and do not provide pathways for rapid spread of contaminants. Soils encountered in the 1989 UST replacement excavation were described as primarily clay and clayey sand (KEI, October 1989) to a depth of 16 to 21 feet bgs. Logs for off-site wells MW-5 and MW-6, installed in November 1992, show primarily clay and clayey sand (TRC, April 2006) (**Appendix E**).

5.3 Hydrogeologic Pathways

Vertical migration of dissolved contaminants beneath the site is hindered by generally fine-grained soil types. Geologic cross-sections are provided as Figures 4 and 5. Groundwater was found seeping into the 1989 UST replacement excavation at a depth of approximately 10.5 feet bgs. Groundwater was first detected in the borings for the three site wells at depths ranging from 19 to 19.5 feet bgs (KEI, October 1989). Wells MW-1 through MW-4 are 29-30 feet deep and are screened from 3.5-5 to 29-30 feet bgs. On September 15, 1989 (first sampling event), static water levels in the wells were not measured. The first recorded depths (April 13, 1993) ranged from 12 (MW-6) to 18 feet bgs (MW-3). Seasonally, depth to groundwater in wells fluctuates approximately 2 to 5 feet. Depth to water in wells over the year typically ranges from approximately 15.5 to 18.5 feet below top of casing in wells MW-1 through MW-5, and from 12 to 18 feet in MW-6. .

The groundwater flow direction beneath the site has historically been primarily to the east, with a more recent strong southwest component. A rose diagram showing groundwater flow direction from 1990 until 2008 (a total of 38 monitoring events) is provided in **Appendix F**. The groundwater gradient at the site has historically been approximately 0.01 feet/foot (ft/ft). Historic groundwater contour maps, including the most recent (September 17, 2008), are also contained in **Appendix F**.

The groundwater flow rate beneath the site can be approximated based on the hydraulic conductivity of the soil, groundwater flow gradient and effective soil porosity. The linear groundwater flow rate or velocity (V) can be calculated from the formula:

$V = (K \times I)/N$

where K = soil coefficient of hydraulic conductivity
I = groundwater gradient
N = effective soil porosity

The predominant soil types beneath the site are clay and clayey sand. The average K for a clay/ clayey sand is estimated in the range of 1×10^{-2} to 1×10^{-3} feet per day (ft/day) and the porosity at 20% (Freeze and Cherry, 1979).

The site hydraulic conductivity has typically been approximately 0.02 ft/ft. Using the above estimated parameters, a groundwater velocity of less than one foot per year is calculated. The flow rate for dissolved petroleum hydrocarbons is typically significantly slower than the groundwater due to physical and chemical interactions with the soil matrix and biological processes.

5.4 Contaminant Migration Model

It appears that a release occurred at some undetermined time from the former site USTs removed in 1989. The former UST pit was partially filled with groundwater, to a level of 10.5 feet bgs. Petroleum hydrocarbons moved very slowly downward by gravity through clay/silty soil until encountering saturated soils at a depth of approximately 19 feet bg. Once contaminants entered the groundwater, they were dissolved and began migrating with the shallow groundwater flow toward the southwest and east.

As the contaminants moved downward, some adhered to the fine-grained soil. The soil impact was limited to the fuel UST source area (SB-3). In 2006, maximum concentrations of MTBE, TPH-G and benzene in soil found in SB-3 was <9.7 mg/kg, 6,100 mg/kg, and <9.7 mg/kg, respectively. These concentrations were taken at a depth of 16 feet. At 14 feet, SB-3 was found to contain 0.11 mg/kg benzene, and 0.64 mg/kg MTBE.

Downgradient extent of analytes from former waste oil UST cannot be established. MW-1 has not shown detections of TPH-G, benzene or MTBE, but has shown a maximum concentration of PCE of 2.7 ug/l on September 15, 1989. Currently, PCE is not detected in MW-1. Trichlorotrifluoroethane has been detected at 4.3 ug/l on September 9, 2007. Installation of additional wells and advancement of borings downgradient from the former waste oil UST is limited by residences in the immediate downgradient direction **(Figure 2).**

5.5 Concentration Trends

TPH-G has only been detected in wells MW-2 and MW-3. TPH-G concentration graphs are shown on **Figures 6** and **7**. The graphs illustrate the declining trend in TPH-G concentrations from a maximum of 21,000 ug/l in 1992 to 56 ug/l in September 2008 for well MW-3, and from 3,900 ug/l in 1990 to less than 50 ug/l in September of 2008 for MW-2.

MTBE has been detected in wells MW-2, MW-3 and to a lesser extent, MW-4. MTBE concentrations are shown on the same graphs for wells MW-2 and MW-3 . The graphs illustrate the high concentration stance of MTBE of 4,800 ug/l in well MW-3 in 1995, and 260 ug/l in well MW-2 1997. Currently, concentrations in wells MW-2 and MW-3 are 3.1 ug/l and 43 ug/l, respectively.

BTEX concentrations in wells MW-2 and MW-3 historically have been high , and tend to vary with TPH-G trends. Currently the only benzene detection is in well MW-2 at 1.6 ug/l.

6.0 SITE REMEDIATION

In October 1989, approximately 4 feet of the side wall soil was excavated from the fuel tank pit.

In October 1998, approximately 380 cubic yards of soil was disposed of off-site during site demolition activities.

7.0 POTENTIAL SENSITIVE RECEPTORS

The following sections evaluate the various potential impacts to sensitive receptors from petroleum hydrocarbons and MTBE detected in soil and groundwater.

7.1 Environmental Screening Levels

The California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) has published Environmental Screening Levels (ESLs) for chemicals commonly found in soil and groundwater at sites where releases of chemicals have occurred. The RWQCB notes "The ESLs are considered to be conservative." The tables below compare site specific soil and groundwater concentrations for TPH-G, benzene, and MTBE with ESLs for various potential sensitive receptors. The ESL tables for various sensitive receptors as found in the November 2007 publication are referenced.

	ESL Table	TPH-G (mg/kg)	Benzene (mg/kg)	MTBE (mg/kg)
Maximum Concentration Detected in Soil Sample		**6,100 (SB-3 at 16')**	**<9.7** (SB-3 at 16')	**<9.7** (SB-3 at 16')
Groundwater Protection (shallow soils <3 meters)*	A-1	83	0.044	0.023
Groundwater Protection (deep soils >3 meters)*	C-1	83	0.044	0.023
Direct Exposure - Residential	K-1	110	0.12	30
Direct Exposure – Commercial	K-2	450	0.27	65
Direct Exposure – Construction/Trench Workers	K-3	42,000	12	2,800

* Ingestion. Groundwater considered a current or potential source of drinking water.

	ESL Table	TPH-G (ug/L)	Benzene (ug/L)	MTBE (ug/L)
Concentration Groundwater 3/27/08		**<50**	**1.8**	**1.3**
Potential Vapor Intrusion - Residential	E-1	NA	540	24,000
Potential Vapor Intrusion - Commercial	E-1	NA	1,800	8,000,000
California Maximum Contaminant Level (MCL)	F-3	NA	1.0	13

The maximum soil concentration for TPH-G, benzene and MTBE in the area of boring SB-3, exceeds the ESL for leaching to groundwater considered as a current or potential source of drinking water. The site specific conditions are considered to mitigate these exceedances. The site is underlain by clay and clayey sand that impede contaminant leaching. MTBE is detected below the MCL of 13 ug/l with a decreasing concentration trend indicating a lack of significant leaching.

The maximum groundwater concentration for benzene of 1.8 ug/l exceeds the ESL of 1.0 ug/l. PCE and TCE concentrations (<0.5ug/l and 4.3 ug/l, respectively) collected in September 27, 2007 did not exceed the MCL of 5.0 ug/l.

7.2 Indoor Air Inhalation - Soil

No ESLs have been established for protection of indoor air from impacted soil. The RWQCB recommends direct measurement of soil gas concentrations in soil. The upward migration of any petroleum hydrocarbons remaining in soil is limited due to the silty nature of site soils and the generally low concentrations and limited area of soil impacts. The threat of soil vapors impacting indoor air quality is considered minimal.

7.3 Impact to Drinking Water Supply Wells

A sensitive receptor survey has been conducted for the site. According to the California Department of Water Resources (DWR) records, no water supply wells have been located within 2,000 feet of the site. The nearest well identified was a private water well located approximately 2,500 feet east-southeast of the site.

8.0 SUMMARY

Delta has prepared an SCM that describes the occurrence, migration, and fate of petroleum hydrocarbons and MTBE previously identified beneath the. The following are the key observations and conclusions;

- Site soils are generally fine-grained consisting of clay and clayey sand. The groundwater flow rate is estimated at less than one foot per year. The primary direction of groundwater flow is to east and to the southwest.

- Groundwater typically occurs at a depth of approximately 12 to 18 feet below top of casing. Depth to groundwater in monitoring wells fluctuates 2 to 5 feet annually

- Facility plans from 1989 indicate that the site gasoline USTs were located in the eastern portion of the property, while the waste oil UST was located just southeast of the service building.

- A release of gasoline and waste oil from the site USTs appears to have occurred prior to July 1989. Soil samples from the UST pits showed a maximum concentration of TPH-G of 3,100 ppm, and 36 ppm of TOG. Petroleum hydrocarbons moved downward from the base of the USTs through 6 to 7 feet of vadose zone. The petroleum hydrocarbons dissolved into the groundwater at a depth of approximately 19 feet bgs and migrated to the southwest and east with the natural groundwater flow gradient.

- TPH-G, was detected in the first groundwater samples collected from wells MW-2 and MW-3 in September 15, 1989 at 290 ug/l and 32ug/l, respectively. Well MW-2 is located approximately 15 feet downgradient of the USTs, and well MW-3 is located approximately 10 feet up gradient from the USTs. TPH-G has only been detected in wells MW-2 and MW-3. TPH-G and BTEX compounds were not detected in the groundwater from boring SB-2, located east (downgradient) of the site (Figure 2).

- TPH-G and MTBE concentrations in groundwater samples from wells MW-2 and MW-3 continue to decline. MTBE was detected in the March 27, 2008 sample from wells MW-2 and MW-3 at 1.3 ug/l and 19 ug/l, respectively.

- A comparison of TPH-G, benzene, and MTBE concentrations in site soil and groundwater with RWQCB ESLs indicates that they do not pose a significant risk to public health or the environment.

9.0 RECOMMENDATIONS

Additional groundwater samples are needed to determine the southwestern extent of contamination from the former waste oil UST, however, access to ideal drilling locations is limited by residences south of the site (**Figure 2**). One possibility would be to gain access to a parcel located directly south of MW-2, which appears to be an empty (parking) lot. Locations on-site are limited due to the recent construction of additional structures over the location of the former waste oil UST. Future boring locations should not be more than 30 feet from the site due to the low groundwater velocity.

Delta recommends collection of a groundwater sample south of the site (**Figure 2**). MTBE and TBA were detected in the "grab" groundwater sample from boring SB-1 located south the site. Direct-push drill equipment will be used to collect a groundwater sample at a depth of approximately 19 feet bgs. The sample will be analyzed for TPH-G, BTEX compounds, MTBE, and TBA.

10.0 LIMITATIONS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

11.0 REFERENCES

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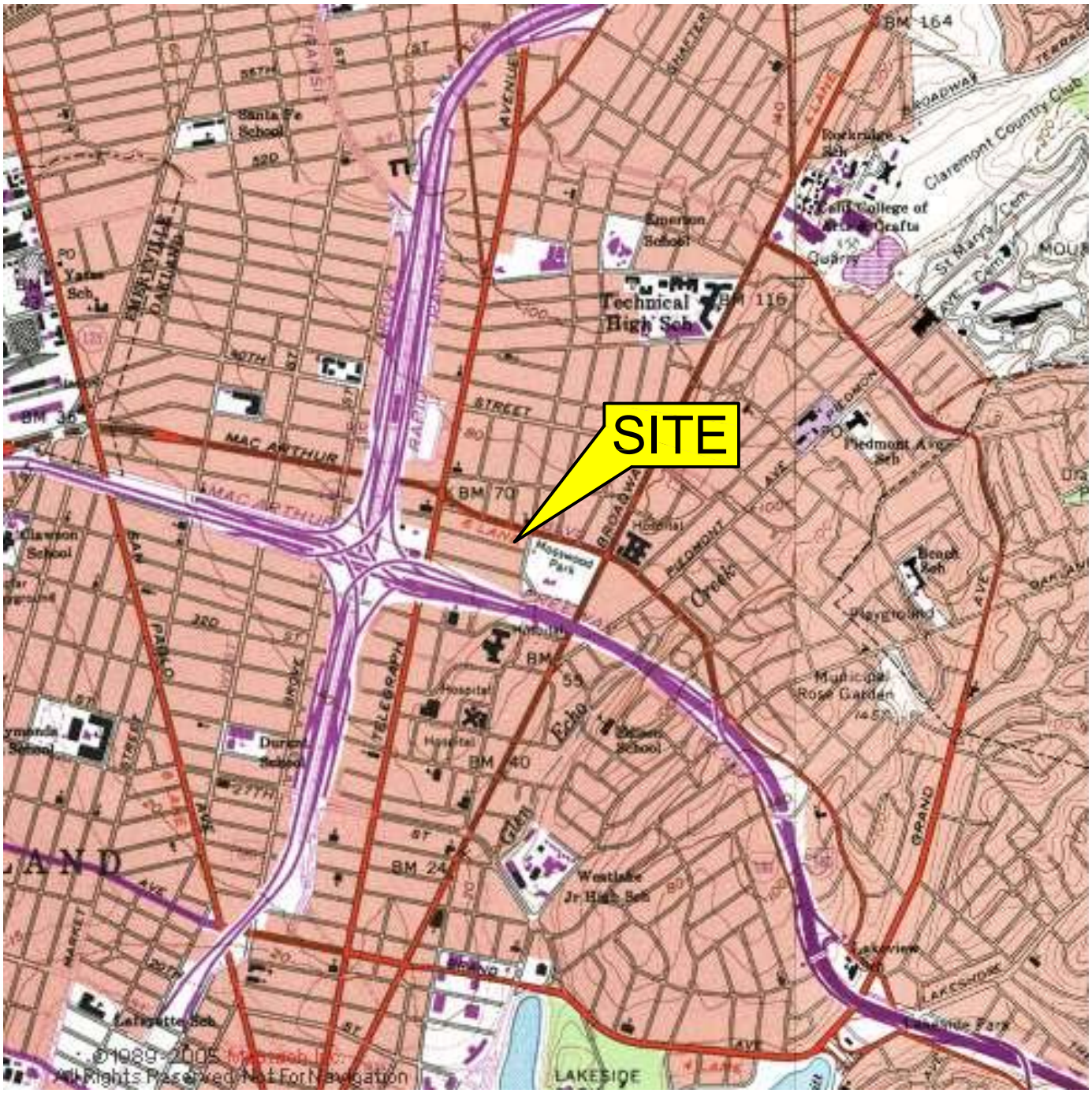
Kaprealian Engineering, Inc., *Preliminary Ground Water Investigation, Unocal Service Station 3538, 411 MacArthur Blvd,, Oakland, California*, October, 23, 1989.

TRC, *Quarterly Monitoring Report, October 2007 through March 2008, 76 Service Station 3538, 411 MacArthur Blvd,, Oakland, California*, April 15, 2008.

TRC, *Soil and Groundwater Investigation Report, 76 Station 3538, 411 MacArthur Blvd, Oakland, California*, April 28, 2006.

FIGURES



North

0 2400 FT 4800 FT

SCALE: 1 : 24,000

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE (1993)

FIGURE 1

SITE LOCATION MAP

FORMER 76 STATION NO. 3538
411 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C103538	DRAWN BY JH 11/14/08
FILE NO. 3538-Site Locator	PREPARED BY NP
REVISION NO.	REVIEWED BY DB

DELTA®

EVERGREEN
BAPTIST
CHURCH

B

BP
STATION

DISPENSER ISLANDS
& CANOPIES

MW-6

WEST MACARTHUR BOULEVARD

MW-5

A

MW-4

MW-3

A'

SB-4

SB-3

RESIDENTIAL
419/421
WEST
MACARTHUR

FORMER
DISPENSER
ISLANDS

FORMER UST

FORMER UST

STATION
BUILDING

MW-1

CANOPY

SHED

MW-2

SB-5

SB-2

PLAYGROUND

FORMER
WASTE OIL UST

SHED

LOT

WEBSTER STREET

SB-1

B

RESIDENTIAL
430
37TH
STREET

RESIDENTIAL
428
37TH
STREET

RESIDENTIAL
424
37TH
STREET

RESIDENTIAL
420
37TH
STREET

RESIDENTIAL
416
37TH
STREET

RESIDENTIAL
412
37TH
STREET

RESIDENTIAL
402
37TH
STREET

LEGEND

Approximate property line

Groundwater monitoring well

Soil Boring by TRC, March 2006

N

0 30 FT

SCALE

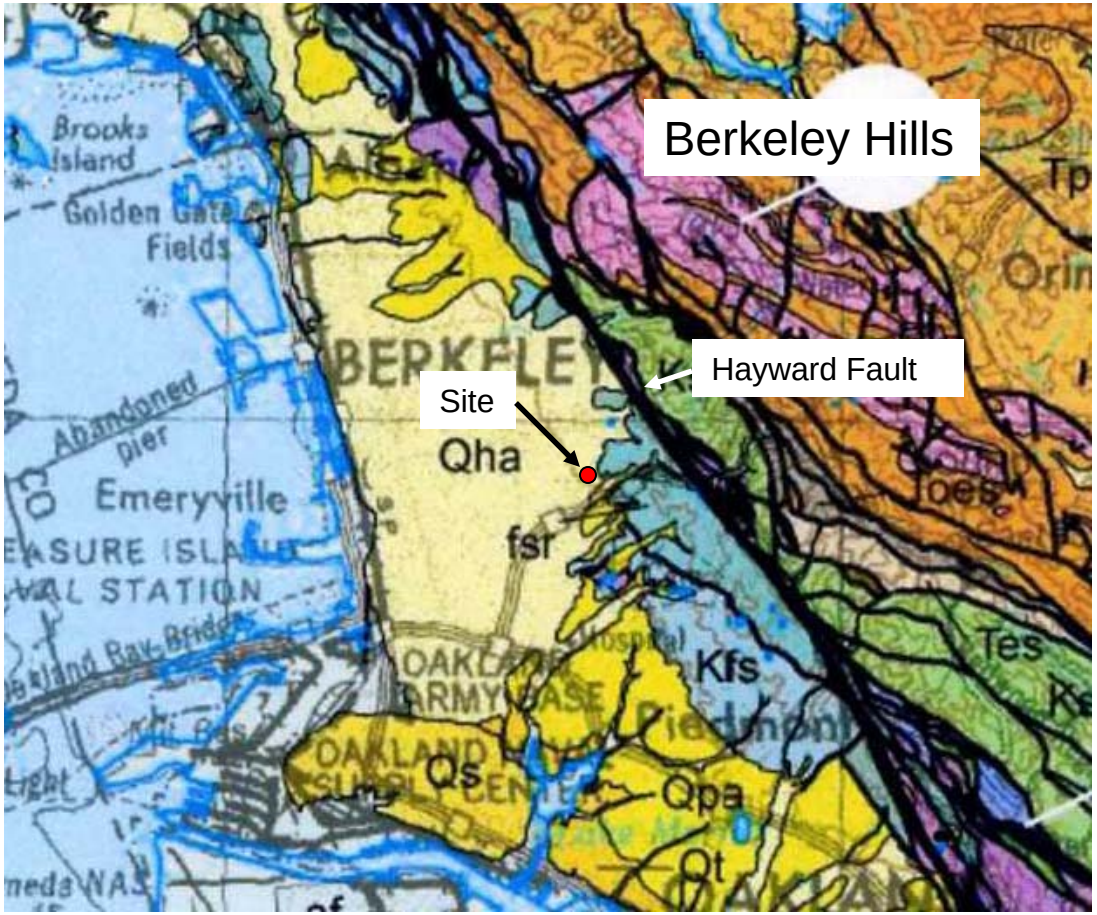
SOURCE: Site plan by Gettler-Ryan, August 2000.

FIGURE 2
SITE PLAN

FORMER 76 STATION 3538
411 WEST MACARTUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
C103538	NP	JH	DELTA®
DATE	REVIEWED BY	FILE NAME	
10/22/08	TP	76-3538	

Figure 3 – Regional Geologic Map



Qha = Alluvium (Holocene)

Qs = Beach and dune sand

Qpa = Alluvium (Pliestocene)

Kfs/fsr = Franciscan Complex (Cretaceous)

Geologic Map of the San Francisco Bay Area; Geology and Geologic Hazards; U.S.Geological Survey

NORTHEAST

B

SOUTHWEST

B'

MW-4 SB-4 MW-3 SB-3 SB-2 MW-5

0 5 10 15 20 25 30

31,ND,NA
17,ND,NA
20,ND,NA
2.1,ND,NA
9/07 Q
ND<50/ND<0.3/ND<1

<0.93,<0.0047,<0.0047
<0.92,<0.0046,<0.0046
ND<50/ND<0.50/3.4

1.3,ND,NA
1.3,0.29,NA
3.3,ND,NA
3/08 Q
ND<50/ND<0.3/19
ND,ND,NA

1.3,0.64,0.11
6400,<9.7,<9.7
13000/340/510

ND<0.97,ND<0.0049,ND<0.0049
ND<0.93,ND<0.0047,ND<0.0047
ND<50/ND<0.50/ND<0.50

ND,ND,NA
ND,ND,NA
ND,ND,NA
ND,ND,NA
9/07 Q
ND<50/ND<0.3/ND<1

LEGEND

MW-7 — MONITORING WELL/BORING NAME

WELL CASING/EXPLORATORY BORING

SOIL SAMPLE LOCATION

WELL SCREEN

6400,<9.7,<9.7 — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPHg, BENZENE, MTBE (mg/kg)

120/130/11 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPHg, BENZENE, MTBE (ug/L)

(3/08 Q) — MONITORING WELL QUARTERLY GROUNDWATER SAMPLE DATE

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

DEPTH TO STATIC GROUNDWATER

LOW PERMEABILITY
SILT (ML), CLAY (CL)

MEDIUM PERMEABILITY
CLAYEY SAND (SC), CLAYEY GRAVEL (GC)

HIGH PERMEABILITY WITH
WELL GRADED GRAVEL (SP, SW)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) ND<50=NOT DETECTED AT LABORATORY DETECTION LIMIT
NA=NOT ANALYZED
TPHg=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE=METHYL TERT BUTYL ETHER
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE.

0 40
SCALE IN FEET

FIGURE 4
GEOLOGIC CROSS SECTION A–A'

FORMER 76 SERVICE STATION #3538
411 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103538	NP	JH
DATE	REVIEWED BY	FILE NAME
10/22/08	DD	3538-CrosA

DELTA®

NORTHEAST

B

SOUTHWEST

B'

MW-6

SB-3

MW-2

SB-1

0

5

10

15

20

25

30

31

NA,ND,NA

NA,ND,NA

NA,ND,NA

9/07 Q
ND<50/ND<0.3/ND<1

NA,ND,NA

1.4,ND,NA

ND,ND,NA

1.3,0.64,0.11

6400,<9.7,<9.7

1.8,ND,NA

13,1.5,NA

(3/08 Q)
ND<50/1.8/1.3

13000/340/510

<0.97,<0.0049,<0.0049

2.8,<0.0048,<0.0048

120/130/11

?

?

?

0

40

SCALE IN FEET

5

LEGEND

MW-7

MONITORING WELL/BORING NAME

WELL CASING/EXPLORATORY BORING

SOIL SAMPLE LOCATION

WELL SCREEN

6400,<9.7,<9.7 — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPHg, BENZENE, MTBE (mg/kg)

120/130/11 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPHg, BENZENE, MTBE (ug/L)

(3/08 Q) — MONITORING WELL QUARTERLY GROUNDWATER SAMPLE DATE

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

DEPTH TO STATIC GROUNDWATER

LOW PERMEABILITY
SILT (ML), CLAY (CL)

MEDIUM PERMEABILITY
CLAYEY SAND (SC), CLAYEY GRAVEL (GC)

HIGH PERMEABILITY WITH
WELL GRADED GRAVEL (SP, SW)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) ND<50=NOT DETECTED AT LABORATORY DETECTION LIMIT
NA=NOT ANALYZED
TPHg=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE=METHYL TERT BUTYL ETHER
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS WERE COLLECTED ON THE DRILLING DATE.

FIGURE 5
GEOLOGIC CROSS SECTION B–B'

FORMER 76 SERVICE STATION #3538
411 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103538	NP	JH
DATE	REVIEWED BY	FILE NAME
10/21/08	DD	3538-CrosB

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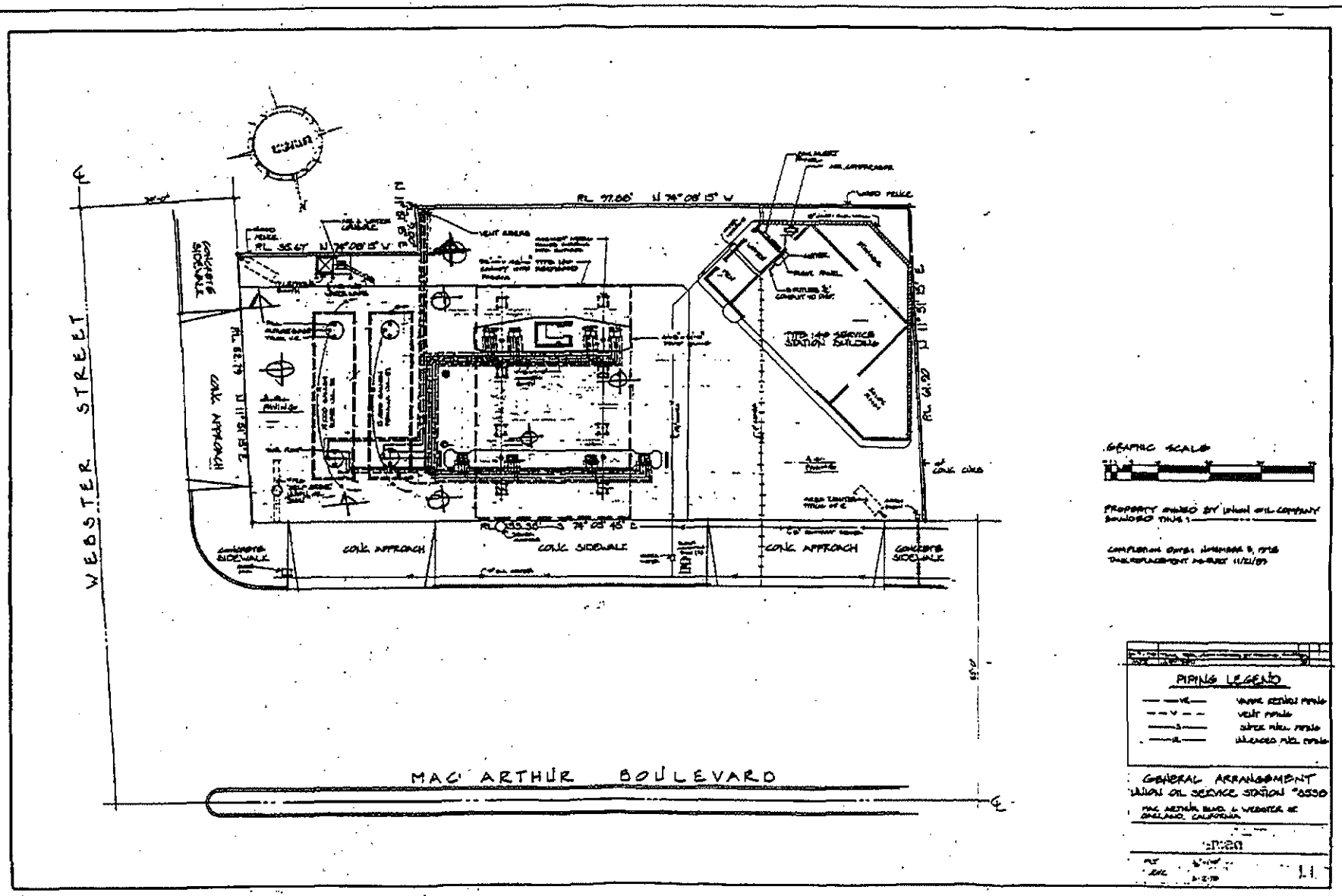
APPENDIX A

Historic Facility Plan


WEBSTER STREET
MAC ARTHUR BOULEVARD
CONC. APPROACH
CONC. SIDEWALK
CONC. APPROACH
CONCRETE SIDEWALK
GRAPHIC SCALE
PIPING LEGEND
GENERAL ARRANGEMENT
UNION OIL SERVICE STATION "3330"
MAC ARTHUR BLVD. & WEBSTER ST.
OAKLAND, CALIFORNIA

3536

APPENDIX B

Historic Soil Analytical Data (1989-1992)

KEI-P89-0703.R6
January 18, 1993

TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
			(Collected on July 12 & 17, 1989)				
SW1	10.0	--	3,100	12	300	730	110
SW1(4)	10.0	--	ND	ND	ND	ND	ND
SW2	10.0	--	1.1	0.10	ND	0.18	ND
SW3	10.0	--	5.7	0.26	ND	0.45	0.23
SW4	10.0	--	2.5	ND	ND	0.24	ND
SW4(2)	10.0	--	11	0.61	0.51	1.3	0.44
P1	6.5	--	ND	ND	ND	ND	ND
P2	6.5	--	ND	ND	ND	ND	ND
P3	5.5	--	ND	ND	ND	ND	ND
P4	10.0	--	170	0.71	12	47	6.8
WO1*	8.5	ND	ND	ND	ND	ND	ND
			(Collected on September 6 & 7, 1989)				
MW1(5)**	5.0	ND	3.4	ND	ND	ND	ND
MW1(10)**	10.0	ND	5.0	ND	ND	ND	ND
MW1(15)**	15.0	ND	2.2	ND	ND	ND	ND
MW1(19)**	19.0	ND	ND	ND	ND	ND	ND
MW2(5)	5.0	--	1.4	ND	ND	ND	ND
MW2(10)	10.0	--	ND	ND	ND	ND	ND
MW2(15)	15.0	--	1.8	ND	ND	ND	ND
MW2(19)	19.0	--	13	1.5	2.1	1.8	0.34
MW3(5)	5.0	--	1.3	ND	ND	ND	ND
MW3(10)	10.0	--	1.8	0.29	ND	ND	ND
MW3(15)	15.0	--	3.3	ND	ND	ND	ND
MW3(18.5)	18.5	--	ND	ND	ND	ND	ND
MW4(5)	5.0	--	3.1	ND	ND	ND	ND
MW4(10)	10.0	--	17	ND	ND	0.10	ND
MW4(15)	15.0	--	20	ND	ND	0.27	ND
MW4(18.5)	18.5	--	2.1	ND	ND	ND	ND

KEI-P89-0703.R6
January 18, 1993

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
			(Collected on November 18, 1992)				
MW5(5)	5.0	--	ND	ND	ND	ND	ND
MW5(10)	10.0	--	ND	ND	ND	ND	ND
MW5(15)	15.0	--	ND	ND	ND	ND	ND
MW5(21)	21.0	--	ND	ND	ND	ND	ND
MW6(5)	5.0	--	ND	ND	ND	ND	ND
MW6(10)	10.0	--	ND	ND	ND	ND	ND
MW6(15)	15.0	--	ND	ND	ND	ND	ND
MW6(19.5)	19.5	--	ND	ND	ND	ND	ND

* TOG was 36 ppm, and EPA method 8010 and 8270 constituents were non-detectable.

** TOG was <50 ppm for these samples. EPA method 8010 compounds were non-detectable for these samples.

ND = Non-detectable.

-- Indicates analysis was not performed.

Results in parts per million (ppm), unless otherwise indicated.

APPENDIX C

Historic Groundwater Monitoring Data

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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	0.00	54.73	--	--	--	--	--	--	--	--	Sampled Q3 only
7/14/1993	72.43	18.49	0.00	53.94	-0.79	ND	2.2	2.1	1.1	6.2	--	--	
10/14/1993	72.10	18.32	0.00	53.78	-0.16	--	--	--	--	--	--	--	Sampled Q3 only
1/12/1994	72.10	18.18	0.00	53.92	0.14	--	--	--	--	--	--	--	Sampled Q3 only
4/11/1994	72.10	17.80	0.00	54.30	0.38	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	72.10	18.28	0.00	53.82	-0.48	ND	ND	ND	ND	ND	--	--	
10/5/1994	72.10	18.55	0.00	53.55	-0.27	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	72.10	17.90	0.00	54.20	0.65	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	72.10	17.22	0.00	54.88	0.68	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	72.10	18.03	0.00	54.07	-0.81	ND	ND	ND	ND	ND	--	--	
10/26/1995	72.10	18.67	0.00	53.43	-0.64	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	72.10	17.20	0.00	54.90	1.47	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	72.10	17.40	0.00	54.70	-0.20	--	--	--	--	--	--	--	Sampled Q3 only

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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 continued													
7/11/1996	72.10	18.03	0.00	54.07	-0.63	ND	ND	ND	ND	ND	ND	--	
1/17/1997	72.10	16.54	0.00	55.56	1.49	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	72.10	18.16	0.00	53.94	-1.62	ND	ND	ND	ND	ND	ND	--	
1/14/1998	72.10	16.05	0.00	56.05	2.11	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	72.10	16.46	0.00	55.64	-0.41	ND	ND	ND	ND	ND	ND	--	
1/13/1999	72.10	17.37	0.00	54.73	-0.91	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	72.12	17.00	0.00	55.12	0.39	ND	ND	ND	ND	ND	ND	--	
1/21/2000	72.12	17.04	0.00	55.08	-0.04	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	72.12	18.10	0.00	54.02	-1.06	ND	ND	ND	ND	ND	ND	--	
1/4/2001	72.12	17.95	0.00	54.17	0.15	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	72.12	18.03	0.00	54.09	-0.08	ND	ND	ND	ND	ND	ND	--	
1/28/2002	72.12	17.31	0.00	54.81	0.72	--	--	--	--	--	--	--	SAMPLED ANNUALLY
7/12/2002	72.12	18.15	0.00	53.97	-0.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	
1/14/2003	72.12	17.66	0.00	54.46	0.49	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	72.12	17.86	0.00	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	0.00	54.69	0.43	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	72.12	18.12	0.00	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	0.00	55.97	1.97	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	72.12	18.04	0.00	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	0.00	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	0.00	54.90	0.68	--	--	--	--	--	--	--	Sampled Q3 only

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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 continued													
9/27/2007	72.12	18.49	0.00	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	0.00	54.55	0.92	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	72.12	18.20	0.00	53.92	-0.63	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
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	0.00	53.77	--	410	42	7.7	6.4	28	200	--	
7/14/1993	71.63	18.38	0.00	53.25	-0.52	110	6.5	ND	ND	1.1	250	--	
10/14/1993	71.38	18.20	0.00	53.18	-0.07	230	5.3	ND	ND	2.1	--	--	
1/12/1994	71.38	18.08	0.00	53.30	0.12	300	7.8	3.8	1.8	10	--	--	
4/9/1994	71.38	17.97	0.00	53.41	0.11	120	10	0.88	1.1	4.9	--	--	

TRC

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-2 continued													
4/11/1994	71.38	17.88	0.00	53.50	0.09	--	--	--	--	--	--	--	
7/7/1994	71.38	17.81	0.00	53.57	0.07	110	4.4	ND	ND	ND	--	--	
10/5/1994	71.38	18.33	0.00	53.05	-0.52	720	20	ND	ND	3.1	--	--	
1/9/1995	71.38	17.40	0.00	53.98	0.93	ND	ND	ND	ND	ND	--	--	
4/17/1995	71.38	17.50	0.00	53.88	-0.10	93	5.6	0.62	1.7	5.5	--	--	
7/19/1995	71.38	18.01	0.00	53.37	-0.51	77	32	0.58	1.7	4.1	--	--	
10/26/1995	71.38	18.21	0.00	53.17	-0.20	54	13	ND	ND	0.72	220	--	
1/16/1996	71.38	16.58	0.00	54.80	1.63	120	23	ND	ND	0.99	--	--	
4/15/1996	71.38	17.61	0.00	53.77	-1.03	340	21	ND	2.2	3.7	45	--	
7/11/1996	71.38	17.98	0.00	53.40	-0.37	540	34	ND	4.3	12	150	--	
1/17/1997	71.38	17.08	0.00	54.30	0.90	320	63	2.4	9.4	26	260	--	
7/21/1997	71.38	18.06	0.00	53.32	-0.98	160	13	ND	1.3	1.6	180	--	
1/14/1998	71.38	16.52	0.00	54.86	1.54	66	6.3	ND	ND	0.98	100	--	
7/6/1998	71.38	16.87	0.00	54.51	-0.35	ND	2.3	ND	ND	ND	11	--	
1/13/1999	71.38	17.88	0.00	53.50	-1.01	53	24	ND	0.52	0.98	120	--	
8/31/1999	71.34	18.45	0.00	52.89	-0.61	86	14	ND	0.63	ND	21	--	
1/21/2000	71.34	17.73	0.00	53.61	0.72	ND	1.94	ND	ND	ND	10.1	--	
7/10/2000	71.34	18.14	0.00	53.20	-0.41	ND	ND	ND	ND	ND	46.6	--	
1/4/2001	71.34	18.02	0.00	53.32	0.12	ND	0.925	ND	ND	ND	ND	--	
7/16/2001	71.34	18.02	0.00	53.32	0.00	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.34	17.57	0.00	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	0.00	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	0.00	53.90	0.61	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	--	

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-2 continued													
7/10/2003	71.34	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
2/4/2004	71.34	17.22	0.00	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	0.00	54.71	--	99	26	ND<0.50	3.5	2.8	ND<5.0	--	
9/30/2005	71.34	17.94	0.00	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	0.00	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	0.00	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	0.00	53.89	0.46	110	6.5	ND<0.30	0.70	ND<0.60	1.7	--	
9/27/2007	71.34	18.23	0.00	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	0.00	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	0.00	53.28	-0.29	ND<50	1.6	ND<0.30	ND<0.30	ND<0.60	3.1	--	
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	--	--	

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Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-3 continued													
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	0.00	54.10	--	12000	290	38	760	2300	1400	--	
7/14/1993	72.06	18.54	0.00	53.52	-0.58	6300	190	ND	430	1000	860	--	
10/14/1993	71.86	18.45	0.00	53.41	-0.11	2500	52	ND	110	250	--	--	
1/12/1994	71.86	18.34	0.00	53.52	0.11	3800	78	ND	180	390	--	--	
4/9/1994	71.86	18.19	0.00	53.67	0.15	1800	22	ND	140	280	--	--	
4/11/1994	71.86	18.12	0.00	53.74	0.07	--	--	--	--	--	--	--	
7/7/1994	71.86	18.21	0.00	53.65	-0.09	110	4.5	ND	ND	ND	--	--	
10/5/1994	71.86	18.58	0.00	53.28	-0.37	ND	ND	ND	ND	ND	--	--	
1/9/1995	71.86	17.69	0.00	54.17	0.89	ND	0.68	ND	ND	ND	--	--	
4/17/1995	71.86	17.68	0.00	54.18	0.01	3700	80	10	270	510	--	--	
7/19/1995	71.86	18.20	0.00	53.66	-0.52	15000	330	27	990	2400	--	--	
10/26/1995	71.86	18.32	0.00	53.54	-0.12	14000	420	180	750	1600	4800	--	
1/16/1996	71.86	17.95	0.00	53.91	0.37	920	38	ND	30	57	--	--	
4/15/1996	71.86	17.78	0.00	54.08	0.17	9700	240	ND	570	860	3200	--	
7/11/1996	71.86	18.19	0.00	53.67	-0.41	13000	69	5.5	430	900	740	--	
1/17/1997	71.86	17.23	0.00	54.63	0.96	4400	25	ND	270	580	1600	--	
7/21/1997	71.86	18.29	0.00	53.57	-1.06	9000	36	ND	450	800	950	--	
1/14/1998	71.86	16.71	0.00	55.15	1.58	7100	40	ND	380	360	930	--	
7/6/1998	71.86	17.03	0.00	54.83	-0.32	6800	39	ND	320	360	370	--	
1/13/1999	71.86	18.00	0.00	53.86	-0.97	1800	9.4	ND	58	36	180	--	

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Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-3 continued													
8/31/1999	71.40	--	0.00	--	--	--	--	--	--	--	--	--	Well obstructed at 0.5 feet.
1/21/2000	71.40	17.58	0.00	53.82	--	ND	ND	ND	ND	ND	21.4	--	
7/10/2000	71.40	18.05	0.00	53.35	-0.47	ND	ND	ND	ND	ND	162	--	
8/25/2000	71.40	17.82	0.00	53.58	0.23	--	--	--	--	--	--	180	
1/4/2001	71.40	18.16	0.00	53.24	-0.34	ND	ND	ND	ND	ND	193	--	
7/16/2001	71.40	17.98	0.00	53.42	0.18	ND	ND	ND	ND	ND	660	--	
1/28/2002	71.40	17.84	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	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	0.00	54.79	1.18	54	ND<0.30	0.41	ND<0.30	0.98	63	--	
9/26/2006	71.40	17.77	0.00	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	0.00	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	0.00	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	0.00	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	0.00	53.49	-0.24	56	ND<0.30	ND<0.30	ND<0.30	ND<0.60	43	--	
MW-4													
9/15/1989	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/23/1990	--	--	--	--	--	ND	ND	0.4	ND	ND	--	--	

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Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-4 continued													
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	0.00	54.31	--	--	--	--	--	--	--	--	Sampled Q3 only
7/14/1993	71.98	18.31	0.00	53.67	-0.64	ND	ND	ND	ND	ND	--	--	
10/14/1993	71.64	18.08	0.00	53.56	-0.11	--	--	--	--	--	--	--	Sampled Q3 only
1/12/1994	71.64	17.97	0.00	53.67	0.11	--	--	--	--	--	--	--	Sampled Q3 only
4/11/1994	71.64	17.70	0.00	53.94	0.27	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.64	17.80	0.00	53.84	-0.10	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.64	18.28	0.00	53.36	-0.48	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.64	17.38	0.00	54.26	0.90	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.64	17.21	0.00	54.43	0.17	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.64	17.82	0.00	53.82	-0.61	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.64	18.17	0.00	53.47	-0.35	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.64	16.45	0.00	55.19	1.72	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.64	17.35	0.00	54.29	-0.90	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.64	17.81	0.00	53.83	-0.46	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.64	16.73	0.00	54.91	1.08	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.64	17.91	0.00	53.73	-1.18	ND	ND	ND	ND	ND	ND	--	

TRC

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-4 continued													
1/14/1998	71.64	16.18	0.00	55.46	1.73	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.64	16.49	0.00	55.15	-0.31	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.64	17.29	0.00	54.35	-0.80	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.54	--	0.00	--	--	--	--	--	--	--	--	--	Well obstructed at 10.4 feet.
1/21/2000	71.54	17.51	0.00	54.03	--	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	71.54	17.93	0.00	53.61	-0.42	ND	ND	ND	ND	ND	ND	--	
1/4/2001	71.54	18.10	0.00	53.44	-0.17	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.54	17.76	0.00	53.78	0.34	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.54	17.20	0.00	54.34	0.56	--	--	--	--	--	--	--	SAMPLED ANNUALLY
7/12/2002	71.54	17.81	0.00	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	0.00	54.24	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.54	17.58	0.00	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	0.00	54.47	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.54	17.81	0.00	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	0.00	55.29	1.56	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.54	17.74	0.00	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	0.00	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	0.00	53.98	0.15	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.54	18.16	0.00	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	0.00	53.96	0.58	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.54	17.87	0.00	53.67	-0.29	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-5													
11/30/1992	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
1/8/1993	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	
4/13/1993	71.51	17.49	0.00	54.02	--	ND	ND	ND	ND	ND	--	--	
7/14/1993	71.51	18.02	0.00	53.49	-0.53	ND	ND	0.57	ND	ND	--	--	
10/14/1993	71.23	17.82	0.00	53.41	-0.08	ND	ND	ND	ND	ND	--	--	
1/12/1994	71.23	17.74	0.00	53.49	0.08	ND	ND	0.84	ND	1.6	--	--	
4/11/1994	71.23	17.56	0.00	53.67	0.18	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.23	17.50	0.00	53.73	0.06	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.23	17.98	0.00	53.25	-0.48	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.23	17.13	0.00	54.10	0.85	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.23	17.05	0.00	54.18	0.08	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.23	17.59	0.00	53.64	-0.54	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.23	18.10	0.00	53.13	-0.51	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.23	17.11	0.00	54.12	0.99	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.23	17.22	0.00	54.01	-0.11	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.23	17.59	0.00	53.64	-0.37	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.23	16.75	0.00	54.48	0.84	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.23	17.59	0.00	53.64	-0.84	ND	ND	ND	ND	ND	ND	--	
1/14/1998	71.23	16.16	0.00	55.07	1.43	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.23	16.52	0.00	54.71	-0.36	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.23	17.62	0.00	53.61	-1.10	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.16	17.76	0.00	53.40	-0.21	ND	ND	ND	ND	ND	ND	--	
1/21/2000	71.16	16.83	0.00	54.33	0.93	--	--	--	--	--	--	--	Sampled Q3 only

TRC

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-5 continued													
7/10/2000	71.16	17.46	0.00	53.70	-0.63	ND	ND	ND	ND	ND	ND	--	
1/4/2001	71.16	17.51	0.00	53.65	-0.05	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.16	17.32	0.00	53.84	0.19	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.16	17.12	0.00	54.04	0.20	--	--	--	--	--	--	--	SAMPLED ANNUALLY
7/12/2002	71.16	17.12	0.00	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	0.00	54.49	0.45	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.16	17.39	0.00	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	0.00	54.93	1.16	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.16	16.02	0.00	55.14	0.21	ND<50	ND<0.3	0.64	ND<0.3	0.79	ND<1	--	
3/2/2005	71.16	16.43	0.00	54.73	-0.41	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.16	17.41	0.00	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	0.00	54.79	1.04	--	--	--	--	--	--	--	Sampled Q3 only
9/26/2006	71.16	15.54	0.00	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	0.00	53.96	-1.66	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.16	18.01	0.00	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	0.00	53.59	0.44	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.16	17.68	0.00	53.48	-0.11	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	--	
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	0.00	59.85	--	ND	ND	ND	ND	ND	--	--	
7/14/1993	71.79	17.20	0.00	54.59	-5.26	ND	0.99	2.4	ND	1.9	--	--	
10/14/1993	71.44	17.21	0.00	54.23	-0.36	ND	ND	0.64	ND	ND	--	--	

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-6 continued													
1/12/1994	71.44	17.44	0.00	54.00	-0.23	ND	ND	1.2	ND	2.9	--	--	
4/11/1994	71.44	13.66	0.00	57.78	3.78	--	--	--	--	--	--	--	Sampled Q3 only
7/7/1994	71.44	14.05	0.00	57.39	-0.39	ND	ND	ND	ND	ND	--	--	
10/5/1994	71.44	14.16	0.00	57.28	-0.11	--	--	--	--	--	--	--	Sampled Q3 only
1/9/1995	71.44	13.73	0.00	57.71	0.43	--	--	--	--	--	--	--	Sampled Q3 only
4/17/1995	71.44	11.30	0.00	60.14	2.43	--	--	--	--	--	--	--	Sampled Q3 only
7/19/1995	71.44	12.32	0.00	59.12	-1.02	ND	ND	ND	ND	ND	--	--	
10/26/1995	71.44	17.88	0.00	53.56	-5.56	--	--	--	--	--	--	--	Sampled Q3 only
1/16/1996	71.44	16.38	0.00	55.06	1.50	--	--	--	--	--	--	--	Sampled Q3 only
4/15/1996	71.44	14.00	0.00	57.44	2.38	--	--	--	--	--	--	--	Sampled Q3 only
7/11/1996	71.44	13.58	0.00	57.86	0.42	ND	ND	ND	ND	ND	ND	--	
1/17/1997	71.44	15.42	0.00	56.02	-1.84	--	--	--	--	--	--	--	Sampled Q3 only
7/21/1997	71.44	13.78	0.00	57.66	1.64	ND	ND	ND	ND	ND	ND	--	
1/14/1998	71.44	13.65	0.00	57.79	0.13	--	--	--	--	--	--	--	Sampled Q3 only
7/6/1998	71.44	13.90	0.00	57.54	-0.25	ND	ND	ND	ND	ND	ND	--	
1/13/1999	71.44	14.93	0.00	56.51	-1.03	--	--	--	--	--	--	--	Sampled Q3 only
8/31/1999	71.37	15.81	0.00	55.56	-0.95	ND	ND	ND	ND	ND	ND	--	
1/21/2000	71.37	16.13	0.00	55.24	-0.32	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2000	71.37	16.95	0.00	54.42	-0.82	ND	ND	ND	ND	ND	ND	--	
1/4/2001	71.37	17.09	0.00	54.28	-0.14	--	--	--	--	--	--	--	Sampled Q3 only
7/16/2001	71.37	16.83	0.00	54.54	0.26	ND	ND	ND	ND	ND	ND	--	
1/28/2002	71.37	14.58	0.00	56.79	2.25	--	--	--	--	--	--	--	SAMPLED ANNUALLY
7/12/2002	71.37	16.76	0.00	54.61	-2.18	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.5	--	

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 1989 Through September 2008

Former 76 Station 3538

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (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-6 continued													
1/14/2003	71.37	16.25	0.00	55.12	0.51	--	--	--	--	--	--	--	Sampled Q3 only
7/10/2003	71.37	12.97	0.00	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	0.00	55.17	-3.23	--	--	--	--	--	--	--	Sampled Q3 only
7/29/2004	71.37	14.98	0.00	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	0.00	56.86	0.47	--	--	--	--	--	--	--	Sampled Q3 only
9/30/2005	71.37	14.45	0.00	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	0.00	54.82	-2.10	--	--	--	--	--	--	--	Sampled Q3 only
9/26/2006	71.37	17.58	0.00	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	0.00	57.65	3.86	--	--	--	--	--	--	--	Sampled Q3 only
9/27/2007	71.37	14.18	0.00	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	0.00	56.54	-0.65	--	--	--	--	--	--	--	Sampled Q3 only
9/17/2008	71.37	14.70	0.00	56.67	0.13	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	2.8	--	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date Sampled	TPH-D (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Total Oil and Grease (mg/l)	Bromo-dichloro-methane (µg/l)	Bromo-form (µg/l)	Bromo-methane (µg/l)
MW-1												
9/15/1989	ND	--	--	--	--	--	--	--	ND	--	--	--
1/23/1990	ND	--	--	--	--	--	--	--	1.5	--	--	--
4/19/1990	ND	--	--	--	--	--	--	--	ND	--	--	--
7/17/1990	ND	--	--	--	--	--	--	--	ND	--	--	--
10/16/1990	ND	--	--	--	--	--	--	--	ND	--	--	--
1/15/1991	ND	--	--	--	--	--	--	--	ND	--	--	--
4/12/1991	ND	--	--	--	--	--	--	--	ND	--	--	--
7/15/1991	ND	--	--	--	--	--	--	--	ND	--	--	--
7/16/2001	--	--	--	--	--	--	--	--	--	1.7	--	--
7/29/2004	--	--	--	--	ND<0.5	--	--	--	--	ND<0.5	ND<0.5	ND<1
9/30/2005	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0
9/26/2006	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0
9/27/2007	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0
9/17/2008	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0
MW-3												
8/25/2000	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--
7/12/2002	--	ND<20	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--

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Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date Sampled	Carbon Tetra-chloride (µg/l)	Chloro-benzene (µg/l)	Chloro-ethane (µg/l)	Chloroform (µg/l)	Chloro-methane (µg/l)	Dibromo-chloro-methane (µg/l)	1,2-Dichloro-benzene (µg/l)	1,3-Dichloro-benzene (µg/l)	1,4-Dichloro-benzene (µg/l)	Dichloro-difluoro-methane (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)
MW-1												
7/11/1996	--	--	--	0.96	--	--	--	--	--	--	--	--
7/21/1997	--	--	--	1.0	--	--	--	--	--	--	--	--
7/16/2001	--	--	--	45	--	--	--	--	--	--	--	--
7/12/2002	--	--	--	--	--	--	--	--	--	--	--	1.8
7/10/2003	--	--	--	--	--	--	--	--	--	--	--	0.89
7/29/2004	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.2
9/30/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.52
9/26/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.60
9/27/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
9/17/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 2 c
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date Sampled	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro-propane (µg/l)	cis-1,3-Dichloro-propene (µg/l)	trans-1,3-Dichloro-propene (µg/l)	Methylene chloride (µg/l)	1,1,2,2-Tetrachloro-ethane (µg/l)	Tetrachloro-ethene (PCE) (µg/l)	Trichloro-trifluoro-ethane (µg/l)	1,1,1-Trichloro-ethane (µg/l)	1,1,2-Trichloro-ethane (µg/l)	Trichloro-ethene (TCE) (µg/l)
MW-1												
9/15/1989	--	--	--	--	--	--	--	2.7	--	--	--	--
1/23/1990	--	--	--	--	--	--	--	2.1	--	--	--	--
4/19/1990	--	--	--	--	--	--	--	2.2	--	--	--	--
7/17/1990	--	--	--	--	--	--	--	1.7	--	--	--	--
10/16/1990	--	--	--	--	--	--	--	2.0	--	--	--	--
1/15/1991	--	--	--	--	--	--	--	2.1	--	--	--	--
4/12/1991	--	--	--	--	--	--	--	2.0	--	--	--	--
7/15/1991	--	--	--	--	--	--	--	1.8	--	--	--	--
7/14/1992	--	--	--	--	--	--	--	1.4	--	--	--	--
7/14/1993	--	--	--	--	--	--	--	0.95	--	--	--	--
7/7/1994	--	--	--	--	--	--	--	0.83	--	--	--	--
7/19/1995	--	--	--	--	--	--	--	0.52	--	--	--	--
7/11/1996	--	--	--	--	--	--	--	0.73	--	--	--	--
7/21/1997	--	--	--	--	--	--	--	0.70	--	--	--	--
8/31/1999	--	--	--	--	--	--	--	ND	--	--	--	--
7/16/2001	--	--	--	--	--	--	--	ND	--	--	--	--
7/12/2002	--	--	--	--	--	--	--	ND<0.60	--	--	--	--
7/10/2003	--	--	--	--	--	--	--	ND<0.50	--	--	--	--
7/29/2004	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<0.5	13	ND<0.5	ND<0.5	ND<0.5
9/30/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	9.1	ND<0.50	ND<0.50	ND<0.50
9/26/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	7.0	ND<0.50	ND<0.50	ND<0.50
9/27/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	4.3	ND<0.50	ND<0.50	ND<0.50
9/17/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	5.4	ND<0.50	ND<0.50	ND<0.50

TRC

Table 2 d
ADDITIONAL HISTORIC ANALYTICAL RESULTS
Former 76 Station 3538

Date Sampled	Trichloro-fluoro-methane (µg/l)	Vinyl chloride (µg/l)
MW-1		
7/29/2004	ND<0.5	ND<0.5
9/30/2005	ND<0.50	ND<0.50
9/26/2006	ND<0.50	ND<0.50
9/27/2007	ND<0.50	ND<0.50
9/17/2008	ND<0.50	ND<0.50

APPENDIX D

Soil and Groundwater Analytical Data - 2006

Table 1

RESULTS OF LABORATORY ANALYSIS OF SOIL SAMPLES
Former 76 Service Station 3538
411 West MacArthur
Oakland, California

Sample Number	Sample Date	Depth (fbg)	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	1,2 DCA (mg/kg)	Ethanol (mg/kg)	Lead (mg/kg)
			EPA Method 8260B													6061B
SB - 1 @ 5'	3/27/2006	5.0	<0.97	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	---
SB - 1 @ 9'	3/27/2006	9.0	2.8	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.48	---
SB - 2 @ 5'	3/27/2006	5.0	<0.97	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	---
SB - 2 @ 9'	3/27/2006	9.0	<0.93	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	---
SB - 3 @ 14'	3/27/2006	14.0	1.3	0.11	<0.0046	0.061	0.055	0.64	0.19	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	---
SB - 3 @ 16'	3/27/2006	16.0	6,100	<9.7	53	86	420	<9.7	<19	<9.7	<9.7	<9.7	<9.7	<9.7	<190	---
SB - 4 @ 5'	3/28/2006	5.0	<0.93	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	---
SB - 4 @ 15'	3/28/2006	15.0	<0.92	<0.0046	<0.0046	<0.0046	<0.0092	<0.0046	<0.0092	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	---
SB - 5 @ 9'	3/28/2006	9.0	<0.93	<0.0046	<0.0046	<0.0046	<0.0093	<0.0046	<0.0093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	---
SB - 5 @ 13'	3/28/2006	13.0	<0.93	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0046	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	---
Composite	3/28/2006	na	<0.95	<0.0047	0.013	0.0051	0.023	0.037	0.073	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	15

Notes:

TPPH = total purgeable petroleum hydrocarbons
TBA = tertiary butyl alcohol
MTBE = methyl tertiary butyl ether
DIPE = di-isopropyl ether
ETBE = ethyl tertiary butyl ether
na = not applicable
TAME = tertiary amyl methyl ether
1,2-DCA = 1,2-dichloroethane
EDB = ethylene dibromide
fbg = feet below grade
mg/kg = milligrams per kilogram
--- = not analyzed

Table 2

RESULTS OF LABORATORY ANALYSIS OF GRAB GROUNDWATER SAMPLES
Former 76 Service Station 3538
411 West MacArthur
Oakland, California

Sample Number	Sample Date	TPPH (µg/kg)	Benzene (µg/kg)	Ethyl-benzene (µg/kg)	Toluene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	TBA (µg/kg)	TAME (µg/kg)	DIPE (µg/kg)	ETBE (µg/kg)	EDB (µg/kg)	1,2 DCA (µg/kg)	Ethanol (µg/kg)
		EPA 8260B												
SB - 1W	3/27/2006	120	11	<0.50	<0.50	<1.0	130	28	<0.50	<1.0	<0.50	<0.50	<0.50	<100
SB - 2W	3/27/2006	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	<100
SB - 3W	3/27/2006	13,000	510	470	1,400	2,600	340	57	<5.0	<10	<5.0	<5.0	<5.0	<100
SB - 4W	3/28/2006	<50	<0.50	<0.50	<0.50	<1.0	3.4	<5.0	<0.50	<1.0	<0.50	<0.50	<0.50	<100
SB - 5W	3/28/2006	3,000	44	63	1.2	30	53	17	<0.50	<1.0	<0.50	<0.50	<0.50	<100

Notes:

TPPH	= total purgeable petroleum hydrocarbons	1,2-DCA	= 1,2-dichloroethane
TBA	= tertiary butyl alcohol	EDB	= ethylene dibromide
MTBE	= methyl tertiary butyl ether	ft MSL	= feet above mean sea level
DIPE	= di-isopropyl ether	ft boc	= feet below top of casing
ETBE	= ethyl tertiary butyl ether	µg/L	= micrograms per liter
TAME	= tertiary amyl methyl ether	--	= not analyzed

APPENDIX E

Boring Logs

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/7/89
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		A.C. Pavement Sand and Gravel: fill.
11/17/22		5		Clay, high plasticity, stiff, moist, very dark grayish brown.
				Gravelly clay with sand, stiff, moist, dark yellowish brown.
32/17/20		10		Sand clay, high plasticity, stiff, moist, olive, trace gravel.
			CH	Clay, high plasticity, very stiff, moist, pale olive, with greenish gray stained root holes.
13/17/19		15		Sandy clay, moderate to high plasticity, stiff, moist, olive to light yellowish brown.
10/17/20	▼		SC	Clayey sand, dense, very moist to wet, yellowish brown.
		20		

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/7/89
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
			SC	Clayey sand, as above.
		25	SP	Poorly graded sand, yellowish brown.
			CH	Clay, high plasticity, very stiff, moist, yellowish brown.
		30		
		35		
		40		TOTAL DEPTH 29'

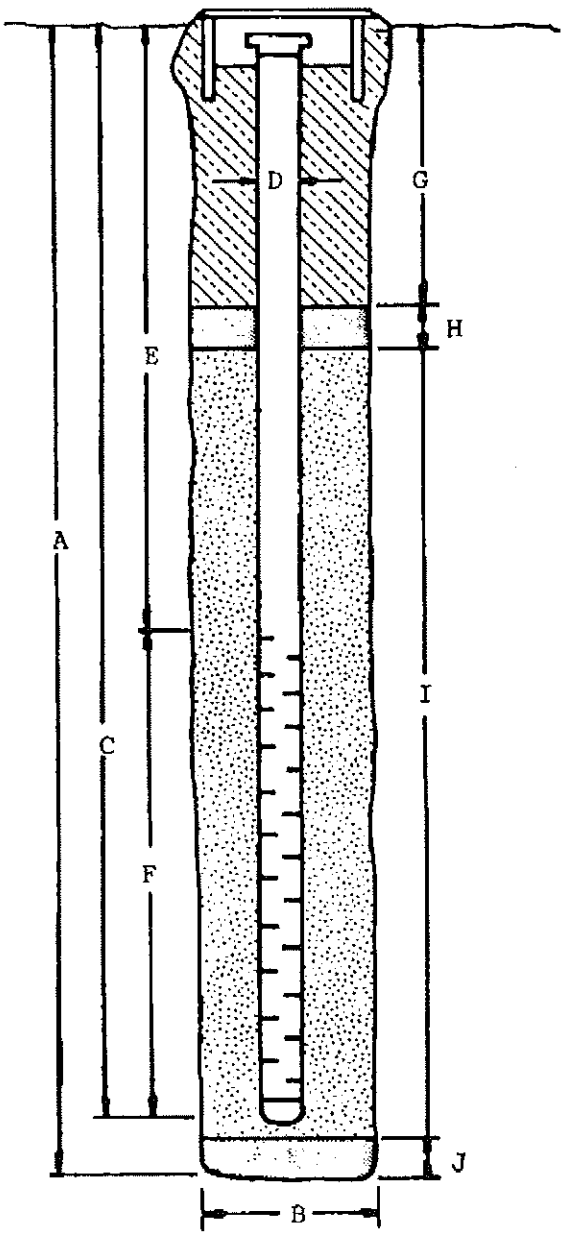
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, MacArthur BORING/WELL NO. MW1

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.:

Flush-mounted Well Cover



A. Total Depth: 29'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 29'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 24'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 3'

Seal Material: Concrete

H. Seal: 1'

Seal Material: Bentonite

I. Gravel Pack: 25'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/6/89
Boring No. MW2	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		Concrete Pavement
				Sand and Gravel: Fill
			CH	Clay, high plasticity, with silt, firm to stiff, moist, dark olive gray, black from 1.5 to 4 feet.
9/14/21		5		
			GC	Clayey gravel with sand, dense, moist, yellowish brown, gravel to 3/4".
13/15/28		10		
			CH	Sandy clay, high plasticity, 15-45% sand, stiff, moist, light yellowish brown and greenish gray, mottled, lensed with clayey sand.
9/15/19				
10/15/23			SC	Clayey sand, dense to very dense, moist, olive and greenish gray.
8/10/15		15		
			CH	Silty clay, moderate to high plasticity, firm, moist, olive.
9/12/16				
	▼		SW	Well graded sand with gravel, dense, wet, brown, silty from 19.5 feet.
13/37/46		20		

BORING LOG

Project No.	Boring & Casing Diameter	Logged By
KEI-P89-0703	9" 2"	D.L.
Project Name Unocal, Oakland/MacArthur	**Well Head Elevation** N/A	**Date Drilled** 9/6/89
Boring No. MW2	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
			GP-GM	Poorly graded gravel with silt and sand, very dense, wet, dark yellowish brown.
25/37/45		25	GP	Poorly graded gravel with sand, very dense, wet, dark, yellowish brown.
			CH	Clay, high plasticity, trace sand, very stiff, moist, yellowish brown.
25/29/35		30		
		35		
		40		TOTAL DEPTH 30.5'

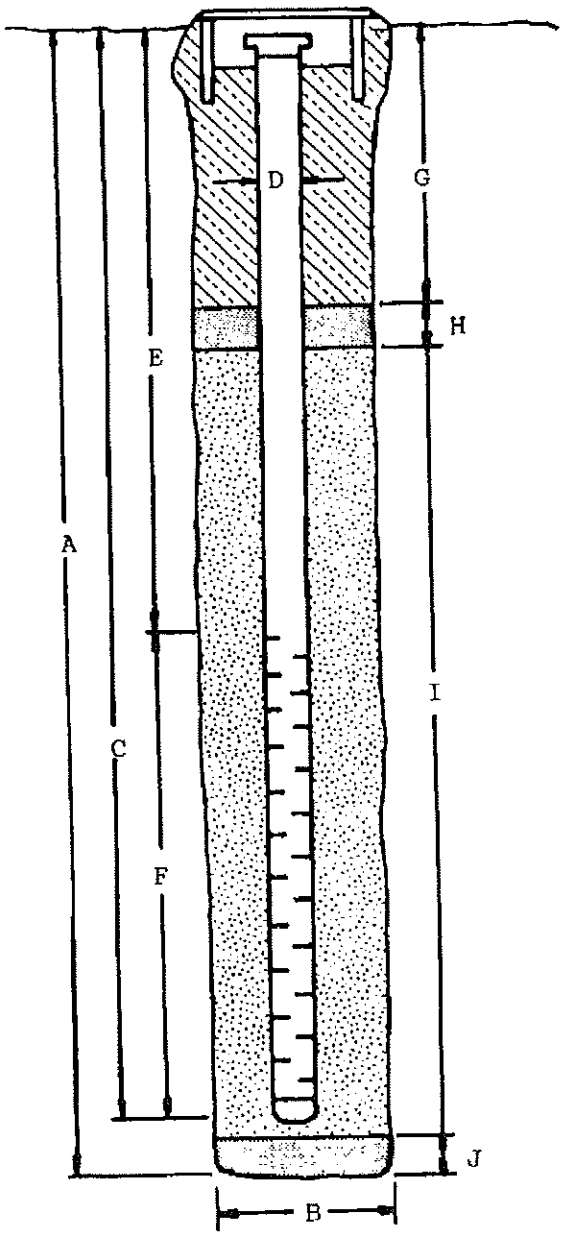
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, MacArthur BORING/WELL NO. MW2

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.:

Flush-mounted Well Cover



A. Total Depth: 30'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 28.5'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 3.5'

F. Perforated Length: 25'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 2'

Seal Material: Concrete

H. Seal: 1'

Seal Material: Bentonite

I. Gravel Pack: 27'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/7/89
Boring No. MW3	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		Concrete Pavement
9/15/21		5	CH	Clay, high plasticity, with silt, stiff, moist, dark olive gray, very dark grayish brown above 4'.
14/17/23		10		Clay, high plasticity, very stiff, moist, pale olive, with dark greenish gray stained root holes.
15/23/33		15	CL	Sandy clay, low to moderate plasticity, 25-40% sand, stiff, moist, olive and greenish gray, mottled, lensed with clayey sand.
10/17/24	▼		CH	Sandy clay, moderate to high plasticity, stiff, moist, olive.
		20		

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/7/89
Boring No. MW3	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
				Sandy clay, as above.
37/50-5-1/2"			GP-GC	Poorly graded gravel with clay and sand, very dense, wet, dark yellowish brown.
		25	GC	Clayey gravel, very dense, moist, yellowish brown.
		30		
		35		
		40		TOTAL DEPTH 29'

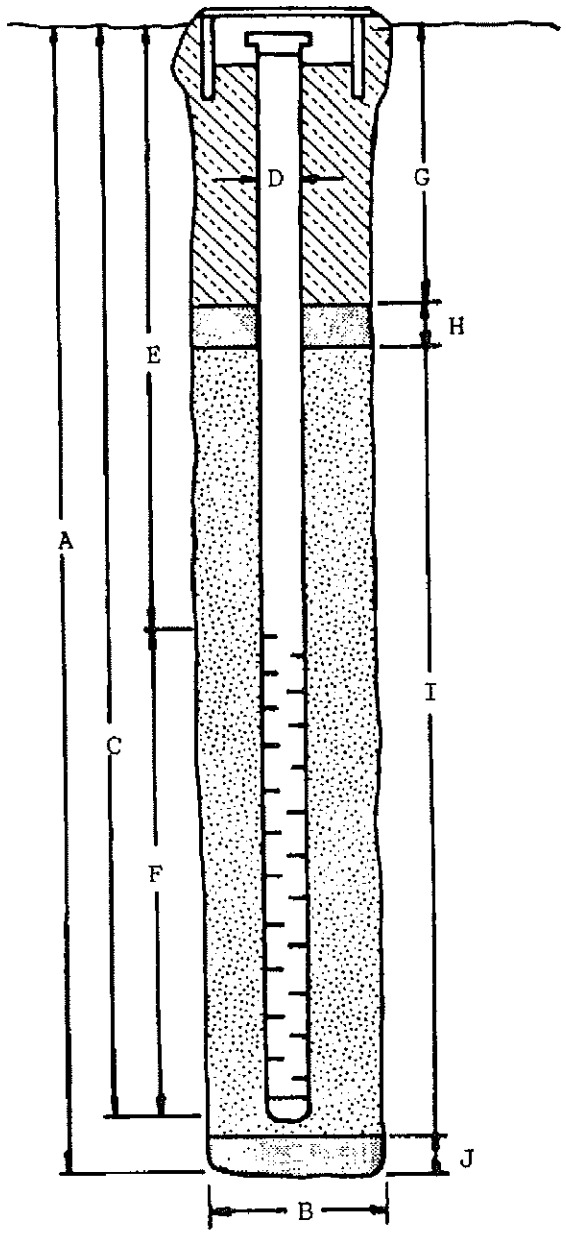
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, MacArthur BORING/WELL NO. MW3

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.:

Flush-mounted Well Cover



A. Total Depth: 29'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 29'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 24'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 3'

Seal Material: Concrete

H. Seal: 1'

Seal Material: Bentonite

I. Gravel Pack: 25'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/6/89
Boring No. MW4	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		A.C. Pavement Sand and Gravel: Fill
12/16/25		5		Clay, high plasticity, very stiff, moist, very dark grayish brown, brown below 5'.
				Gravelly clay with sand, very stiff, moist, dark yellowish brown.
19/25/30		10	CH	Clay, high plasticity, very stiff, slightly moist, light yellowish brown.
14/17/29		15		Silty clay, high plasticity, 10-15%, fine sand, very stiff, moist, pale olive.
15/15/23	▼		SM	Silty sand, dense to very dense, very moist to wet, light yellowish brown.
		20	SW	Well graded sand, trace to 10%

BORING LOG

Project No. KEI-P89-0703	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal, Oakland/MacArthur	Well Head Elevation N/A	Date Drilled 9/6/89
Boring No. MW4	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
			SW	fines, dense, wet, dark yellowish brown.
		25	GP-GC	Poorly graded gravel with clay and sand, dense, wet, dark yellowish brown, clay content, increasing with depth.
			CH	Gravelly clay, high plasticity, 5-10% sand, very stiff, moist, dark yellowish brown.
		30		
		35		
		40		TOTAL DEPTH 29'

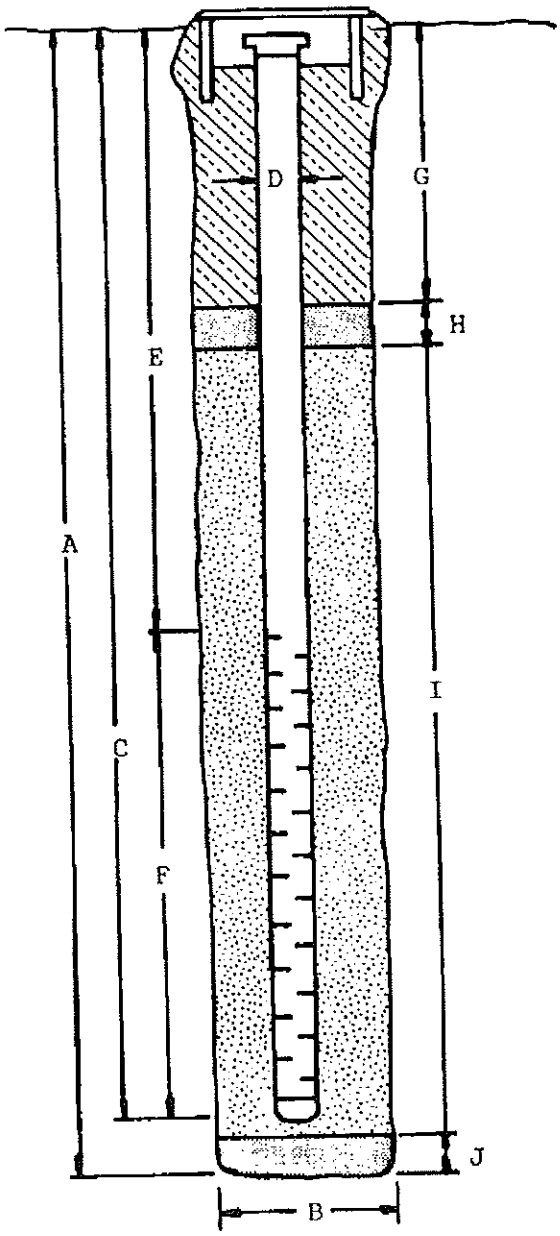
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland, MacArthur BORING/WELL NO. MW4

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.:

Flush-mounted Well Cover



A. Total Depth: 29'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 29'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 5'

F. Perforated Length: 24'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 3'

Seal Material: Concrete

H. Seal: 1'

Seal Material: Bentonite

I. Gravel Pack: 25'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

KAPREALIAN ENGINEERING
INCORPORATED

MAJOR DIVISIONS		SYMBOLS	TYPICAL SOIL DESCRIPTIONS
GRAVELS (More than 1/2 of coarse fraction > No. 4 sieve size)		GW	Well graded gravels or gravel - sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel - sand mixtures, little or no fines
		GM	Silty gravels, gravel - sand - silt mixtures
		GC	Clayey gravels, gravel - sand - clay mixtures
SANDS (More than 1/2 of coarse fraction < No. 4 sieve size)		SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand - silt mixtures
		SC	Clayey sands, sand - clay mixtures
SILTS & CLAYS LL < 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS & CLAYS LL > 50		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils
DUAL (TRANSITION) SOILS			Soil characterisitics are transitional between the soil classifications listed above

CLASSIFICATION CHART (Unified Soil Classification System)

BORING LOG

Project No. KEI-P89-0703	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #3538 411 West MacArthur Blvd., Oakland	**Well Cover Elevation**	**Date Drilled** 11/18/92
Boring No. MW5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Six inches of concrete pavement over sand and gravel base.
8/13/17		5	CL	Silty clay, estimated at 35% silt, moist, black, strong brown staining in pores.
				Silty clay, estimated at 15% silt, 5% sand, and trace gravel to 3/8 inch in diameter, hard, moist, yellowish brown (10YR 5/4) and light brownish gray (10YR 6/2) mottled, trace pores.
8/11/16		10	ML	Clayey silt, estimated at 15-20% clay and 5% fine-grained sand, very stiff, moist, pale yellow (2.5Y 7/3), trace pores.
6/10/17		15		Silt, estimated at 5-10% clay, very stiff, moist to very moist, pale yellow (2.5Y 7/3) with slight yellowish brown (10YR 5/6) mottling, trace sand and pores.
				Silt, trace clay, hard, very moist, very pale brown (10YR 7/3) and strong brown (7.5YR 5/6) mottled, slightly micaceous.
10/20/24		20	CL	Silty clay, estimated at 35-40% silt, hard, moist, very pale brown (10YR 5/4) mottled.
8/13/25	▼		ML	Clayey silt, estimated at 15% clay and 5-10% sand, hard, very moist, pale yellow (2.5Y 7/3).

BORING LOG

Project No. KEI-P89-0703	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #3538 411 West MacArthur Blvd., Oakland	**Well Cover Elevation**	**Date Drilled** 11/18/92
Boring No. MW5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
9/20/36		25	ML	Clayey silt, estimated at 15% clay and 5-10% sand, hard, very moist, pale yellow (2.5Y 7/3). Clayey silt, estimated at 20-25% clay and 5% sand, hard, moist, very pale brown (10YR 7/3).
13/19/28		30	CL	Silty clay, estimated at 15-20% fine-grained silt and 5% sand, hard, moist, very pale brown (10YR 7/3), trace organic matter. Silty clay, estimated at 15% silt, 5-10% sand, and trace gravel, hard, moist, very pale brown (10YR 7/3).
		35		TOTAL DEPTH: 30'
		40		

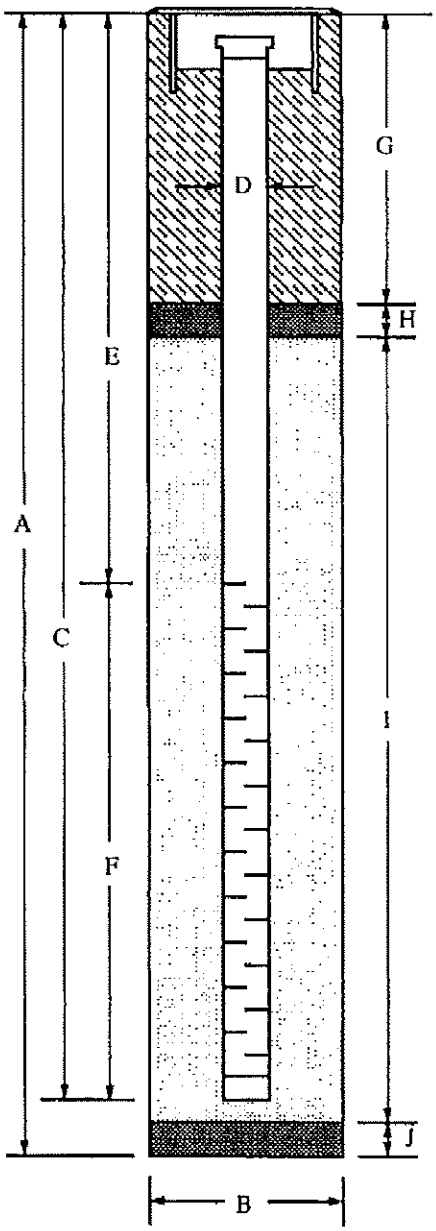
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #3538, 411 West MacArthur Blvd., Oakland WELL NO. MW5

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.: 91185

Flush-mounted Well Cover



A. Total Depth: 30'

B. Boring Diameter: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 30'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 13'

F. Perforated Length: 17'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 9'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 19'

Pack Material: RMC Lonestar Sand

Size: 2/12

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P89-0703	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** JGG / W.W. CEG 1633
Project Name Unocal S/S #3538 411 West MacArthur Blvd., Oakland	**Well Cover Elevation**	**Date Drilled** 11/18/92
Boring No. MW6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Fifteen inches of asphalt pavement.
				Silty clay, estimated at 20% silt and trace sand, moist, very dark gray.
18/30/34		5		Silty clay, estimated at 20-25% silt and 5% sand, hard, moist, greenish gray (5GY 5/1).
				Silty clay with sand and gravel, estimated at 15-20% silt, 15% gravel to 2 inches in diameter, and 10-15% sand, hard, moist, greenish gray (5GY 5/1) with strong brown (7.5YR 4/6) staining.
19/23/35		10	CL	Silty clay, estimated at 15% silt and trace sand, hard, moist, greenish gray (5GY 6/1) with slight light yellowish brown (10YR 6/4) mottling.
13/22/27		15		Silty clay, estimated at 20% silt, hard, moist, light yellowish brown (10YR 6/4) with slight light gray (5Y 7/1) staining in pores, trace organic matter.
12/18/20	▼	20	ML	Clayey silt, estimated at 15% clay and 5-10% very fine-grained sand, hard, very moist, light yellowish brown (10YR 6/4).

BORING LOG

Project No. KEI-P89-0703	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG1633
Project Name Unocal S/S #3538 411 West MacArthur Blvd., Oakland	**Well Cover Elevation**	**Date Drilled** 11/18/92
Boring No. MW6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
7/10/13		25	ML	Clayey silt, estimated at 15% clay and trace sand, very stiff, very moist, light yellowish brown.
			CL	Silty clay, estimated at 20-30% slightly elastic silt, very stiff, moist, very pale brown.
8/15/21		30		Silty clay, estimated at 20-25% silt and trace gravel, hard, moist, light yellowish brown (10YR 6/4).
				TOTAL DEPTH: 30'
		35		
		40		

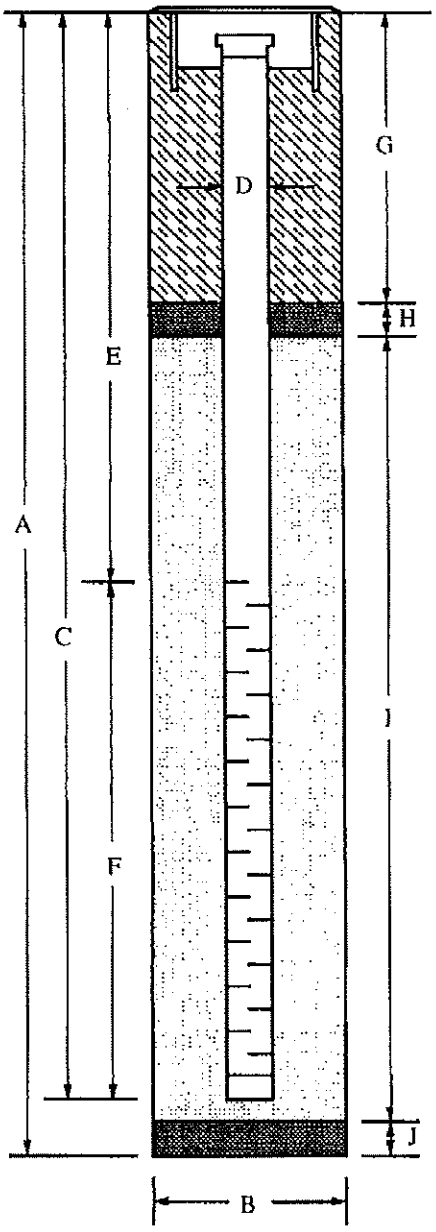
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #3538, 411 West MacArthur Blvd., Oakland WELL NO. MW6

PROJECT NUMBER: KEI-P89-0703

WELL PERMIT NO.: 91185

Flush-mounted Well Cover



A. Total Depth : 30'

B. Boring Diameter: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 30'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 13'

F. Perforated Length: 17'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 9'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 19'

Pack Material: RMC Lonestar Sand

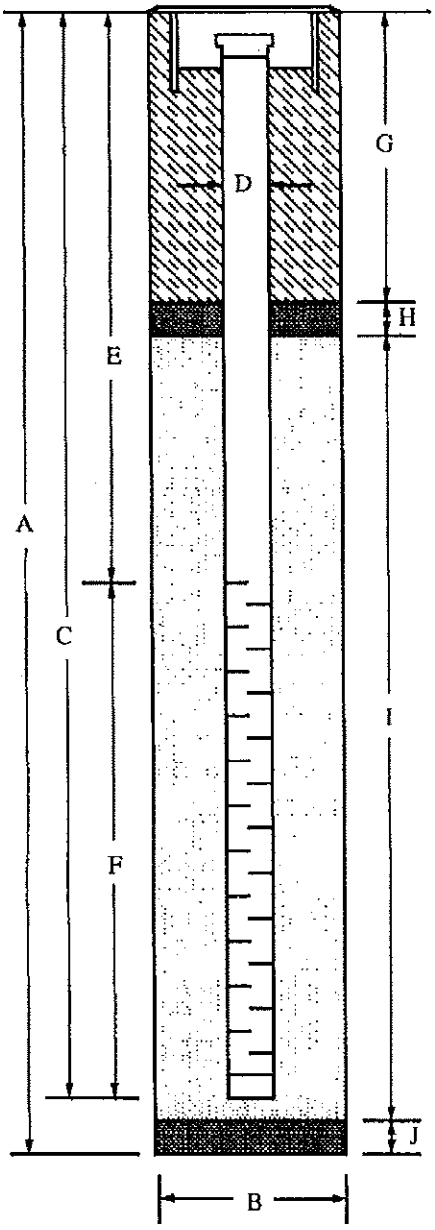
Size: 2/12

J. Bottom Seal: None

Seal Material: N/A

WELL COMPLETION DIAGRAM
(SCHEMATIC)

Flush-mounted Well Cover



WELL DETAILS*

1. Well will be terminated 10 to 15 feet into the first encountered ground water, unless an aquitard five feet or greater in thickness is encountered below the water table, in which case the bottom of the boring will be backfilled with bentonite pellets and the well terminated at the top of this aquitard [A].

2. Boring diameter [B] is 8 inches for 2 inch wells, 10 inches for 4 inch wells, and 12 inches for 6 inch wells.

3. Perforated interval [F] will extend from bottom of casing to five feet above the first encountered ground water table (unless water <5 feet deep).

4. Schedule 40 PVC casing, 2 inch in diameter [D], will be used. Screen is 0.020 or 0.010 inch factory machined slots, depending on filter pack grain size.

5. Filter pack will be placed from bottom of casing to two feet above perforated interval [I]. (Bottom seal [J] is not installed unless required.) One to two feet of bentonite [H] will be placed above the filter pack. Concrete grout [G] will be placed from top of bentonite seal to the surface (unless modified due to shallow water). Blank casing [E] will extend from the top of the perforated casing to the top of the hole.

6. The well will be installed with a waterproof cap, padlock and a flush-mounted well cover.

* See text for additional information.

PROJECT NO.: 42-0142-09
LOCATION: 76 Station #3538
411 W. MacArthur Blvd.
Oakland, California

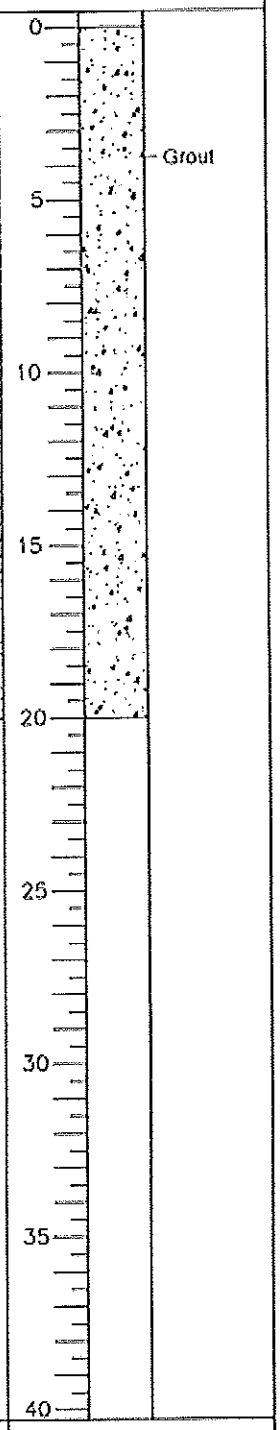
DATE DRILLED: 3/27/06
LOGGED BY: J. Kearns
APPROVED BY: K. Woodburne, RG
DRILLING CO.: Woodward Drilling

NORTHING: NOT SURVEYED
EASTING: NOT SURVEYED
ELEVATION: NOT SURVEYED

DRILLING METHOD: 2-inch Direct Push
SAMPLER TYPE: 4-foot Continuous Core
TOTAL DEPTH: 20.00 feet
DEPTH TO WATER: 16.25 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Asphalt concrete.	Asphalt	
4.0		3.0/3.0		5	CLAY (CL): Dark brown (10YR 3/3), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, dry. - @ 6': color change to black (2.5/2.5/1), moist.	CL	
12.0		4.0/4.0		10	- @ 9': color change to dark gray (5Y 4/1), 95% fines, 5% fine-grained sand. - @ 10': color change to olive gray (5Y 5/2).		
0.2		2.0/4.0		15	SAND (SW): Olive (5Y 4/3), 10% fines, 90% fine- to coarse-grained sand, loose, moist. CLAY (CL): Light olive brown (2.5Y 5/6), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, moist.	SW CL	
1.1		4.0/4.0		20	SAND (SW): Dark grayish brown (2.5Y 4/2), 10% fines, 90% fine- to coarse-grained sand, loose, wet.	SW	
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

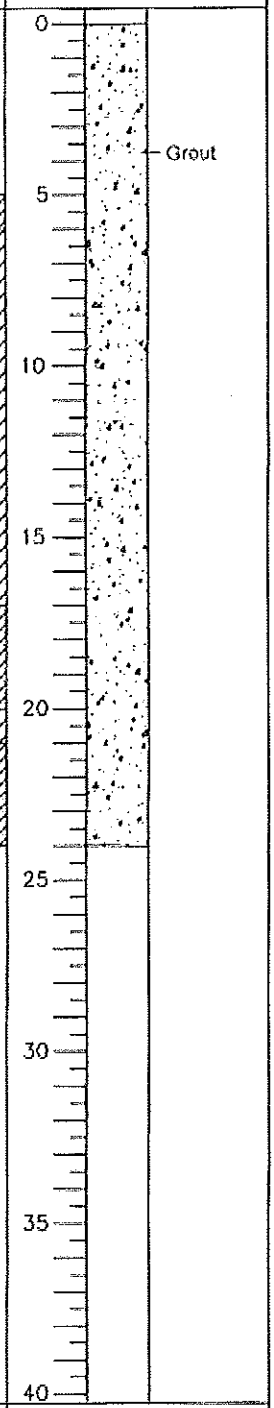
SB-1
PAGE 1 OF 1

PROJECT NO.: 42-0142-09	DATE DRILLED: 3/27/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #3538	LOGGED BY: J. Kearns	EASTING: NOT SURVEYED
411 W. MacArthur Blvd.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

DRILLING METHOD: 2-inch Direct Push
SAMPLER TYPE: 4-foot Continuous Core
TOTAL DEPTH: 24.00 feet
DEPTH TO WATER: 16.25 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0			
1.8		3.0/3.0		5	CLAYEY SAND (SC): Brown (10YR 4/3), 20% fines, 80% fine- to coarse-grained sand, loose, moist.	SC	
0.2		4.0/4.0			CLAY (CL): Light olive brown (2.5Y 5/6), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, moist. - @ 9': color change to mottled light yellowish brown (2.5Y 6/3) and very dark gray (10YR 3/1). - @ 11': color change to mottled brown (10YR 3/3) and very dark grayish brown (10YR 3/2).	CL	
0.0		4.0/4.0		10			
		2.0/2.0		15	CLAYEY SAND (SC): Yellowish brown (10YR 5/8), 30% fines, 72% fine- to coarse-grained sand, loose, dry.	SC	
		2.0/2.0					
0.0		4.0/4.0		20	CLAY (CL): Yellowish brown (10YR 5/4), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, wet.	CL	
					SAND (SC): 10% fines, 90% fine- to coarse-grained sand, loose.	SC	
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

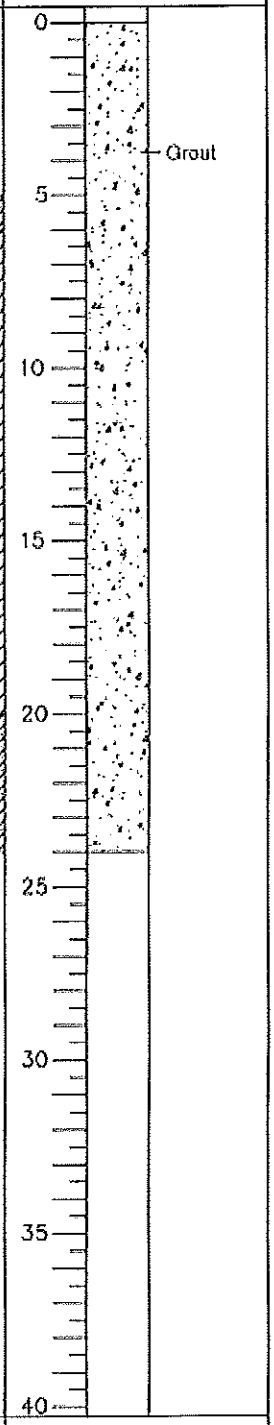
SB-2
PAGE 1 OF 1

PROJECT NO.: 42-0142-09	DATE DRILLED: 3/27/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #3538	LOGGED BY: J. Kearns	EASTING: NOT SURVEYED
411 W. MacArthur Blvd.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

DRILLING METHOD: 2-inch Direct Push
SAMPLER TYPE: 4-foot Continuous Core
TOTAL DEPTH: 24.00 feet
DEPTH TO WATER: 16.69 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0			
13.3		3.0/3.0		5	CLAYEY SAND (SC): Brown (10YR 3/3), 10% fines, 90% fine- to coarse-grained sand, loose, dry.	SC	
6.9		4.0/4.0		10	CLAY (CL): Dark brown (10YR 3/3), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, moist. - @ 9': color change to mottled light yellowish brown (10YR 4/4) and dark yellowish brown (10YR 4/6), high plasticity. - @ 11': low plasticity.	CL	
105		2.5/4.0		15	- @ 14': hydrocarbon odor.		
1596		3.0/4.0					
0.0		4.0/4.0		20	- @ 19': color change to mottled dusky red (10YR 3/2) and dark brown, hydrocarbon odor. CLAYEY SAND (SC): Mottled dark greenish gray (GLEY1 6/1) and yellowish brown (10YR 5/6).	SC	
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

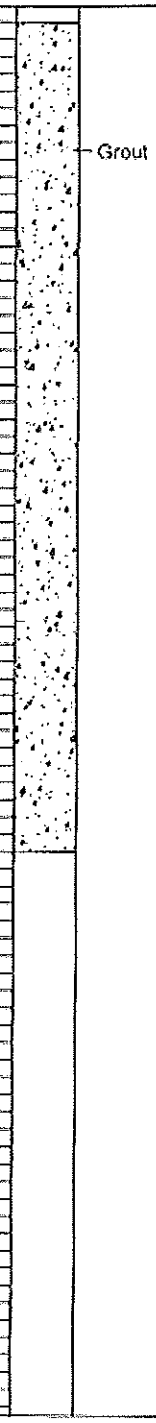
SB-3
PAGE 1 OF 1

PROJECT NO.: 42-0142-09	DATE DRILLED: 3/28/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #3538	LOGGED BY: J. Kearns	EASTING: NOT SURVEYED
411 W. MacArthur Blvd.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

DRILLING METHOD: 2-inch Direct Push
SAMPLER TYPE: 4-foot Continuous Core
TOTAL DEPTH: 24.00 feet
DEPTH TO WATER: 16.39 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0			
8.3		3.0/3.0		5	CLAY (CL): Mottled brown (10YR 4/3) and black (10YR 2/1), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, moist.	CL	
4.0		3.5/4.0			- @ 9': color change to mottled dark gray (5Y 4/1) and dark yellowish brown (10YR 3/4).		
				10	SAND (SW): Very pale brown (10YR 7/3), 5% fines, 95% fine- to coarse-grained sand, loose, dry.	SW	
3.7		2.5/4.0			CLAY (CL): Brown (10YR 4/3), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, moist. - @ 12': color change to grayish brown (10YR 5/2). - @ 14': color change to mottled pale brown (10YR 6/3) and yellowish brown (10YR 5/6).	CL	
3.7		2.0/4.0		15			
2.7		2.0/4.0		20	CLAYEY SAND (SC): Mottled pale brown (10YR 6/3) and yellowish brown (10YR 5/6), 15% fines, 85% fine- to medium-grained sand, wet.	SC	
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

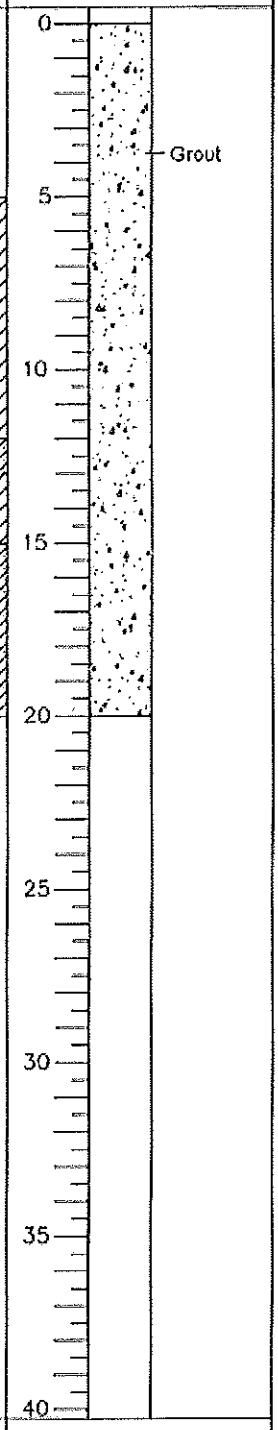
SB-4
PAGE 1 OF 1

PROJECT NO.: 42-0142-09	DATE DRILLED: 3/28/06	NORTHING: NOT SURVEYED
LOCATION: 76 Station #3538	LOGGED BY: J. Kearns	EASTING: NOT SURVEYED
411 W. MacArthur Blvd.	APPROVED BY: K. Woodburne, RG	ELEVATION: NOT SURVEYED
Oakland, California	DRILLING CO.: Woodward Drilling	

DRILLING METHOD: 2-Inch Direct Push
SAMPLER TYPE: 4-foot Continuous Core
TOTAL DEPTH: 20.00 feet
DEPTH TO WATER: 18.00 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0			
1.1		3.0/3.0		5	CLAY (CL): Brown (10YR 4/3), 90% fines, 10% fine- to coarse-grained sand, medium plasticity, wet.		
2.4		3.0/4.0			- @ 9': color change to dark grayish brown (2.5Y 4/2).	CL	
				10	- @ 10': color change to dark olive gray (5Y 3/2).		
1.8		4.0/4.0			CLAYEY SAND (SC): Dark olive gray (5Y 3/2), 15% fines, 85% fine- to coarse-grained sand, loose, wet.	SC	
					CLAY (CL): Mottled grayish brown (2.5Y 5/2) and dark yellowish brown (10YR 5/6), 90% fines, 10% fine- to medium- grained sand, wet.	CL	
				15	CLAYEY SAND (SC): Mottled grayish brown (2.5Y 5/2) and dark yellowish brown (10YR 5/6), 15% fines, 85% fine- to medium-grained sand, wet.		
2.3		3.0/4.0			- @ 19': color change to greenish gray (GLEY1 5/5GY).	SC	
				20			
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

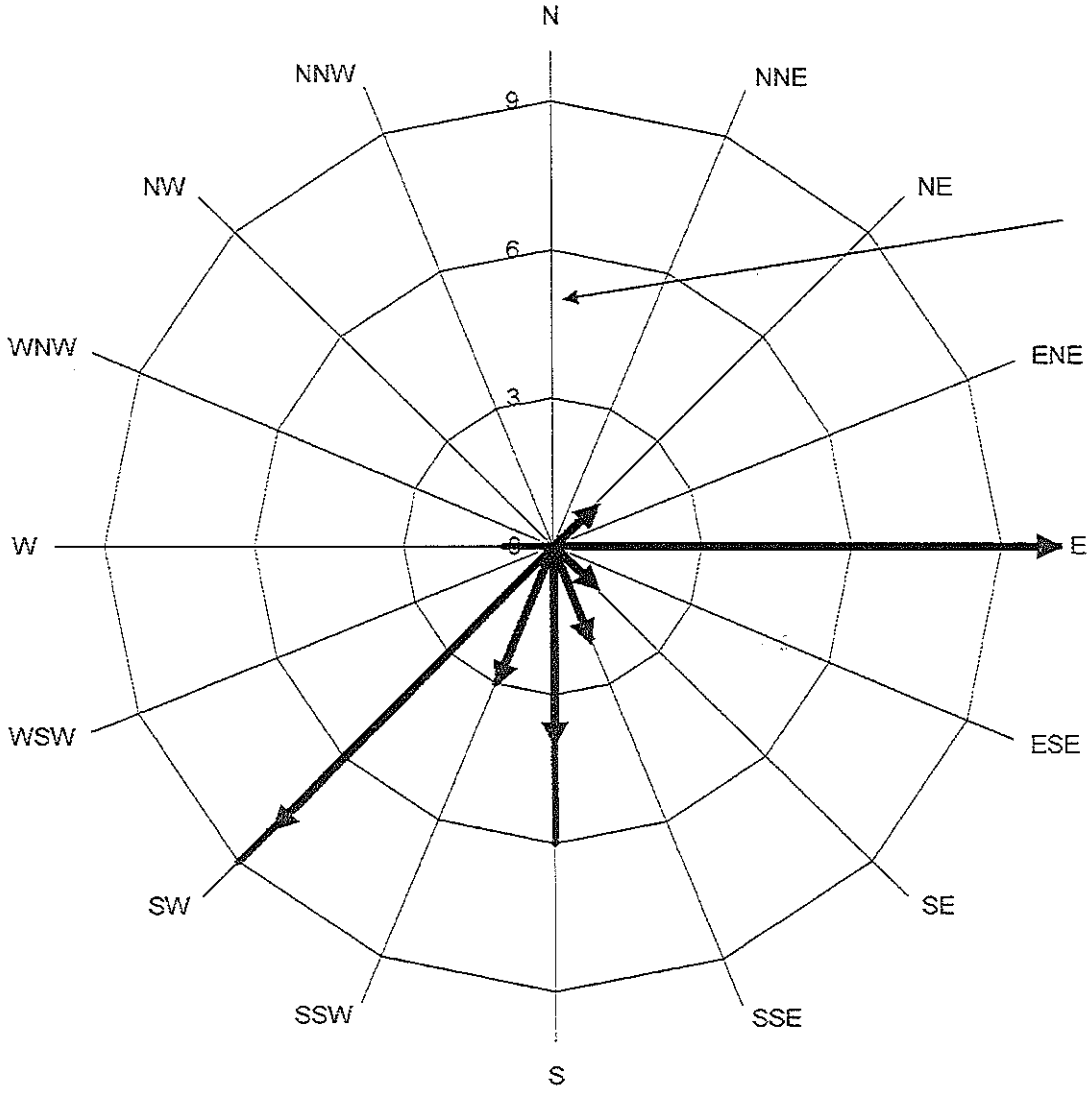
LOG OF EXPLORATORY BORING

SB-5
PAGE 1 OF 1

APPENDIX F

Groundwater Flow Rose Diagram and Historic Maps

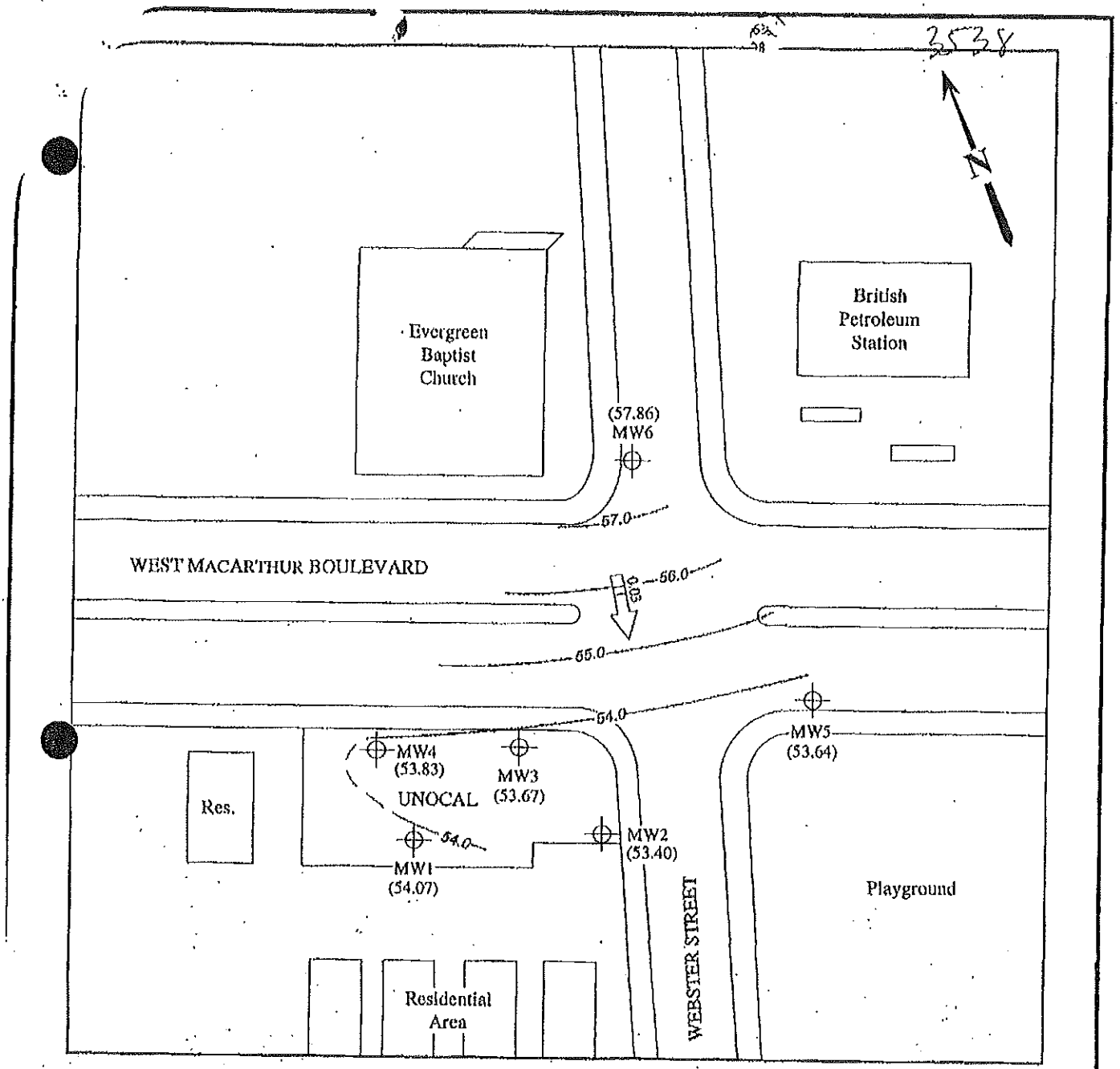
Historical Groundwater Flow Directions
for Tosco (76) Service Station No. 3538
February 1990 through March 2008



Number of monitoring events in which groundwater was reported to flow in a particular direction.

TRC

FIGURE 5



LEGEND

- Monitoring well
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

0 60 120

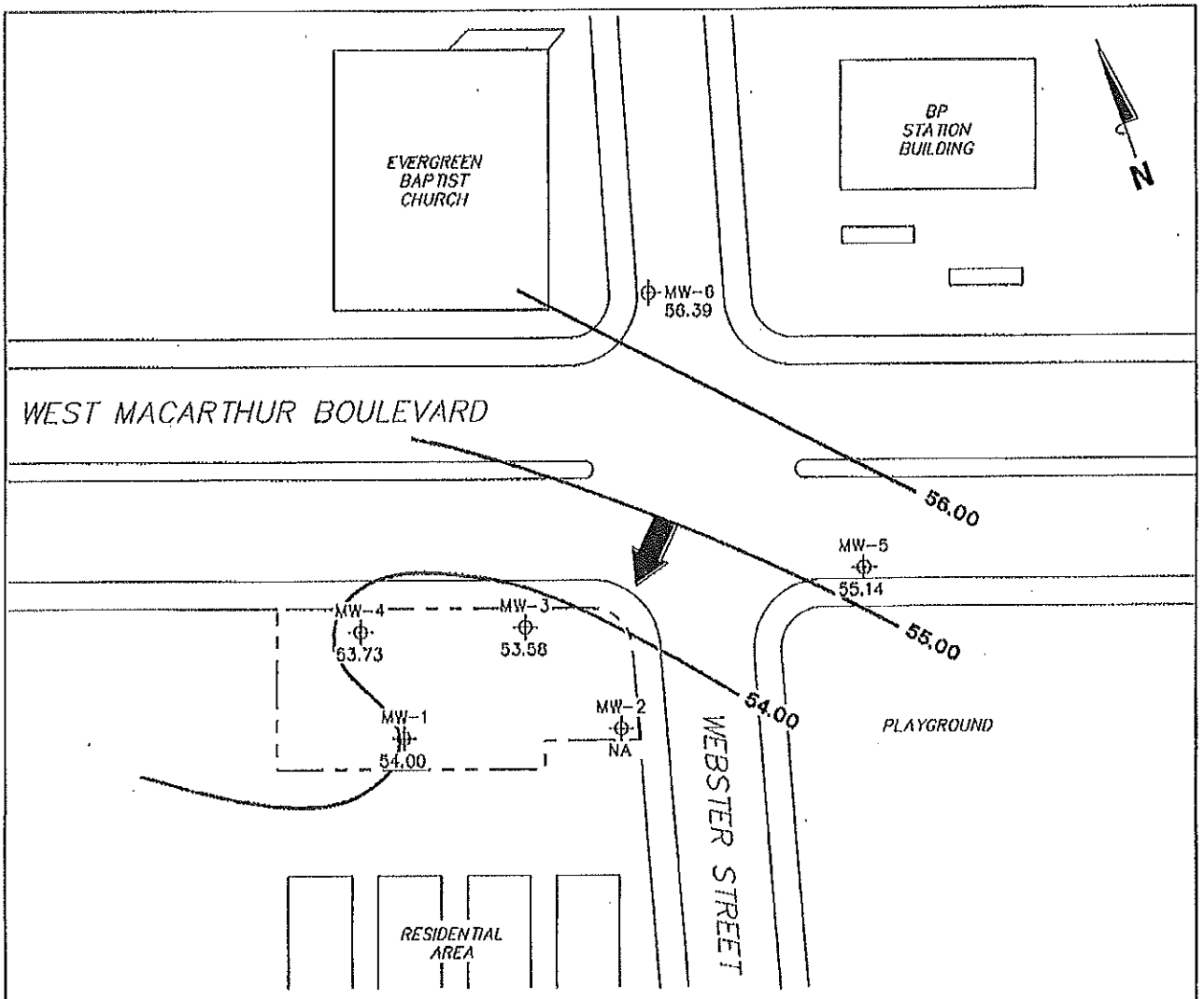
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JULY 11, 1996 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE
1



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank. NA = not analyzed, measured, or collected.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

56.00 — Groundwater Elevation Contour

General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
July 29, 2004

Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

TRC

SCALE (FEET)
0 60

FIGURE 2

PS=1:1 3538-003

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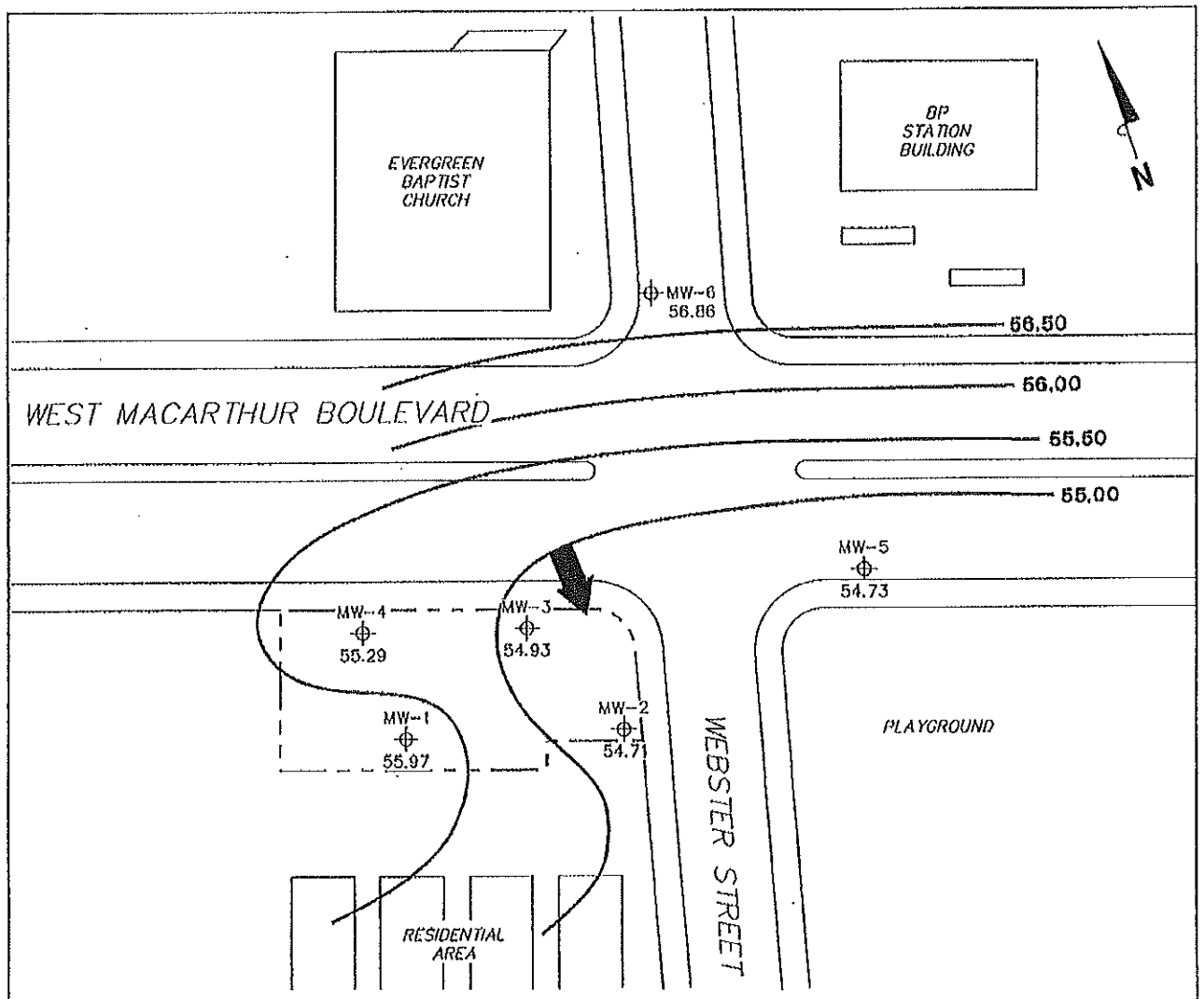


NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

56.50 — Groundwater Elevation Contour

➡ General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
March 2, 2005

Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

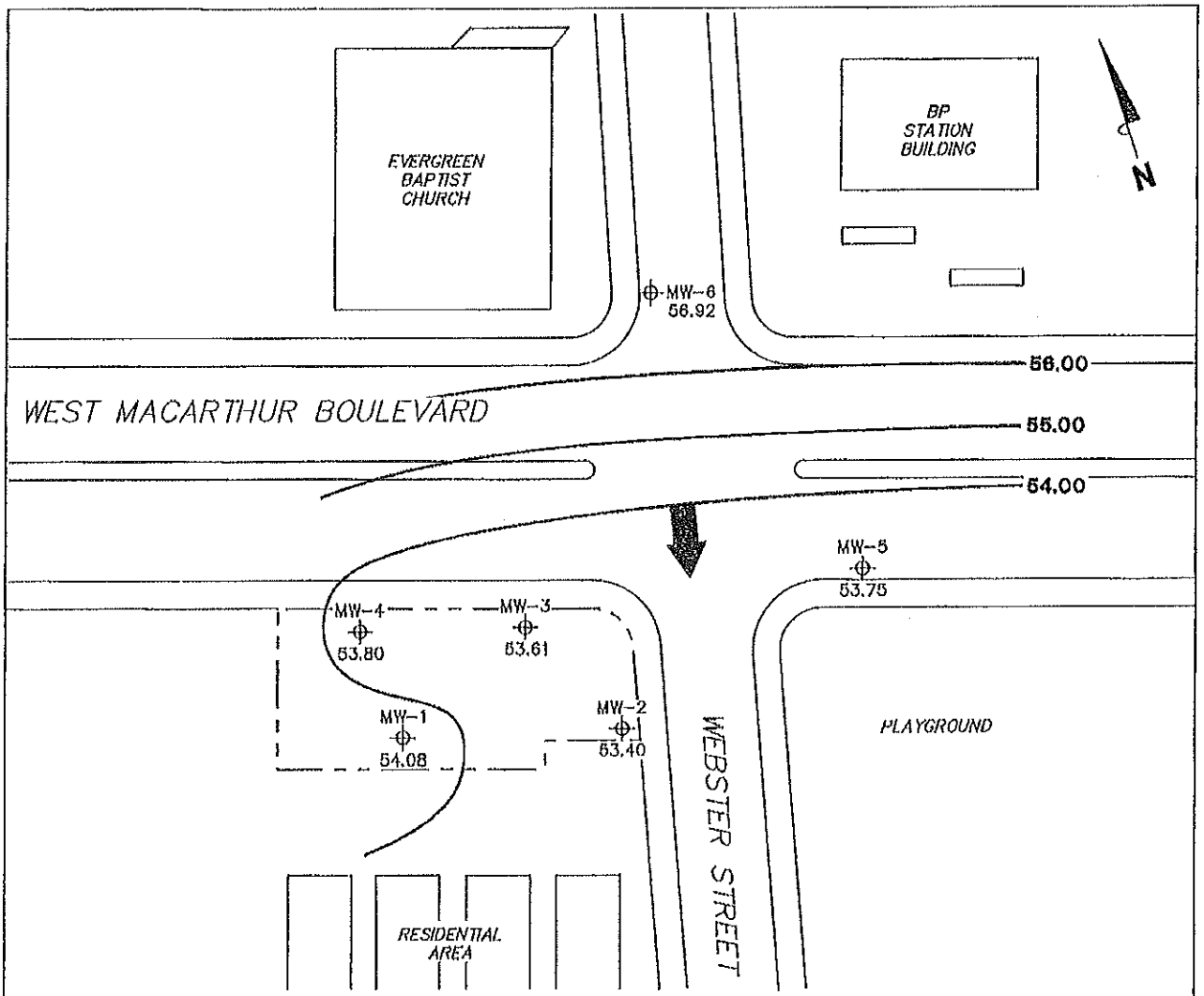
TRC

SCALE (FEET)
0 60

FIGURE 2

PS=1:1 3538-003

L:\Graphics\ProjectsByNumber\20-xxxx\20-0400(UnocalQMS)\x-3000\3538+\3538-QMS.dwg Mar 31, 2005 - 10:29am lwinters



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

56.00 — Groundwater Elevation Contour

➡ General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
September 30, 2005

Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

TRC

SCALE (FEET)
0 60

FIGURE 2

PS=1:1 3538-003

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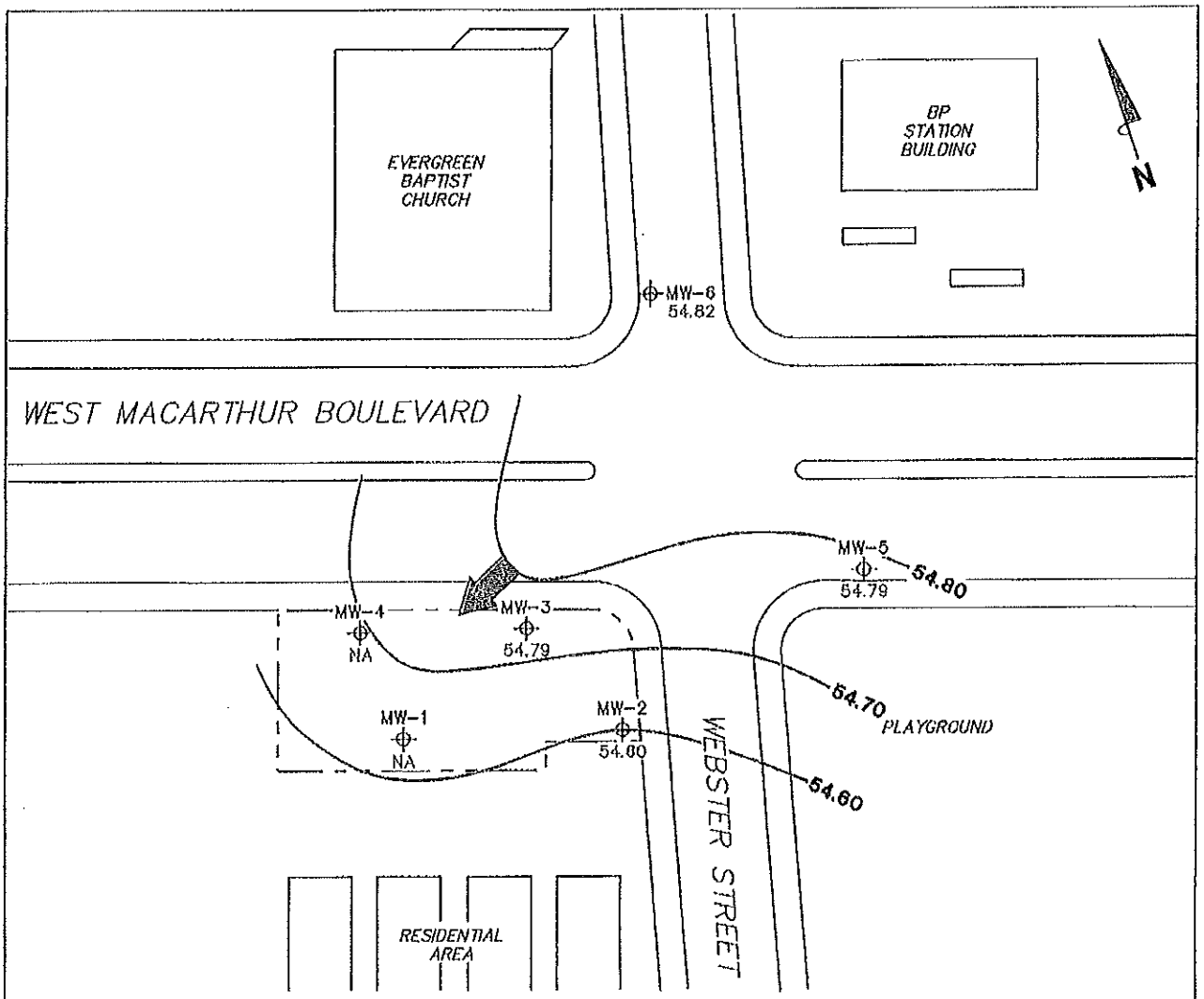

NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

54.80 — Groundwater Elevation Contour

General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
March 23, 2006

Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

SCALE (FEET)
0 60

FIGURE 2

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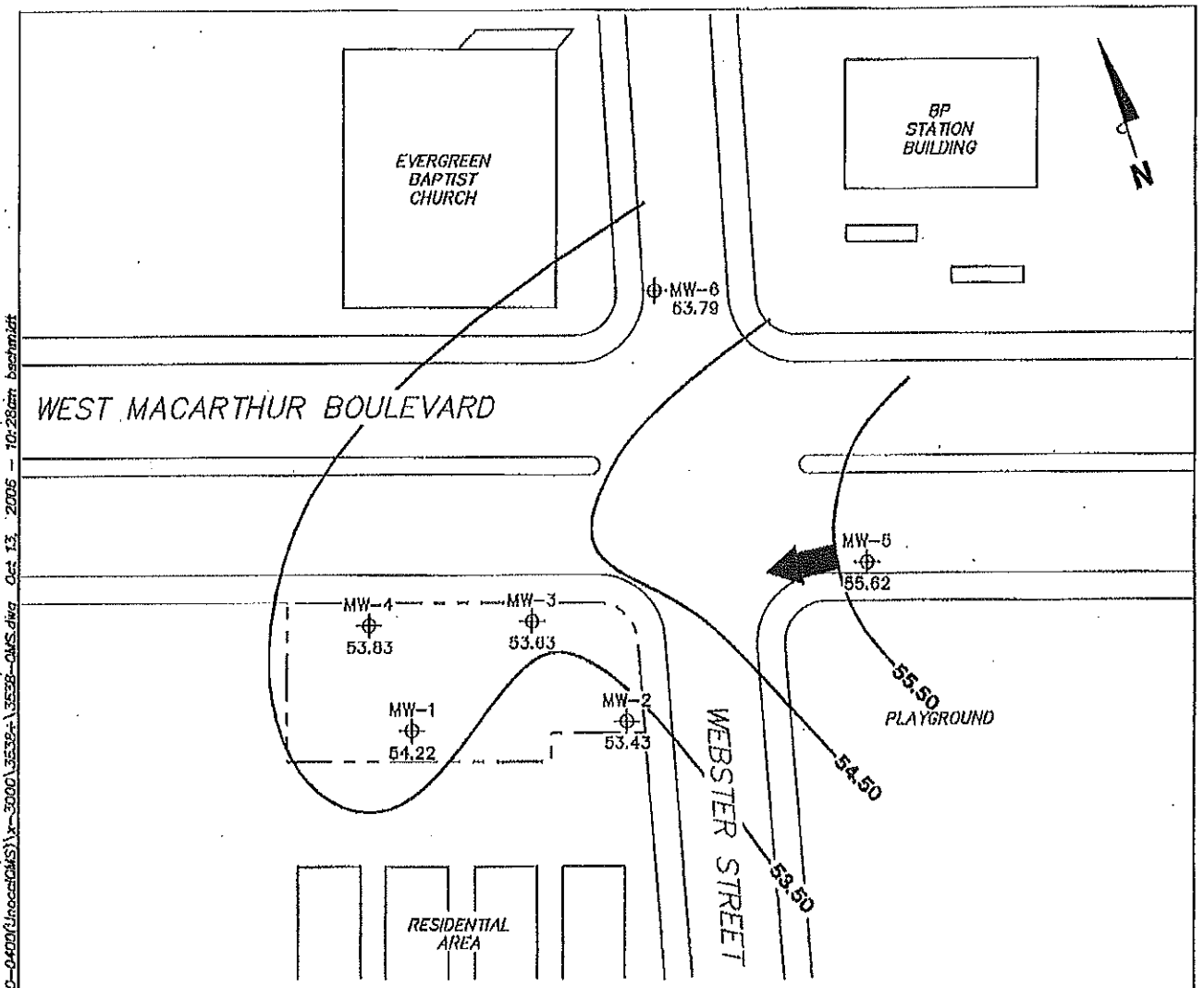
\\IRVINE-FS1\Graphics\Graphics\ProjectsByNumber\20-xxxx\20-0400(UnocalQMS)\x-3000\3538\3538-QMS.dwg Apr 15, 2006 -- 10:19am bschmidt



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

55.50 — Groundwater Elevation Contour

General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
September 26, 2006

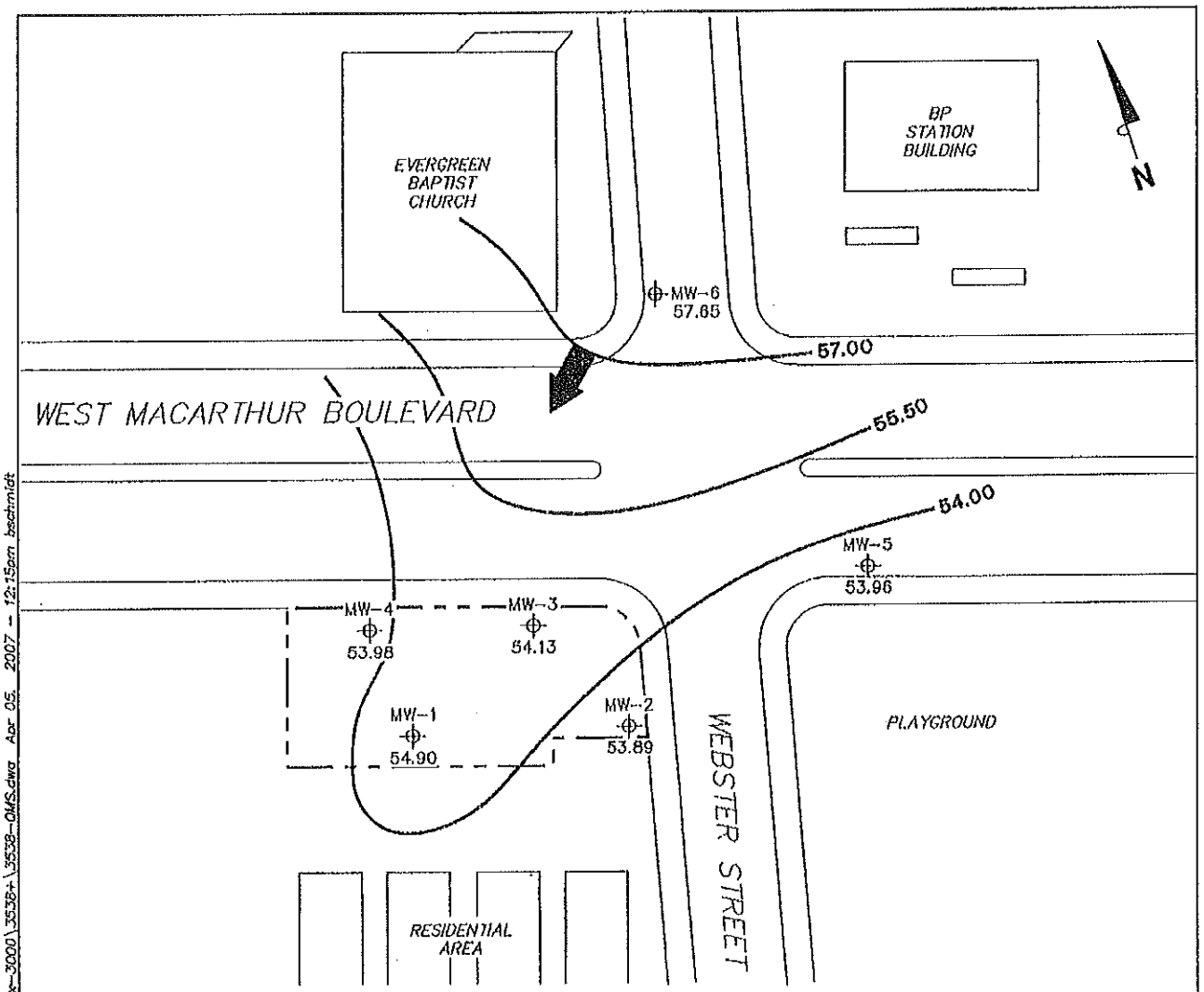
Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

TRC

SCALE (FEET)
0 60

FIGURE 2

PS=1:1,3538-003 \\RVBVE-FS1\Graphics\Projects\ProjectNumber\20-xxxx\20-0400\UnocalGIS\x-3000\3532+\3538-GWS.dwg Oct 13, 2006 - 10:28am bschmidt



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level.

LEGEND

MW-6 ⊕ Monitoring Well with Groundwater Elevation (feet)

57.00 — Groundwater Elevation Contour

General Direction of Groundwater Flow

GROUNDWATER ELEVATION CONTOUR MAP
March 15, 2007

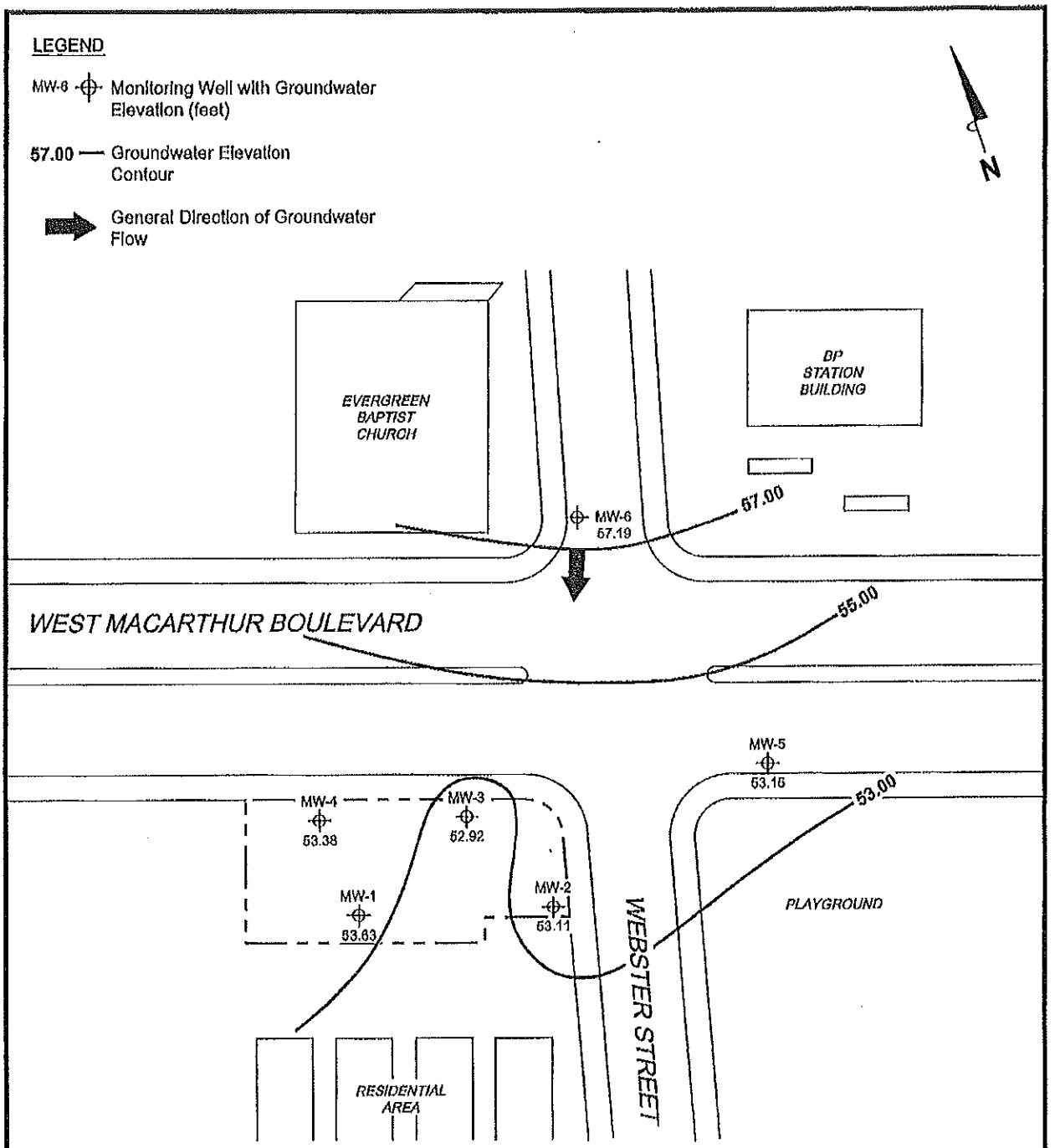
Former 76 Station 3538
411 West MacArthur Boulevard
Oakland, California

TRC

SCALE (FEET)
0 60

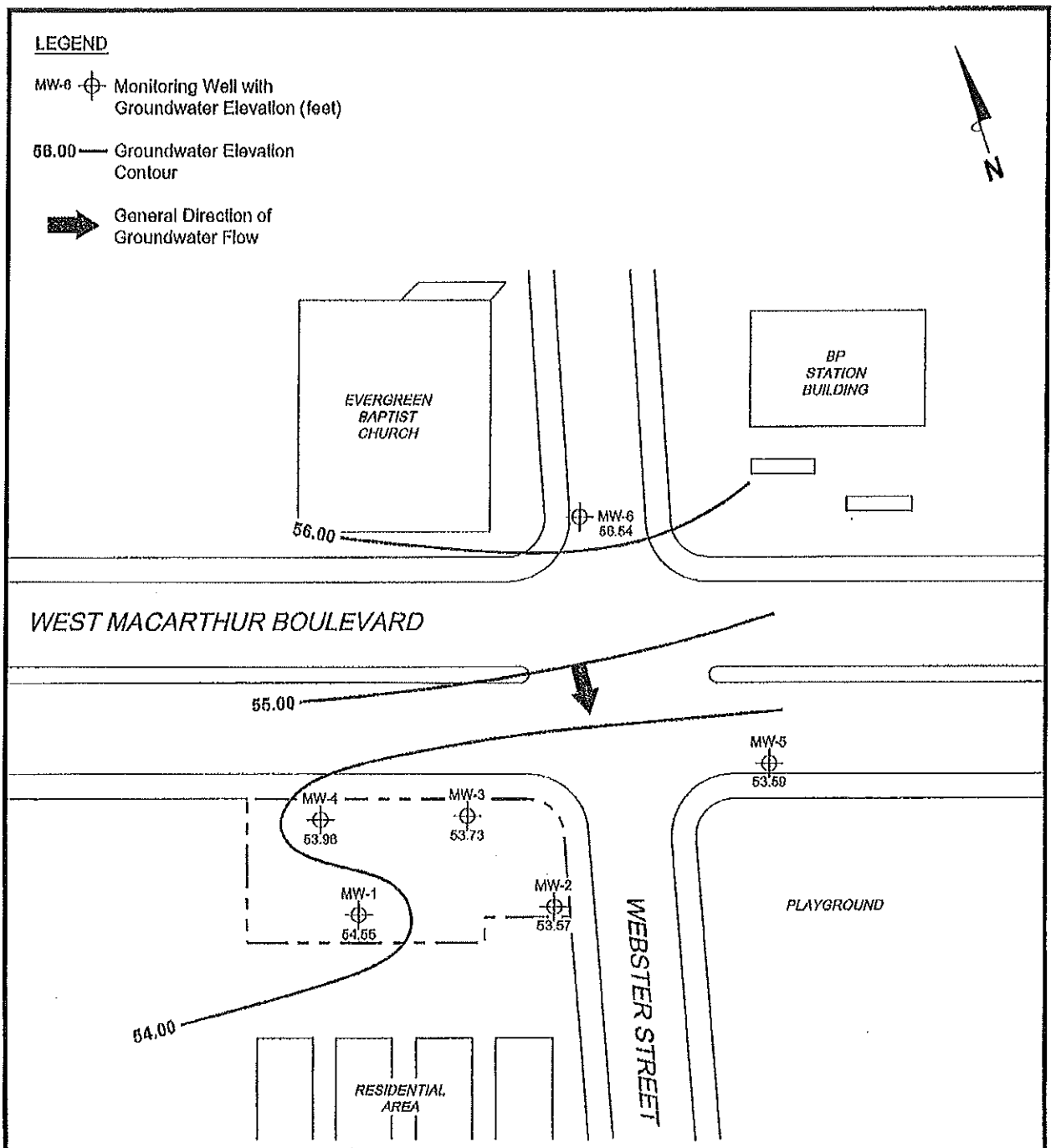
FIGURE 2

PS=1:1 3538-003 L:\Graphics\Projects\Number\20-xxxx\20-0400\Uncat\GWS\1\x-3000\3536+\3538-GWS.dwg Apr 05, 2007 - 12:15pm bschmidt



TRC	PROJECT: 126703 FACILITY: FORMER 76 STATION 3538 411 WEST MACARTHUR BLVD. OAKLAND, CALIFORNIA	GROUNDWATER ELEVATION CONTOUR MAP September 27, 2007 FIGURE 2

MS=1:1 3538-003 L:\Graphics\QMS NORTH-SOUTH\5x-3900\3538H-3538-QMS-(NEW).dwg Oct 10, 2007 - 5:41pm bschmidt



TRC	PROJECT: 154771 FACILITY: FORMER 76 STATION 3638 411 WEST MACARTHUR BLVD. OAKLAND, CALIFORNIA	GROUNDWATER ELEVATION CONTOUR MAP March 27, 2008 **FIGURE 2**

MS=1:1 3638-003 L:\GIS\graphics\EQMS NORTH-SOUTH\DX-3000\3638\3638-QMS-(NEW).dwg Apr 14, 2008 - 1:11pm cwang

76 Broadway
Sacramento, California 95818

February 18, 2011

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: **Additional Assessment Report**
Former 76 Service Station No. 3538
411 West MacArthur Boulevard
Oakland, California

RO # 0251

Dear Ms. Jakub:

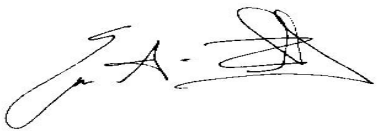
I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

If you have any questions or need additional information, please call:

Ted Moise (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818

Phone: (510) 245-5162
Fax: (918) 662-4480
Ted.Moise@contractor.conocophillips.com

Sincerely,



Eric G. Hetrick
Site Manager
Risk Management & Remediation

Attachment

anteagroup
Antea Group
11050 White Rock Road, Suite 110
Rancho Cordova, California 95670
www.anteagroup.com

February 18, 2011

Mr. Barbara Jakub
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: **ADDITIONAL ASSESSMENT REPORT**
Former 76 Service Station No. 3538
411 W. MacArthur Boulevard
Oakland, California
AOC 1178
RO# 0251

Dear Mr. Wickham:

Due to global rebranding, as of January 5, 2011 Delta Consultants has become Antea Group. Any work performed or reports submitted prior to this date will be referenced using the Delta name.

On behalf of ConocoPhillips Company (COP), Antea Group is submitting this *Additional Assessment Report*, for the above referenced location.

Please contact Jan Wagoner at (916) 503-1275 if you have questions.

Sincerely,
ANTEA GROUP

Jan W. Wagoner
Senior Project Manager

cc: Mr. Ted Moise - ConocoPhillips (electronic copy only)

ADDITIONAL ASSESSMENT REPORT

Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Antea Group Project No. C103538061

February 18, 2011

Prepared for:
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Prepared by:
Antea™Group
11050 White Rock Road
Suite 110
Rancho Cordova, CA
95670

Inogen Environmental Alliance

Antea USA, Inc.

ADDITIONAL ASSESSMENT REPORT

76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, California

February 18, 2011

Prepared for

ConocoPhillips Company
76 Broadway
Sacramento, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

ANTEA GROUP

Alan Buehler
Staff Geologist

Jan Wagoner
Project Manager

Dennis S. Dettloff, P.G.
California Registered Professional Geologist No. 7480

PROFESSIONAL GEOLOGIST
DENNIS SHANNON DETTLOFF
No. 7480
STATE OF CALIFORNIA

1.0 INTRODUCTION

On behalf of ConocoPhillips (COP), Antea™Group has prepared this *Additional Assessment Report.* Assessment activities were performed as described in Delta's *Work Plan for Additional Assessment*, dated June 3, 2009, and *Amendment to Work Plan for Additional Assessment*, dated November 5, 2010, and were approved in an Alameda County Health Care Services Agency (ACHCSA) letter to COP dated October 5, 2010 (Appendix A). As an appropriate access agreement for the private property south of the site and a City of Oakland encroachment permit could not be obtained for Webster Street to coincide with the drilling of SB-8, SB-9, and SB-10, borings SB-6 and SB-7 are pending.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The site is located at the southwest corner of West MacArthur Boulevard and Webster Street in Oakland, California (Figure 1). The site is a former service station, and all underground storage tanks (USTs) and product piping have been removed. A canopy over the former dispenser island locations and a station building located in the southwestern portion of the site are still in place (Figure 2). There are currently six groundwater monitoring wells (MW-1 through MW-6) on and in the vicinity of the site. Properties in the immediate vicinity of the site are utilized for commercial and residential purposes.

2.2 PREVIOUS ASSESSMENT

A site map with historical sampling locations is included as Figure 4.

July 1989: One 10,000-gallon and one 12,000-gallon gasoline USTs were removed and replaced with two new 12,000-gallon USTs. One 550-gallon waste oil UST and the associated piping for all three tanks were also removed. No holes or cracks were observed in the gasoline USTs; however, holes were observed in the waste oil UST. Groundwater was encountered in the former UST pit at a depth of approximately 10.5 feet below ground surface (bgs), which prohibited the collection of soil samples below the former fuel USTs. Confirmation soil samples from the sidewalls contained moderate maximum concentrations of total petroleum hydrocarbons as gasoline (TPHg), and low maximum concentrations of benzene. These sample areas were subsequently over-excavated. Soil samples from the base of the waste oil UST pit did not contain TPHg or benzene, toluene, ethyl-benzene, and xylenes (BTEX compounds). (Kaprealian Engineering, INC., 1989)

September 1989: Kaprealian Engineering, INC. (KEI) installed four groundwater monitoring wells at the site to depths of approximately 30 feet bgs.

November 1992: Two additional groundwater monitoring wells were installed off-site to a depth of 30 feet bgs. (KEI, 1993)

September 1998: Two 12,000-gallon gasoline USTs and associated product piping and dispensers were removed from the site during station demolition activities. No holes or cracks were observed in the tanks. Confirmation soil samples contained low maximum concentrations of TPHg and benzene. Methyl tertiary-butyl ether (MTBE) was below the laboratory's indicated reporting limits.

October 2003: Site environmental consulting responsibilities were transferred to TRC.

March 2006: TRC conducted additional soil and groundwater assessment at the site. The investigation involved the advancement of three onsite soil borings (SB-3, SB-4, and SB-5) and two offsite soil borings (SB-1 and SB-2) to sufficient depth to obtain representative groundwater samples (approximately 16 feet bgs).

October 2007: Site environmental consulting responsibilities were transferred to Delta.

2.3 SENSITIVE RECEPTORS

In 2002, Gettler-Ryan, Inc. requested that California Department of Water Resources (DWR) perform a record search of their files for the presence of water supply wells within a 2,000 foot radius of the site. The DWR file search revealed that there are no water supply wells located within 2,000 feet of the site. The nearest well identified is a private water well located approximately 2,500 feet east-southeast of the site, in the cross-gradient groundwater flow direction.

2.4 SITE GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps the site is underlain by Late Pleistocene Alluvium. This alluvium is considered to be alluvial fan deposits, and is described as consisting of weakly consolidated, slightly weathered, irregularly interbedded clay, silt, and gravel. The maximum thickness of these deposits is unknown, but is considered to be at least 150 feet thick.

Based on subsurface investigation performed at the site, the first 1.5 feet of the subsurface is composed of artificial fill. The fill is underlain by an unsaturated zone consisting of clay with minor amounts of sand and gravel, to a depth of approximately 18 feet blow ground surface (bgs). The saturated zone, extending from approximately 18 to 30 feet bgs (limit of exploration), is composed of gravel with silt and sand, interbedded with clayey sand and clayey silt.

Monitoring and sampling of wells at the site has been performed since September 1989. Depth to groundwater has varied from approximately 11 to 19 feet below top of casing (TOC). Groundwater flow direction has been predominantly towards the south and south-southeast with occasional deviation to the east-southeast and southwest.

3.0 ADDITIONAL ASSESSMENT

3.1 PRE-FIELD ACTIVITIES

Before commencing field operations Antea Group prepared a site-specific health and safety plan in accordance with state and federal requirements for use during site assessment activities. Antea Group also obtained the appropriate permits from Alameda County Public Works Agency (ACPWA) (Appendix B).

Prior to performing any drilling activities, Antea Group identified and marked the proposed boring locations and notified Underground Service Alert (USA) as required. A private utility locating service was also contracted to clear the proposed boring locations for underground utilities.

All the proposed soil boring locations were cleared by air vacuum to five feet bgs, to avoid damage to possible underground utilities.

3.2 SOIL AND GROUNDWATER BORINGS

The purpose of the proposed borings was to confirm the petroleum hydrocarbon concentrations reported during the soil and groundwater investigation activities detailed in TRC's *Soil and Groundwater Investigation Report*, dated April 28, 2006 and monitoring well MW-3 installation activities detailed in Kaprealian Engineering, Inc.'s (KEI's) *Preliminary Groundwater Investigation at Unocal Service Station #3538*, dated October 23, 1989. Initially, 5 borings were proposed, two offsite down-gradient (SB-6 and BS-7), and three onsite (SB-8 through SB-10). Borings SB-8 through SB-10 are shown on Figure 2. However, due to permitting and access agreement issues, only the onsite borings were advanced. Borings SB-6 and SB-7 will be advanced once access agreements are in place for SB-6.

On December 15, 16, 20, and 21, 2010, Antea Group oversaw air-knifing and advancement of three direct push soil borings SB-8 through SB-10. Boring SB-8 was advanced to 25 feet bgs in the vicinity of MW-3, north of the former UST pit, and east of the former dispenser islands. Boring SB-9 was advanced to 30 feet bgs in the vicinity of boring SB-3, east of the former UST pit. Boring SB-10 was advanced to 30 feet bgs in the vicinity of boring SB-5, south of the former UST pit and dispenser islands.

For boring SB-8, only one hole was advanced for soil sampling and the collection of a grab groundwater sample. For borings SB-9 and SB-10, three holes were advanced at each location: one for soil sampling, and two for collection of two depth discrete groundwater samples.

3.2.1 Soil Sampling

Soil was collected continuously from just below the air-vacuum cleared depth of 5 feet bgs to total depth in each borehole using GeoProbe direct push technology equipped with acetate liners. Soil was logged for lithology using the Unified Soils Classification System (USCS). Soil samples were collected continuously in boring SB-8 from 5 feet bgs to 20 feet bgs. Four soil samples were collected for analysis from 5, 10, 15, and 20 feet bgs. Soil samples were collected continuously in borings SB-9 and SB-10 from 5 feet bgs to 30 feet bgs. Six soil samples were collected for analysis from 5, 10, 15, 20, 25, and 30 feet bgs from each borehole.

Each sample was collected by cutting a six-inch section from the acetate liner at the corresponding depth. Each sample was then capped with Teflon® sheeting and tight-fitting plastic end caps, labeled, and placed on ice in preparation for transportation to a California-certified laboratory. All sampled were accompanied by proper chain of custody (COC) documentation.

3.2.2 Groundwater Sampling

Groundwater samples were collected from each borehole using HydroPunch® technology in which 0.75-inch temporary polyvinyl chloride (PVC) well screen is exposed to groundwater bearing zones using direct push technology. Groundwater samples collected from boring SB-8 were depth discrete grab samples collected with screen exposed from 20 to 25 feet bgs. Initially, based on lithological data, an attempt was made to obtain a grab sample with temporary well screen exposed from 15 to 20 feet bgs, but no water was encountered.

Based on lithologic data collected during soil sampling, two depth discrete groundwater samples were collected from each boring SB-9 and SB-10. In both borings, the shallow sample was collected with temporary screen exposed from 17 to 22 feet bgs, while the deep sample was collected with temporary screen exposed from 24 to 29 feet bgs.

All groundwater samples were collected in appropriate sample bottles, labeled, and placed on ice in preparation for transportation to a California-certified laboratory. All samples were accompanied by proper COC documentation.

3.2.3 Analysis

Soil and groundwater samples were analyzed for TPHg, BTEX, and 8 fuel oxygenates [MTBE, tert-butyl alcohol (TBA), ethylene dibromide (EDB), 1,2 dicholoroethane (1,2-DCA), di-isopropyl ether (DIPE), tert amyl methyl ether (TAME), ethyl tert butyl ether (ETBE), and ethanol] by Environmental Protection Agency (EPA) Method 8260. A copy of the certified laboratory report is included as Appendix C.

3.3 DISPOSAL OF DRILL CUTTINGS AND WASTEWATER

Drill cuttings and wastewater generated during proposed soil, groundwater and soil vapor assessment activities were placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored at the service station site. Samples of the drill cuttings and wastewater were collected, properly labeled and placed on ice for submittal to a California-certified laboratory and analyzed for TPHg, BTEX, and MTBE by EPA Method 8260B. Additionally, soil samples will also be analyzed for CAM 17 metals by EPA Method 6010. A chain-of-custody accompanied the samples during transportation to the laboratory. Subsequent to receiving the laboratory analytical results, the drummed drill cuttings and wastewater will be profiled and transported for disposed of at a COP approved facility.

4.0 DISCUSSION

A site map with current wells and current investigation sampling locations is included as Figure 2. A site map with historical sampling locations is includes as Figure 3. Current soil and grab groundwater analytical results are included in Table 1 and Table 2, respectively. Historical soil and grab groundwater analytical results are included in Table 3 and Table 4, respectively. Boring logs for borings SB-8 through SB-10 are included as Appendix D.

Historical groundwater flow directions are presented in a rose diagram as Figure 4. In the 2006 *Soil and Groundwater Investigation Report*, TRC included a rose diagram that depicted the predominant groundwater flow directions through first quarter 2006 to be east and southwest. After re-evaluation of this existing data, and the addition of data from second quarter 2006 through third quarter 2010, Figure 4 shows the predominant groundwater flow directions to be south and south-southeast. Since second quarter 1994, all reported flow directions have been generally southerly, ranging between east-southeast and southwest, with the exception of second quarter 2001 (northeast), and third quarter 2006 (west). Since third quarter 2007, reported flow directions have been to the south.

Borings SB-8 and SB-9 were confirmation sampling locations for monitoring well MW-3 and boring SB-3, respectively. Boring SB-10 was a sampling location down-gradient of the former USTs.

Benzene concentrations present in soil in the original borings for monitoring well MW-3 and boring SB-3 were the main concern of the regulatory agency. Benzene concentrations in soil from each of the borings (SB-8, SB-9, and SB-10) from all depths were below laboratory indicated reporting limits, with the exception of 15 and 20 feet bgs in boring SB-9 (1.4 milligrams per kilogram (mg/kg) and 0.17 mg/kg benzene, respectively). This data confirms that benzene concentrations in soil in the vicinity of monitoring well MW-3 and boring SB-8 are no longer present and benzene is not present in the soil in the vicinity of boring SB-10 to 30 feet bgs. While benzene concentrations in the soil sample collected

from boring SB-9 were higher than those in boring SB-3, soil sampled collected at both 5 feet and 10 feet bgs were below the laboratory's indicated reporting limits.

This would indicate at least 10 to 15 feet of soil with no reportable benzene concentrations are present immediately below the ground surface in boring SB-9 and no reportable benzene concentrations were reported in boring SB-8 to 20 feet bgs. This would indicate the potential for vapor intrusion in the vicinity of borings SB-3, MW-3, SB-8, SB-9, and SB-10 are minimal and no additional vapor intrusion assessment is necessary.

The highest soil TPHg concentrations were reported in boring SB-8, just north of the former gasoline USTs, and just east of the former dispenser islands. In this boring, TPHg was reported at a concentration of 520 mg/kg at 20 feet bgs. TPHg concentrations at shallower depths in this boring were below or near the laboratory's indicated reporting limits. TPHg concentrations reported in soil samples collected from boring SB-9 were below 10 mg/kg at each depth sampled. TPHg concentrations reported in soil samples collected from boring SB-10, south of the former USTs, were below 1.0 mg/kg from each depth sampled.

Benzene was reported in groundwater samples collected from each of the borings and each depth, with the exception of boring SB-8 (between 20 to 25 feet bgs) which was below laboratory's indicated reporting limits. Benzene was present in both the shallow (17-22 feet bgs) and deep (24-29 feet bgs) samples collected from boring SB-9. The shallow sample contained 420 µg/L benzene, while the deep sample contained 79 µg/L benzene. Both of these concentrations are lower than the 510 µg/L benzene reported in groundwater samples collected from boring SB-3 in 2006. Benzene concentrations in the shallow (17-22 feet bgs) and deep (24-29 feet bgs) samples collected from boring SB-10 were 20 µg/L and 1.8 µg/L, respectively.

TPHg concentrations in groundwater were the highest in samples collected from boring SB-9, in the middle of the driveway along the eastern edge of the property, cross-gradient to the former USTs. TPHg was reported in this boring at a maximum concentration of 9,500 µg/L from the shallow sample (17-22 feet bgs). The deeper sample (24-29 feet bgs) from boring SB-9 reported a TPHg concentration of 2,900 µg/L. Only one sample (20-25 feet bgs was collected from boring SB-8, with a reported TPHg concentration of 2,000 µg/L. TPHg in boring SB-10 was reported with a maximum concentration of 1,500 µg/L in the shallower sample (17-22 feet bgs) and a concentration of 310 µg/L in the deeper sample (24-29 feet bgs).

Historically, groundwater flow was predominantly to the south-southeast and south, and to a lesser extent northeast, east northeast, southwest, and south-southwest. During the 2006 TRC investigation, reported TPHg concentrations in boring SB-2 (east across Webster Street) were below the laboratory's indicated reporting limits for each constituent analyzed. This indicates that while residual petroleum hydrocarbons may be present in boring SB-9, petroleum hydrocarbons have not migrated offsite across Webster Street (Figure 3). Petroleum hydrocarbons present in boring SB-10 indicate petroleum hydrocarbons are present in groundwater south of the former USTs.

5.0 RECOMMENDATIONS

In Delta's *Work plan for Additional Assessment*, dated June 3, 2009, and *Amendment to Work plan for Additional Assessment*, dated November 5, 2010, the proposed scope of work included advancing boring SB-6 in the private property immediately to the south of the site, and boring SB-7 in the street southeast of the site at the corner of Webster Street and 37th Street. Due to access issues with the

private property owner on which the proposed SB-6 boring is located, and permitting issues with the City of Oakland, borings SB-6 and SB-7 were not advanced as part of this investigation. The purpose of boring SB-6 was to better assess offsite impact south of the USTs and site. The purpose of SB-7 was to better assess any possible migration of site impact offsite to the southeast.

Upon implementation of an access agreement for boring SB-6, and proper permitting for boring SB-7, these borings will be advanced. However, Antea Group proposes to shift the location of boring SB-6 slightly to the west closer to the property line between the 402 37th Street and 412 37th Street properties. This location will put this boring in a more directly down-gradient (south) of the former USTs and boring SB-10. The locations of proposed borings SB-6 and SB-7 are shown on Figure 5.

In ACHCSA's letter to COP dated October 5, 2010, a work plan for assessment of soil vapor pathways was requested upon the confirmation of the presence of benzene in the vicinity of MW-3 and SB-3. ACHCSA's main concern was in regards to soil vapor was the soil sample from MW-3 at 10 feet bgs. No benzene concentrations were reported in boring SB-8. While benzene is present in boring SB-9, the shallowest reported benzene concentrations are at 15 feet bgs. Between 10 and 15 feet of soil with no reportable benzene concentrations are present below the ground surface in the vicinity of borings SB-3 and SB-9 and benzene was not reported in each of the soil sample collected from borings SB-8 and SB-10 to the maximum depths of 20 feet bgs and 30 feet bgs, respectively. As such, Antea Group does not recommend performance of a soil vapor assessment investigation, and has not prepared the work plan noted in ACHCSA's letter of October 5, 2010.

6.0 LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Antea Group's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of ConocoPhillips for the expressed purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Antea Group. To the extent that this report is based on information provided to Antea Group by third parties, Antea Group may have made efforts to verify this third party information, but Antea Group cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied, are made by Antea Group.

CONSULTANT: ANTEA GROUP

*****

FIGURES

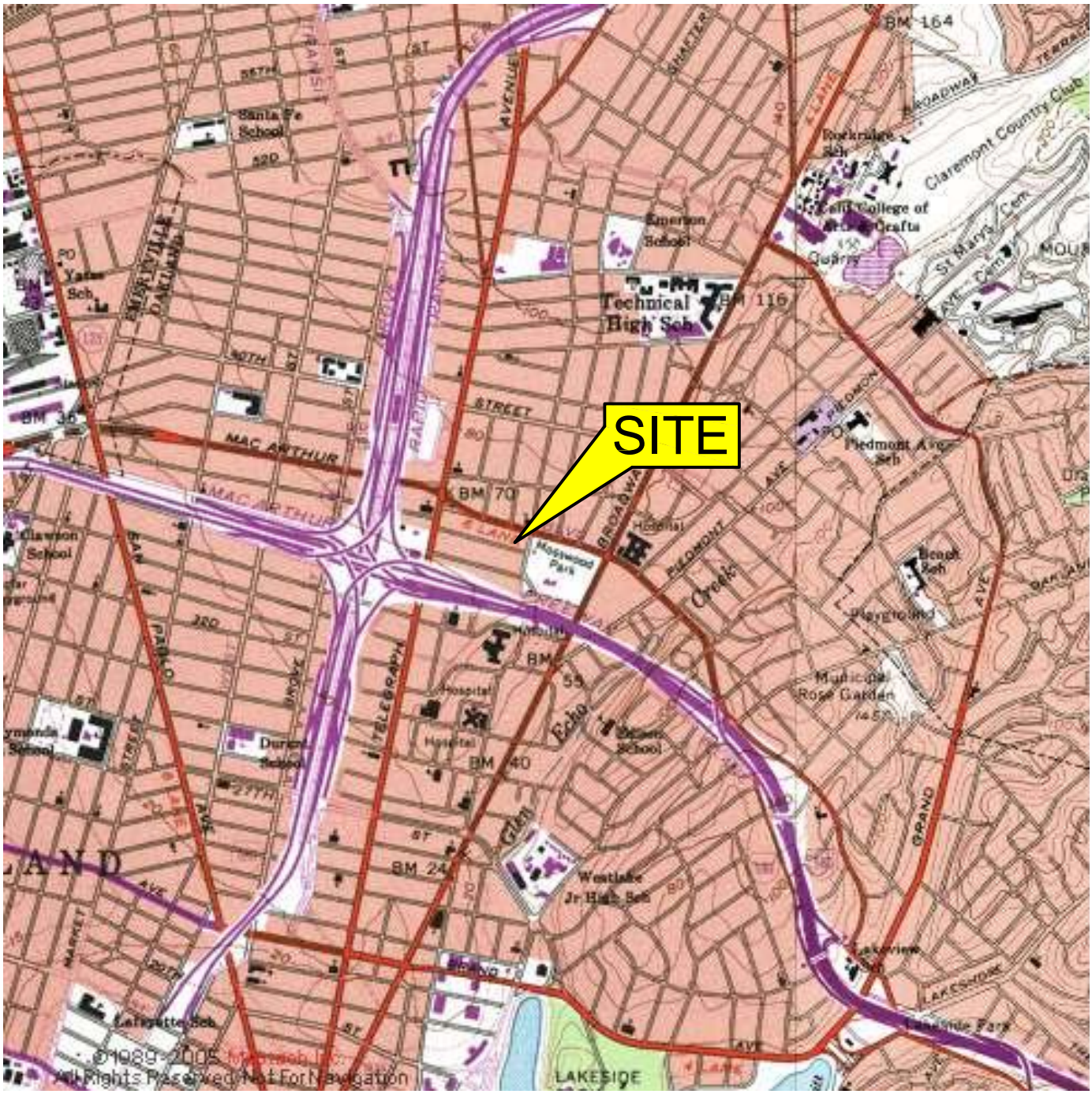
Figure 1 – Site Locator Map
Figure 2 – Site Plan with Current Well and Current Investigation Sampling Locations
Figure 3 – Site Plan with Historical Sampling Locations
Figure 4 – Historical Groundwater Flow Direction Rose Diagram
Figure 5 – Site Plan with Proposed Borings

TABLES

Table 1 – Current Soil Analytical Results
Table 2 – Current Grab Groundwater Analytical Results
Table 3 – Historical Soil Analytical Results

APPENDICES

FIGURES



North

0 2400 FT 4800 FT

SCALE: 1 : 24,000

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE (1993)

FIGURE 1

SITE LOCATION MAP

FORMER 76 STATION NO. 3538
411 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C103538	DRAWN BY JH 11/14/08
FILE NO. 3538-Site Locator	PREPARED BY NP
REVISION NO.	REVIEWED BY DB

anteagroup

EVERGREEN
BAPTIST
CHURCH

MW–6

BP
STATION

DISPENSER ISLANDS
& CANOPIES

WEST MACARTHUR BOULEVARD

MW–5

MW–4

MW–3

SB–8

RESIDENTIAL
419/421
WEST
MACARTHUR

FORMER
DISPENSER
ISLANDS

FORMER UST

FORMER UST

SB–9

STATION
BUILDING

MW–1

CANOPY

SB–10

MW–2

FORMER
WASTE OIL UST

SHED

LOT

WEBSTER STREET

PLAYGROUND

RESIDENTIAL
428 37TH
STREET

RESIDENTIAL
424 37TH
STREET

RESIDENTIAL
420 37TH
STREET

RESIDENTIAL
416 37TH
STREET

RESIDENTIAL
412 37TH
STREET

RESIDENTIAL
402 37TH
STREET

LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

SOIL BORING (DELTA 2010)

N

0 30 FT

SCALE

SOURCE: Site plan by Gettler–Ryan, August 2000.

FIGURE 2
SITE PLAN WITH CURRENT WELLS AND CURRENT SAMPLING LOCATIONS
FORMER 76 STATION 3538
411 WEST MACARTUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103538	AB	JH
DATE	REVIEWED BY	FILE NAME
2/10/11	LH	76–3538

anteagroup

EVERGREEN
BAPTIST
CHURCH

BP
STATION

DISPENSER ISLANDS
& CANOPIES

MW-6

WEST MACARTHUR BOULEVARD

MW-5

RESIDENTIAL
419/421
WEST
MACARTHUR

STATION
BUILDING

MW-4
SB-4
P2
P3(6)
MW-3
SB-8
SW3
SW4
P4(6)
P1
A2
B2
SB-3
FORMER
DISPENSER
ISLANDS
SW2
P3
P2(6)
P4
SB-9
SW4(2)
P1(6)
FORMER UST
FORMER UST
A1
B1
CANOPY
MW-1
WO1
SB-10
SW1(4)
SW1
MW-2
SB-5
FORMER
WASTE OIL UST
SHED
LOT
WEBSTER STREET
SB-2
PLAYGROUND
SB-1

RESIDENTIAL
428 37TH
STREET

RESIDENTIAL
424 37TH
STREET

RESIDENTIAL
420 37TH
STREET

RESIDENTIAL
416 37TH
STREET

RESIDENTIAL
412 37TH
STREET

RESIDENTIAL
402 37TH
STREET

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER MONITORING WELL
- SOIL BORING (DELTA 2010)
- SOIL BORING (TRC 2006)
- SOIL SAMPLING LOCATION (GRI 1999)
- SOIL SAMPLING LOCATION (KEI 1982)

N

0 30 FT
SCALE

SOURCE: Site plan by Gettler-Ryan, August 2000.

FIGURE 3
SITE PLAN WITH HISTORICAL SAMPLING LOCATIONS

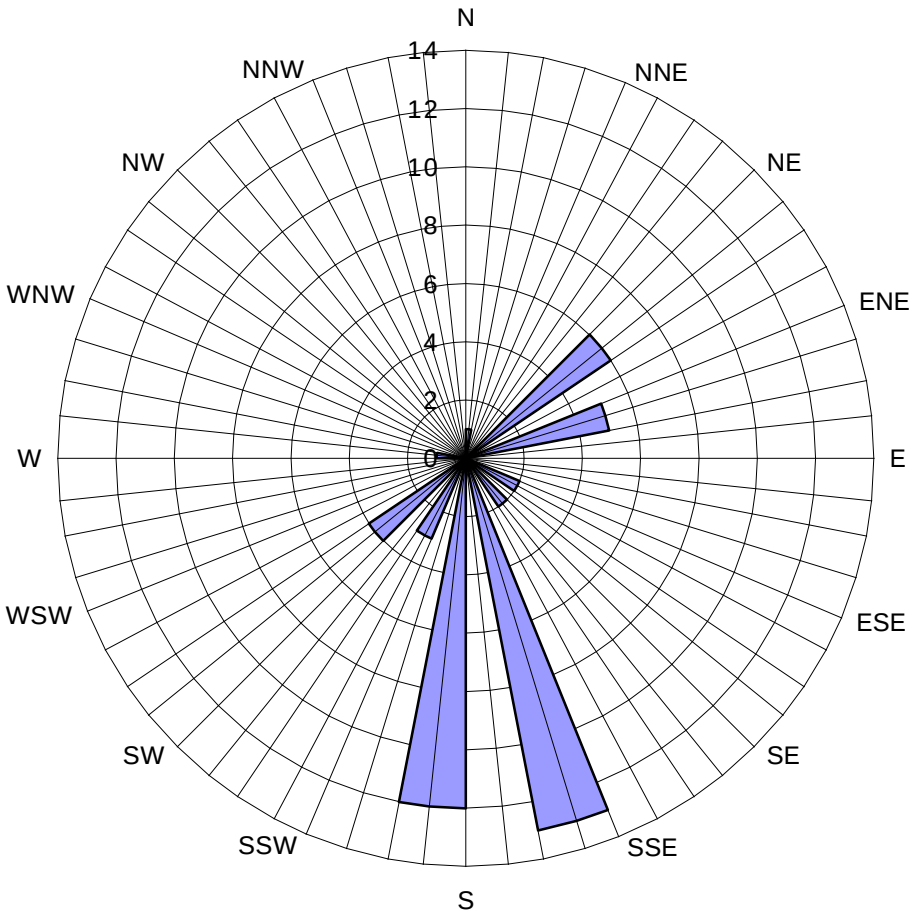
FORMER 76 STATION 3538
411 WEST MACARTUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103538	CM	JH
DATE	REVIEWED BY	FILE NAME
2/16/11	JW	76-3538

anteagroup

FIGURE 4

Historic Groundwater Flow Directions
Site No. 3538
411 W. MacArthur Blvd
Oakland, California



Legend

Concentric circles represent quarterly montoring events.
Second Quarter 1990
through
Third Quarter 2010.
49 data points shown.

EVERGREEN
BAPTIST
CHURCH

MW–6

BP
STATION

DISPENSER ISLANDS
& CANOPIES

WEST MACARTHUR BOULEVARD

MW–5

MW–4

MW–3

SB–8

RESIDENTIAL
419/421
WEST
MACARTHUR

FORMER
DISPENSER
ISLANDS

FORMER UST

FORMER UST

SB–9

STATION
BUILDING

MW–1

CANOPY

SB–10

MW–2

FORMER
WASTE OIL UST

SHED

LOT

SB–6

WEBSTER STREET

PLAYGROUND

SB–7

RESIDENTIAL
428 37TH
STREET

RESIDENTIAL
424 37TH
STREET

RESIDENTIAL
420 37TH
STREET

RESIDENTIAL
416 37TH
STREET

RESIDENTIAL
412 37TH
STREET

RESIDENTIAL
402 37TH
STREET

LEGEND

APPROXIMATE PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

SOIL BORING (DELTA 2010)

PROPOSED SOIL BORING

N

0 30 FT

SCALE

SOURCE: Site plan by Gettler–Ryan, August 2000.

FIGURE 5
SITE PLAN WITH PROPOSED BORING LOCATIONS

FORMER 76 STATION 3538
411 WEST MACARTUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103538	CM	JH
DATE	REVIEWED BY	FILE NAME
2/16/11	JW	76–3538

anteagroup

TABLES

Table 1
Soil Analytical Results
76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Ethanol (mg/kg)
SB-8@5	12/20/10	5	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-8@10	12/20/10	10	**0.30**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-8@15	12/20/10	15	<10	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-8@20	12/20/10	20	**520**	<1.2	**19**	**19**	**86**	<1.2	<12	<1.2	<1.2	<1.2	<1.2	<1.2	<250
SB-9@5	12/20/10	5	**9.9**	<0.025	<0.025	**0.10**	**0.059**	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@10	12/20/10	10	**3.0**	<0.0050	**0.011**	**0.069**	**0.28**	**0.014**	**0.40**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-9@15	12/20/10	15	<10	**1.4**	**0.28**	**0.14**	**0.66**	**0.04**	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@20	12/20/10	20	**4.5**	**0.17**	**0.10**	**0.067**	**0.37**	**0.62**	**0.58**	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@25	12/20/10	25	**0.30**	<0.0050	**0.014**	**0.0050**	**0.028**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-9@30	12/20/10	30	**0.28**	<0.0050	**0.02**	**0.011**	**0.043**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@5	12/21/10	5	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@10	12/21/10	10	**0.28**	<0.0050	<0.0050	<0.0050	**0.017**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@15	12/21/10	15	**0.47**	<0.0050	<0.0050	**0.0055**	**0.024**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@20	12/21/10	20	**0.31**	<0.0050	<0.0050	**0.047**	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@25	12/21/10	25	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@30	12/21/10	30	<0.20	<0.0050	<0.0050	<0.0050	**0.012**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0

TPHg = total petroleum hydrocarbons as gasoline MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether DIPE = diisopropyl ether
ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane ND = non detect, where reporting limit is not known
bold = value above reporting limit mg.kg = milligrams per kilogram

Table 2
Groundwater Analytical Results
76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	EDB	1,2-DCA	Ethanol
		(ft)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
SB-8@20-25	12/20/10	20-25	**2000**	<0.50	**48**	**98**	**340**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-9@17-22	12/20/10	17-22	**9500**	**430**	**2000**	**330**	**2100**	**190**	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<2500
SB-9@24-29	12/20/10	24-29	**2900**	**79**	**470**	**100**	**540**	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<2500
SB-10@17-22	12/20/10	17-22	**1500**	**20**	**0.96**	**75**	**8.3**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-10@24-29	12/20/10	24-29	**310**	**1.8**	**25**	**12**	**63**	**5.8**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250

TPHg = total petroleum hydrocarbons as gasoline MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether DIPE = diisopropyl ether
ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane TOG = total oil and grease ND = non detect, where reporting limit is not known
bold = value above reporting limit ug/L = micrograms per liter

Table 3
Historical Soil Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	1-2,DCA (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)	Lead (mg/kg)
SW-1	6/12/1989	10	**3100**	--	**12**	**300**	**730**	**110**	--	--	--	--	--	--	--	--	--	--
SW-1 (4)	6/12/1989	10	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
SW2	6/12/1989	10	**1.1**	--	**0.1**	<0.10	**0.18**	<0.10	--	--	--	--	--	--	--	--	--	--
SW3	6/12/1989	10	**5.7**	--	**0.26**	<0.10	**0.45**	**0.23**	--	--	--	--	--	--	--	--	--	--
SW4	6/12/1989	10	**2.5**	--	<0.050	<0.10	**0.24**	<0.10	--	--	--	--	--	--	--	--	--	--
SW4 (2)	6/12/1989	10	**11**	--	**0.61**	**0.51**	**1.3**	**0.44**	--	--	--	--	--	--	--	--	--	--
P1	6/12/1989	6.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P2	6/12/1989	6.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P3	6/12/1989	5.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P4	6/12/1989	10	**170**	--	**0.71**	**12**	**47**	**6.8**	--	--	--	--	--	--	--	--	--	--
WO1	6/12/1989	8.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
MW-1 (5)	9/6/1989	5	**3.4**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (10)	9/6/1989	10	**5**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (15)	9/6/1989	15	**2.2**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (19)	9/6/1989	19	<1.0	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW2 (5)	9/6/1989	5	**1.4**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (10)	9/6/1989	10	<1.0	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (15)	9/6/1989	15	**1.8**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (19)	9/6/1989	19	**13**	--	**1.5**	**2.1**	**0.34**	**1.8**	--	--	--	--	--	--	--	--	--	--
MW3 (5)	9/6/1989	5	**1.3**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (10)	9/6/1989	10	**1.8**	--	**0.29**	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (15)	9/6/1989	15	**3.3**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (18.5)	9/6/1989	18.5	<1.0	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW4 (5)	9/6/1989	5	**3.1**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW4 (10)	9/6/1989	10	**17**	--	<0.050	<0.010	<0.010	**0.1**	--	--	--	--	--	--	--	--	--	--
MW4 (15)	9/6/1989	15	**20**	--	<0.050	<0.010	<0.010	**0.27**	--	--	--	--	--	--	--	--	--	--
MW4 (18.5)	9/6/1989	18.5	**2.1**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW5 (5)	11/18/1992	5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (10)	11/18/1992	10	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (15)	11/18/1992	15	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (21)	11/18/1992	21	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (5)	11/18/1992	5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (10)	11/18/1992	10	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (15)	11/18/1992	15	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (19.5)	11/18/1992	19.5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
A1 (19)	9/14/1998	19	**3.5**	--	**0.53**	**0.36**	**0.069**	**0.40**	<0.050	--	--	--	--	--	--	--	--	**26**
A2 (18)	9/14/1998	18	**12**	--	**0.050**	**0.075**	<0.0050	**0.026**	<0.050	--	--	--	--	--	--	--	--	<1.0
B1 (19.5)	9/14/1998	19.5	**360**	--	**1.5**	**15**	**7.0**	**44**	<0.050	--	--	--	--	--	--	--	--	**1.7**
B2 (19.5)	9/14/1998	19.5	**6.7**	--	**0.017**	**1.8**	**0.24**	**1.4**	<0.050	--	--	--	--	--	--	--	--	**2.7**
P1 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	**11**
P2 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	**1.3**
P3 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	<1.0
P4 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	<1.0

Table 3
Historical Soil Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	1-2,DCA (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)	Lead (mg/kg)
SB-1@5	3/27/2006	5	<0.97	--	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	--	--
SB-1@9	3/27/2006	9	**2.8**	--	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.48	--	--
SB-2@5	3/27/2006	5	<0.97	--	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	--	--
SB-2@9	3/27/2006	9	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-3@14	3/27/2006	14	**1.3**	--	**0.11**	<0.0046	**0.061**	**0.055**	**0.64**	**0.19**	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-3@16	3/27/2006	16	**6100**	--	<9.7	**53**	**86**	**420**	<9.7	<19	<9.7	<9.7	<9.7	<9.7	<9.7	<190	--	--
SB-4@5	3/27/2006	5	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-4@15	3/27/2006	15	<0.92	--	<0.0046	<0.0046	<0.0046	<0.0092	<0.0046	<0.0092	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-5@9	3/27/2006	9	<0.93	--	<0.0046	<0.0046	<0.0046	<0.0093	<0.0046	<0.0093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-5@13	3/27/2006	13	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-8@5	12/20/10	5	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-8@10	12/20/10	10	**0.30**	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-8@15	12/20/10	15	<10	--	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-8@20	12/20/10	20	**520**	--	<1.2	**19**	**19**	**86**	<1.2	<12	<1.2	<1.2	<1.2	<1.2	<1.2	<250	--	--
SB-9@5	12/20/10	5	**9.9**	--	<0.025	<0.025	**0.10**	**0.059**	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@10	12/20/10	10	**3.0**	--	<0.0050	**0.011**	**0.069**	**0.28**	**0.014**	**0.40**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-9@15	12/20/10	15	<10	--	**1.4**	**0.28**	**0.14**	**0.66**	**0.04**	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@20	12/20/10	20	**4.5**	--	**0.17**	**0.10**	**0.067**	**0.37**	**0.62**	**0.58**	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@25	12/20/10	25	**0.30**	--	<0.0050	**0.014**	**0.0050**	**0.028**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-9@30	12/20/10	30	**0.28**	--	<0.0050	**0.02**	**0.011**	**0.043**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@5	12/21/10	5	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@10	12/21/10	10	**0.28**	--	<0.0050	<0.0050	<0.0050	**0.017**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@15	12/21/10	15	**0.47**	--	<0.0050	<0.0050	**0.0055**	**0.024**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@20	12/21/10	20	**0.31**	--	<0.0050	<0.0050	**0.047**	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@25	12/21/10	25	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@30	12/21/10	30	<0.20	--	<0.0050	<0.0050	<0.0050	**0.012**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--

TPHg = total petroleum hydrocarbons as gasoline TPHd = total petroleum hydrocarbons as diesel MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether DIPE = diisopropyl ether
ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane TOG = total oil and grease **bold** = value above reporting limit mg/kg = milligrams per kilogram

Table 4
Historical Grab Groundwater Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	TAME (ug/L)	DIPE (ug/L)	ETBE (ug/L)	EDB (ug/L)	1-2,DCA (ug/L)	Ethanol (ug/L)
SB-1W	3/27/2006	--	**120**	**11**	<0.050	<0.050	<1.0	**130**	**28**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-2W	3/27/2006	--	<50	<0.050	<0.050	<0.050	<1.0	<0.050	<5.0	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-3W	3/27/2006	--	**13000**	**510**	**470**	**1400**	**2600**	**340**	**57**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-4W	3/27/2006	--	<50	<0.050	<0.050	<0.050	<1.0	**3.4**	<5.0	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-5W	3/27/2006	--	**3000**	**44**	**63**	**1.2**	**30**	**53**	**17**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-8@20-25	12/20/10	20-25	**2000**	<0.50	**48**	**98**	**340**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-9@17-22	12/20/10	17-22	**9500**	**430**	**2000**	**330**	**2100**	**190**	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<2500
SB-9@24-29	12/20/10	24-29	**2900**	**79**	**470**	**100**	**540**	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<2500
SB-10@17-22	12/20/10	17-22	**1500**	**20**	**0.96**	**75**	**8.3**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-10@24-29	12/20/10	24-29	**310**	**1.8**	**25**	**12**	**63**	**5.8**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250

TPHg = total petroelum hydrocarbons as gasoline TPHd = total petroleum hydrocarbons as diesel MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether
DIPE = diisopropyl ether ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane TOG = total oil and grease ND = non detect, where reporting limit is not known
bold = value above reporting limit ug/L = micrograms per liter

APPENDIX A

ACHCSA Letter dated October 5, 2010

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 5, 2010

Mr. Bill Borgh
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Messrs. Arthur Yu and Kevin Ma
411 W. MacArthur Blvd.
Oakland, CA 94609

Subject: Work Plan, Approval for Fuel Leak Case No. RO0000251 and Geotracker Global ID T0600101472, Unocal #3538, 411 W. MacArthur Blvd., Oakland, CA 94609

Dear Messrs. Borgh, Yu and Ma:

Thank you for the recently submitted documents entitled, *Site Conceptual Model* dated October 15, 2008, and Work Plan for Additional Assessment dated May 27, 2009 which were prepared by Delta Environmental for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned report/work plan for the above-referenced site. The SCM identifies additional work that is needed and the work plan presents work plan that addresses the identified data gaps.

The proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. However, submittal of a map showing the locations of additional borings is required.

TECHNICAL COMMENTS

1. **Soil and Groundwater Characterization** – In addition to the proposed off-site sampling location, ACEH requests that you perform a boring downgradient of the source area to delineate the vertical extent of groundwater contamination and requests that you determine if the residual concentrations of benzene detected in soil in MW-3 and SB-3 are still present. If they are present please present a plan to assess the vapor pathway at the site in the report requested below.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and perform the proposed work. Please provide ACEH with at least three (3) business days notification prior to conducting the fieldwork (e-mail preferred to barbara.jakub@acgov.org).

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Barbara Jakub), according to the following schedule:

- **November 5, 2010** – Map showing locations of requested borings.
- **January 5, 2010** – SWI with vapor pathway assessment work plan if needed.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosure: Responsible Party(ies) Legal Requirements/Obligations
ACEH Electronic Report Upload (ftp) Instructions

cc: Jan Wagoner, Delta Environmental, 11050 White Rock Rd., Suite 110 Rancho Cordova, CA 95670 (Sent via E-mail to: jwagoner@deltaenv.com)
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Barbara Jakub, ACEH (*Sent via E-mail to: barbara.jakub@acgov.org*)
GeoTracker, e-file

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.

d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

ACPWA Drilling Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 12/07/2010 By jamesy

Permit Numbers: W2010-0989
Permits Valid from 12/15/2010 to 12/24/2010

Application Id: 1291420038960 **City of Project Site:** Oakland
Site Location: 411 W MacArthur Blvd, Oakland, CA
Project Start Date: 12/15/2010 **Completion Date:** 12/24/2010
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Delta - Jan Wagoner **Phone:** 916-503-1275
11050 Whitte Rock Rd, Ste 110, Rancho Cordova, CA 95670
Property Owner: Ted Moise Conoco Phillips **Phone:** 916-558-7612
76 Broadway, Sacramento, CA 95818
Client: ** same as Property Owner **

Total Due: $265.00
Receipt Number: WR2010-0418 **Total Amount Paid:** $265.00
Payer Name : Delta Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 3 Boreholes
Driller: Cascade Drillign - Lic #: 938110 - Method: other **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010-0989	12/07/2010	03/15/2011	3	2.00 in.	30.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits

required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

Certified Laboratory Reports

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 01/07/2011

Jan Wagoner

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

RE: 3538
BC Work Order: 1018019
Invoice ID: B092882

Enclosed are the results of analyses for samples received by the laboratory on 12/22/2010. 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

Table of Contents

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Ted Moise
INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704

ConocoPhillips SAP Project Number:
ConocoPhillips Requisition / Line Number:
DATE:
PAGE: ____ of ____

SAMPLING COMPANY: Delta Consultants	Valid Value ID:
ADDRESS: 11050 White Rock Road #110, Rancho Cordova, CA 95670	
PROJECT CONTACT (Hardcopy or PDF Report to): Jan Wagoner	
TELEPHONE: 916-503-1275	FAX: 916-638-8385
E-MAIL: jwagoner@deltaenv.com	
SAMPLER NAME(S) (Print): Alan Buehler	CONSULTANT PROJECT NUMBER: C103538
CONOCOPHILLIPS SITE NUMBER: 76 Service Station No. 3538	GLOBAL ID NO.:
SITE ADDRESS (Street and City): 411 W. MacArthur Blvd, Oakland, CA	CONOCOPHILLIPS SITE MANAGER: Bill Borgh
EDF DELIVERABLE TO (PP or Designee): Jan Wagoner	PHONE NO.: 916-503-1275
E-MAIL: Ted.Moise@contractor.conocophillips.	LAB USE ONLY: 10-18019

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

Please CC Alan Buehler (abuehler@deltaenv.com) on reports

**Hold TPHd analysis until further notice

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPHg - 8015	TPHg - 8260	TPHd - 8015	BTEX - 8260	MTBE - 8260	Oxys - 8260	TEMPERATURE ON RECEIPT C°
1	SB-8@5	12/20/10	10:30a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
2	SB-8@10	12/20/10	10:40a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
3	SB-8@15	12/20/10	10:45a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
4	SB-8@20	12/20/10	11:00a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
5	SB-9@5	12/20/10	1:15p	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
6	SB-9@10	12/20/10	1:20p	Soil	1		X	X	X	X	X	
7	SB-9@15	12/20/10	1:25	Soil	1		X	X	X	X	X	
8	SB-9@20	12/20/10	1:30p	Soil	1		X	X	X	X	X	
9	SB-9@25	12/20/10	1:35p	Soil	1		X	X	X	X	X	
10	SB-9@30	12/20/10	2:00p	Soil	1		X	X	X	X	X	

FIELD NOTES:
Oxys: EDB, 1,2-DCA, TAME, DIPE, ETBE, TBA, ethanol

CHK BY
DISTRIBUTION
LAB COPY
SUB-OUT ☐

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
		12.22.10	1350
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
		12.22.10	1800
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
		12-22-10	2045

12.22.10 2045

8/18/03 Revision

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Ted Moise
INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704
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EDF DELIVERABLE TO (ZIP or Designee): Jan Wagoner	PHONE NO.: 916-503-1275
E-MAIL: Ted.Moise@contractor.conocophillips.	LAB USE ONLY: 10-18019

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

Please CC Alan Buehler (abuehler@deltaenv.com) on reports

**Hold TPHd analysis until further notice

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REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPHg - 8015	TPHg - 8260	TPHd - 8015	BTEX - 8260	MTBE - 8260	Oxys - 8260	TEMPERATURE ON RECEIPT C°
-11	SB-10@5	12/21/10	8:30a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
-12	SB-10@10	12/21/10	8:40a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
-13	SB-10@15	12/21/10	8:45a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
-14	SB-10@20	12/21/10	9:00a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
-15	SB-10@25	12/21/10	9:05a	Soil	1		X	X	X	X	X	Various Preservatives Not Field Filtered
-16	SB-10@30	12/21/10	9:20a	Soil	1		X	X	X	X	X	
-17	Comp Soil	12/21/10	12:45p	Soil	2		X	X	X	X	X	

FIELD NOTES:
Oxys: EDB, 1,2-DCA, TAME, DIPE, ETBE, TBA, ethanol

Relinquished by: (Signature)	Received by: (Signature)	Date: 12.22.10	Time: 1350
Relinquished by: (Signature) Kazo Dickey 12.22.10	Received by: (Signature)	Date: 12-22-10	Time: 1800
Relinquished by: (Signature) 12.22.10 2045	Received by: (Signature)	Date: 12-22-10	Time: 2045

SHE/03 Revision

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Ted Moise
INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704
ConocoPhillips SAP Project Number:
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DATE:
PAGE: ____ of ____

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ADDRESS: 11050 White Rock Road #110, Rancho Cordova, CA 95670	
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E-MAIL: Ted.Moise@contractor.conocophillips.	LAB USE ONLY: 10-18019

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

Please CC Alan Buehler (abuehler@deltaenv.com) on reports

**Hold TPHd analysis until further notice

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

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-18	SB-8@20-25	12/20/10	11:00a	H2O	7		X	X	X	X	X	Various Preservatives Not Field Filtered
-19	SB-9@17-22	12/20/10	2:45p	H2O	7		X	X	X	X	X	Various Preservatives Not Field Filtered
-20	SB-9@24-29	12/20/10	4:00p	H2O	7		X	X	X	X	X	Various Preservatives Not Field Filtered
-21	SB-10@17-22	12/21/10	12:00p	H2O	7		X	X	X	X	X	Various Preservatives Not Field Filtered
-22	SB-10@24-29	12/21/10	10:00a	H2O	7		X	X	X	X	X	Various Preservatives Not Field Filtered
-23	Comp H2O	12/21/10	12:30p	H2O	7		X	X	X	X	X	

FIELD NOTES:
Oxys: EDB, 1,2-DCA, TAME, DIPE, ETBE, TBA, ethanol

	Relinquished by: (Signature)	Received by: (Signature)	Date	Time
1		Kasa Dickey	12-22-10	1350
2	Kasa Dickey 12-22-10	R C Ruyard	12-22-10	1800
3	R C Ruyard 12-22-10 2045		12-22-10	2045

9/19/03 Revision

Chain of Custody and Cooler Receipt Form for 1018019 Page 4 of 6

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 3

Submission #: 10-18019

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: Soil Sleeve Thermometer ID: 1183

Temperature: A 4.7 °C / C 4.7 °C

Date/Time 12-22-10 2051

Analyst Init JDW

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										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
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	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: Description of samples was written on the plastic bags they were packaged in.
Sample Numbering Completed By: JDW Date/Time: 12/22/10 2132 1932 JDW 12-22
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Chain of Custody and Cooler Receipt Form for 1018019 Page 5 of 6

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 2 of 3

Submission #: 10-18019

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: Soil Sleeve Thermometer ID: 1103

Temperature: A 4.7 °C / C 4.7 °C

Date/Time 12-22-10 2051

Analyst Init JDW

SAMPLE CONTAINERS	SAMPLE NUMBERS: 11	12	13	14	15	16	17	18	19	20
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										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL								A	A	A
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								B	B	B
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	AB			
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: Description of samples was written on the plastic bags they were packaged in.

Sample Numbering Completed By: JDW Date/Time: 12/22/10 2139 1933 1000 12-22

A = Actual / C = Corrected

[H:\DOCS\NPB\LAB_DOCS\FORMS\SAMREC2.WPD]

Chain of Custody and Cooler Receipt Form for 1018019 Page 6 of 6

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 3 of 3

Submission #: 10-18019

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: Soil Sleeve Thermometer ID: 1103

Temperature: A 4.7 °C / C 4.7 °C

Date/Time 12-22-10 2051

Analyst Init JDW

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										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A 10	A 10	A 10							
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 631										
QT EPA 8015M										
QT AMBER	B	B	B							
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: Description of samples was written on the plastic bags they were packaged in. -21B
Sample Numbering Completed By: JDW Date/Time: 12/22/10 2132
(H:\DOCS\WPEGILAB_DOCS\FORMS\SAMREC2.WPD)
JDW 12-22 was received 3/4 full.
A = Actual C = Corrected

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1018019-01	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/20/2010 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-8@5	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-8
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-02	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/20/2010 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-8@10	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-8
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-03	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/20/2010 10:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-8@15	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-8
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1018019-04	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 11:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@20	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-05	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 13:15
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@5	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-06	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 13:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@10	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1018019-07	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 13:25
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@15	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-08	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 13:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@20	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-09	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 13:35
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@25	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1018019-10	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 14:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-9@30	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-9
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-11	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/21/2010 08:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-10@5	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-10
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-12	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/21/2010 08:40
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-10@10	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-10
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1018019-13	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 08:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-10@15	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-10
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-14	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-10@20	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-10
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-15	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 09:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-10@25	**Lab Matrix:**	Solids
	Sampled By:	DECR	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-10
			Matrix:	SO
			Sample QC Type (SACode):	CS
			Cooler ID:	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1018019-16	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/21/2010 09:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-10@30	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-10
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-17	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/21/2010 12:45
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	Comp Soil	**Lab Matrix:** Solids
	Sampled By:	DECR	**Sample Type:** Soil
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): COMP
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1018019-18	**COC Number:**	---	**Receive Date:** 12/22/2010 20:45
	Project Number:	3538	**Sampling Date:** 12/20/2010 11:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@20-25	**Lab Matrix:** Water
	Sampled By:	DECR	**Sample Type:** Water
			Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1018019-19	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/20/2010 14:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-9@17-22	**Lab Matrix:**	Water
	Sampled By:	DECR	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-9
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-20	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/20/2010 16:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-9@24-29	**Lab Matrix:**	Water
	Sampled By:	DECR	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-9
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
1018019-21	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-10@17-22	**Lab Matrix:**	Water
	Sampled By:	DECR	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	SB-10
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1018019-22	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-10@24-29	**Lab Matrix:**	Water
	Sampled By:	DECR	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID:			
	Location ID (FieldPoint): SB-10			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1018019-23	**COC Number:**	---	**Receive Date:**	12/22/2010 20:45
	Project Number:	3538	**Sampling Date:**	12/21/2010 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	Comp H2O	**Lab Matrix:**	Water
	Sampled By:	DECR	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID:			
	Location ID (FieldPoint): COMP			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-01 | **Client Sample Name:** 3538, SB-8@5, 12/20/2010 10:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	89.9	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	96.7	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.0	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 05:01	MCQ	MS-V3	1	BTL1883

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-02 | **Client Sample Name:** 3538, SB-8@10, 12/20/2010 10:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.30**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	90.6	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.4	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.2	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 05:27	MCQ	MS-V3	1	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-03 | **Client Sample Name:** 3538, SB-8@15, 12/20/2010 10:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dibromoethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethylbenzene	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Methyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Toluene	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Xylenes	ND	mg/kg	0.050	EPA-8260	ND	A01	1
t-Amyl Methyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	mg/kg	0.25	EPA-8260	ND	A01	1
Diisopropyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethanol	ND	mg/kg	5.0	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	10	Luft-GC/MS	ND	A01	2
1,2-Dichloroethane-d4 (Surrogate)	97.2	%	70 - 121 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	70 - 121 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.8	%	81 - 117 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	100	%	74 - 121 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 22:31	MCQ	MS-V3	5	BTL1883
2	EPA-8260	12/29/10	01/03/11 14:01	MCQ	MS-V3	50	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-04 | **Client Sample Name:** 3538, SB-8@20, 12/20/2010 11:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	1.2	EPA-8260	ND	A01	1
1,2-Dibromoethane	ND	mg/kg	1.2	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	1.2	EPA-8260	ND	A01	1
Ethylbenzene	**19**	**mg/kg**	**1.2**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	ND	mg/kg	1.2	EPA-8260	ND	A01	1
Toluene	**19**	**mg/kg**	**1.2**	**EPA-8260**	**ND**	**A01**	1
Total Xylenes	**86**	**mg/kg**	**2.5**	**EPA-8260**	**ND**	**A01**	1
t-Amyl Methyl ether	ND	mg/kg	1.2	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	mg/kg	12	EPA-8260	ND	A01	1
Diisopropyl ether	ND	mg/kg	1.2	EPA-8260	ND	A01	1
Ethanol	ND	mg/kg	250	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	mg/kg	1.2	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**520**	**mg/kg**	**200**	**Luft-GC/MS**	**ND**	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	101	%	70 - 121 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	103	%	70 - 121 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 23:07	MCQ	MS-V3	250	BTL1883
2	EPA-8260	12/29/10	01/03/11 14:27	MCQ	MS-V3	1000	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-05 | **Client Sample Name:** 3538, SB-9@5, 12/20/2010 1:15:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dibromoethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethylbenzene	**0.10**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Toluene	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Xylenes	**0.059**	**mg/kg**	**0.050**	**EPA-8260**	**ND**	**A01**	1
t-Amyl Methyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	mg/kg	0.25	EPA-8260	ND	A01	1
Diisopropyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethanol	ND	mg/kg	5.0	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**9.9**	**mg/kg**	**1.0**	**Luft-GC/MS**	**ND**	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	100	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.5	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.1	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/31/10 00:00	MCQ	MS-V3	5	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-06 | **Client Sample Name:** 3538, SB-9@10, 12/20/2010 1:20:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	**0.069**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	**0.014**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Toluene	**0.011**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Total Xylenes	**0.28**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	**0.40**	**mg/kg**	**0.050**	**EPA-8260**	**ND**		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**3.0**	**mg/kg**	**1.0**	**Luft-GC/MS**	**ND**	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	116	%	70 - 121 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	70 - 121 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	98.9	%	81 - 117 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.7	%	81 - 117 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.6	%	74 - 121 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 07:12	MCQ	MS-V3	1	BTL1883
2	EPA-8260	12/29/10	12/31/10 00:26	MCQ	MS-V3	5	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-07 | **Client Sample Name:** 3538, SB-9@15, 12/20/2010 1:25:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**1.4**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethylbenzene	ND	mg/kg	0.25	EPA-8260	ND	A01	2
Methyl t-butyl ether	**0.040**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
Toluene	**0.28**	**mg/kg**	**0.25**	**EPA-8260**	**ND**	**A01**	2
Total Xylenes	**0.66**	**mg/kg**	**0.50**	**EPA-8260**	**ND**	**A01**	2
t-Amyl Methyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	mg/kg	0.25	EPA-8260	ND	A01	1
Diisopropyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethanol	ND	mg/kg	5.0	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	10	Luft-GC/MS	ND	A01	2
1,2-Dichloroethane-d4 (Surrogate)	109	%	70 - 121 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	100	%	70 - 121 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	110	%	81 - 117 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.4	%	81 - 117 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	95.9	%	74 - 121 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	74 - 121 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	01/03/11 14:54	MCQ	MS-V3	5	BTL1883
2	EPA-8260	12/29/10	12/31/10 00:53	MCQ	MS-V3	50	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-08 | **Client Sample Name:** 3538, SB-9@20, 12/20/2010 1:30:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.17**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethylbenzene	**0.067**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	**0.62**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
Toluene	**0.10**	**mg/kg**	**0.025**	**EPA-8260**	**ND**	**A01**	1
Total Xylenes	**0.37**	**mg/kg**	**0.050**	**EPA-8260**	**ND**	**A01**	1
t-Amyl Methyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
t-Butyl alcohol	**0.58**	**mg/kg**	**0.25**	**EPA-8260**	**ND**	**A01**	1
Diisopropyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Ethanol	ND	mg/kg	5.0	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	mg/kg	0.025	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**4.5**	**mg/kg**	**1.0**	**Luft-GC/MS**	**ND**	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	01/03/11 15:20	MCQ	MS-V3	5	BTL1883

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-09 | **Client Sample Name:** 3538, SB-9@25, 12/20/2010 1:35:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	**0.0050**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	**0.014**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Total Xylenes	**0.028**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.30**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	98.2	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.9	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/31/10 02:12	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-10 | **Client Sample Name:** 3538, SB-9@30, 12/20/2010 2:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	**0.011**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	**0.020**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Total Xylenes	**0.043**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.28**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	88.7	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.3	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.9	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 08:59	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-11 | **Client Sample Name:** 3538, SB-10@5, 12/21/2010 8:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.6	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.5	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.8	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	01/03/11 15:46	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-12 | **Client Sample Name:** 3538, SB-10@10, 12/21/2010 8:40:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	**0.017**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.28**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	93.3	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.8	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.9	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 09:52	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-13 | **Client Sample Name:** 3538, SB-10@15, 12/21/2010 8:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	**0.0055**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	**0.024**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.47**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	89.4	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.1	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.6	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 10:19	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-14 | **Client Sample Name:** 3538, SB-10@20, 12/21/2010 9:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	**0.047**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.31**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	98.9	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	01/04/11 14:25	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-15 | **Client Sample Name:** 3538, SB-10@25, 12/21/2010 9:05:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.0	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	96.3	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.6	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 11:11	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-16 | **Client Sample Name:** 3538, SB-10@30, 12/21/2010 9:20:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	**0.012**	**mg/kg**	**0.010**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.5	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.2	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.7	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 11:38	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-17 | **Client Sample Name:** 3538, Comp Soil, 12/21/2010 12:45:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.20**	**mg/kg**	**0.20**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	89.1	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.2	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.4	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/29/10	12/30/10 12:04	MCQ	MS-V3	1	BTL1884

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Total Concentrations (TTLC)

BCL Sample ID: 1018019-17 | **Client Sample Name:** 3538, Comp Soil, 12/21/2010 12:45:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Antimony	ND	mg/kg	5.0	EPA-6010B	ND		1
Arsenic	**3.0**	**mg/kg**	**1.0**	**EPA-6010B**	**ND**		1
Barium	**120**	**mg/kg**	**0.50**	**EPA-6010B**	**ND**		1
Beryllium	**0.54**	**mg/kg**	**0.50**	**EPA-6010B**	**ND**		1
Cadmium	ND	mg/kg	0.50	EPA-6010B	ND		1
Chromium	**42**	**mg/kg**	**0.50**	**EPA-6010B**	**ND**		1
Cobalt	**9.8**	**mg/kg**	**2.5**	**EPA-6010B**	**ND**		1
Copper	**14**	**mg/kg**	**1.0**	**EPA-6010B**	**ND**		1
Lead	**6.3**	**mg/kg**	**2.5**	**EPA-6010B**	**ND**		1
Mercury	ND	mg/kg	0.16	EPA-7471A	ND		2
Molybdenum	ND	mg/kg	2.5	EPA-6010B	ND		1
Nickel	**77**	**mg/kg**	**0.50**	**EPA-6010B**	**ND**		1
Selenium	ND	mg/kg	1.0	EPA-6010B	ND		1
Silver	ND	mg/kg	0.50	EPA-6010B	ND		1
Thallium	ND	mg/kg	5.0	EPA-6010B	ND		1
Vanadium	**34**	**mg/kg**	**0.50**	**EPA-6010B**	**ND**		1
Zinc	**27**	**mg/kg**	**2.5**	**EPA-6010B**	**ND**		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	01/03/11	01/04/11 09:36	ARD	PE-OP2	1	BUA0029
2	EPA-7471A	01/05/11	01/06/11 11:23	MEV	CETAC1	0.992	BUA0232

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-18 | **Client Sample Name:** 3538, SB-8@20-25, 12/20/2010 11:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	**98**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	**48**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
Total Xylenes	**340**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	2
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**2000**	**ug/L**	**250**	**Luft-GC/MS**	**ND**	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	89.5	%	76 - 114 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	94.7	%	88 - 110 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.9	%	88 - 110 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	110	%	86 - 115 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/30/10	12/30/10 19:40	KEA	MS-V12	1	BTL1912
2	EPA-8260	12/30/10	01/03/11 17:25	JSK	HPCHEM	5	BTL1923

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-19 | **Client Sample Name:** 3538, SB-9@17-22, 12/20/2010 2:45:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**430**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
Ethylbenzene	**330**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	**190**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
Toluene	**2000**	**ug/L**	**25**	**EPA-8260**	**ND**	**A01**	2
Total Xylenes	**2100**	**ug/L**	**10**	**EPA-8260**	**ND**	**A01**	1
t-Amyl Methyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	ug/L	100	EPA-8260	ND	A01	1
Diisopropyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Ethanol	ND	ug/L	2500	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**9500**	**ug/L**	**500**	**Luft-GC/MS**	**ND**	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	131	%	76 - 114 (LCL - UCL)	EPA-8260		S09	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.9	%	88 - 110 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	113	%	86 - 115 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)	EPA-8260			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	01/03/11	01/03/11 15:38	KEA	MS-V12	10	BTL1914
2	EPA-8260	01/03/11	01/03/11 17:04	JSK	HPCHEM	50	BTL1923

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-20 | **Client Sample Name:** 3538, SB-9@24-29, 12/20/2010 4:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**76**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
Ethylbenzene	**100**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Toluene	**470**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
Total Xylenes	**540**	**ug/L**	**10**	**EPA-8260**	**ND**	**A01**	1
t-Amyl Methyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	ug/L	100	EPA-8260	ND	A01	1
Diisopropyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Ethanol	ND	ug/L	2500	EPA-8260	ND	A01	1
Ethyl t-butyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**2900**	**ug/L**	**500**	**Luft-GC/MS**	**ND**	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	125	%	76 - 114 (LCL - UCL)	EPA-8260		S09	1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	01/03/11	01/03/11 15:20	KEA	MS-V12	10	BTL1914

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Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-21 | **Client Sample Name:** 3538, SB-10@17-22, 12/21/2010 12:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**20**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Ethylbenzene	**75**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Toluene	**0.96**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Total Xylenes	**8.3**	**ug/L**	**1.0**	**EPA-8260**	**ND**	**Z1**	1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND	Z1	1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Ethanol	ND	ug/L	250	EPA-8260	ND	Z1	1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Total Purgeable Petroleum Hydrocarbons	**1500**	**ug/L**	**50**	**Luft-GC/MS**	**ND**	**Z1**	1
1,2-Dichloroethane-d4 (Surrogate)	91.8	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	95.3	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	115	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/30/10	12/30/10 18:46	KEA	MS-V12	1	BTL1912

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Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-22 | **Client Sample Name:** 3538, SB-10@24-29, 12/21/2010 10:00:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**1.8**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND	Z1	1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Ethylbenzene	**12**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Methyl t-butyl ether	**5.8**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Toluene	**25**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Total Xylenes	**63**	**ug/L**	**1.0**	**EPA-8260**	**ND**	**Z1**	1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND	Z1	1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Ethanol	ND	ug/L	250	EPA-8260	ND	Z1	1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Total Purgeable Petroleum Hydrocarbons	**310**	**ug/L**	**50**	**Luft-GC/MS**	**ND**	**Z1**	1
1,2-Dichloroethane-d4 (Surrogate)	90.0	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	95.2	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/30/10	12/30/10 18:28	KEA	MS-V12	1	BTL1912

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Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1018019-23 | **Client Sample Name:** 3538, Comp H2O, 12/21/2010 12:30:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**1.7**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	**11**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	**14**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
Total Xylenes	**43**	**ug/L**	**1.0**	**EPA-8260**	**ND**		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**490**	**ug/L**	**50**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	94.5	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	88.4	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	106	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	12/30/10	12/30/10 18:09	KEA	MS-V12	1	BTL1912

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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: BTL1883						
Benzene	BTL1883-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BTL1883-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BTL1883-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BTL1883-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BTL1883-BLK1	ND	mg/kg	0.0050		
Toluene	BTL1883-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BTL1883-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BTL1883-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BTL1883-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BTL1883-BLK1	ND	mg/kg	0.0050		
Ethanol	BTL1883-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BTL1883-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BTL1883-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BTL1883-BLK1	93.6	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTL1883-BLK1	99.5	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTL1883-BLK1	100	%	74 - 121 (LCL - UCL)		
QC Batch ID: BTL1884						
Benzene	BTL1884-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BTL1884-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BTL1884-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BTL1884-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BTL1884-BLK1	ND	mg/kg	0.0050		
Toluene	BTL1884-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BTL1884-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BTL1884-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BTL1884-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BTL1884-BLK1	ND	mg/kg	0.0050		
Ethanol	BTL1884-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BTL1884-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BTL1884-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BTL1884-BLK1	103	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTL1884-BLK1	102	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTL1884-BLK1	99.5	%	74 - 121 (LCL - UCL)		

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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: BTL1912						
Benzene	BTL1912-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTL1912-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTL1912-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTL1912-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTL1912-BLK1	ND	ug/L	0.50		
Toluene	BTL1912-BLK1	ND	ug/L	0.50		
Total Xylenes	BTL1912-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BTL1912-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BTL1912-BLK1	ND	ug/L	10		
Diisopropyl ether	BTL1912-BLK1	ND	ug/L	0.50		
Ethanol	BTL1912-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BTL1912-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BTL1912-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BTL1912-BLK1	91.3	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTL1912-BLK1	95.9	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTL1912-BLK1	101	%	86 - 115 (LCL - UCL)		
QC Batch ID: BTL1914						
Benzene	BTL1914-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTL1914-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTL1914-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTL1914-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTL1914-BLK1	ND	ug/L	0.50		
Toluene	BTL1914-BLK1	ND	ug/L	0.50		
Total Xylenes	BTL1914-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BTL1914-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BTL1914-BLK1	ND	ug/L	10		
Diisopropyl ether	BTL1914-BLK1	ND	ug/L	0.50		
Ethanol	BTL1914-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BTL1914-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BTL1914-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BTL1914-BLK1	104	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTL1914-BLK1	102	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTL1914-BLK1	94.6	%	86 - 115 (LCL - UCL)		

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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: BTL1923						
Toluene	BTL1923-BLK1	ND	ug/L	0.50		
Total Xylenes	BTL1923-BLK1	ND	ug/L	1.0		
Total Purgeable Petroleum Hydrocarbons	BTL1923-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BTL1923-BLK1	105	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTL1923-BLK1	98.2	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTL1923-BLK1	106	%	86 - 115 (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: BTL1883										
Benzene	BTL1883-BS1	LCS	0.13954	0.12500	mg/kg	112		70 - 130		
Toluene	BTL1883-BS1	LCS	0.12711	0.12500	mg/kg	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTL1883-BS1	LCS	0.046423	0.050000	mg/kg	92.8		70 - 121		
Toluene-d8 (Surrogate)	BTL1883-BS1	LCS	0.048081	0.050000	mg/kg	96.2		81 - 117		
4-Bromofluorobenzene (Surrogate)	BTL1883-BS1	LCS	0.049287	0.050000	mg/kg	98.6		74 - 121		
QC Batch ID: BTL1884										
Benzene	BTL1884-BS1	LCS	0.12435	0.12500	mg/kg	99.5		70 - 130		
Toluene	BTL1884-BS1	LCS	0.12307	0.12500	mg/kg	98.5		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTL1884-BS1	LCS	0.052476	0.050000	mg/kg	105		70 - 121		
Toluene-d8 (Surrogate)	BTL1884-BS1	LCS	0.049873	0.050000	mg/kg	99.7		81 - 117		
4-Bromofluorobenzene (Surrogate)	BTL1884-BS1	LCS	0.051986	0.050000	mg/kg	104		74 - 121		
QC Batch ID: BTL1912										
Benzene	BTL1912-BS1	LCS	22.080	25.000	ug/L	88.3		70 - 130		
Toluene	BTL1912-BS1	LCS	21.810	25.000	ug/L	87.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTL1912-BS1	LCS	8.9800	10.000	ug/L	89.8		76 - 114		
Toluene-d8 (Surrogate)	BTL1912-BS1	LCS	9.6600	10.000	ug/L	96.6		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTL1912-BS1	LCS	10.210	10.000	ug/L	102		86 - 115		
QC Batch ID: BTL1914										
Benzene	BTL1914-BS1	LCS	28.610	25.000	ug/L	114		70 - 130		
Toluene	BTL1914-BS1	LCS	29.410	25.000	ug/L	118		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTL1914-BS1	LCS	10.370	10.000	ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BTL1914-BS1	LCS	10.040	10.000	ug/L	100		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTL1914-BS1	LCS	9.9400	10.000	ug/L	99.4		86 - 115		
QC Batch ID: BTL1923										
Toluene	BTL1923-BS1	LCS	27.240	25.000	ug/L	109		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTL1923-BS1	LCS	10.640	10.000	ug/L	106		76 - 114		
Toluene-d8 (Surrogate)	BTL1923-BS1	LCS	9.7100	10.000	ug/L	97.1		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTL1923-BS1	LCS	10.240	10.000	ug/L	102		86 - 115		

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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: BTL1883	Used client sample: N										
Benzene	MS	1016633-93	ND	0.14269	0.12500	mg/kg		114		70 - 130	
	MSD	1016633-93	ND	0.14385	0.12500	mg/kg	0.8	115	20	70 - 130	
Toluene	MS	1016633-93	ND	0.13107	0.12500	mg/kg		105		70 - 130	
	MSD	1016633-93	ND	0.12851	0.12500	mg/kg	2.0	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1016633-93	ND	0.046518	0.050000	mg/kg		93.0		70 - 121	
	MSD	1016633-93	ND	0.046623	0.050000	mg/kg	0.2	93.2		70 - 121	
Toluene-d8 (Surrogate)	MS	1016633-93	ND	0.049709	0.050000	mg/kg		99.4		81 - 117	
	MSD	1016633-93	ND	0.050263	0.050000	mg/kg	1.1	101		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1016633-93	ND	0.047151	0.050000	mg/kg		94.3		74 - 121	
	MSD	1016633-93	ND	0.048348	0.050000	mg/kg	2.5	96.7		74 - 121	
QC Batch ID: BTL1884	Used client sample: N										
Benzene	MS	1016633-94	ND	0.12127	0.12500	mg/kg		97.0		70 - 130	
	MSD	1016633-94	ND	0.12769	0.12500	mg/kg	5.2	102	20	70 - 130	
Toluene	MS	1016633-94	ND	0.12098	0.12500	mg/kg		96.8		70 - 130	
	MSD	1016633-94	ND	0.13017	0.12500	mg/kg	7.3	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1016633-94	ND	0.053497	0.050000	mg/kg		107		70 - 121	
	MSD	1016633-94	ND	0.050784	0.050000	mg/kg	5.2	102		70 - 121	
Toluene-d8 (Surrogate)	MS	1016633-94	ND	0.050616	0.050000	mg/kg		101		81 - 117	
	MSD	1016633-94	ND	0.049659	0.050000	mg/kg	1.9	99.3		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1016633-94	ND	0.051297	0.050000	mg/kg		103		74 - 121	
	MSD	1016633-94	ND	0.050435	0.050000	mg/kg	1.7	101		74 - 121	
QC Batch ID: BTL1912	Used client sample: N										
Benzene	MS	1016633-83	ND	25.270	25.000	ug/L		101		70 - 130	
	MSD	1016633-83	ND	26.570	25.000	ug/L	5.0	106	20	70 - 130	
Toluene	MS	1016633-83	ND	25.010	25.000	ug/L		100		70 - 130	
	MSD	1016633-83	ND	26.470	25.000	ug/L	5.7	106	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1016633-83	ND	8.8000	10.000	ug/L		88.0		76 - 114	
	MSD	1016633-83	ND	8.8600	10.000	ug/L	0.7	88.6		76 - 114	
Toluene-d8 (Surrogate)	MS	1016633-83	ND	9.7500	10.000	ug/L		97.5		88 - 110	
	MSD	1016633-83	ND	9.6700	10.000	ug/L	0.8	96.7		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1016633-83	ND	10.580	10.000	ug/L		106		86 - 115	
	MSD	1016633-83	ND	10.390	10.000	ug/L	1.8	104		86 - 115	
QC Batch ID: BTL1914	Used client sample: N										
Benzene	MS	1016633-84	ND	21.090	25.000	ug/L		84.4		70 - 130	
	MSD	1016633-84	ND	25.340	25.000	ug/L	18.3	101	20	70 - 130	
Toluene	MS	1016633-84	ND	22.440	25.000	ug/L		89.8		70 - 130	
	MSD	1016633-84	ND	27.310	25.000	ug/L	19.6	109	20	70 - 130	

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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: BTL1914	Used client sample: N										
1,2-Dichloroethane-d4 (Surrogate)	MS	1016633-84	ND	10.160	10.000	ug/L		102		76 - 114	
	MSD	1016633-84	ND	10.140	10.000	ug/L	0.2	101		76 - 114	
Toluene-d8 (Surrogate)	MS	1016633-84	ND	10.230	10.000	ug/L		102		88 - 110	
	MSD	1016633-84	ND	10.290	10.000	ug/L	0.6	103		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1016633-84	ND	9.5400	10.000	ug/L		95.4		86 - 115	
	MSD	1016633-84	ND	9.8600	10.000	ug/L	3.3	98.6		86 - 115	
QC Batch ID: BTL1923	Used client sample: N										
Toluene	MS	1016633-85	ND	27.580	25.000	ug/L		110		70 - 130	
	MSD	1016633-85	ND	27.760	25.000	ug/L	0.7	111	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1016633-85	ND	10.930	10.000	ug/L		109		76 - 114	
	MSD	1016633-85	ND	10.620	10.000	ug/L	2.9	106		76 - 114	
Toluene-d8 (Surrogate)	MS	1016633-85	ND	10.220	10.000	ug/L		102		88 - 110	
	MSD	1016633-85	ND	9.9400	10.000	ug/L	2.8	99.4		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1016633-85	ND	10.130	10.000	ug/L		101		86 - 115	
	MSD	1016633-85	ND	10.200	10.000	ug/L	0.7	102		86 - 115	

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Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BUA0029						
Antimony	BUA0029-BLK1	ND	mg/kg	5.0		
Arsenic	BUA0029-BLK1	ND	mg/kg	1.0		
Barium	BUA0029-BLK1	ND	mg/kg	0.50		
Beryllium	BUA0029-BLK1	ND	mg/kg	0.50		
Cadmium	BUA0029-BLK1	ND	mg/kg	0.50		
Chromium	BUA0029-BLK1	ND	mg/kg	0.50		
Cobalt	BUA0029-BLK1	ND	mg/kg	2.5		
Copper	BUA0029-BLK1	ND	mg/kg	1.0		
Lead	BUA0029-BLK1	ND	mg/kg	2.5		
Molybdenum	BUA0029-BLK1	ND	mg/kg	2.5		
Nickel	BUA0029-BLK1	ND	mg/kg	0.50		
Selenium	BUA0029-BLK1	ND	mg/kg	1.0		
Silver	BUA0029-BLK1	ND	mg/kg	0.50		
Thallium	BUA0029-BLK1	ND	mg/kg	5.0		
Vanadium	BUA0029-BLK1	ND	mg/kg	0.50		
Zinc	BUA0029-BLK1	ND	mg/kg	2.5		
QC Batch ID: BUA0232						
Mercury	BUA0232-BLK1	ND	mg/kg	0.16		

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11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Total Concentrations (TTLC)

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: BUA0029										
Antimony	BUA0029-BS1	LCS	102.02	100.00	mg/kg	102		75 - 125		
Arsenic	BUA0029-BS1	LCS	10.253	10.000	mg/kg	103		75 - 125		
Barium	BUA0029-BS1	LCS	104.84	100.00	mg/kg	105		75 - 125		
Beryllium	BUA0029-BS1	LCS	10.869	10.000	mg/kg	109		75 - 125		
Cadmium	BUA0029-BS1	LCS	10.292	10.000	mg/kg	103		75 - 125		
Chromium	BUA0029-BS1	LCS	104.51	100.00	mg/kg	105		75 - 125		
Cobalt	BUA0029-BS1	LCS	106.44	100.00	mg/kg	106		75 - 125		
Copper	BUA0029-BS1	LCS	101.97	100.00	mg/kg	102		75 - 125		
Lead	BUA0029-BS1	LCS	108.56	100.00	mg/kg	109		75 - 125		
Molybdenum	BUA0029-BS1	LCS	102.42	100.00	mg/kg	102		75 - 125		
Nickel	BUA0029-BS1	LCS	108.35	100.00	mg/kg	108		75 - 125		
Selenium	BUA0029-BS1	LCS	9.7475	10.000	mg/kg	97.5		75 - 125		
Silver	BUA0029-BS1	LCS	10.723	10.000	mg/kg	107		75 - 125		
Thallium	BUA0029-BS1	LCS	105.87	100.00	mg/kg	106		75 - 125		
Vanadium	BUA0029-BS1	LCS	100.79	100.00	mg/kg	101		75 - 125		
Zinc	BUA0029-BS1	LCS	105.71	100.00	mg/kg	106		75 - 125		
QC Batch ID: BUA0232										
Mercury	BUA0232-BS1	LCS	1.2413	1.5000	mg/kg	82.8		75 - 125		

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Reported: 01/07/2011 17:08
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Total Concentrations (TTLC)

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: BUA0029	Used client sample: N										
Antimony	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	98.903	100.00	mg/kg		98.9		16 - 119	
	MSD	1018116-01	ND	99.109	100.00	mg/kg	0.2	99.1	20	16 - 119	
Arsenic	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	10.127	10.000	mg/kg		101		75 - 125	
	MSD	1018116-01	ND	9.8156	10.000	mg/kg	3.1	98.2	20	75 - 125	
Barium	DUP	1018116-01	0.16908	ND		mg/kg			20		
	MS	1018116-01	0.16908	103.95	100.00	mg/kg		104		75 - 125	
	MSD	1018116-01	0.16908	104.61	100.00	mg/kg	0.6	104	20	75 - 125	
Beryllium	DUP	1018116-01	0.51800	0.53135		mg/kg	2.5		20		
	MS	1018116-01	0.51800	11.626	10.000	mg/kg		111		75 - 125	
	MSD	1018116-01	0.51800	11.315	10.000	mg/kg	2.7	108	20	75 - 125	
Cadmium	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	10.866	10.000	mg/kg		109		75 - 125	
	MSD	1018116-01	ND	10.380	10.000	mg/kg	4.6	104	20	75 - 125	
Chromium	DUP	1018116-01	0.31011	ND		mg/kg			20		A02
	MS	1018116-01	0.31011	106.08	100.00	mg/kg		106		75 - 125	
	MSD	1018116-01	0.31011	101.20	100.00	mg/kg	4.7	101	20	75 - 125	
Cobalt	DUP	1018116-01	0.89462	ND		mg/kg			20		
	MS	1018116-01	0.89462	111.60	100.00	mg/kg		111		75 - 125	
	MSD	1018116-01	0.89462	106.34	100.00	mg/kg	4.8	105	20	75 - 125	
Copper	DUP	1018116-01	0.60346	ND		mg/kg			20		
	MS	1018116-01	0.60346	107.86	100.00	mg/kg		107		75 - 125	
	MSD	1018116-01	0.60346	105.31	100.00	mg/kg	2.4	105	20	75 - 125	
Lead	DUP	1018116-01	0.84341	ND		mg/kg			20		
	MS	1018116-01	0.84341	113.32	100.00	mg/kg		112		75 - 125	
	MSD	1018116-01	0.84341	107.57	100.00	mg/kg	5.2	107	20	75 - 125	
Molybdenum	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	106.08	100.00	mg/kg		106		75 - 125	
	MSD	1018116-01	ND	101.24	100.00	mg/kg	4.7	101	20	75 - 125	
Nickel	DUP	1018116-01	0.18905	ND		mg/kg			20		
	MS	1018116-01	0.18905	112.48	100.00	mg/kg		112		75 - 125	
	MSD	1018116-01	0.18905	107.30	100.00	mg/kg	4.7	107	20	75 - 125	
Selenium	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	9.7680	10.000	mg/kg		97.7		75 - 125	
	MSD	1018116-01	ND	9.1484	10.000	mg/kg	6.6	91.5	20	75 - 125	
Silver	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	8.9307	10.000	mg/kg		89.3		75 - 125	
	MSD	1018116-01	ND	8.8391	10.000	mg/kg	1.0	88.4	20	75 - 125	

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Rancho Cordova, CA 95670

Reported: 01/07/2011 17:08
Project: 3538
Project Number: 4514546539
Project Manager: Jan Wagoner

Total Concentrations (TTLC)

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: BUA0029	Used client sample: N										
Thallium	DUP	1018116-01	ND	ND		mg/kg			20		
	MS	1018116-01	ND	107.20	100.00	mg/kg		107		75 - 125	
	MSD	1018116-01	ND	106.57	100.00	mg/kg	0.6	107	20	75 - 125	
Vanadium	DUP	1018116-01	149.09	152.33		mg/kg	2.1		20		
	MS	1018116-01	149.09	260.46	100.00	mg/kg		111		75 - 125	
	MSD	1018116-01	149.09	253.55	100.00	mg/kg	2.7	104	20	75 - 125	
Zinc	DUP	1018116-01	2.9149	3.0144		mg/kg	3.4		20		
	MS	1018116-01	2.9149	120.83	100.00	mg/kg		118		75 - 125	
	MSD	1018116-01	2.9149	114.68	100.00	mg/kg	5.2	112	20	75 - 125	
QC Batch ID: BUA0232	Used client sample: N										
Mercury	DUP	1018241-04	0.047143	ND		mg/kg			20		A02
	MS	1018241-04	0.047143	0.81476	0.79365	mg/kg		96.7		85 - 115	
	MSD	1018241-04	0.047143	0.81762	0.79365	mg/kg	0.4	97.1	20	85 - 115	

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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
A01	PQL's and MDL's are raised due to sample dilution.
A02	The difference between duplicate readings is less than the PQL.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
Z1	Combined two VOAs for a complete sample.

APPENDIX D

Boring Logs for Borings SB-8 Through SB-10

anteagroup

Project No: C103535061
Logged By: A. Buehler
Driller: Cascade Drilling
Drilling Method: Direct Push
Sampling Method: Acetate Liner
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: ConocoPhillips
Location: Oakland, CA
Date Drilled: 12/20/10
Hole Diameter: 2"
Hole Depth: 20'
Well Diameter: N/A
Well Depth: N/A
First Water Depth:
Static Water Depth:

Elevation:
Northing:
Easting:

Boring/Well No: **SB-8**
Page 1 of 1

Site Address:
411 W. MacArthur Blvd, Oakland, CA

Well Completion (Backfill / Casing)	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement Grout									Air-knife clearance to 5 ft.
			0.6	SB-8 @5	5			CL	brown/green mottled, sandy lean clay with gravel, 20% sand, 10% gravel, damp
					7			ML	Brown/black mottled, sandy silt, 30% sand, trace gravel, mild odor, damp
			5.8	SB-8 @10	10				
					13			GM	Brown/gray, silty gravel with sand, 10% silt, 30% gravel, moist
			0.7	SB-8 @15	15			CL	Brown/gray, lean clay, 5% sand, moist
					16			GC	Brown, clayey gravel with sand, 10% clay, 20% sand, moist to wet
					18			ML	Brown/gray mottles, sandy silt, 30% sand, very dense, damp
			440	SB-8 @20	20				
									Total Depth = 20 ft

Project No:	5697	Client:	COP	Boring/Well No:	**SB-9**
Logged By:	A Buehler	Location:	Oakland	Page 1 of	2
Driller:	Cascade	Date Drilled:	12/20/2010		
Drilling Method:	Direct Push	Hole Diameter:	2 in		
Sampling Method:	Acetate	Hole Depth:	20 ft		
Casing Type:	N/A	Well Diameter:	N/A		
Slot Size:	N/A	Well Depth:	N/A		
Gravel Pack:	N/A	▼ First Water Depth:			
		▽ Static Water Depth:			
Elevation:		Northing:		Easting:	

Well Completion	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
					1				Air-knife clearance to 5 ft
					2				
					3				
					4				
					5				
			6.7	SB-9 @5	6				Gray, gravelly lean clay, 20% gravel, moist, no odor
					7			ML	Brown/black mottled, sandy silt with gravel, 20% sand, 10% gravel
					8				
					9				
Backfill / Casing: Neat Cement Grout			7.5	SB-9 @10	10			CL	Brown/gray mottled, gravelly lean clay, 10% gravel, moist, slight odor
					11				
					12			SP	Dark brown, sand, fine sand, wet
					13			ML	Brown/orange/gray mottled, sandy silt, 40% sand, damp
					14				
			910	SB-9 @15	15				
	▼				16				Dark brown/gray layered, sandy silt, 35% sand, saturated
					17				
					18				
					19				
			37	SB-9 @20	20			SM	Gray, Silty sand, fine sand, 25% silt, saturated
					21				
					22				

Project No: C103535061
Logged By: A. Buehler
Driller: Cascade Drilling
Drilling Method: Direct Push
Sampling Method: Acetate Liner
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: ConocoPhillips
Location: Oakland, CA
Date Drilled: 12/20/10
Hole Diameter: 2"
Hole Depth: 20'
Well Diameter: N/A
Well Depth: N/A
▼ First Water Depth:
▽ Static Water Depth:

Boring/Well No: **SB-9**
Page 2 of 2

Elevation:
Northing:
Easting:

Well Completion (Backfill / Casing)	Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement Grout					23				
					24			ML	Gray/green sandy silt, 30% sand, very dense, dry
			12.5	SB-9 @25	25				
		▼							Same as above, saturated
					26			CL	Brown/gray mottled, lean clay, very dense, moist
					27				
					28				
					29				
			4.6	SB-9 @30	30				Total Depth = 30 ft
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Project No:	5697	Client:	COP	Boring/Well No: **SB-9**	
Logged By:	A Buehler	Location:	Oakland	Page 2 of	2
Driller:	Cascade	Date Drilled:	12/21/2010		
Drilling Method:	Direct Push	Hole Diameter:	2 in		
Sampling Method:	Acetate	Hole Depth:	20 ft		
Casing Type:	N/A	Well Diameter:	N/A		
Slot Size:	N/A	Well Depth:	N/A		
Gravel Pack:	N/A	First Water Depth:			
		Static Water Depth:			
Elevation:		Northing:		Easting:	

Well Completion: Backfill	Well Completion: Casing	Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
						1				Air-knife cleared to 5 ft
						2				
						3				
						4				
						5				
				0	SB-10 @5	6			CL	Brown, Gravelly lean clay with sand, 20% gravel, 10% sand, saturated
						7			CL	Brown/gray/green layered sandy lean clay, 15% sand, moist, no odor
						8				
						9				
				0.5	SB-10 @10	10				
						11				
						12				
						13			SW	Brown, gravelly sand, 20% gravel, moist
						14				
						15			CL	Brown/oraange/green mottled, sandy lean clay, 25% sand, dense
				0.6	SB-10 @15	16			ML	Brown/gray layered, sandy silt, 40% sand
						17				
						18				
						19				
						20				
				9.3	SB-10 @20	21				Gray, sandy silt, 40% sand, moist
						22			GM	Brown, sandy silt with gravel, 25% sand, 40% gravel, moist
Neat Cement Grout										

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Project No: C103535061
Logged By: A. Buehler
Driller: Cascade Drilling
Drilling Method: Direct Push
Sampling Method: Acetate Liner
Casing Type: N/A
Slot Size: N/A
Gravel Pack: N/A

Client: ConocoPhillips
Location: Oakland, CA
Date Drilled: 12/21/10
Hole Diameter: 2"
Hole Depth: 20'
Well Diameter: N/A
Well Depth: N/A
First Water Depth:
Static Water Depth:

Boring/Well No: **SB-10**
Page 2 of 2

Elevation:
Northing:
Easting:

Well Completion: Backfill / Casing	Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery / Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement Grout			0	SB-10 @25	23–25		ML	Brown/gray, sandy silt, 40% sand, moist
					25–26		SM	Brown silty sand, 50% sand, saturated
					26–30		CL	Brown, sandy lean clay, 10% sand, moist, very dense
			0	SB-10 @30	30			Total Depth = 30 ft
					31–44			

Attachment B
Historical Soil Data

Table 1
Soil Analytical Results
76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	Ethanol (mg/kg)
SB-8@5	12/20/10	5	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-8@10	12/20/10	10	**0.30**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-8@15	12/20/10	15	<10	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-8@20	12/20/10	20	**520**	<1.2	**19**	**19**	**86**	<1.2	<12	<1.2	<1.2	<1.2	<1.2	<1.2	<250
SB-9@5	12/20/10	5	**9.9**	<0.025	<0.025	**0.10**	**0.059**	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@10	12/20/10	10	**3.0**	<0.0050	**0.011**	**0.069**	**0.28**	**0.014**	**0.40**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-9@15	12/20/10	15	<10	**1.4**	**0.28**	**0.14**	**0.66**	**0.04**	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@20	12/20/10	20	**4.5**	**0.17**	**0.10**	**0.067**	**0.37**	**0.62**	**0.58**	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0
SB-9@25	12/20/10	25	**0.30**	<0.0050	**0.014**	**0.0050**	**0.028**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-9@30	12/20/10	30	**0.28**	<0.0050	**0.02**	**0.011**	**0.043**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@5	12/21/10	5	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@10	12/21/10	10	**0.28**	<0.0050	<0.0050	<0.0050	**0.017**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@15	12/21/10	15	**0.47**	<0.0050	<0.0050	**0.0055**	**0.024**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@20	12/21/10	20	**0.31**	<0.0050	<0.0050	**0.047**	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@25	12/21/10	25	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
SB-10@30	12/21/10	30	<0.20	<0.0050	<0.0050	<0.0050	**0.012**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0

TPHg = total petroleum hydrocarbons as gasoline MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether DIPE = diisopropyl ether
ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane ND = non detect, where reporting limit is not known
bold = value above reporting limit mg.kg = milligrams per kilogram

Table 3
Historical Soil Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	1-2,DCA (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)	Lead (mg/kg)
SW-1	6/12/1989	10	**3100**	--	**12**	**300**	**730**	**110**	--	--	--	--	--	--	--	--	--	--
SW-1 (4)	6/12/1989	10	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
SW2	6/12/1989	10	**1.1**	--	**0.1**	<0.10	**0.18**	<0.10	--	--	--	--	--	--	--	--	--	--
SW3	6/12/1989	10	**5.7**	--	**0.26**	<0.10	**0.45**	**0.23**	--	--	--	--	--	--	--	--	--	--
SW4	6/12/1989	10	**2.5**	--	<0.050	<0.10	**0.24**	<0.10	--	--	--	--	--	--	--	--	--	--
SW4 (2)	6/12/1989	10	**11**	--	**0.61**	**0.51**	**1.3**	**0.44**	--	--	--	--	--	--	--	--	--	--
P1	6/12/1989	6.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P2	6/12/1989	6.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P3	6/12/1989	5.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
P4	6/12/1989	10	**170**	--	**0.71**	**12**	**47**	**6.8**	--	--	--	--	--	--	--	--	--	--
WO1	6/12/1989	8.5	<1.0	--	<0.050	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--
MW-1 (5)	9/6/1989	5	**3.4**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (10)	9/6/1989	10	**5**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (15)	9/6/1989	15	**2.2**	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW1 (19)	9/6/1989	19	<1.0	<1.0	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	<5.0	--	<50	--
MW2 (5)	9/6/1989	5	**1.4**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (10)	9/6/1989	10	<1.0	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (15)	9/6/1989	15	**1.8**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW2 (19)	9/6/1989	19	**13**	--	**1.5**	**2.1**	**0.34**	**1.8**	--	--	--	--	--	--	--	--	--	--
MW3 (5)	9/6/1989	5	**1.3**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (10)	9/6/1989	10	**1.8**	--	**0.29**	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (15)	9/6/1989	15	**3.3**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW3 (18.5)	9/6/1989	18.5	<1.0	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW4 (5)	9/6/1989	5	**3.1**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW4 (10)	9/6/1989	10	**17**	--	<0.050	<0.010	<0.010	**0.1**	--	--	--	--	--	--	--	--	--	--
MW4 (15)	9/6/1989	15	**20**	--	<0.050	<0.010	<0.010	**0.27**	--	--	--	--	--	--	--	--	--	--
MW4 (18.5)	9/6/1989	18.5	**2.1**	--	<0.050	<0.010	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--
MW5 (5)	11/18/1992	5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (10)	11/18/1992	10	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (15)	11/18/1992	15	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW5 (21)	11/18/1992	21	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (5)	11/18/1992	5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (10)	11/18/1992	10	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (15)	11/18/1992	15	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
MW6 (19.5)	11/18/1992	19.5	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--
A1 (19)	9/14/1998	19	**3.5**	--	**0.53**	**0.36**	**0.069**	**0.40**	<0.050	--	--	--	--	--	--	--	--	**26**
A2 (18)	9/14/1998	18	**12**	--	**0.050**	**0.075**	<0.0050	**0.026**	<0.050	--	--	--	--	--	--	--	--	<1.0
B1 (19.5)	9/14/1998	19.5	**360**	--	**1.5**	**15**	**7.0**	**44**	<0.050	--	--	--	--	--	--	--	--	**1.7**
B2 (19.5)	9/14/1998	19.5	**6.7**	--	**0.017**	**1.8**	**0.24**	**1.4**	<0.050	--	--	--	--	--	--	--	--	**2.7**
P1 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	**11**
P2 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	**1.3**
P3 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	<1.0
P4 (6)	9/14/1998	6	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--	--	--	--	--	--	<1.0

Table 3
Historical Soil Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	EDB (mg/kg)	1-2,DCA (mg/kg)	Ethanol (mg/kg)	TOG (mg/kg)	Lead (mg/kg)
SB-1@5	3/27/2006	5	<0.97	--	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	--	--
SB-1@9	3/27/2006	9	**2.8**	--	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	<0.0097	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.48	--	--
SB-2@5	3/27/2006	5	<0.97	--	<0.0049	<0.0049	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.49	--	--
SB-2@9	3/27/2006	9	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-3@14	3/27/2006	14	**1.3**	--	**0.11**	<0.0046	**0.061**	**0.055**	**0.64**	**0.19**	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-3@16	3/27/2006	16	**6100**	--	<9.7	**53**	**86**	**420**	<9.7	<19	<9.7	<9.7	<9.7	<9.7	<9.7	<190	--	--
SB-4@5	3/27/2006	5	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-4@15	3/27/2006	15	<0.92	--	<0.0046	<0.0046	<0.0046	<0.0092	<0.0046	<0.0092	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-5@9	3/27/2006	9	<0.93	--	<0.0046	<0.0046	<0.0046	<0.0093	<0.0046	<0.0093	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.46	--	--
SB-5@13	3/27/2006	13	<0.93	--	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	<0.0093	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.47	--	--
SB-8@5	12/20/10	5	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-8@10	12/20/10	10	**0.30**	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-8@15	12/20/10	15	<10	--	<0.025	<0.025	<0.025	<0.050	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-8@20	12/20/10	20	**520**	--	<1.2	**19**	**19**	**86**	<1.2	<12	<1.2	<1.2	<1.2	<1.2	<1.2	<250	--	--
SB-9@5	12/20/10	5	**9.9**	--	<0.025	<0.025	**0.10**	**0.059**	<0.025	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@10	12/20/10	10	**3.0**	--	<0.0050	**0.011**	**0.069**	**0.28**	**0.014**	**0.40**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-9@15	12/20/10	15	<10	--	**1.4**	**0.28**	**0.14**	**0.66**	**0.04**	<0.25	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@20	12/20/10	20	**4.5**	--	**0.17**	**0.10**	**0.067**	**0.37**	**0.62**	**0.58**	<0.025	<0.025	<0.025	<0.025	<0.025	<5.0	--	--
SB-9@25	12/20/10	25	**0.30**	--	<0.0050	**0.014**	**0.0050**	**0.028**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-9@30	12/20/10	30	**0.28**	--	<0.0050	**0.02**	**0.011**	**0.043**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@5	12/21/10	5	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@10	12/21/10	10	**0.28**	--	<0.0050	<0.0050	<0.0050	**0.017**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@15	12/21/10	15	**0.47**	--	<0.0050	<0.0050	**0.0055**	**0.024**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@20	12/21/10	20	**0.31**	--	<0.0050	<0.0050	**0.047**	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@25	12/21/10	25	<0.20	--	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--
SB-10@30	12/21/10	30	<0.20	--	<0.0050	<0.0050	<0.0050	**0.012**	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	--	--

TPHg = total petroleum hydrocarbons as gasoline TPHd = total petroleum hydrocarbons as diesel MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether DIPE = diisopropyl ether
ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane TOG = total oil and grease **bold** = value above reporting limit mg/kg = milligrams per kilogram

Attachment C
Site Groundwater Data

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	**screened from 5 to 29 feet bgs**												
	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	54.73	Sampled Annually in the Third Quarter								
	7/14/1993	72.43	18.49	53.94	ND	**2.2**	**2.1**	**1.1**	**6.2**	--	--	--	--
	10/14/1993	72.10	18.32	53.78	Sampled Annually in the Third Quarter								
	1/12/1994	72.10	18.18	53.92	Sampled Annually in the Third Quarter								
	4/11/1994	72.10	17.80	54.30	Sampled Annually in the Third Quarter								
	7/7/1994	72.10	18.28	53.82	ND	ND	ND	ND	ND	--	--	--	--
	10/5/1994	72.10	18.55	53.55	Sampled Annually in the Third Quarter								
	1/9/1995	72.10	17.90	54.20	Sampled Annually in the Third Quarter								
	4/17/1995	72.10	17.22	54.88	Sampled Annually in the Third Quarter								
	7/19/1995	72.10	18.03	54.07	ND	ND	ND	ND	ND	--	--	--	--
	10/26/1995	72.10	18.67	53.43	Sampled Annually in the Third Quarter								
	1/16/1996	72.10	17.20	54.90	Sampled Annually in the Third Quarter								
	4/15/1996	72.10	17.40	54.70	Sampled Annually in the Third Quarter								
	7/11/1996	72.10	18.03	54.07	ND	ND	ND	ND	ND	ND	--	--	--
	1/17/1997	72.10	16.54	55.56	Sampled Annually in the Third Quarter								
	7/21/1997	72.10	18.16	53.94	ND	ND	ND	ND	ND	ND	--	--	--
	1/14/1998	72.10	16.05	56.05	Sampled Annually in the Third Quarter								
	7/6/1998	72.10	16.46	55.64	ND	ND	ND	ND	ND	ND	--	--	--
	1/13/1999	72.10	17.37	54.73	Sampled Annually in the Third Quarter								
	8/31/1999	72.12	17.00	55.12	ND	ND	ND	ND	ND	ND	--	--	--
	1/21/2000	72.12	17.04	55.08	Sampled Annually in the Third Quarter								
	7/10/2000	72.12	18.10	54.02	ND	ND	ND	ND	ND	ND	--	--	--
	1/4/2001	72.12	17.95	54.17	Sampled Annually in the Third Quarter								
	7/16/2001	72.12	18.03	54.09	ND	ND	ND	ND	ND	ND	--	--	--
	1/28/2002	72.12	17.31	54.81	Sampled Annually in the Third Quarter								
	7/12/2002	72.12	18.15	53.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	1/14/2003	72.12	17.66	54.46	Sampled Annually in the Third Quarter								
	7/10/2003	72.12	17.86	54.26	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--
	2/4/2004	72.12	17.43	54.69	Sampled Annually in the Third Quarter								
	7/29/2004	72.12	18.12	54.00	<50	<0.30	0.38	<0.30	<0.6	<1	--	--	--
	3/2/2005	72.12	16.15	55.97	Sampled Annually in the Third Quarter								
	9/30/2005	72.12	18.04	54.08	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/23/2006	72.12	--	--	Sampled Annually in the Third Quarter								
	9/26/2006	72.12	17.90	54.22	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/15/2007	72.12	17.22	54.90	Sampled Annually in the Third Quarter								
	9/27/2007	72.12	18.49	53.63	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/27/2008	72.12	17.57	54.55	Sampled Annually in the Third Quarter								
	9/17/2008	72.12	18.20	53.92	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/27/2009	72.12	16.75	55.37	Sampled Annually in the Third Quarter								
	9/17/2009	72.12	18.18	53.94	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/23/2010	72.12	17.34	54.78	Sampled Annually in the Third Quarter								
	9/21/2010	72.12	18.74	53.38	<50	<0.30	<0.30	<0.30	<0.6	<1.0	--	--	--
	3/30/2011	72.12	16.68	55.44	Sampled Annually in the Third Quarter								
	09/06/2011	72.12	18.36	53.76	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	02/03/2012	72.12	18.02	54.10	Sampled Annually in the Third Quarter								
	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
	2/14/2013	72.12	17.98	54.14	Sampled Annually in the Third Quarter								
MW-2	**screened from 3.5 to 28.5 feet bgs**												
	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	53.77	410	**42**	**7.7**	**6.4**	**28**	**200**	--	--	--
	7/14/1993	71.63	18.38	53.25	110	**6.5**	ND	ND	**1.1**	**250**	--	--	--
MW-2	10/14/1993	71.38	18.20	53.18	230	**5.3**	ND	ND	**2.1**	--	--	--	--
	1/12/1994	71.38	18.08	53.30	300	**7.8**	**3.8**	**1.8**	**10**	--	--	--	--

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***
	4/9/1994	71.38	17.97	53.41	120	**10**	**0.88**	**1.1**	**4.9**	--	--	--	--
	4/11/1994	71.38	17.88	53.50	--	--	--	--	--	--	--	--	--
	7/7/1994	71.38	17.81	53.57	110	**4.4**	ND	ND	ND	--	--	--	--
	10/5/1994	71.38	18.33	53.05	720	**20**	ND	ND	3.1	--	--	--	--
	1/9/1995	71.38	17.40	53.98	ND	ND	ND	ND	ND	--	--	--	--
	4/17/1995	71.38	17.50	53.88	93	**5.6**	**0.62**	**1.7**	**5.5**	--	--	--	--
	7/19/1995	71.38	18.01	53.37	77	**32**	**0.58**	**1.7**	**4.1**	--	--	--	--
	10/26/1995	71.38	18.21	53.17	54	**13**	ND	ND	**0.72**	**220**	--	--	--
	1/16/1996	71.38	16.58	54.80	120	**23**	ND	ND	**0.99**	--	--	--	--
	4/15/1996	71.38	17.61	53.77	340	**21**	ND	**2.2**	**3.7**	**45**	--	--	--
	7/11/1996	71.38	17.98	53.40	540	**34**	ND	**4.3**	**12**	**150**	--	--	--
	1/17/1997	71.38	17.08	54.30	320	**63**	**2.4**	**9.4**	**26**	**260**	--	--	--
	7/21/1997	71.38	18.06	53.32	160	**13**	ND	**1.3**	**1.6**	**180**	--	--	--
	1/14/1998	71.38	16.52	54.86	66	**6.3**	ND	ND	**0.98**	**100**	--	--	--
	7/6/1998	71.38	16.87	54.51	ND	**2.3**	ND	ND	ND	**11**	--	--	--
	1/13/1999	71.38	17.88	53.50	53	**24**	ND	**0.52**	**0.98**	**120**	--	--	--
	8/31/1999	71.34	18.45	52.89	86	**14**	ND	**0.63**	ND	**21**	--	--	--
	1/21/2000	71.34	17.73	53.61	ND	**1.94**	ND	ND	ND	**10.1**	--	--	--
	7/10/2000	71.34	18.14	53.20	ND	ND	ND	ND	ND	**46.6**	--	--	--
	1/4/2001	71.34	18.02	53.32	ND	**0.925**	ND	ND	ND	ND	--	--	--
	7/16/2001	71.34	18.02	53.32	ND	ND	ND	ND	ND	ND	--	--	--
	1/28/2002	71.34	17.57	53.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	7/12/2002	71.34	18.05	53.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	1/14/2003	71.34	17.44	53.90	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--
	7/10/2003	71.34	--	--	--	--	--	--	--	--	--	--	--
	2/4/2004	71.34	17.22	54.12	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--
	7/29/2004	71.34	--	--	--	--	--	--	--	--	--	--	--
	3/2/2005	71.34	16.63	54.71	**99**	**26**	<0.50	3.5	2.8	<5.0	--	--	--
	9/30/2005	71.34	17.94	53.40	<50	**1.2**	<0.30	<0.30	<0.60	**1.6**	--	--	--
	3/23/2006	71.34	16.74	54.60	<50	**3.6**	<0.30	0.35	<0.60	**2.5**	--	--	--
	9/26/2006	71.34	17.91	53.43	<50	**1.2**	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/15/2007	71.34	17.45	53.89	**110**	**6.5**	<0.30	**0.70**	<0.60	**1.7**	--	--	--
	9/27/2007	71.34	18.23	53.11	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/27/2008	71.34	17.77	53.57	<50	1.8	<0.30	<0.30	<0.60	**1.3**	--	--	--
	9/17/2008	71.34	18.06	53.28	<50	1.6	<0.30	<0.30	<0.60	**3.1**	--	--	--
	3/27/2009	71.34	17.43	53.91	<50	3.5	<0.30	<0.30	<0.60	<1.0	--	--	--
	9/17/2009	71.34	18.01	53.33	<50	2.7	<0.30	<0.30	<0.60	**1.1**	--	--	--
	3/23/2010	71.34	17.47	53.87	<50	0.68	<0.30	<0.30	<0.60	<1.0	--	--	--
	9/21/2010	71.34	18.41	52.93	**69**	1.6	<0.30	<0.30	<0.60	1.6	--	--	--
	3/30/2011	71.34	16.58	54.76	<50	<0.30	<0.30	<0.30	<0.60	1.6	--	--	--
	09/06/2011	71.34	18.14	53.20	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	02/03/2012	71.34	17.97	53.37	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	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
	2/14/2013	71.34	17.88	53.46	<50	<0.30	<0.30	<0.30	<0.60	<1.0	<250	<0.50	<0.50
MW-3	**screened from 5 to 29 feet bgs**												
	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	54.10	**12000**	**290**	**38**	**760**	**2300**	**1400**	--	--	--
	7/14/1993	72.06	18.54	53.52	**6300**	**190**	ND	**430**	**1000**	**860**	--	--	--
	10/14/1993	71.86	18.45	53.41	**2500**	**52**	ND	**110**	**250**	--	--	--	--
	1/12/1994	71.86	18.34	53.52	**3800**	**78**	ND	**180**	**390**	--	--	--	--
	4/9/1994	71.86	18.19	53.67	**1800**	**22**	ND	**140**	**280**	--	--	--	--
	4/11/1994	71.86	18.12	53.74	--	--	--	--	--	--	--	--	--
	7/7/1994	71.86	18.21	53.65	**110**	**4.5**	ND	ND	ND	--	--	--	--
	10/5/1994	71.86	18.58	53.28	ND	ND	ND	ND	ND	--	--	--	--
	1/9/1995	71.86	17.69	54.17	ND	**0.68**	ND	ND	ND	--	--	--	--
	4/17/1995	71.86	17.68	54.18	**3700**	**80**	**10**	**270**	**510**	--	--	--	--
	7/19/1995	71.86	18.20	53.66	**15000**	**330**	**27**	**990**	**2400**	--	--	--	--
	10/26/1995	71.86	18.32	53.54	**14000**	**420**	**180**	**750**	**1600**	**4800**	--	--	--
	1/16/1996	71.86	17.95	53.91	**920**	**38**	ND	**30**	**57**	--	--	--	--
	4/15/1996	71.86	17.78	54.08	**9700**	**240**	ND	**570**	**860**	**3200**	--	--	--
MW-3	7/11/1996	71.86	18.19	53.67	**13000**	**69**	**5.5**	**430**	**900**	**740**	--	--	--
	1/17/1997	71.86	17.23	54.63	**4400**	**25**	ND	**270**	**580**	**1600**	--	--	--
	7/21/1997	71.86	18.29	53.57	**9000**	**36**	ND	**450**	**800**	**950**	--	--	--
	1/14/1998	71.86	16.71	55.15	**7100**	**40**	ND	**380**	**360**	**930**	--	--	--

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***
	7/6/1998	71.86	17.03	54.83	**6800**	**39**	ND	**320**	**360**	**370**	--	--	--
	1/13/1999	71.86	18.00	53.86	**1800**	**9.4**	ND	**58**	**36**	**180**	--	--	--
	8/31/1999	71.40	--	--	--	--	--	--	--	--	--	--	--
	1/21/2000	71.40	17.58	53.82	ND	ND	ND	ND	ND	**21.4**	--	--	--
	7/10/2000	71.40	18.05	53.35	ND	ND	ND	ND	ND	**162**	--	--	--
	8/25/2000	71.40	17.82	53.58	--	--	--	--	--	**180**	--	--	--
	1/4/2001	71.40	18.16	53.24	ND	ND	ND	ND	ND	**193**	--	--	--
	7/16/2001	71.40	17.98	53.42	ND	ND	ND	ND	ND	**660**	--	--	--
	1/28/2002	71.40	17.84	53.56	<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**34**	--	--	--
	7/12/2002	71.40	17.87	53.53	<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**11**	--	--	--
	1/14/2003	71.40	17.28	54.12	<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**12**	--	--	--
	7/10/2003	71.40	17.64	53.76	<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**23**	--	--	--
	2/4/2004	71.40	17.05	54.35	<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**26**	--	--	--
	7/29/2004	71.40	17.82	53.58	<50	<0.30	<0.30	<0.30	<0.60	ND<1	--	--	--
	3/2/2005	71.40	16.47	54.93	**93**	<0.50	<0.50	<0.50	<0.50	140	--	--	--
	9/30/2005	71.40	17.79	53.61	**65**	<0.30	<0.30	<0.30	<0.60	61	--	--	--
	3/23/2006	71.40	16.61	54.79	**54**	<0.30	**0.41**	ND<0.30	**0.98**	**63**	--	--	--
	9/26/2006	71.40	17.77	53.63	**51**	<0.30	<0.30	<0.30	<0.60	**41**	--	--	--
	3/15/2007	71.40	17.27	54.13	**140**	<0.30	<0.30	<0.30	<0.60	**110**	--	--	--
	9/27/2007	71.40	18.48	52.92	<50	<0.30	<0.30	<0.30	<0.60	**20**	--	--	--
	3/27/2008	71.40	17.67	53.73	<50	<0.30	<0.30	<0.30	<0.60	**19**	--	--	--
	9/17/2008	71.40	17.91	53.49	**56**	<0.30	<0.30	<0.30	<0.60	**43**	--	--	--
	3/27/2009	71.40	17.34	54.06	<50	<0.30	<0.30	<0.30	<0.60	**15**	--	--	--
	9/17/2009	71.40	17.88	53.52	<50	<0.30	<0.30	<0.30	<0.60	**30**	--	--	--
	3/23/2010	71.40	17.33	54.07	<50	<0.30	<0.30	<0.30	<0.60	**22**	--	--	--
	9/21/2010	71.40	18.28	53.12	**69**	<0.30	<0.30	<0.30	<0.60	**48**	--	--	--
	3/30/2011	71.40	16.50	54.90	**110**	<0.30	<0.30	<0.30	<0.60	**73**	--	--	--
	09/06/2011	71.40	18.03	53.37	<50	<0.30	<0.30	<0.30	<0.60	**4.7**	--	<0.50	--
	02/03/2012	71.40	17.83	53.57	<50	<0.30	<0.30	<0.30	<0.60	**8.2**	--	<0.50	--
	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
	2/14/2013	71.40	17.72	53.68	<50	<0.30	<0.30	<0.30	<0.60	**5.1**	<250	<0.50	<0.50
MW-4	**screened from 5 to 29 feet bgs**												
	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	54.31	Sampled Annually in the Third Quarter								
	7/14/1993	71.98	18.31	53.67	ND	ND	ND	ND	ND	--	--	--	--
	10/14/1993	71.64	18.08	53.56	Sampled Annually in the Third Quarter								
	1/12/1994	71.64	17.97	53.67	Sampled Annually in the Third Quarter								
	4/11/1994	71.64	17.70	53.94	Sampled Annually in the Third Quarter								
	7/7/1994	71.64	17.80	53.84	ND	ND	ND	ND	ND	--	--	--	--
	10/5/1994	71.64	18.28	53.36	Sampled Annually in the Third Quarter								
	1/9/1995	71.64	17.38	54.26	Sampled Annually in the Third Quarter								
	4/17/1995	71.64	17.21	54.43	Sampled Annually in the Third Quarter								
	7/19/1995	71.64	17.82	53.82	ND	ND	ND	ND	ND	--	--	--	--
	10/26/1995	71.64	18.17	53.47	Sampled Annually in the Third Quarter								
	1/16/1996	71.64	16.45	55.19	Sampled Annually in the Third Quarter								
	4/15/1996	71.64	17.35	54.29	Sampled Annually in the Third Quarter								
	7/11/1996	71.64	17.81	53.83	ND	ND	ND	ND	ND	ND	--	--	--
	1/17/1997	71.64	16.73	54.91	Sampled Annually in the Third Quarter								
	7/21/1997	71.64	17.91	53.73	ND	ND	ND	ND	ND	ND	--	--	--
	1/14/1998	71.64	16.18	55.46	Sampled Annually in the Third Quarter								
	7/6/1998	71.64	16.49	55.15	ND	ND	ND	ND	ND	ND	--	--	--
	1/13/1999	71.64	17.29	54.35	Sampled Annually in the Third Quarter								
	8/31/1999	71.54	--	--	Sampled Annually in the Third Quarter								
	1/21/2000	71.54	17.51	54.03	Sampled Annually in the Third Quarter								
	7/10/2000	71.54	17.93	53.61	ND	ND	ND	ND	ND	ND	--	--	--
	1/4/2001	71.54	18.10	53.44	Sampled Annually in the Third Quarter								
	7/16/2001	71.54	17.76	53.78	ND	ND	ND	ND	ND	ND	--	--	--
	1/28/2002	71.54	17.20	54.34	Sampled Annually in the Third Quarter								
	7/12/2002	71.54	17.81	53.73	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	1/14/2003	71.54	17.30	54.24	Sampled Annually in the Third Quarter								
	7/10/2003	71.54	17.58	53.96	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--
	2/4/2004	71.54	17.07	54.47	Sampled Annually in the Third Quarter								
	7/29/2004	71.54	17.81	53.73	<50	<0.30	<0.30	<0.30	<0.60	<1	--	--	--
MW-4	3/2/2005	71.54	16.25	55.29	Sampled Annually in the Third Quarter								
	9/30/2005	71.54	17.74	53.80	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/23/2006	71.54	--	--	Sampled Annually in the Third Quarter								
	9/26/2006	71.54	17.71	53.83	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/15/2007	71.54	17.56	53.98	Sampled Annually in the Third Quarter								
	9/27/2007	71.54	18.16	53.38	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--

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***
	3/27/2008	71.54	17.58	53.96				Sampled Annually in the Third Quarter					
	9/17/2008	71.54	17.87	53.67	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/27/2009	71.54	17.17	54.37				Sampled Annually in the Third Quarter					
	9/17/2009	71.54	17.86	53.68	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/23/2010	71.54	17.25	54.29				Sampled Annually in the Third Quarter					
	9/21/2010	71.54	18.31	53.23	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/30/2011	71.54	16.35	55.19				Sampled Annually in the Third Quarter					
	09/06/2011	71.54	18.00	53.54	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	02/03/2012	71.54	17.81	53.73				Sampled Annually in the Third Quarter					
	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
	2/14/2013	71.54	17.68	53.86				Sampled Annually in the Third Quarter					
MW-5	**screened from 13 to 30 feet bgs**												
	11/30/1992	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	1/8/1993	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	4/13/1993	71.51	17.49	54.02	ND	ND	ND	ND	ND	--	--	--	--
	7/14/1993	71.51	18.02	53.49	ND	ND	**0.57**	ND	ND	--	--	--	--
	10/14/1993	71.23	17.82	53.41	ND	ND	ND	ND	ND	--	--	--	--
	1/12/1994	71.23	17.74	53.49	ND	ND	**0.84**	ND	**1.6**	--	--	--	--
	4/11/1994	71.23	17.56	53.67				Sampled Annually in the Third Quarter					
	7/7/1994	71.23	17.50	53.73	ND	ND	ND	ND	ND	--	--	--	--
	10/5/1994	71.23	17.98	53.25				Sampled Annually in the Third Quarter					
	1/9/1995	71.23	17.13	54.10				Sampled Annually in the Third Quarter					
	4/17/1995	71.23	17.05	54.18				Sampled Annually in the Third Quarter					
	7/19/1995	71.23	17.59	53.64	ND	ND	ND	ND	ND	--	--	--	--
	10/26/1995	71.23	18.10	53.13				Sampled Annually in the Third Quarter					
	1/16/1996	71.23	17.11	54.12				Sampled Annually in the Third Quarter					
	4/15/1996	71.23	17.22	54.01				Sampled Annually in the Third Quarter					
	7/11/1996	71.23	17.59	53.64	ND	ND	ND	ND	ND	ND	--	--	--
	1/17/1997	71.23	16.75	54.48				Sampled Annually in the Third Quarter					
	7/21/1997	71.23	17.59	53.64	ND	ND	ND	ND	ND	ND	--	--	--
	1/14/1998	71.23	16.16	55.07				Sampled Annually in the Third Quarter					
	7/6/1998	71.23	16.52	54.71	ND	ND	ND	ND	ND	ND	--	--	--
	1/13/1999	71.23	17.62	53.61				Sampled Annually in the Third Quarter					
	8/31/1999	71.16	17.76	53.40	ND	ND	ND	ND	ND	ND	--	--	--
	1/21/2000	71.16	16.83	54.33				Sampled Annually in the Third Quarter					
	7/10/2000	71.16	17.46	53.70	ND	ND	ND	ND	ND	ND	--	--	--
	1/4/2001	71.16	17.51	53.65				Sampled Annually in the Third Quarter					
	7/16/2001	71.16	17.32	53.84	ND	ND	ND	ND	ND	ND	--	--	--
	1/28/2002	71.16	17.12	54.04				Sampled Annually in the Third Quarter					
	7/12/2002	71.16	17.12	54.04	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	1/14/2003	71.16	16.67	54.49				Sampled Annually in the Third Quarter					
	7/10/2003	71.16	17.39	53.77	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--
	2/4/2004	71.16	16.23	54.93				Sampled Annually in the Third Quarter					
	7/29/2004	71.16	16.02	55.14	<50	<0.30	0.64	<0.30	0.79	<1	--	--	--
	3/2/2005	71.16	16.43	54.73				Sampled Annually in the Third Quarter					
	9/30/2005	71.16	17.41	53.75	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/23/2006	71.16	16.37	54.79				Sampled Annually in the Third Quarter					
	9/26/2006	71.16	15.54	55.62	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/15/2007	71.16	17.20	53.96				Sampled Annually in the Third Quarter					
	9/27/2007	71.16	18.01	53.15	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/27/2008	71.16	17.57	53.59				Sampled Annually in the Third Quarter					
	9/17/2008	71.16	17.68	53.48	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/27/2009	71.16	17.14	54.02				Sampled Annually in the Third Quarter					
	9/17/2009	71.16	17.60	53.56	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/23/2010	71.16	17.84	53.32				Sampled Annually in the Third Quarter					
	9/21/2010	71.16	17.92	53.24	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/30/2011	71.16	15.87	55.29				Sampled Annually in the Third Quarter					
	09/06/2011	71.16	17.74	53.42	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	02/03/2012	71.16	17.69	53.47				Sampled Annually in the Third Quarter					
	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
	2/14/2013	71.16	17.51	53.65				Sampled Annually in the Third Quarter					
MW-6	**screened from 13 to 30 feet bgs**												
	11/30/1992	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	1/8/1993	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	4/13/1993	71.79	11.94	59.85	ND	ND	ND	ND	ND	--	--	--	--
	7/14/1993	71.79	17.20	54.59	ND	**0.99**	**2.4**	ND	**1.9**	--	--	--	--
	10/14/1993	71.44	17.21	54.23	ND	ND	**0.64**	ND	ND	--	--	--	--
	1/12/1994	71.44	17.44	54.00	ND	ND	**1.2**	ND	**2.9**	--	--	--	--
	4/11/1994	71.44	13.66	57.78				Sampled Annually in the Third Quarter					
MW-6	7/7/1994	71.44	14.05	57.39	ND	ND	ND	ND	ND	--	--	--	--
	10/5/1994	71.44	14.16	57.28				Sampled Annually in the Third Quarter					
	1/9/1995	71.44	13.73	57.71				Sampled Annually in the Third Quarter					
	4/17/1995	71.44	11.30	60.14				Sampled Annually in the Third Quarter					
	7/19/1995	71.44	12.32	59.12	ND	ND	ND	ND	ND	--	--	--	--
	10/26/1995	71.44	17.88	53.56				Sampled Annually in the Third Quarter					
	1/16/1996	71.44	16.38	55.06				Sampled Annually in the Third Quarter					
	4/15/1996	71.44	14.00	57.44				Sampled Annually in the Third Quarter					

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***
	7/11/1996	71.44	13.58	57.86	ND	ND	ND	ND	ND	ND	--	--	--
	1/17/1997	71.44	15.42	56.02	Sampled Annually in the Third Quarter								
	7/21/1997	71.44	13.78	57.66	ND	ND	ND	ND	ND	ND	--	--	--
	1/14/1998	71.44	13.65	57.79	Sampled Annually in the Third Quarter								
	7/6/1998	71.44	13.90	57.54	ND	ND	ND	ND	ND	ND	--	--	--
	1/13/1999	71.44	14.93	56.51	Sampled Annually in the Third Quarter								
	8/31/1999	71.37	15.81	55.56	ND	ND	ND	ND	ND	ND	--	--	--
	1/21/2000	71.37	16.13	55.24	Sampled Annually in the Third Quarter								
	7/10/2000	71.37	16.95	54.42	ND	ND	ND	ND	ND	ND	--	--	--
	1/4/2001	71.37	17.09	54.28	Sampled Annually in the Third Quarter								
	7/16/2001	71.37	16.83	54.54	ND	ND	ND	ND	ND	ND	--	--	--
	1/28/2002	71.37	14.58	56.79	Sampled Annually in the Third Quarter								
	7/12/2002	71.37	16.76	54.61	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--
	1/14/2003	71.37	16.25	55.12	Sampled Annually in the Third Quarter								
	7/10/2003	71.37	12.97	58.40	<50	<0.50	<0.50	<0.50	<0.50	<2.0	--	--	--
	2/4/2004	71.37	16.20	55.17	Sampled Annually in the Third Quarter								
	7/29/2004	71.37	14.98	56.39	<50	<0.30	<0.30	<0.30	<0.6	**1.3**	--	--	--
	3/2/2005	71.37	14.51	56.86	Sampled Annually in the Third Quarter								
	9/30/2005	71.37	14.45	56.92	<50	<0.30	<0.30	<0.30	<0.6	**1.7**	--	--	--
	3/23/2006	71.37	16.55	54.82	Sampled Annually in the Third Quarter								
	9/26/2006	71.37	17.58	53.79	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/15/2007	71.37	13.72	57.65	Sampled Annually in the Third Quarter								
	9/27/2007	71.37	14.18	57.19	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/27/2008	71.37	14.83	56.54	Sampled Annually in the Third Quarter								
	9/17/2008	71.37	14.70	56.67	<50	<0.30	<0.30	<0.30	<0.6	**2.8**	--	--	--
	3/27/2009	71.37	15.66	55.71	Sampled Annually in the Third Quarter								
	9/17/2009	71.37	15.31	56.06	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/23/2010	71.37	15.42	55.95	Sampled Annually in the Third Quarter								
	9/21/2010	71.37	15.62	55.75	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	--	--
	3/30/2011	71.37	14.12	57.25	Sampled Annually in the Third Quarter								
	09/06/2011	71.37	15.07	56.30	<50	<0.30	<0.30	<0.30	<0.60	<1.0	--	<0.50	--
	02/03/2012	71.37	14.88	56.49	Sampled Annually in the Third Quarter								
	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
	2/14/2013	71.37	13.66	57.71	Sampled Annually in the Third Quarter								

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
bold = detected
[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.

Attachment C
ADDITIONAL HISTORIC ANALYTICAL RESULTS
CHEVRON STATION #351642, FORMER UNOCAL STATION #3538
411 W MACARTHUR BLVD
OAKLAND, CALIFORNIA

Date Sampled	TPH-D (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Total Oil and Grease (mg/l)	Bromo-dichloro-methane (µg/l)	Bromo-form (µg/l)	Bromo-methane (µg/l)	Comments
MW-1													
9/15/1989	ND	--	--	--	--	--	--	--	ND	--	--	--	
1/23/1990	ND	--	--	--	--	--	--	--	1.5	--	--	--	
4/19/1990	ND	--	--	--	--	--	--	--	ND	--	--	--	
7/17/1990	ND	--	--	--	--	--	--	--	ND	--	--	--	
10/16/1990	ND	--	--	--	--	--	--	--	ND	--	--	--	
1/15/1991	ND	--	--	--	--	--	--	--	ND	--	--	--	
4/12/1991	ND	--	--	--	--	--	--	--	ND	--	--	--	
7/15/1991	ND	--	--	--	--	--	--	--	ND	--	--	--	
7/14/1992	--	--	--	--	--	--	--	--	--	--	--	--	
7/14/1993	--	--	--	--	--	--	--	--	--	--	--	--	
7/7/1994	--	--	--	--	--	--	--	--	--	--	--	--	
7/19/1995	--	--	--	--	--	--	--	--	--	--	--	--	
7/11/1996	--	--	--	--	--	--	--	--	--	--	--	--	
7/21/1997	--	--	--	--	--	--	--	--	--	--	--	--	
8/31/1999	--	--	--	--	--	--	--	--	--	--	--	--	
7/16/2001	--	--	--	--	--	--	--	--	--	1.7	--	--	
7/12/2002	--	--	--	--	--	--	--	--	--	--	--	--	
7/10/2003	--	--	--	--	--	--	--	--	--	--	--	--	
7/29/2004	--	--	--	--	ND<0.5	--	--	--	--	ND<0.5	ND<0.5	ND<1	
9/30/2005	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0	
9/26/2006	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0	
9/27/2007	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0	
9/17/2008	--	--	--	--	ND<0.50	--	--	--	--	ND<0.50	ND<0.50	ND<1.0	
MW-3													
8/25/2000	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	
7/12/2002	--	ND<20	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--	

Attachment C
ADDITIONAL HISTORIC ANALYTICAL RESULTS
CHEVRON STATION #351642, FORMER UNOCAL STATION #3538

Date Sampled	Carbon Tetra-chloride (µg/l)	Chloro-benzene (µg/l)	Chloro-ethane (µg/l)	Chloroform (µg/l)	Chloro-methane (µg/l)	Dibromo-chloro-methane (µg/l)	1,2-Dichloro-benzene (µg/l)	1,3-Dichloro-benzene (µg/l)	1,4-Dichloro-benzene (µg/l)	Dichloro-difluoro-methane (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	Comments
MW-1													
9/15/1989	--	--	--	--	--	--	--	--	--	--	--	--	
1/23/1990	--	--	--	--	--	--	--	--	--	--	--	--	
4/19/1990	--	--	--	--	--	--	--	--	--	--	--	--	
7/17/1990	--	--	--	--	--	--	--	--	--	--	--	--	
10/16/1990	--	--	--	--	--	--	--	--	--	--	--	--	
1/15/1991	--	--	--	--	--	--	--	--	--	--	--	--	
4/12/1991	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/1991	--	--	--	--	--	--	--	--	--	--	--	--	
7/14/1992	--	--	--	--	--	--	--	--	--	--	--	--	
7/14/1993	--	--	--	--	--	--	--	--	--	--	--	--	
7/7/1994	--	--	--	--	--	--	--	--	--	--	--	--	
7/19/1995	--	--	--	--	--	--	--	--	--	--	--	--	
7/11/1996	--	--	--	0.96	--	--	--	--	--	--	--	--	
7/21/1997	--	--	--	1.0	--	--	--	--	--	--	--	--	
8/31/1999	--	--	--	--	--	--	--	--	--	--	--	--	
7/16/2001	--	--	--	45	--	--	--	--	--	--	--	--	
7/12/2002	--	--	--	--	--	--	--	--	--	--	--	1.8	
7/10/2003	--	--	--	--	--	--	--	--	--	--	--	0.89	
7/29/2004	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.2	
9/30/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.52	
9/26/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.60	
9/27/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
9/17/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	
MW-3													
8/25/2000	--	--	--	--	--	--	--	--	--	--	--	--	
7/12/2002	--	--	--	--	--	--	--	--	--	--	--	--	

Attachment C
ADDITIONAL HISTORIC ANALYTICAL RESULTS
CHEVRON STATION #351642, FORMER UNOCAL STATION #3538

Date Sampled	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro-propane (µg/l)	cis-1,3-Dichloro-propene (µg/l)	trans-1,3-Dichloro-propene (µg/l)	Methylene chloride (µg/l)	1,1,2,2-Tetrachloro-ethane (µg/l)	Tetrachloro-ethene (PCE) (µg/l)	Trichloro-trifluoro-ethane (µg/l)	1,1,1-Trichloro-ethane (µg/l)	1,1,2-Trichloro-ethane (µg/l)	Trichloro-ethene (TCE) (µg/l)	Comments
MW-1													
9/15/1989	--	--	--	--	--	--	--	2.7	--	--	--	--	
1/23/1990	--	--	--	--	--	--	--	2.1	--	--	--	--	
4/19/1990	--	--	--	--	--	--	--	2.2	--	--	--	--	
7/17/1990	--	--	--	--	--	--	--	1.7	--	--	--	--	
10/16/1990	--	--	--	--	--	--	--	2.0	--	--	--	--	
1/15/1991	--	--	--	--	--	--	--	2.1	--	--	--	--	
4/12/1991	--	--	--	--	--	--	--	2.0	--	--	--	--	
7/15/1991	--	--	--	--	--	--	--	1.8	--	--	--	--	
7/14/1992	--	--	--	--	--	--	--	1.4	--	--	--	--	
7/14/1993	--	--	--	--	--	--	--	0.95	--	--	--	--	
7/7/1994	--	--	--	--	--	--	--	0.83	--	--	--	--	
7/19/1995	--	--	--	--	--	--	--	0.52	--	--	--	--	
7/11/1996	--	--	--	--	--	--	--	0.73	--	--	--	--	
7/21/1997	--	--	--	--	--	--	--	0.70	--	--	--	--	
8/31/1999	--	--	--	--	--	--	--	ND	--	--	--	--	
7/16/2001	--	--	--	--	--	--	--	ND	--	--	--	--	
7/12/2002	--	--	--	--	--	--	--	ND<0.60	--	--	--	--	
7/10/2003	--	--	--	--	--	--	--	ND<0.50	--	--	--	--	
7/29/2004	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<0.5	ND<0.5	13	ND<0.5	ND<0.5	ND<0.5	
9/30/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	9.1	ND<0.50	ND<0.50	ND<0.50	
9/26/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	7.0	ND<0.50	ND<0.50	ND<0.50	
9/27/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	4.3	ND<0.50	ND<0.50	ND<0.50	
9/17/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	5.4	ND<0.50	ND<0.50	ND<0.50	
MW-3													
8/25/2000	--	--	--	--	--	--	--	--	--	--	--	--	
7/12/2002	--	--	--	--	--	--	--	--	--	--	--	--	

Attachment C
ADDITIONAL HISTORIC ANALYTICAL RESULTS
CHEVRON STATION #351642, FORMER UNOCAL STATION #3538

Date Sampled	Trichloro-fluoro-methane (µg/l)	Vinyl chloride (µg/l)	Comments
MW-1			
9/15/1989	--	--	
1/23/1990	--	--	
4/19/1990	--	--	
7/17/1990	--	--	
10/16/1990	--	--	
1/15/1991	--	--	
4/12/1991	--	--	
7/15/1991	--	--	
7/14/1992	--	--	
7/14/1993	--	--	
7/7/1994	--	--	
7/19/1995	--	--	
7/11/1996	--	--	
7/21/1997	--	--	
8/31/1999	--	--	
7/16/2001	--	--	
7/12/2002	--	--	
7/10/2003	--	--	
7/29/2004	ND<0.5	ND<0.5	
9/30/2005	ND<0.50	ND<0.50	
9/26/2006	ND<0.50	ND<0.50	
9/27/2007	ND<0.50	ND<0.50	
9/17/2008	ND<0.50	ND<0.50	
MW-3			
8/25/2000	--	--	
7/12/2002	--	--	

Attachment D
Historical Grab Groundwater Data

Table 4
Historical Grab Groundwater Analytical Results
Former 76 Service Station No. 3538
411 W. MacArthur Blvd
Oakland, CA

Sample ID	Date	Depth (ft)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	TAME (ug/L)	DIPE (ug/L)	ETBE (ug/L)	EDB (ug/L)	1-2,DCA (ug/L)	Ethanol (ug/L)
SB-1W	3/27/2006	--	**120**	**11**	<0.050	<0.050	<1.0	**130**	**28**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-2W	3/27/2006	--	<50	<0.050	<0.050	<0.050	<1.0	<0.050	<5.0	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-3W	3/27/2006	--	**13000**	**510**	**470**	**1400**	**2600**	**340**	**57**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-4W	3/27/2006	--	<50	<0.050	<0.050	<0.050	<1.0	**3.4**	<5.0	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-5W	3/27/2006	--	**3000**	**44**	**63**	**1.2**	**30**	**53**	**17**	<0.050	<0.050	<0.050	<0.050	<0.050	<100
SB-8@20-25	12/20/10	20-25	**2000**	<0.50	**48**	**98**	**340**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-9@17-22	12/20/10	17-22	**9500**	**430**	**2000**	**330**	**2100**	**190**	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<2500
SB-9@24-29	12/20/10	24-29	**2900**	**79**	**470**	**100**	**540**	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<2500
SB-10@17-22	12/20/10	17-22	**1500**	**20**	**0.96**	**75**	**8.3**	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250
SB-10@24-29	12/20/10	24-29	**310**	**1.8**	**25**	**12**	**63**	**5.8**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250

TPHg = total petroelum hydrocarbons as gasoline TPHd = total petroleum hydrocarbons as diesel MTBE = metyl tert butyl ether TBA = tert butyl alcohol TAME = tert amyl methyl ether
DIPE = diisopropyl ether ETBE = ethyl tert butyl ether EDB = ethylene dibromide 1,2-DCA = 1,2 dicholorethane TOG = total oil and grease ND = non detect, where reporting limit is not known
bold = value above reporting limit ug/L = micrograms per liter