

Atlantic Richfield Company

Chuck Carmel

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September 19, 2014

RECEIVED

By Alameda County Environmental Health at 9:08 am, Sep 23, 2014

Re: Site Management Plan
Former Richfield Oil Company Station No. 472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by,



Chuck Carmel
Remediation Management Project Manager

Attachment

Site Management Plan
Former Richfield Oil Company Station No.472
aka Pluckey's Liquors
6415 International Boulevard
Oakland, California
ACEH Case No. RO0002982

Prepared for

Mr. Chuck Carmel
Operations Project Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by



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September 19, 2014

Project No. 09-88-601



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Creating Solutions. Building Trust.

September 19, 2014

Project No. 09-88-601

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

Re: Site Management Plan, Former Richfield Oil Company Station No.472, 6415 International Boulevard, Oakland, California; ACEH Case No. RO0002982

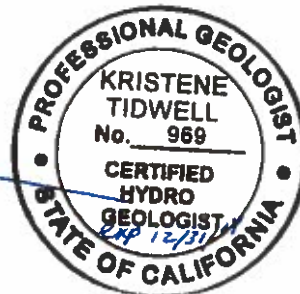
Dear Mr. Carmel:

Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Site Management Plan* for Former Richfield Oil Company Station No.472 (also known as Pluckey's Liquors) located at 6415 International Boulevard, Oakland, California (Site). This document was prepared in order to govern future activities following site closure.

Should you have questions or require additional information, please do not hesitate to contact us at (707) 455-7290.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Kristene Tidwell, P.G., C.Hg.
Associate Hydrogeologist



Attachment

cc: Ms. Dilan Roe, PE, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Mahmud Ghanem, 6207 International Boulevard, Oakland, CA 94621
Electronic copy uploaded to GeoTracker

SITE MANAGEMENT PLAN
Former Richfield Company Station No. 472
6415 International Boulevard, Oakland, California
Fuel Leak Case No. RO0002982

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SITE MANAGEMENT PLAN
Former Richfield Company Station No. 472
6415 International Boulevard, Oakland, California
Fuel Leak Case No. RO0002982

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company– (ARC, a BP affiliated company) Broadbent & Associates, Inc. (Broadbent) has prepared this *Site Management Plan (SMP)* for the Former Richfield Oil Company (ROC) Station No.472 (also known as Pluckey’s Liquors but herein referred to as Former Station No.472), located at 6415 International Boulevard, Oakland, California (Site). This SMP was prepared in order to mitigate human exposure to soil and groundwater contamination following recently approved consideration for case closure by the Alameda County Environmental Health Agency. This SMP includes discussions on the Site background and previous environmental activities, present contamination data, and handling procedures for soil and groundwater. A Site Map is included as Drawing 2.

1.1 Site Setting

The Site is currently a vacant store front. Previously, a liquor store was operated onsite, and the building from this operation is still present. The Site is generally asphalt or concrete. Alameda County Assessors records indicate the Site is located on an approximately 0.27 acre parcel of property. The Site is located in Section 16, Township 2 South, Range 3 West, relative to the Mount Diablo Baseline and Meridian of Northern California, and The Site can be located on the Oakland East, California 7½-minute topographic quadrangle map of the United States Geological Survey (USGS). A Site Location Map is presented as Drawing 1.

The Site is located in a mixed residential and commercial land-use area. The property across 64th Avenue to the northwest is a car wash. The property to the southeast is a Little Caesars restaurant. Across International Blvd. To the northeast of the Site is a McDonald’s restaurant. To the southwest, and adjacent to the Site, are single-family residences.

1.2 Site Background

The Site operated as a gasoline fueling station between 1947 to at least 1971. The fueling station features including the USTs and dispensers were removed in 1976. A detailed Site history and summary of previous investigations is included in Appendix A.

1.3 Document Purpose and Organization

The purpose of this document is to outline best practices for the possible future handling of materials and outline the risks involved with conducting ground disturbance at the Site. Table 1 presents the historical contamination data obtained from groundwater analysis.

2.0 SOIL MANAGEMENT ACTIVITIES

The following sections present guidelines for parties involved in future ground disturbance activities.

2.1 Soil

No Light Aqueous Phase Liquids (LNAPL) in soil is present at the Site. Additionally, benzene has never been reported in historical soil samples. Shallow soil samples collected at the site within the bioattenuation zone (area of soil between land surface and shallow groundwater located approximately 7 feet bgs) have not detected TPH as gasoline or diesel. Therefore, it was concluded that the vapor intrusion pathway was not complete.

No BTEX has ever been detected in soil or groundwater samples at the Site with the exception of one minor groundwater detection of toluene in 2009. Minimal amounts of GRO and DRO have been detected in groundwater which indicates a minimal soil concentrations as well.

2.2 Groundwater

The most recent sampling results (September 9, 2013) indicates concentration of DRO and GRO consistent with historical ranges. No other analytes were detected in any monitoring well sample. No LNAPL in groundwater is present at the Site. Additionally, benzene has never been reported in historical groundwater samples. Groundwater monitoring laboratory analytical results are summarized in Table 1.

Hydrocarbon concentration trends appear limited in extent, as evidenced by the absence of any petroleum hydrocarbon detections in downgradient well MW-3. Due to the hydrocarbon signature in groundwater consisting of only minor sporadic detections of DRO/GRO and no select BTEX and/or fuel oxygenates (benzene has never been detected), and the age of the release; it appears that the remaining hydrocarbon plume greatly attenuated over time.

2.3 Health and Safety Plan

Prior to conducting any earthwork activities, a Site-Specific health and safety plan (HASP) shall be prepared for use by personnel implementing the work. The HASP will address the scope of work. A copy of the HASP shall be available onsite during the work. Subcontractors performing field activities will be provided with a copy of the HASP prior to initiating work. The HASP will include a comprehensive list of chemicals which may be encountered and the MSDS sheets for these chemicals.

2.4 Handling Procedures for Contaminated Soil

Contaminated or hazardous soil is not anticipated to be based on data collected to date (Table 1, Appendix B). However, in the event that soil is excavated during future site development activities, the soil shall be segregated and profiled if petroleum impacted soil is encountered. Profiling will consist of sampling and tested via field methods to determine if it is considered hazardous waste. If this is the case, soil shall be transported in compliance with all state and federal regulations to a permitted disposal site and disposed of according to standard procedures.

Because groundwater is relatively shallow and the soil impacts are limited in extent and magnitude, we can infer that the contaminant mass in soil above the groundwater table is not appreciable, and the potential for further leaching is limited.

2.5 Handling Procedures for Contaminated Groundwater

With the exception of a low MTBE concentration detected in MW-1 (0.54 micrograms per liter [$\mu\text{g/L}$] on 8/25/09) and a low Toluene concentration detected in MW-3 (1.2 $\mu\text{g/L}$ on 8/25/2009), both believed to be anomalous, BTEX and fuel oxygenates are not present. Primarily GRO and DRO have been detected in groundwater at the site with concentration from the most recent sampling event conducted on September 4, 2013 all below 200 $\mu\text{g/L}$.

Due to the sporadic nature of concentration spikes in groundwater at the site, caution shall be taken when performing any work that may put humans into direct contact with groundwater. Proper PPE shall be used at all times. Dewatered fluid shall be held in storage tanks, sampled, transported, and analyzed according to applicable laws; and disposed of according to standard procedures.

2.6 Decontamination

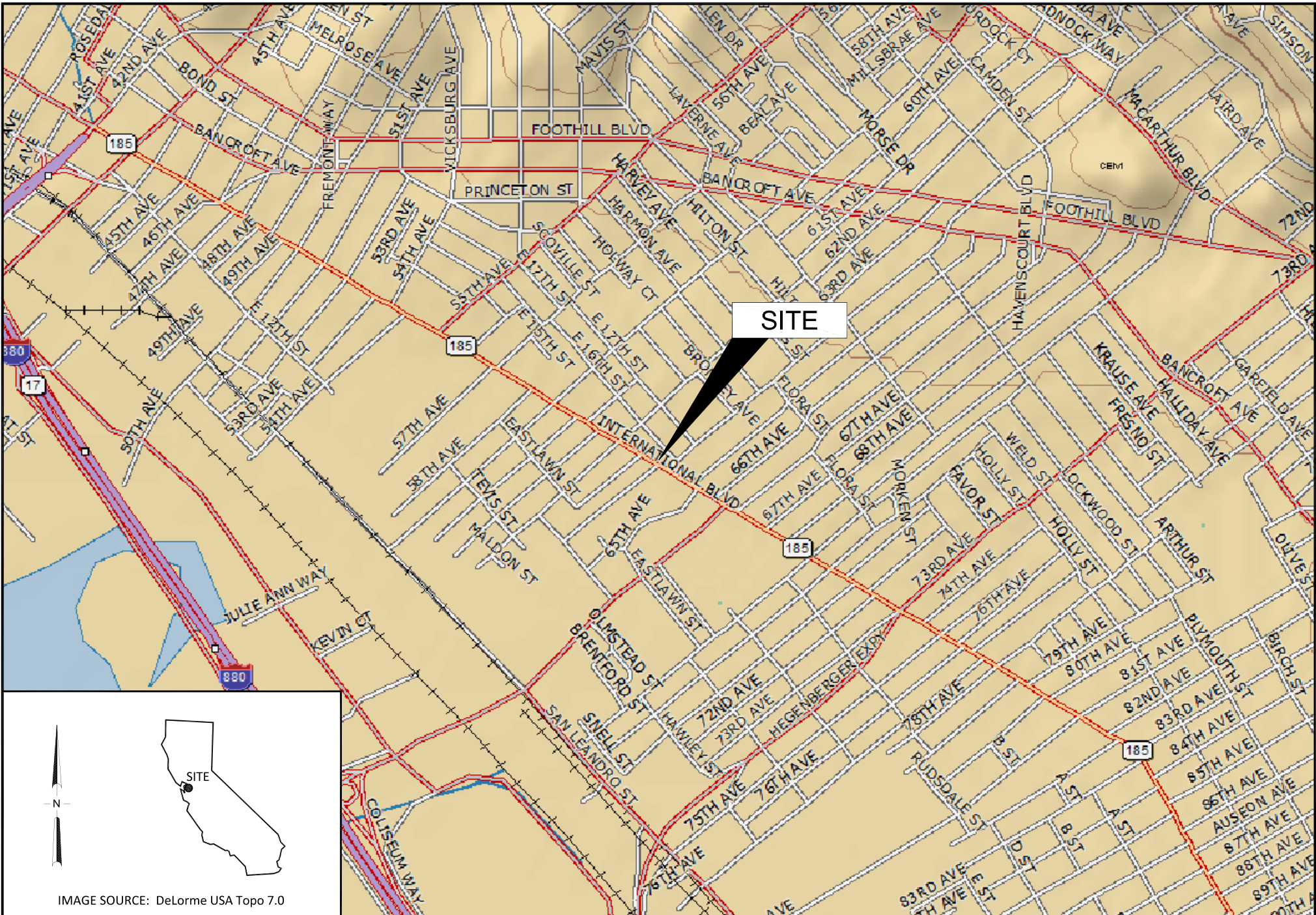
Detergents, such asalconox or bleach, shall be used on equipment that has contacted contaminated or possibly contaminated soils and/or fluids.

2.7 Implementation of Site Management Plan

This Site Management Plan shall be given as a copy to contractors that will be performing ground disturbance work at the site. Contractors are responsible to maintain safety and comply with this and any other plans pertaining to the site.

As conditions change this SMP may require modification to maintain its relevance. Conditions that may require a modification to this plan include: regulations, environmental factors, scope of work that is not addressed by this plan, presence of chemicals not addressed by this plan, etc.

Drawings



SITE

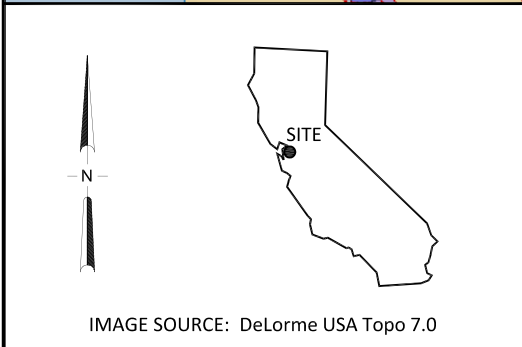
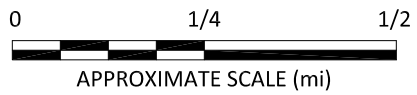


IMAGE SOURCE: DeLorme USA Topo 7.0



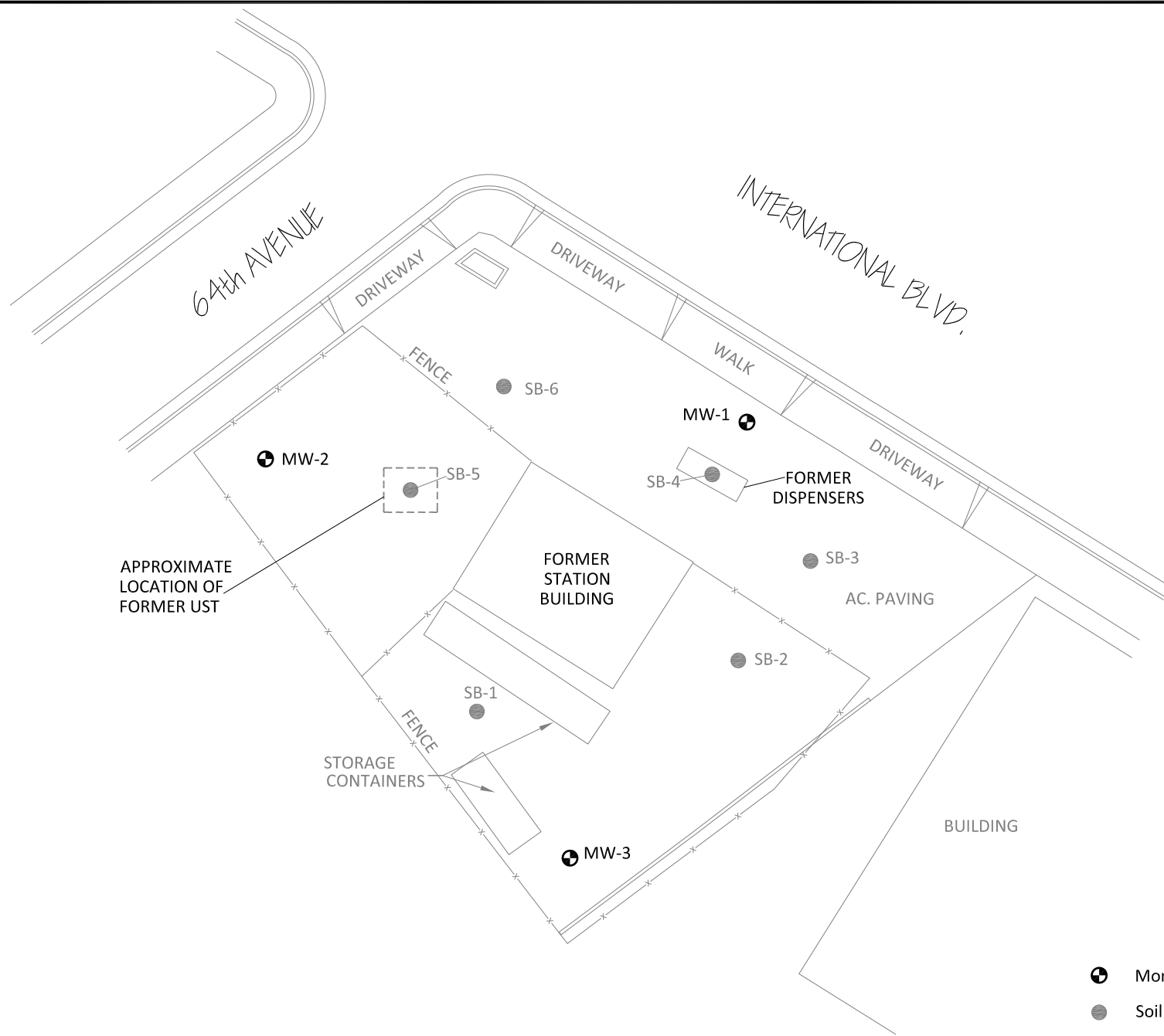
BROADBENT
 1370 Ridgewood Dr., Suite 5
 Chico, California 95973
 Project No.: 09-88-601 Date: 4/2/2013

Former Station #472
 6415 International Boulevard
 Oakland, California



Site Location Map

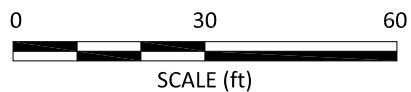
Drawing

1



LEGEND

-  Monitor Well Location
-  Soil Boring Location



BROADBENT
 1370 Ridgewood Dr., Suite 5
 Chico, California 95973
 Project No.: 09-88-601 Date: 5/15/2013

Former Station #472
 6415 International Boulevard
 Oakland, California

Site Map with Monitoring Well
 and Historic Boring Locations

Drawing

2

TABLE 1
Analytical Results

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote	
							DRO/TPHd	GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes				MTBE
MW-1																
8/25/2009	P	24.17	7.00	17.00	9.29	14.88	190	530	<0.50	<0.50	<0.50	<0.50	0.54	--	7.21	LX (DRO)
11/11/2009	NP		7.00	17.00	8.22	15.95	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
2/17/2010	NP		7.00	17.00	7.36	16.81	70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.69	7.03	LX (DRO)
6/2/2010	NP		7.00	17.00	7.61	16.56	120	110	<0.50	<0.50	<0.50	<0.50	<0.50	1.21	7.0	LW (GRO), LX (DRO)
9/3/2010	NP		7.00	17.00	8.99	15.18	190	1,000	<0.50	<0.50	<0.50	<0.50	<0.50	0.74	7.30	LW (GRO), LX (DRO)
2/8/2011	NP		7.00	17.00	7.69	16.48	53	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.64	6.8	LX (DRO)
7/18/2011	NP		7.00	17.00	7.99	16.18	110	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.70	7.2	LX (DRO)
3/1/2012	P		7.00	17.00	8.20	15.97	140	500	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	7.01	
8/15/2012	P		7.00	17.00	8.89	15.28	220	490	<0.50	<0.50	<0.50	<1.0	<0.50	8.90	7.53	
2/21/2013	P		7.00	17.00	7.63	16.54	<51	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.78	7.54	
9/4/2013	P		7.00	17.00	9.40	14.77	130	330	<0.50	<0.50	<0.50	<1.0	<0.50	1.48	7.37	
MW-2																
8/25/2009	P	23.62	7.00	17.00	9.65	13.97	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.30	
11/11/2009	NP		7.00	17.00	8.09	15.53	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
2/17/2010	P		7.00	17.00	6.80	16.82	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.62	7.15	
6/2/2010	NP		7.00	17.00	7.11	16.51	65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.85	7.3	LX (DRO)
9/3/2010	NP		7.00	17.00	8.79	14.83	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.19	7.90	
2/8/2011	NP		7.00	17.00	7.21	16.41	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.15	7.0	
7/18/2011	--		7.00	17.00	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
3/1/2012	P		7.00	17.00	7.41	16.21	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.89	7.34	
8/15/2012	P		7.00	17.00	8.79	14.83	<47	<50	<0.50	<0.50	<0.50	<1.0	<0.50	3.3	7.48	
2/21/2013	P		7.00	17.00	6.89	16.73	<52	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.35	7.73	
9/4/2013	P		7.00	17.00	9.35	14.27	<48	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.21	7.48	
MW-3																
8/25/2009	P	24.73	7.00	17.00	11.07	13.66	85	63	<0.50	1.2	<0.50	<0.50	<0.50	--	7.09	
11/11/2009	NP		7.00	17.00	9.56	15.17	--	88	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	LW (GRO)

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote	
							DRO/TPHd	GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes				MTBE
MW-3 Cont.																
2/17/2010	NP	24.73	7.00	17.00	8.52	16.21	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.04	7.09	
6/2/2010	NP		7.00	17.00	8.64	16.09	130	100	<0.50	<0.50	<0.50	<0.50	<0.50	1.22	7.1	LW (GRO), LX (DRO)
9/3/2010	NP		7.00	17.00	8.41	16.32	140	200	<0.50	<0.50	<0.50	<0.50	<0.50	0.87	6.9	LW (GRO), LX (DRO)
2/8/2011	NP		7.00	17.00	8.82	15.91	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.88	7.0	
7/18/2011	NP		7.00	17.00	9.20	15.53	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.93	6.9	
3/1/2012	P		7.00	17.00	9.13	15.60	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.63	6.91	
8/15/2012	P		7.00	17.00	10.45	14.28	600	<50	<0.50	<0.50	<0.50	<1.0	<0.50	2.99	7.38	*(DRO)
2/21/2013	P		7.00	17.00	8.39	16.34	95	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.30	7.76	
9/4/2013	P		7.00	17.00	10.92	13.81	<48	<50	<0.50	<0.50	<0.50	<1.0	<0.50	0.97	8.01	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							DRO/ TPHd	GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes			

Symbols & Abbreviations:

--- = Not analyzed/applicable/measured/available

< = Not detected at or above specified laboratory reporting limit

DO = Dissolved oxygen

DRO = Diesel range organics

DTW = Depth to water in ft bgs

GRO = Gasoline range organics

GWE = Groundwater elevation measured in ft

HVOC = Halogenated volatile organic compounds

mg/L = Milligrams per liter

MTBE = Methyl tert-butyl ether

NP = Well not purged prior to sampling

P = Well purged prior to sampling

TOC = Top of casing measured in ft

TOG = Total oil and grease

TPH-d = Total petroleum hydrocarbons as diesel

TPH-g = Total petroleum hydrocarbons as gasoline

µg/L = Micrograms per liter

CEL = CalScience Environmental Laboratories, Inc.

* = Hydrocarbon result partly due to individual peak(s) in the quantitation range

Footnotes:

LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline

LX = Quantitation of unknown hydrocarbon(s) in sample based on diesel

APPENDIX A

SUMMARY OF PREVIOUS INVESTIGATIONS

Summary of Previous Investigations

In 1947, Richfield Oil Company purchased the property for the construction of a service station with completion taking place in 1949. The service station was operated by various Richfield Oil Company dealers from 1949 to 1970. In 1966, two 4,000 gallon and one 6,000 gallon replacement underground storage tanks (USTs) were installed on the property. Richfield Oil Company sold the property in 1971 to the Natrass Corporation.

In May 2007, AAI Environmental Corporation (AAI) conducted a Phase I Environmental Site Assessment (ESA) on the property. Work included review of environmental and regulatory databases and site reconnaissance prior to selling the property. AAI reported that one or two USTs were previously removed from the northeast corner of the property prior to 1976, but no soil sampling data or removal report were found to confirm the information given. Sampling and reporting information was likely not required at that time. The AAI site reconnaissance reportedly did not identify potential concerns. However, AAI recommended a limited Phase II Environmental Site Assessment on the property to assess the former presence of the USTs and/or legacy environmental contamination (AAI, 2007).

In April 2008, GEOCON conducted a Limited Phase II Environmental Site investigation on the Site. Work included the advancement of six soil borings (SB-1 through SB-6) down to 31 feet below ground surface (ft bgs) at the locations shown on Drawing 2. Soil samples were collected from each boring and groundwater samples were collected from borings SB-1, SB-2, SB-3 and SB-5. Soil boring SB-1 was drilled on the backside of the property to assess the potential for off-site contaminant migration. Borings SB-2, SB-3, SB-5 and SB-6 were advanced in the area suspected of containing the former USTs. SB-4 was advanced to assess a former pump island. Soil samples from borings SB-1 through SB-6 contained Total Petroleum Hydrocarbons in the Gasoline Range (TPHg) at concentrations up to 95 milligrams per kilogram (mg/kg) (SB-6 at 14 ft bgs), Total Petroleum Hydrocarbons in the Diesel Range (TPHd) at concentrations up to 20 mg/kg (SB-2 at 20 ft bgs), and Total Petroleum Hydrocarbons in the Motor Oil Range (TPHmo) at concentrations up to 51 mg/kg (SB-2 at 20 ft bgs). Grab groundwater samples from borings SB-1, SB-2, SB-3 and SB-5 contained TPHg at concentrations up to 8.1 milligrams per liter (mg/L) (SB-3), TPHd at concentrations up to 7.2 mg/L (SB-3), and TPHmo at concentrations up to 0.18 mg/L (SB-5). No concentrations of Benzene, Toluene, Ethylbenzene, or Xylenes (BTEX) were detected above the laboratory reporting limits in the soil or groundwater samples collected (GEOCON, 2008).

In a letter dated January 29, 2009, ACEH requested completion of an Unauthorized Release Report (URR), and soil and groundwater investigation work plan. A URR was submitted to ACEH on February 20, 2009. A work plan for a soil and groundwater investigation was submitted to ACEH on March 30, 2009. In a letter dated April 16, 2009, ACEH requested an addendum work plan. An addendum work plan for a soil and groundwater investigation was submitted to ACEH on May 28, 2009. In a letter dated June 11, 2009, ACEH approved the addendum work plan. Broadbent and Associates, inc. (Broadbent) submitted the *Revised Soil & Ground-Water Investigation with Third Quarter 2009 Ground-Water Monitoring Report* detailing the installation of three groundwater monitoring wells on November 17, 2009. No petroleum hydrocarbons were detected in the 20 soil samples collected during monitoring well installation activities with the exception of one sample containing Gasoline Range Organics (GRO), which was detected at a concentration of 0.87 mg/kg in boring MW-1 at 14.5 ft bgs.

Broadbent conducted quarterly groundwater monitoring and sampling from the Third Quarter of 2009 to the Second Quarter of 2010. With the concurrence of ACEH, Broadbent switched to semi-annual

monitoring and sampling in the First Quarter of 2011. Low concentrations of Diesel Range Organics (DRO) and GRO have been generally stable or decreasing in wells since initial sampling. The highest GRO concentration was found in well MW-1 at 1,000 micrograms per liter ($\mu\text{g/L}$, parts per billion, ppb) during the Third Quarter 2010 sampling event. The highest DRO concentration was found in well MW-1 during the First Quarter 2013 sampling event at 95 $\mu\text{g/L}$. BTEX and MTBE have not been detected in any of the groundwater samples with the exception of a concentration of 1.2 $\mu\text{g/L}$ of Toluene in well MW-3 (third quarter 2009) and 0.54 $\mu\text{g/L}$ of MTBE in well MW-1 (Third Quarter 2009).

References

AAI, May 9, 2007. *Phase I Environmental Site Assessment Report, Former Gasoline Station Plucky's Liquors, 6415 International Boulevard, Oakland, California*. Prepared for Mr. Marcelo Bermudez, Freeman.

Broadbent & Associates, Inc., February 20, 2009. *Underground Storage Tank Unauthorized Release (Leak)/ Contamination Site Report, Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982*.

Broadbent & Associates, Inc., November 17, 2009. *Revised Soil & Ground-Water Investigation and Third Quarter 2009 Ground-Water Monitoring Report, For Former Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982*.

Broadbent & Associates, Inc., November 28, 2011. *Case Evaluation and Justification for No Further Action, Former Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982*.

Broadbent & Associates, Inc., April 26, 2013. *First Quarter 2013 Monitoring Report, Former Richfield Oil Company Station #472, 6415 International Boulevard, Oakland; ACEH Case #RO0002982*.

GEOCON, May 7, 2008. *Limited Soil and Grab Groundwater Sampling Report, Plucky's Liquors/ Former Gasoline Station, 6415 International Boulevard, Oakland, California*. Prepared for Ms. Holly Moore, DGC Associates.

APPENDIX B
HISTORICAL SITE DATA

Table 1
Summary of Soil Sample Results
Plucky's Liquors / Former Gasoline Station
6415 International Blvd.
Oakland, California

Borehole Location	Collection Date	Depth (feet bgs)	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Total Xylenes (ug/kg)
SB-1	4/22/2008	15	7.3	6.3	5.5	<5.0	<5.0	<5.0	<15
SB-2	4/22/2008	16	21	2.6	3.5	<5.0	<5.0	<5.0	<15
SB-2	4/22/2008	20	<1.0	20	51	<5.0	<5.0	<5.0	<15
SB-3	4/22/2008	13	<1.0	5.8	5.8	<5.0	<5.0	<5.0	<15
SB-3	4/22/2008	20	<1.0	<1.0	1.6	<5.0	<5.0	<5.0	<15
SB-4	4/22/2008	8	<1.0	4.6	6.2	<5.0	<5.0	<5.0	<15
SB-5	4/22/2008	16	<1.0	7.6	6.3	<5.0	<5.0	<5.0	<15
SB-6	4/22/2008	14	95	7.8	4.4	<25	<25	<25	<75
SB-6	4/22/2008	20	<1.0	1.5	4.0	<5.0	<5.0	<5.0	<15
SB-6	4/22/2008	31	<1.0	3.2	2.7	<5.0	<5.0	<5.0	<15

Table 2
Summary of Grab Groundwater Sample Results
Plucky's Liquors / Former Gasoline Station
6415 International Blvd.
Oakland, California

Borehole Location	Collection Date	Depth (feet bgs)	TPHg (mg/l)	TPHd (mg/l)	TPHmo (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)
SB-1	4/22/2008	21	0.080	0.076	0.11	<0.50	<0.50	<0.50	<1.5
SB-2	4/22/2008	21	1.5	0.71	0.13	<0.50	<0.50	<0.50	<1.5
SB-3	4/22/2008	26	8.1	7.2	0.15	<5.0	<5.0	<5.0	<15
SB-5	4/22/2008	14	0.14	0.11	0.18	<0.50	<0.50	<0.50	<1.5

NOTES:

- TPHg- Total Petroleum Hydrocarbons as Gasoline
- TPHd - Total Petroleum Hydrocarbons as Diesel
- TPHmo - Total Petroleum Hydrocarbons as Motor Oil
- mg/kg- Milligrams per kilogram
- ug/kg- Micrograms per kilogram
- mg/l - Milligrams per liter
- ug/l - Micrograms per liter

Table 1. Summary of Soil Sampling Analytical Data
 Station #472, 6415 International Boulevard, Oakland, CA

Sample ID	Sample Depth (ft)	Date Sampled	DRO/TPHd	ORO/TPHo	GRO/TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Concentrations in (mg/kg)						
MW-1 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 14.5'	14.5	7/14/2009	ND <5.0	ND <25	0.87	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010

ND = Not Detected above the laboratory detection limit

DRO/TPHd = Diesel Range Organics/Total Petroleum Hydrocarbons in the diesel range (C10-C28)

ORO/TPHo = Oil Range Organics/Total Petroleum Hydrocarbons in the oil range (C17-C44)

GRO/TPHg = Gasoline Range Organics/Total Petroleum Hydrocarbons in the gasoline range (C6-C12)

mg/kg = milligrams per kilogram

PROJECT NO. E8448-06-01

BORING NO. SB-1					SOIL (USCS)	HEADSPACE (FT)	
DEPTH IN FEET	PENETRAT. RESIST BLOWS/FT	SAMPLE NO	LITHOLOGY	DATE DRILLED <u>4/22/08</u> WATER LEVEL (ATD) _____			
EQUIPMENT <u>GEOPROBE</u> DRILLER <u>En Prob</u>							
SOIL DESCRIPTION							
1			ASPHALT AND BASE ROCK				
2			Stiff, moist, black, fine Sandy CLAY, low to medium plasticity, no odor	CL			
3							
4							
5			Stiff, moist, olive, medium Sandy CLAY, low plasticity, no odor	CL			
6							
7							
8			Dense, moist to very moist, olive, Clayey coarse angular GRAVEL, no odor	GC			
9							
10							
11			Stiff, moist, yellowish red with light green, Sandy CLAY, low to medium plasticity, no odor	CL			
12							
13							
14			Dense, moist, pale green, Clayey GRAVEL, with coarse angular sand, slight plasticity, slight odor	GC			
15					CL		
16							
17			Firm to soft, moist, brown, Silty CLAY, low to medium plasticity, no odor				
18							
19							
20			Soft, very moist, brown, Silty CLAY, with interbedded clayey fine sand, low to medium plasticity, no odor	CL			
21							
22							
23							
24			BORING TERMINATED AT 24 FEET				

Figure 1, Log of Boring SB-1, page 1 of 1

ENV_NO_WELL_PLUCKYS BORINGS.GPJ 05/06/08

BORING ELEVATION:	ENGINEER/GEOLOGIST: JOHN LOVE
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NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. SB-2		SOIL (USCS)	HEADSPACE (PPM)	
				DATE DRILLED 4/22/08	WATER LEVEL (ATD)			
				EQUIPMENT	GEOPROBE	DRILLER	En Proh	
SOIL DESCRIPTION								
1			ASPHALT					
2			Stiff, moist, black, fine Sandy CLAY, low to medium plasticity, no odor			CL		
3								
4								
5								
6			Stiff, moist, olive, medium Sandy CLAY, low plasticity, no odor			CL		
7								
8							GC	
9			Dense, moist to very moist, olive, Clayey coarse angular GRAVEL, no odor					
10								
11			Stiff, moist, yellowish red with light green, Sandy CLAY, low to medium plasticity, no odor			CL		
12								
13								
14			Dense, moist, pale green, Clayey GRAVEL with coarse angular sand, slight plasticity, petroleum odor			GC		
15							CL	
16			Firm to soft, moist, brown, Silty CLAY, low to medium plasticity, petroleum odor					
17								
18								
19								
20								
21			Soft, very moist, brown, Silty CLAY with interbedded clayey fine sand, petroleum odor			CL		
22								
23								
24								
BORING TERMINATED AT 24 FEET								

Figure 2, Log of Boring SB-2, page 1 of 1

ENV_NO_WELL PLUCKYS BORINGS GPJ 05/06/08

BORING ELEVATION:

ENGINEER/GEOLOGIST: **JOHN LOVE**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. SB-3		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED 4/22/08	WATER LEVEL (ATD)		
				EQUIPMENT	GEOPROBE	DRILLER	En Prob
SOIL DESCRIPTION							
1			ASPHALT				
2			Stiff, moist, black to brown, Sandy CLAY, low plasticity, no odor			CL	
3							
4			Dense, moist, brown, Clayey GRAVEL with angular sand and gravel, no odor			GC	
5							
6			Firm, moist, reddish yellow, Sandy CLAY, low to medium plasticity, no odor			CL	
7							
8			Stiff, moist, pale green, Sandy CLAY, medium plasticity, no odor			CL	
9							
10			Moist, Gravelly SAND with some clay and interbedded brick fragments, petroleum odor			SW	
11							
12			Stiff, moist, brown, Silty CLAY, medium plasticity, no odor			CL	
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Figure 3, Log of Boring SB-3, page 1 of 2

ENV_NO_WELL PLUCKYS BORINGS GPJ 05/06/08

BORING ELEVATION:	ENGINEER/GEOLOGIST: JOHN LOVE
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NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST BLOWS/FT	SAMPLE NO.	LITHOLOGY	BORING NO. SB-3		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED 4/22/08	WATER LEVEL (ATD)		
				EQUIPMENT	GEOPROBE	DRILLER	En Prob
SOIL DESCRIPTION							
26			▼	Strong petroleum odor in groundwater			
27							
28				BORING TERMINATED AT 28 FEET			

Figure 4, Log of Boring SB-3, page 2 of 2

ENV_NO_WELL PLUCKYS BORINGS.GPJ 05/06/08

BORING ELEVATION:	ENGINEER/GEOLOGIST: JOHN LOVE
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NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. SB-4		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED 4/22/08	WATER LEVEL (ATD)		
				EQUIPMENT	GEOPROBE	DRILLER	En Prob
SOIL DESCRIPTION							
1			ASPHALT AND BASE				
2			Stiff, moist, black, Sandy CLAY, medium plasticity, no odor			CL	
3							
4							
5			Dense, slightly moist, fine Gravelly SAND, variegated, no odor			SW	
6							
7							
8			BORING TERMINATED AT 8 FEET				

Figure 4, Log of Boring SB-4, page 1 of 1

ENV_NO_WELL_PLUCKYS BORINGS.GPJ 05/06/08

BORING ELEVATION:	ENGINEER/GEOLOGIST: JOHN LOVE
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NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. SB-5		SOIL (USCS)	HEADSPACE (FT)	
				DATE DRILLED <u>4/22/08</u>	WATER LEVEL (ATD) _____			
				EQUIPMENT <u>GEOPROBE</u> DRILLER <u>En Prob</u>				
				SOIL DESCRIPTION				
1			ASPHALT AND FILL					
2								
3								
4								
5								
6								
7								
8								
9			▽					
10								
11			Soft to stiff, saturated, brown to light green, Silty and Sandy CLAY, low plasticity, slight odor in water, no odor in soil			CL		
12								
13								
14			▽					
15			Dense, moist, variegated Gravelly SAND, fine gravel, well graded sand, no odor			SW		
16								
				BORING TERMINATED AT 16 FEET				

Figure 5, Log of Boring SB-5, page 1 of 1

ENV_NO_WELL_PLUCKYS BORINGS.GPJ 05/06/08

BORING ELEVATION:

ENGINEER/GEOLOGIST: **JOHN LOVE**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

PROJECT NO. E8448-06-01

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING NO. SB-6		SOIL (USCS)	HEADSPACE (PFM)
				DATE DRILLED 4/22/08	WATER LEVEL (ATD)		
				EQUIPMENT	DRILLER		
				SOIL DESCRIPTION			
1			ASPHALT AND BASE				
2			Very stiff, moist, black, Sandy CLAY, low to medium plasticity, no odor			CL	
3							
4			Dense, moist, brown, Clayey GRAVEL with angular sand, low plasticity, no odor			GC	
5							
6			Dense, moist, brown, angular Gravelly SAND, no odor			SW	
7							
8			Stiff, moist, brown with olive, Sandy CLAY, medium plasticity, no odor			CL	
9							
10			Soft				
11							
12			Slight petroleum odor				
13							
14			Pale green				
15							
16			Stiff to very stiff, moist, brown, Silty CLAY, medium plasticity, no odor			CL	
17							
18							
19							
20							
21							
22							
23							
24							

Figure 6, Log of Boring SB-6, page 1 of 2

ENV_NO_WELL_PLUCKYS BORINGS.GPJ 05/06/08

BORING ELEVATION:

ENGINEER/GEOLOGIST: JOHN LOVE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

DI	F	PEN RE BLC	SA	LITH	EQUIPMENT	GEOPROBE	DRILLER	En Prob	(USCS)	(PPM)
					SOIL DESCRIPTION					
26										
27										
28										
29										
30										
31					BORING TERMINATED AT 31 FEET					

Figure 7, Log of Boring SB-6, page 2 of 2

ENV_NO_WELL PLUCKYS BORINGS GPI 05/06/08

BORING ELEVATION:

ENGINEER/GEOLOGIST: **JOHN LOVE**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES. ALL BLOW COUNTS HAVE BEEN CONVERTED TO EQUIVALENT STANDARD PENETRATION TEST (SPT) BLOW COUNTS.

SOIL BORING LOG

Boring No. MW-1

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard Oakland, CA	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
Project No.	E472	Driller	Norman
Logged By:	Collin Fischer	Method	Hollow Stem Auger Hole Diameter: 10 inches
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 7 ft. to 17 ft. Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
		Depth to GW:	▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4	SC	Clayey sand with silt and gravel, SC, (0'-7.5'), grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
						5			
S	MW-1 6.5'	N/A	1055	100		6			0
						7			
S	MW-1 8'	N/A	1058	100		8			0
						9			
S	MW-1 9.5'	N/A	1100	100		10	ML	Clayey silt with sand and gravel, ML, (7.5'-12'), dark yellowish brown moist, low plasticity, 50% silt, 30% clay, 10% fine grained sand 10% medium gravel	0
						11			0
S	MW-1 11'	N/A	1102	100		12			
						13	SC	Clayey sand, SC, (12'-12.5'), grayish brown, moist 60% medium grained sand, 40% clay	0
						14	ML	Clayey silt, ML, (12.5'-13.5'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	
S	MW-1 14.5'	N/A	1107	100		15	SC	Clayey sand, SC, (13.5'-14.5'), dark grayish brown, moist 60% medium grained sand, 40% clay	21
						16			
						17	ML	Clayey silt, ML, (14.5'-17'), grayish brown, moist, medium plasticity 60% silt, 40% clay	
						18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.

SOIL BORING LOG

Boring No. MW-2

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard Oakland, CA	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
Project No.	E472	Driller	Norman
Logged By:	Collin Fischer	Method	Hollow Stem Auger Hole Diameter: 10 inches
		Sampler:	Continuous core
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Casing Diameter: 4 in. Screen Interval: 7 ft. to 17 ft. Screen Slot Size: 0.010-in.
		Depth to GW:	▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4	SC	Clayey sand with silt and gravel, SC, (0'-8'), grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
						5			
S	MW-2 6.5'	N/A	1600	100		6			0
						7			
S	MW-2 8'	N/A	1602	100		8			0
						9	ML	Clayey silt, ML, (8'-9.5'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
S	MW-2 9.5'	N/A	1605	100		10			
						11	SC	Clayey sand with silt and gravel, SC, (9.5'-11.5'), dark brown, wet 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
S	MW-2 11'	N/A	1607	100		12	ML	Clayey silt, ML, (11.5'-12.5'), yellowish brown, moist, medium plasticity 60% silt, 40% clay	
S	MW-2 12.5'	N/A	1610	100		13	SC	Clayey sand with silt and gravel, SC, (12.5'-13'), dark brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
						14	ML	Clayey silt, ML, (13'-14'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	
S	MW-2 14.5'	N/A	1612	100		15	SC	Clayey sand with silt and gravel, SC, (14'-14.5'), yellowish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
						16	ML	Clayey silt, ML, (14.5'-17'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	
S	MW-2 17'	N/A	1615	100		17			0
						18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.

SOIL BORING LOG

Boring No. MW-3

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
	Oakland, CA	Driller	Norman
Project No.	E472	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	Continuous core
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 7 ft. to 17 ft. Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
		Depth to GW:	▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4	CL		
						5	Silty clay with sand, CL, (0'-8'), dark brown, moist, medium plasticity 50% clay, 40% silt, 10% fine grained sand		
S	MW-3 6.5'	N/A	1405	100		6		0	
						7			
S	MW-3 8'	N/A	1407	100		8		0	
						9	Silty clay with sand and gravel, CL, (8'-9'), dark yellowish brown, moist low plasticity, 40% silt, 30% clay, 20% fine gravel, 10% fine grained sand		
S	MW-3 9.5'	N/A	1410	100		10	SC	Clayey sand with silt and gravel, SC, (9'-10'), dark grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
						11			
S	MW-3 11'	N/A	1412	100		12		0	
						13	ML	Clayey silt, ML, (10'-15'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						14			
S	MW-3 14.5'	N/A	1417	100		15		0	
						16	SC	Clayey sand with silt and gravel, SC, (15'-16.5'), dark grayish brown, wet 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
						17	ML	Clayey silt, ML, (16.5'-17'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.