Ultramar, Inc.

January 29, 2010

Mr. Jerry Wickham
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

SUBJECT: SOIL GAS SURVEY AND SOIL ASSESSMENT REPORT
FORMER BEACON STATION NO. 12574
22315 REDWOOD ROAD RWQCB Case No. 01-0167
CASTRO VALLEY, CALIFORNIA ACDEH: RO0000355

Mr. Wickham:

Please find enclosed the **Soil Gas Survey and Soil Assessment Report** for the above-referenced facility. Pursuant to your requests, I declare, under penalty of perjury, that the following information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

Please call if you have any questions or comments regarding this letter or the enclosed report (210) 345-4663.

Sincerely,
ULTRAMAR INC.

C. Shay Wideman
Director – Environmental Liability Management

Enclosures

cc w/o encl. Mr. Ken Mateik, Horizon Environmental

HORIZON ENVIRONMENTAL INC.

Specialists in Site Assessment, Remedial Testing, Design and Operation

January 29, 2010

Mr. C. Shay Wideman
Ultramar Inc.
One Valero Way
San Antonio, Texas 78249-1616

Subject: **Soil Gas Survey and Soil Assessment Report**
Former Beacon Station No. 12574 RWQCB Case No. 01-0167
22315 Redwood Road, Castro Valley, California ACEHS Case No. 00355

Mr. Wideman:

At the request of Ultramar Inc. (Ultramar), Horizon Environmental Inc. (Horizon) has prepared this Soil Gas Survey and Soil Assessment Report for Former Beacon Station No. 12574 (Site) in Castro Valley, California. Horizon prepared and submitted a Soil Gas Survey Work Plan (Horizon, May 26, 2009), and recommended onsite borings in the High Vacuum Dual-Phase Extraction Testing Report (Horizon, June 30, 2009). The proposed scope of work for the soil gas survey was to provide data to evaluate the potential exposure pathways at the Site, and to evaluate the potential human health risks from potentially affected onsite and offsite areas. The proposed scope of work for the soil borings was to evaluate the lateral and vertical extent of petroleum hydrocarbons in soil in the area of the former dispenser islands and the former underground storage tanks (USTs) beneath the Site. This work was approved by the Alameda County Environmental Health Services (ACEHS) in their letter dated August 14, 2009 (see Attachment A). The ACEHS requested that "grab" groundwater samples also be collected from each of the borings during the soil assessment work.

The work performed included: preparing a site-specific Health and Safety plan; installation of five soil gas probes (SG-1 through SG-5) and collection of soil gas samples; advancing and sampling five onsite borings (B-1 through B-5) with direct-push equipment; collecting soil and groundwater samples from the borings; submitting the vapor, soil and groundwater samples for laboratory analysis; and preparing this report which presents the field procedures, results, and conclusions subsequent to completion of the work. Proposed offsite soil gas probes (SG-6 and SG-7) for the collection of offsite soil gas samples were not performed as no access was granted by the offsite property owners.

Site Description

The Site is located on the southwestern corner of the intersection of Redwood Road and Grove Way in Castro Valley, California, as depicted on the Site Location Map (Figure 1). The Site is bounded by Grove Way to the north, a vacant office building to the south, Redwood Road to the east, and private residences to the west. Chevron #9-2960 was formerly located at 2416 Grove

formerly located at 2416 Grove Avenue, northeast of the Beacon site and across the intersection of Grove Avenue and Redwood Road. The Chevron site is an open Fuel Leak case (RWQCB Case No. 01-0346 and ACEHS Case No. 0275).

Existing site facilities include a 7-11 convenience store and other commercial buildings situated on the western portion of the Site extending to the property line, and a parking lot and landscaping areas situated on the central and eastern portions of the Site. Former site facilities included eight former USTs located in the southern portion of the property. There are currently five groundwater monitoring wells (MW-1 through MW-4 and MW-6) associated with the Site. Wells MW-1 through MW-4 are located within the property boundaries, while well MW-6 is located offsite to the south of the property on an adjoining property. Well MW-5 was destroyed by a third party due to offsite construction activities. Locations of these and other pertinent site features are shown on the Site Map (Figure 2) and Site Area Map (Figure 3).

Site Background

Ultramar leased the Site and operated a retail gasoline service station from 1981 to 1987. Prior to 1981, the Site had been leased and operated by Shell Oil Company (Shell). Information provided by Ultramar indicates that the former Beacon site facilities included four former fuel USTs located in the southeastern portion of the property and one former waste-oil UST located in the southwestern portion of the property. These USTs were removed by Ultramar in 1987. Three former fuel USTs located to the west of the former Ultramar USTs existed and were removed by Shell Oil Company sometime prior to 1981 (Acton, Mickelson, van Dam, Inc., November 1994). Acton, Mickelson, van Dam, Inc. (AMD) indicated that at least one previous generation of USTs had been installed and used at the Site by Shell. According to the 1994 AMD report, Ultramar was not aware of any specific incidents in which gasoline leaked from the former Beacon USTs or was spilled during filling of any of the USTs in use during their site lease period (AMD, 1994).

Five USTs were removed from the Site on May 5, 1987. The USTs consisted of one 500-gallon waste oil UST (Tank T1), two 5,000-gallon diesel USTs (Tanks T2 and T4), an 8,000-gallon gasoline UST (Tank T3), and a 7,000-gallon gasoline UST (Tank T5). Records made available by Ultramar indicate that these USTs were originally installed and owned by Shell (AMD, 1994). Analytical results of soil samples collected at the time of the UST removals indicated the presence of petroleum constituents in soil underlying the USTs. Over-excavation of the tank basin to a depth of approximately 20 feet below surface grade (bsg) was performed in May 1987. After completion of the over-excavation work, laboratory analysis of the seven soil samples collected at the limit of the excavation indicated concentrations of 125.5, 208.7, and 1,989 milligrams per kilogram (mg/Kg or parts per million [ppm]) of total volatile hydrocarbons (AMD, 1994) primarily along the northern side of the over-excavated UST excavation.

Quarterly groundwater monitoring and sampling has been performed at the Site since 1992. Historical groundwater level data has indicated that groundwater has been seasonally present beneath the Site between the depths of approximately 14 to 22 feet bsg, and the direction of groundwater flow beneath the Site has been consistently to the south-southwest beneath the site.

site. A Benzene Isoconcentration Map for the August 26, 2009 analytical data is shown on Figure 4. A more detailed Site history will be presented in the comprehensive Site Conceptual Model (SCM) to be prepared later in 2010.

SCOPE OF WORK

Prior to conducting the onsite field work, Horizon obtained verbal access from the current property owners, and the current tenants of the onsite businesses were notified of the proposed field work. No access was received from the offsite property owners for offsite soil gas sampling locations SG-6 and SG-7.

Permitting

Horizon obtained Water Resource Permit No.W2009-1043 from the Alameda County Public Works Agency (ACPWA) for advancing soil borings at the Site (see Attachment A). On December 2, 2009, the ACPWA and ACEHS were notified of the scheduled field work, Underground Services Alert (USA) was notified for locations of underground utilities, and a site-specific Health & Safety Plan was prepared. All activities were completed in compliance with the State of California Water Resources Control Board's Leaking Underground Fuel Tanks (LUFT) Manual, the Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites, and ACPWA and ACEHS guidelines.

SOIL GAS SURVEY

Field Work

Horizon retained TEG Northern California (TEG) of Rancho Cordova (C-57 License No. 706568) to hand-auger, advance soil gas probe points by direct-push technology, sample, and analyze the soil gas samples in their mobile lab. The SGS was conducted according to the attached Horizon Field Methods and Procedures – Soil Gas Investigation, and the probe advancement, installation, and sampling was conducted according to the attached Geoprobe Systems – PRT Operation instructions (Attachment B). The field procedures implemented are recommended in the California Environmental Protection Agency (Cal-EPA) Advisory-Active Soil Gas Investigations (2003), and the Department of Toxic Substances Control (DTSC/Cal-EPA) Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (2005), and procedures developed by the Los Angeles Regional Water Quality Board (RWQCB). As proposed in the Soil Gas Survey Work Plan (Horizon, May 26, 2009), the soil gas sampling locations were selected on the basis of accessibility in the area of the estimated impacted groundwater plume based on historical groundwater monitoring data.

Field work for the SGS was conducted on December 21, 2009. Five onsite soil gas sampling locations (SG-1 through SG-5) were cored in the asphalt surface and cleared for utilities with a hand auger to depths of approximately 3 feet bsg. Temporary soil gas probes contained within the drive rods were advanced through the bottom of the hand-augered borings at sample

sample locations SG-1 through SG-5 using a 9500 PTP Geoprobe rig to a target depth of approximately 5 feet bsg. After the soil gas sampling was completed, the borings were backfilled to within one foot of the surface with granular bentonite. Water was poured into the borings and allowed to hydrate the bentonite for approximately 30 minutes. The boreholes were then backfilled with neat cement and capped with concrete tinted to match the surrounding asphalt.

Laboratory Analyses

The soil gas samples were collected with brand new or with properly decontaminated 50 cubic centimeters (cc) glass syringes, and were analyzed in TEG's mobile laboratory for total petroleum hydrocarbons as gasoline (TPHg), the volatile aromatic compounds benzene, toluene, ethylbenzene and xylenes (BTEX), the fuel oxygenate methyl-t-butyl ether (MTBE), and the leak check compound 1,1-difluoroethane (DFA) by Environmental Protection Agency (EPA) Method 8260B. Soil gas analytical data is presented in the attached TEG report in Attachment C.

Results of SGS Investigation

The soil gas analytical data are referenced to the Region 2 (San Francisco Bay) RWQCB Shallow Soil Gas Environmental Screening Levels (ESLs) and the California Human Health Screening Levels (CHHSLs) for Indoor Air and Soil Gas developed by the Office of Environmental Health Hazard Assessment (OEHHA) presented in Attachment C. The ESLs and CHHSLs were developed to screen sites for potential human health concerns and are concentration values that Cal EPA considers to be below thresholds of concern for risks to human health. Analytical results for the soil gas samples are summarized in Table 1.

The laboratory analytical results for the soil gas samples collected during this SGS indicated the following:

- Concentrations of TPHg ranging from 17,000 to 13,000,000 micrograms per cubic centimeter ($\mu g/m^3$) were reported in soil gas samples SG-1, SG-2, SG-3 and SG-5;
- Concentrations ranging from 76 to 350 $\mu g/m^3$ of benzene, 350 to 2,400 $\mu g/m^3$ of toluene, 110 to 110,000 $\mu g/m^3$ of ethylbenzene, and 300 to 102,700 $\mu g/m^3$ of total xylenes were reported in the five soil gas samples;
- No concentrations of MTBE were reported in the five soil gas samples; and
- No concentrations of the leak detection compound DFA were reported in the five soil gas samples indicating that the sampling assemblies were air-tight and that no vapor leakage occurred at the probe-surface interface.

Shallow soil gas concentrations reported from sample location SG-3 are higher than the Region 2 commercial ESL values of 29,000 $\mu g/m^3$ for TPHg, 280 $\mu g/m^3$ for benzene, and 3,300 $\mu g/m^3$ for ethylbenzene, and the commercial ESL value of 58,000 $\mu g/m^3$ for total xylenes. A soil gas concentration reported from sample location SG-1 is above the commercial ESL value for TPHg, and the TPHg and benzene soil gas concentrations reported from sample location SG-5 are above the commercial CHHSL values. All other reported shallow soil gas concentrations of petroleum hydrocarbons are lower than the Region 2 ESL and CHHSL listed values for commercial sites.

SOIL ASSESSMENT

Soil Assessment Field Work

Horizon retained Well Test Inc., (WTI) of San Jose (C-57 License No. 843074) to sample subsurface soil and groundwater from onsite borings B-1 through B-5. The boring locations were selected based on locations of the former USTs and dispenser islands. As a condition of the approved work, the ACEHS requested that "grab" groundwater samples also be collected from each of the borings even though monitoring wells are present at the Site.

On December 22 and 23, 2009, a Horizon geologist observed the sampling of subsurface soil and groundwater in five borings (B-1 through B-5) by utilizing a truck-mounted, direct-push sampling rig at the Site. The five borings were advanced at the locations indicated on the Site Map (Figure 2). After asphalt coring and hand-augering the first few feet to avoid contact with underground utilities, soil samples were continuously collected from the borings from a depth of approximately 4 feet to the bottom of each boring as requested by the ACEHS. Soil samples were evaluated for the presence of petroleum hydrocarbon vapors with a portable ionization detector (PID). The subsurface soils from each boring were classified using the Unified Soil Classification System (USCS), and are shown on the Boring Logs in Attachment D. Any evidence of petroleum hydrocarbons, such as discoloration or odor, was recorded on the boring logs. In borings B-1 and B-2 located in the former UST excavation areas, subsurface soils consisted of combinations of sandy silt (ML), well graded sand (SW), and silty gravel (GM) fill materials to a maximum depth of approximately 15 feet bsg. These fill materials were underlain by clayey to sandy silt (ML) with gravel and silty sand (SM) to well-graded sand (SP) to depths of approximately 26 to 28 feet bsg. In borings B-3, B-4 and B-5 located in the former dispenser island areas, subsurface soils consisted of high plasticity silty clay (CH) to a depth of approximately 4 feet bsg; underlain by clayey silt (ML), sandy silt (ML), and silty sand (SM) and gravel (GM) to depths of approximately 20 to 22 feet bsg; and underlain by clayey sand (SC) to silty sand (SM) to depths of approximately 26 to 28 feet bsg. The soil samples collected from each boring were contained in chilled storage for transport to the analytical laboratory.

Groundwater Sampling from Borings

Groundwater was encountered in the borings at depths between approximately 22½ and 27 feet bsg. The groundwater samples were collected from each boring using a temporary one-inch diameter schedule 40 polyvinyl chloride (PVC) well casing. The screen length was a maximum of five feet in length with 0.010-inch factory-machined slotted screen fitted to blank PVC well casing. Polyvinyl tubing equipped with a check valve was then lowered into the temporary well casing for retrieval of groundwater samples. To reduce cross-contamination between borings, the ¼-inch diameter poly tubing was replaced before each sampling event.

Backfilling of Borings

Upon completion of the sampling activities, each boring was backfilled with neat cement grout inspected by Mr. Ron Smalley, Building Inspector with the ACPWA. The grout backfill was placed via a tremie pipe from the bottom of the boring up to within approximately one foot bsg.

approximately one foot bsg. The remaining borehole was then backfilled with either semi-compacted soil in the landscape areas or with concrete tinted to match the surrounding asphalt surface in the paved areas. Because the borings were advanced using direct-push equipment, no soil cuttings were generated during the boring operations.

Laboratory Analyses

Soil and groundwater samples collected from borings B-1 through B-5 were submitted under Chain-of-Custody to Kiff Analytical, a State-certified laboratory in Davis, California (ELAP Certificate No. 2236). Sixteen soil samples and five groundwater samples were selected from borings B-1 through B-5 for laboratory analysis. The soil and groundwater samples were analyzed for TPHg, BTEX, and the fuel oxygenates MTBE, di-isopropyl ether (DIPE), ethyl-tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) using EPA Method 8260B. Analytical results for the soil and groundwater samples are summarized in Tables 2 and 3, respectively. Laboratory analytical data sheets and Chain-of-Custody reports are included in Attachment E.

RESULTS AND CONCLUSIONS

Based on field and analytical data collected during this investigation, Horizon concludes the following:

Soil Gas:

- The analytical results indicate that elevated concentrations of gasoline hydrocarbons are present in shallow soil gas samples SG-1, SG-2, SG-3 and SG-5. The highest concentrations were encountered in sample location SG-3, which was located adjacent to the front of the commercial buildings at the Site.

Soil:

- The analytical results from boring B-1 suggest that the soil materials used to backfill the former Shell UST excavation consisted of unimpacted "clean" fill materials and possibly some aerated UST excavation soils. The analytical results for the soils encountered in boring B-1 indicate that elevated concentrations of gasoline hydrocarbons are present in the saturated soils beneath the former Shell UST excavation.
- The analytical results from boring B-2 indicate that the soil materials used to backfill the former Beacon UST excavation consisted of unimpacted "clean" fill materials. The analytical results for the soils encountered in boring B-2 indicate that no concentrations of gasoline hydrocarbons are present in the saturated soils beneath the southern side of the former Beacon UST excavation.
- The analytical results from boring B-3 indicate that no concentrations of gasoline hydrocarbons are present beneath the northern end of the former northern dispenser islands near Grove Way.
- The analytical results from borings B-4 and B-5 indicate that elevated concentrations of gasoline hydrocarbons are present beneath the former eastern dispenser islands in both unsaturated and saturated soils. Therefore, the former eastern dispenser islands appear to be a source area of gasoline-impacted soils present beneath the Site.

- The analytical results of soil samples collected in May 1987 after removal of the USTs and over-excavation work indicated that the northern side of the former Beacon UST excavation appear to be a source area of diesel- and gasoline-impacted soils present beneath the Site.

Groundwater:

- Dissolved concentrations of TPHg and BTEX were reported in all the groundwater samples collected from borings B-1 through B-5. Because relatively low dissolved concentrations of the fuel oxygenate MTBE and TBA and no concentrations of DIPE, ETBE, and TAME were present in the groundwater samples, the onsite source of the gasoline hydrocarbons is old and likely pre-dates the use of fuel oxygenates in the mid 1980s.

- Dissolved concentrations of TPHg and BTEX reported in groundwater samples collected from boring B-3 and historically since 1992 from monitoring well MW-3 could be from an upgradient offsite source across Redwood Road.
- As mentioned in the Semi-Annual Groundwater Monitoring Reports submitted by Horizon since 2004, the groundwater flow direction beneath the Site has historically been to the southwest. It is noted that Former Chevron #9-2960 was located to the northeast across Redwood Road at 2416 Grove Avenue, and upgradient from the Beacon Site. According to information on the State of California's GeoTracker website, the Former Chevron #9-2960 site (ACEHS Case #RO0000275 and SF Bay RWQCB Case #01-346) remains an Open Fuel Leak Case. Environmental work performed at the Chevron site has been ongoing since 1986. The historical groundwater flow direction beneath the Chevron site area has been reported to be to the west beneath Redwood Road.

RECOMMENDATIONS

Based on the above results and conclusions, Horizon recommends the following:

1. Continue to pursue offsite access with the identified offsite property owners for offsite soil gas sampling locations SG-6 and SG-7 to evaluate the potential human health risks from potentially affected onsite and offsite areas to the west and southwest of the Site.

2. Installation of a replacement groundwater delineation well (MW-5A) within Sixth Avenue to the west or southwest of former well MW-5.
3. Installation of vapor extraction wells in the area of soil gas sampling location SG-3 to evaluate and remediate elevated levels of gasoline vapors adjacent to the commercial buildings. The 2009 HVDPE work has indicated that vapor extraction is feasible for removal of gasoline vapors from the vadose zone.
4. Preparation of a Site Conceptual Model (SCM) Report with a Corrective Action Plan (CAP), if appropriate, for the Site to evaluate the distribution and movement of gasoline and diesel hydrocarbons in the subsurface soils and groundwater, and to identify potential impacts of the petroleum hydrocarbons on human health or beneficial uses of groundwater (if any). If a CAP is prepared, then a preliminary remedial design will be

remedial design will be included.

5. Preparation of a Risk-Based Corrective Action (RBCA) analysis for the Site to evaluate the risks to human health and the environment, and to propose site-specific target levels (SSTLs) as cleanup criteria for the petroleum hydrocarbons present in soil and groundwater beneath the Site area.

DISTRIBUTION

A copy of this report should be forwarded to:

Mr. Jerry Wickham, PG, CEG, CHG
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-2213

Mr. Bill Courtney, Property Manager
Banya Investments LLC
20632 Redwood Road, Suite B
Castro Valley, CA 94546

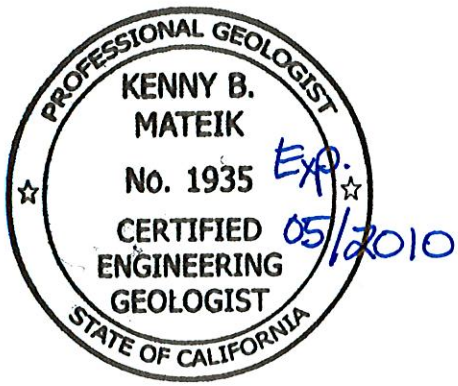
Mr. Allen Shin
Banya Investments LLC
3011 Cabrillo Avenue
San Ramon, California 94583

If you have any questions, please contact Horizon at (916) 939-2170.

Sincerely,
HORIZON ENVIRONMENTAL INC.

Gary Barker
Senior Project Manager

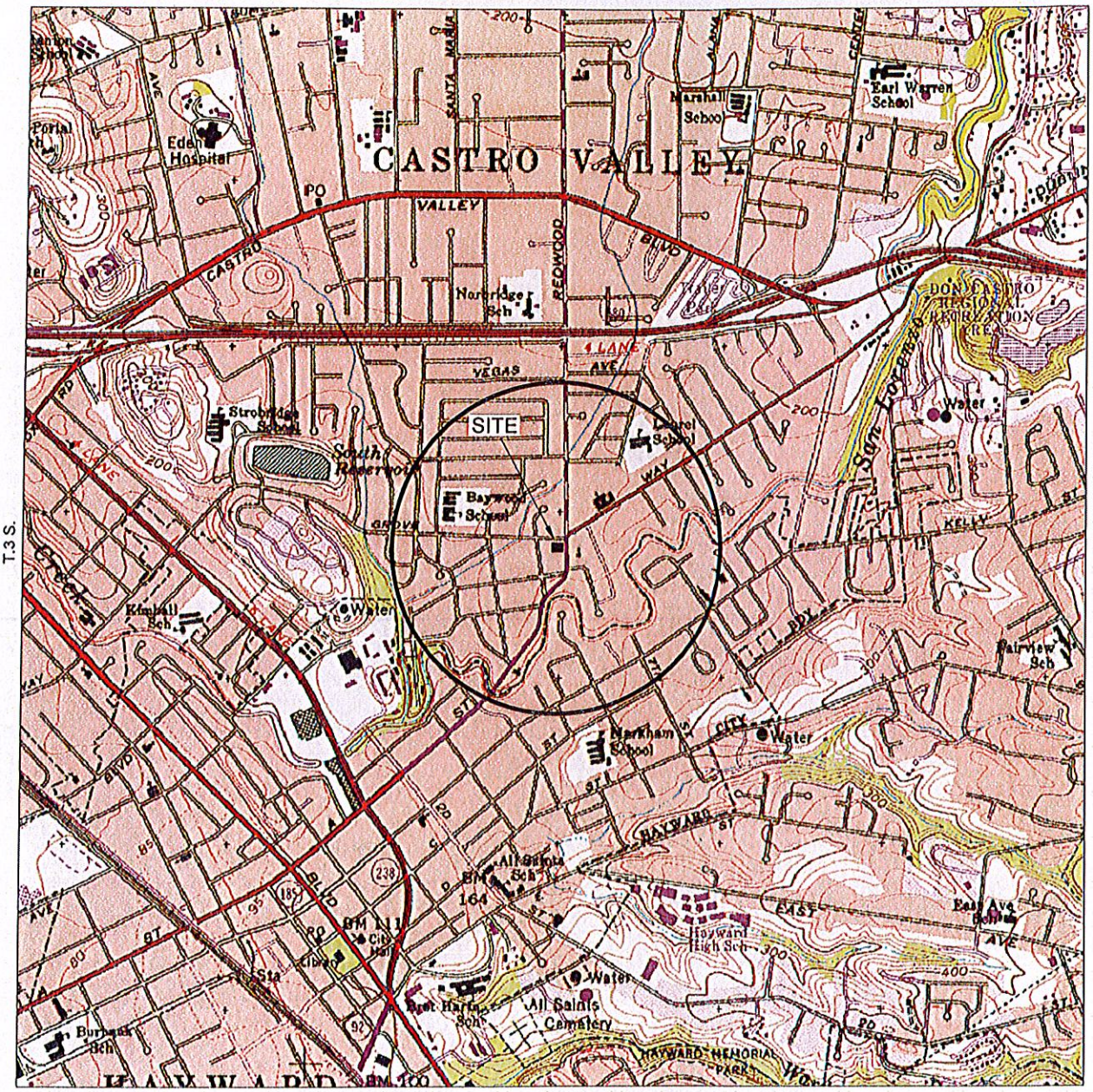
Kenny B. Mateik
Professional Geologist, C.E.G. No. 1935



Emil D. Kruck
Project Geologist

Attachments:

Figure 1:	Site Location Map
Figure 2:	Site Map
Figure 3:	Site Area Map
Figure 4:	Benzene Isoconcentration Map
Table 1:	Soil Gas Analytical Data
Table 2:	Soil Analytical Data
Table 3:	Groundwater Analytical Data
A:	Alameda County EHS Correspondence Alameda County Public Works Agency Permit
B:	Horizon's Field Methods and Procedures
C:	Soil Gas Survey Analytical Data (TEG Report, CHHSLs and ESLs Tables)
D:	Boring Logs
E:	Laboratory Analytical Data



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
HAYWARD, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

QUADRANGLE LOCATION

0 2000 FT

SCALE 1:24,000

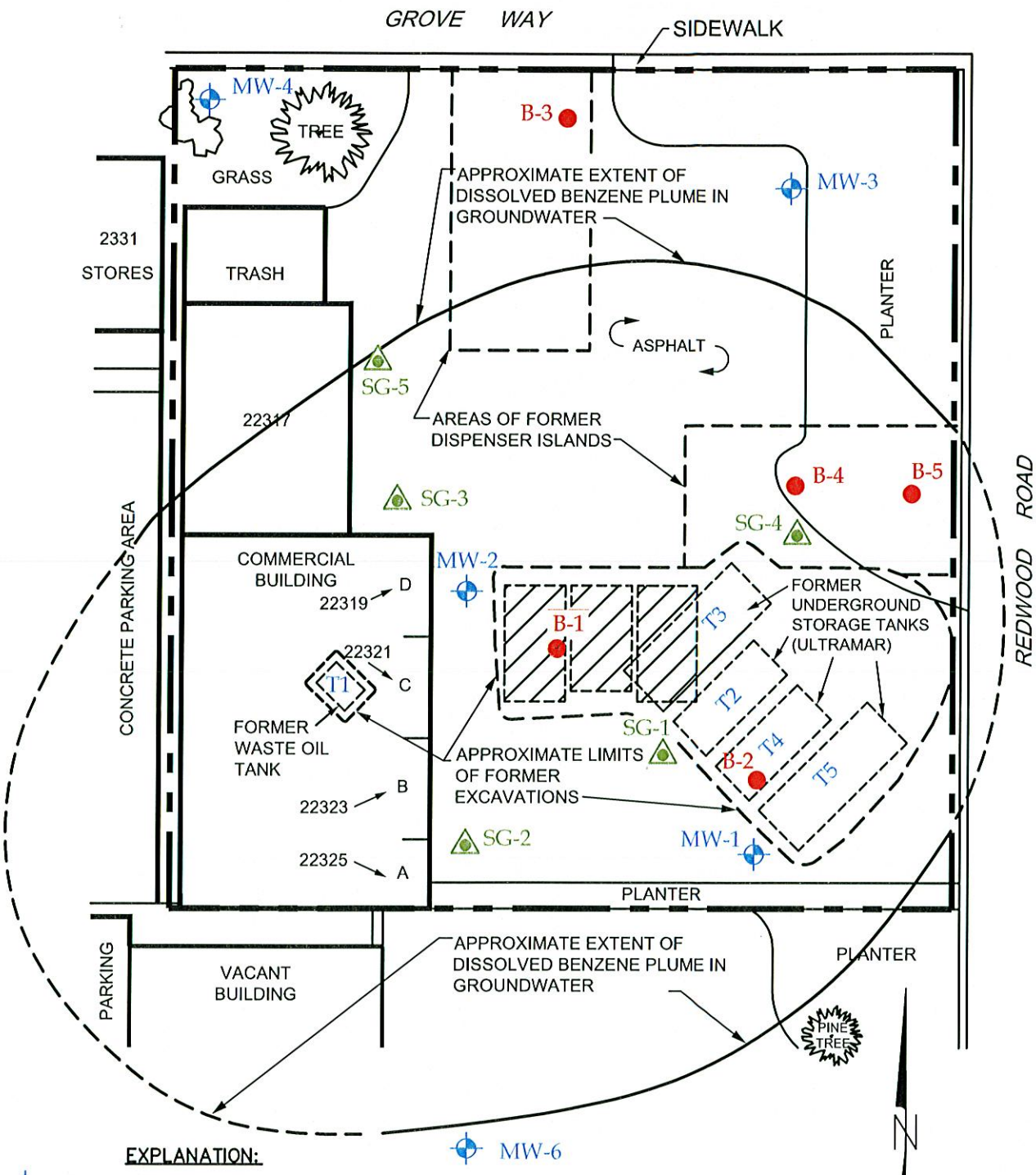
NORTH

HORIZON ENVIRONMENTAL INC.

Project Number: 1574.41	Drawn By: M. LaCoste	SITE LOCATION MAP
Prepared By: K. Liptak	Date: 10/7/04	FORMER BEACON STATION NO. 12574
Reviewed By: K. Mateik	Revised Date:	22315 REDWOOD ROAD CASTRO VALLEY, CA.

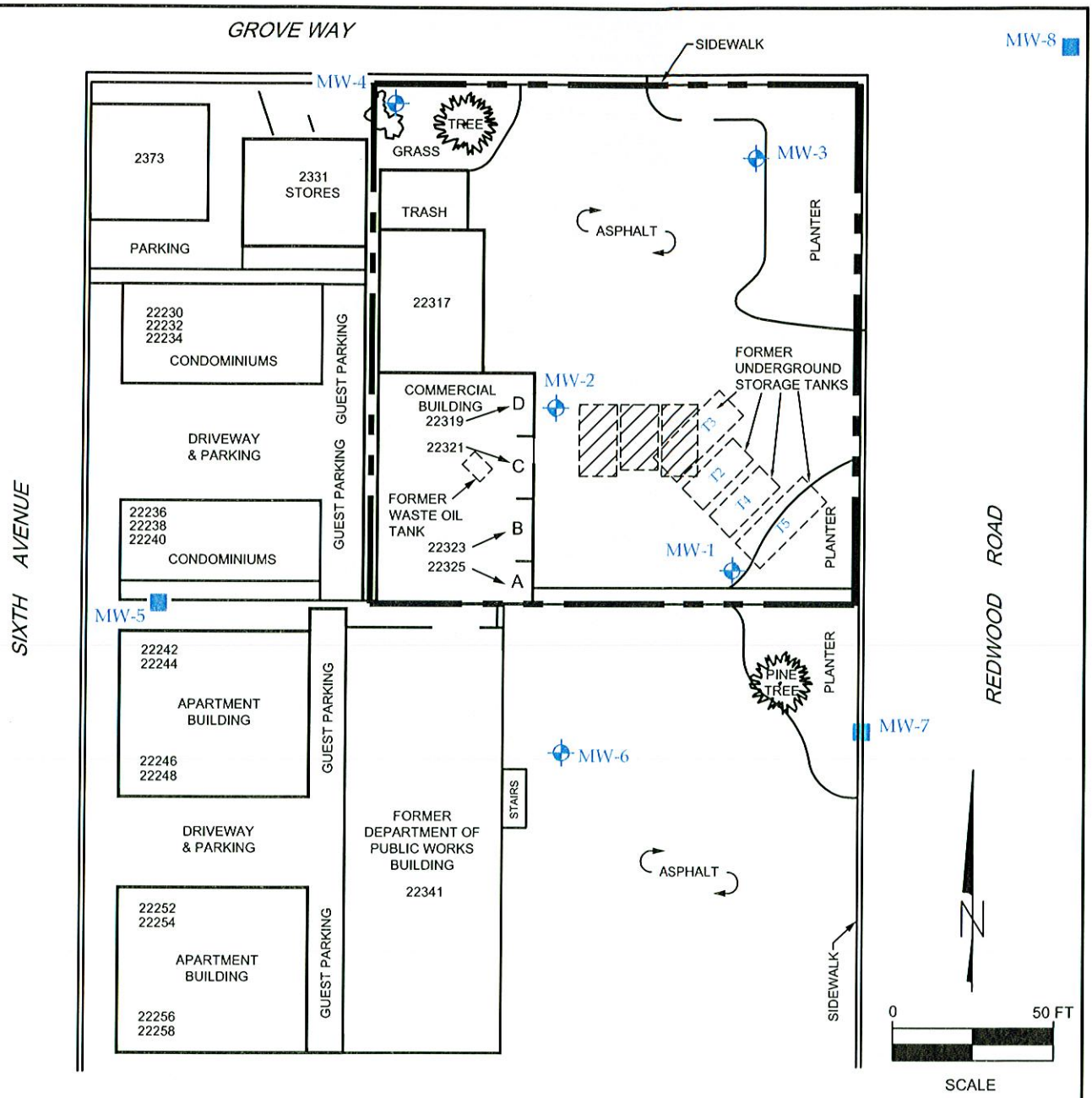
FIGURE

1



Source: Figure Modified From Survey Drawing Prepared By Others For Ultramar

HORIZON ENVIRONMENTAL INC.		SITE MAP	FIGURE
Project Number: 1574.11 Prepared By: K. Mateik Reviewed By: G. Barker	Drawn By: C. Bechtell Date: 12/09 Revised Date:	FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	2

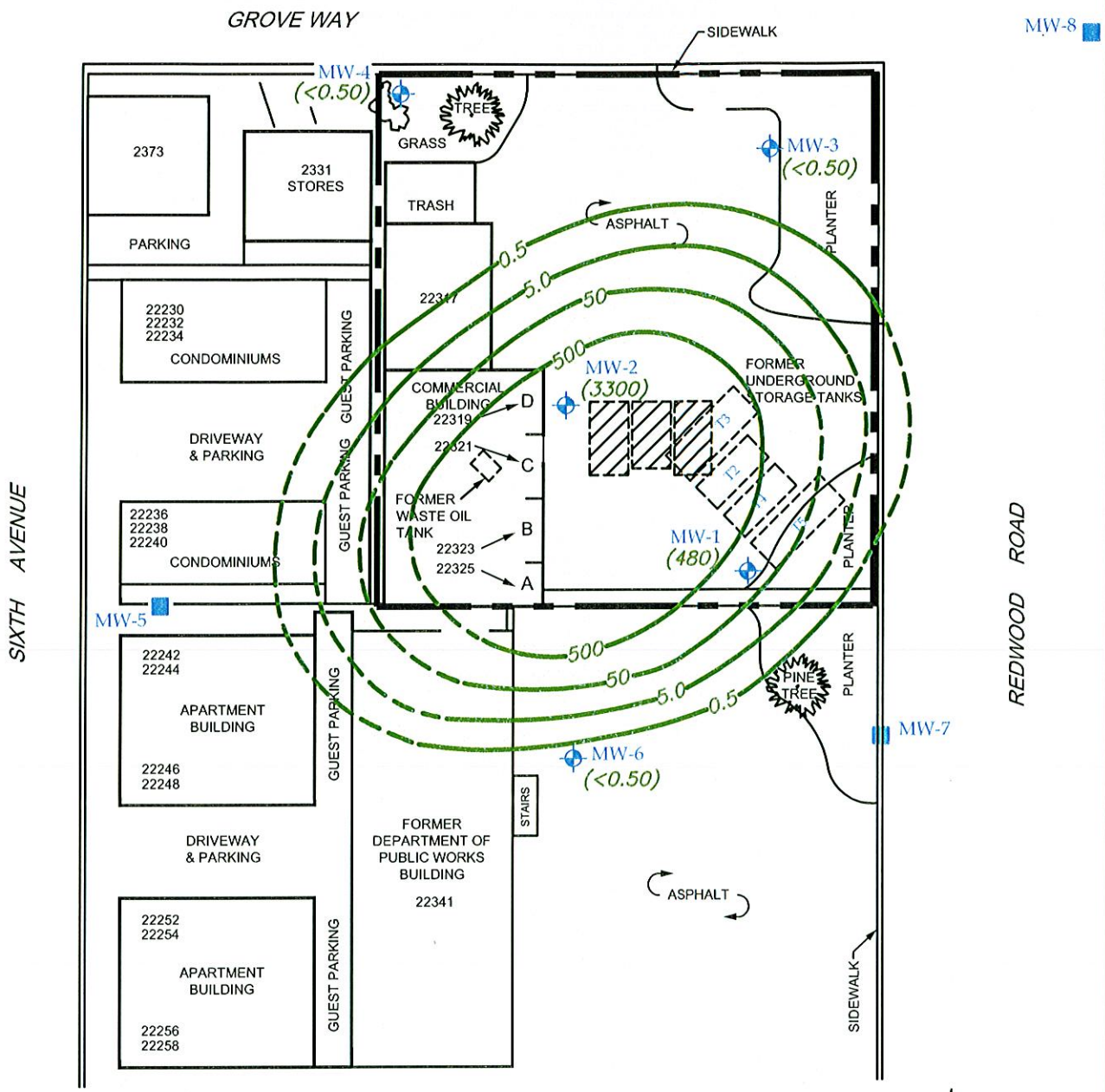


EXPLANATION:

- MW-6 Groundwater Monitoring Well
- MW-8 Abandoned Monitoring Well
- Former Shell Oil USTs

Source: Figure Modified From Survey Drawing Prepared By Majors For Tesoro Refining.

HORIZON ENVIRONMENTAL INC.		SITE AREA MAP	FIGURE
Project Number: 1574.11 Prepared By: K. Liptak Reviewed By: K. Mateik	Drawn By: C. Bechtell Date: Revised Date:	FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	3



Source: Figure Modified From Survey Drawing Prepared By Majors For Tesoro Refining.

HORIZON ENVIRONMENTAL INC.		BENZENE ISOCONCENTRATION MAP	FIGURE 4
Project Number: 1574.46 Prepared By: K. Liptak Reviewed By: K. Mateik	Drawn By: C. Bechtell Date: 10/09 Revised Date:	FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	

Table 1
Soil Gas Analytical Data
Former Beacon Station No. 12574
22315 Redwood Road, Castro Valley, California

Chemical	Region 2 ESL values Residential µg/m3	Region 2 ESL values Commercial µg/m3	CHHSL values Residential µg/m3	CHHSL values Commercial µg/m3	Laboratory R L µg/m3	SG-1 ug/m^3	SG-2 ug/m^3	SG-3 ug/m^3	SG-4 ug/m^3	SG-5 1 PV ug/m^3	SG-5 3 PV ug/m^3	SG-5 7 PV ug/m^3
Benzene	84	280	36.2	122	34	**97**	**100**	**350**	**76**	**220**	**180**	**140**
Toluene	63,000	180,000	135,000	378,000	200	**350**	**840**	**1,300**	**360**	**2,300**	**2,400**	**2,000**
Ethylbenzene	980	3,300	NL	NL	100	**110**	**230**	**110,000**	**110**	**340**	**400**	**360**
total Xylenes	21,000	58,000	315,000	879,000	300	**300**	**1,130**	**102,700**	**570**	**1,520**	**2,120**	**1,890**
MTBE	9,400	31,000	4,000	13,400	100	<100	<100	<100	<100	<100	<100	<100
1,1-DFA	NL	NL	NL	NL	10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000
TPHg	10,000	29,000	NL	NL	10,000	**3,600,000**	**17,000**	**13,000,000**	<10,000	**23,000**	**22,000**	**19,000**

Notes:

ug/m^3 = micrograms per cubic meter of air

MTBE = Methyl-t-butyl ether

1,1-DFA = 1,1 Diflouroethane (leak tracing compound)

TPHg = total petroleum hydrocarbons as gasoline (gasoline range)

RL = Reporting Limits
NL = Not listed
PV = Purge Volume

Table 2 - Soil Analytical Data
Former Beacon Station No. 12574
22315 Redwood Road, Castro Valley, California

Sample Number	Location on Figure 2	Date Sampled	Sample Depth (bsg)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)
B-1-8	B1	12/23/09	8 feet	1.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-1-18	B1	12/23/09	18 feet	<1.0	0.022	<0.0050	<0.0050	<0.0050	<0.0050
B-1-22	B1	12/23/09	22 feet	560	0.56	2.2	5.8	34	<0.090
B-1-26	B1	12/23/09	26 feet	17	0.038	0.070	0.12	0.87	<0.0050
B-2-12	B2	12/22/09	12 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-20	B2	12/22/09	20 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-24	B2	12/22//09	24 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-28	B2	12/22/09	28 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-3-20	B3	12/23/09	20 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-3-26	B3	12/23/09	26 feet	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-4-10	B4	12/22/09	10 feet	930	<0.060	<0.060	0.31	0.19	<0.060
B-4-20	B4	12/22/09	20 feet	1,200	1.1	3.6	5.6	32	<0.15
B-4-27	B4	12/22/09	24 feet	<1.0	0.12	<0.0050	0.0076	<0.0050	0.11
B-5-20	B5	12/22/09	20 feet	2,800	2.0	26	36	210	<0.50
B-5-24	B5	12/22/09	24 feet	21	0.014	0.035	0.088	0.54	<0.0050
B-5-28	B5	12/22/09	28 feet	4.7	0.75	0.55	0.11	0.61	0.0071

Notes:

TPHg = total petroleum hydrocarbons as gasoline

B = benzene

T = toluene

E = ethylbenzene

X = xylenes

MTBE= methyl tertiary butyl ether

ppm = parts per million

< = less than indicated detection level

bsg = below surface grade

Table 3 - Groundwater Analytical Data
Former Beacon Station No. 12574
22315 Redwood Road, Castro Valley, California

Sample Number	Date Sampled	Sample Depth (bsg)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenz. (ppb)	Xylenes (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	TBA (ppb)
B-1	12/23/09	~ 25 feet	**46,000**	**8,200**	**3,400**	**1,100**	**5,800**	**27**	<10	<10	<10	**66**
B-2	12/22/09	~ 25 feet	**540**	**120**	**2.1**	**1.3**	**4.2**	**3.9**	<0.50	<0.50	<0.50	<5.0
B-3	12/23/09	~ 23 feet	**1,100**	**2.0**	**1.6**	**45**	**4.5**	<0.50	<0.50	<0.50	<0.50	<5.0
B-4	12/22/09	~ 24 feet	**26,000**	**2,800**	**690**	**490**	**2,000**	**110**	<2.5	<2.5	<2.5	**100**
B-5	12/22/09	~ 27 feet	**64,000**	**6,400**	**4,000**	**1,600**	**8,300**	**10**	<10	<10	<10	<50

Notes:

TPHg = total petroleum hydrocarbons as gasoline

MTBE = methyl t-butyl ether

DIPE = diisopropyl ether

ETBE = ethyl-tert-butyl ether

TAME = tert-amyl methyl ether

TBA = tertiary butyl alcohol

bsg = below surface grade

< = less than indicated detection level

ppb = parts per billion

ATTACHMENT A

ALAMEDA COUNTY HEALTH SERVICES

CORRESPONDENCE

AND

ALAMEDA COUNTY PUBLIC WORKS AGENCY PERMIT

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

August 14, 2009

Mr. Robert Ehlers
Valero
685 West Third Street
Hanford, CA 93230

Castro Group LLC
2021 Francisco Street
Berkeley, CA 94709-2213

Ms. Mary Moore
EMB Group LLC & Mary Moore
Re Trust 611 Marlin Court
Redwood City, CA 94065-1214

Mr. Allen Shin
Banya Investments LLC
3011 Cabrillo Avenue
San Ramon, CA 94583

Mr. Paul Wilson
1238 Stanyan Street
San Francisco, CA 94117

Subject: Fuel Leak Case No. RO0000355 and Geotracker Global ID T0600100155, Beacon #12574, 22315 Redwood Road, Castro Valley, CA 94546 – DEP Pilot Test Report and Soil Vapor Sampling Work Plan

Dear Mr. Ehlers, Castro Group LLC, Ms. Moore, Mr. Shin, and Mr. Wilson:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the documents entitled, *"High Vacuum Dual-Phase Extraction Testing Report,"* dated June 30, 2009 and *"Soil Gas Survey Work Plan,"* dated May 26, 2009. The *"High Vacuum Dual-Phase Extraction Testing Report,"* presents results from a 48-hour high vacuum, dual-phase extraction (HVDPE) test conducted between May 19, 2009 and May 21, 2009. The Report concludes that HVDPE is effective in extracting vapors from the vadose zone soils and capturing contaminated groundwater. The Report recommends that five soil borings be advanced to help evaluate that lateral and vertical extent of contamination in the area of the former USTs and dispensers and develop a site conceptual model. The proposed soil borings are conditionally approved provided that the technical comments below are addressed and incorporated during field implementation of the soil borings.

The *"Soil Gas Survey Work Plan,"* dated May 26, 2009 proposes installation of temporary soil vapor probes and collection of soil vapor samples from five on-site and two off-site locations. The proposed scope of work for soil vapor sampling is acceptable and may be implemented as proposed. Please present results from the soil vapor sampling in the Site Investigation Report requested below.

TECHNICAL COMMENTS

1. **Proposed Soil Borings.** The proposed direct push soil borings are to be sampled continuously for logging and screening purposes. Soil samples are to be collected for laboratory analysis from any zones where visible staining, odor, or elevated PID readings are observed. If no visible staining, odor, or elevated PID readings are observed, we concur with the proposal to collect soil samples at 5-foot intervals for chemical analyses. We request that grab groundwater samples be collected from first-

encountered groundwater in each soil boring. The grab groundwater sample is to be collected over no greater than a five-foot vertical interval using a temporary well casing with a well screen or Hydropunch® or similar device that is capable of collecting a depth-discrete groundwater sample. Please present boring logs, screening results, and analytical data for soil samples in the Site Investigation Report requested below.

2. **Groundwater Monitoring.** Please continue the groundwater monitoring program on the current semi-annual basis. Please present the groundwater sampling results in the Groundwater Monitoring Reports requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **October 13, 2009** – Third Quarter 2009, Semi-Annual Groundwater Monitoring Report
- **January 11, 2010** – Site Investigation Report
- **April 13, 2010** – First Quarter 2010, Semi-Annual Groundwater Monitoring Report

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/cleanup/electronic_reporting).

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.

If you have any questions, please call me at 510-567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Gary Barker, Horizon Environmental, Inc., 4970 Windplay Drive, #C5, El Dorado Hills, CA 95762

Kenny Mateik, Horizon Environmental, Inc., 4970 Windplay Drive, #C5, El Dorado Hills, CA 95762

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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: 11/25/2009 By vickyh1

Permit Numbers: W2009-1043
Permits Valid from 12/21/2009 to 12/22/2009

Application Id:	1259082731492	**City of Project Site:**	Castro Valley
Site Location:	22315 Redwood Rd, Castro Valley, CA		
Project Start Date:	12/07/2009	**Completion Date:**	12/07/2009
Assigned Inspector:	Contact Ron Smalley at (510) 670-5407 or ronaldws@acpwa.org		
Extension Start Date:	12/21/2009	**Extension End Date:**	12/22/2009
Extension Count:	1	**Extended By:**	jamesy

Applicant:	Horizon Environmental Inc. - Ken Mateik 4970 Windplay Dr #C5, El Dorado Hills, CA 95762	**Phone:** 916-939-2170
Property Owner:	Banya Investments LLC 3011 Cabrillo Avenue, San Ramon, CA 94583	**Phone:** --
Client:	** same as Property Owner **	

	Total Due:	$265.00
Receipt Number: WR2009-0422	**Total Amount Paid:**	$265.00
Payer Name : Horizon Environmental	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 10 Boreholes
Driller: TEG - 706568 & Well Test Inc (below) - Lic #: 843074 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2009-1043	11/25/2009	03/07/2010	10	4.00 in.	40.00 ft

Specific Work Permit Conditions

1. 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.

2. 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.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an 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.

4. Applicant shall contact Ron Smalley for an inspection time at 510-670-5407 or email to ronaldws@acpwa.org 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.

ATTACHMENT B

HORIZON ENVIRONMENTAL INC.

FIELD METHODS AND PROCEDURES

HORIZON ENVIRONMENTAL INC.
FIELD METHODS AND PROCEDURES

SOIL GAS INVESTIGATION
HYDRAULIC OR MANUALLY- DRIVEN SAMPLING PROBES

The following section describes field methods and procedures that will be completed by Horizon Environmental Inc. (Horizon) personnel in performance of soil gas investigations.

1.0 HEALTH AND SAFETY PLAN

Fieldwork performed by Horizon and subcontractors at the site will be conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document that describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP will be at the site and available for reference by appropriate parties during work at the site.

2.0 UNDERGROUND UTILITY SURVEY

Prior to commencement of work on site, Horizon will contact Underground Service Alert (USA) to set up an underground utility survey. USA contacts the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Work associated with borings and monitoring well installations will be preceded by manual hand augering to avoid contact with underground utilities.

3.0 SOIL GAS SAMPLING PROTOCOL

Installation of probe rods and sampling for soil gas investigations will be performed under the supervision of a Horizon geologist. All metal and non-metal tools and parts utilized during probe installation and soil gas sampling will be in good working condition, decontaminated or new, dedicated parts. A Post-Run Tubing (PRT) system consisting of a PRT expendable point holder, a PRT adapter and PRT Teflon or Nylaflow tubing will be used to insert, seal and convey soil gas from the target depth to the surface. The PRT expendable point holder will be driven into the ground using a truck-mounted direct-push sampling rig or by an electric hammer ahead of a one-inch outside diameter (OD) stainless steel probe rod until the PRT is advanced to the proposed target depth. The PRT adapter will be fitted at the end of a selected length of an inert 1/8-inch OD Nylaflow tubing approximately five feet longer than the embedded length of the probe rods. The Nylaflow tubing will be fitted inside a protective, disposable, 1/4-inch OD Teflon or polyethylene tubing, and will be threaded down the center of the probe rods and connected to a sampling port just above the expandable (drop off) PRT expendable point.

A dedicated 50 cubic centimeter (cc) syringe will be connected to the 1/8-inch Nylaflow tubing at the surface via an on/off valve. Prior to opening the vapor sampling port, a vacuum test of the tubing and PRT connection will be performed using the syringe to place a vacuum on the system to check for integrity of the connections. While holding back pressure via the syringe, the probe rod will be retracted to open the vapor sampling port. The probe rod will be retracted until the back pressure is released, indicating the presence of in-situ soil gas. The target depth and the actual depth of the rod will be recorded. The probe rod will be sealed at the surface with granular and hydrated bentonite, and the soil gas pressure inside the Nylaflow tubing will be allowed to equilibrate for a minimum 20 minutes before sampling.

A tracer compound for leak testing, typically difluoroethane, iso-propanol, or butane, will be sprayed around the sampling apparatus from the ground surface up to and including the sampling syringe. The tracer will be dispensed around the base and top of the probe rod and along the tubing train during sample collection. If the tracer compound is detected in the sample, another soil gas sample will be collected.

Soil gas will be withdrawn from the end of the inert Nylaflow tubing that runs from the sampling tip to the surface using a dedicated 50 cc glass syringe or an air-tight canister (Summa) under vacuum connected via an on/off valve. The probe tip and sampling tubing will be nominally purged by a purge volume test as described below. A sample of in-situ soil gas will be withdrawn and immediately transferred to the mobile laboratory for analysis within minutes of collection. For off-site analysis, soil gas samples will be collected in Summa canisters or in Tedlar bags when allowed.

4.0 PURGE VOLUME TEST

A site specific purge volume test will be conducted at the beginning of the soil gas investigation to purge ambient air from the sampling system. Three different volumes will be purged and sampled (nominally 1, 3 and 7 purge volumes) and analyzed immediately to determine the volume amount with the highest concentration. Therefore, the optimum purge volume will be achieved and utilized during the entire soil gas investigation.

5.0 SAMPLE FLOW RATE

Sample collection will be timed so that the soil gas flow rate does not exceed 200 milliliters per minute (mL/min). This will be accomplished by withdrawing the plunger on the syringe at a constant rate of 3 milliliters per second (mL/sec). The sample collector will record collection time and any resistance to sample flow felt on the syringe during collection.

If soil gas is contained in Summa canisters, a flow controller pre-calibrated to a flow rate of maximum 200 mL/min will be utilized at the end of the 1/8-inch OD polyethylene conveyance tubing and tight-fitted to the canister. The collector will record the initial and final collection time and vacuum readings.

6.0 SPECIAL CONSTITUENT SAMPLING – TETRAETHYL LEAD

Battery-operated sampling pumps will be pre-calibrated by the licensed analytical laboratory to an extraction flow rate of one liter per minute (L/min). Dedicated sampling tubes containing resin mesh separated and contained by silylated glass wool plugs will be attached with flexible tubing to the intake end of the sample pump, and the opposite end of the tube will be broken and immediately attached to the 1/4-inch OD Nylaflow probe tubing. Sampling will proceed at the known flow rate for a calculated time interval to allow passing of a predetermined amount of soil gas to meet the required reporting limit qualification. The glass sample tube will be capped, securely packed and shipped under chain of custody documentation to the licensed laboratory for analysis by NIOSH Method 2533.

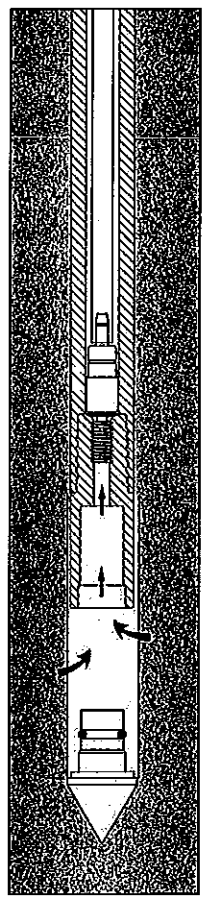
7.0 BOREHOLE ABANDONMENT AND SURFACE RESTORATION

After completion of sampling, the borehole shall be backfilled from total depth to the surface with cement grout. The pavement surface shall be restored to pre-existing conditions utilizing either cold patch asphalt for surrounding asphalt pavement or quick-set cement tinted to match surrounding concrete.

Soil Gas Sampling – PRT System Operation

from Geoprobe Systems®

www.geoprobe.com
1-800-436-7762



Soil Gas Sampling using the Post-Run Tubing (PRT) System.

Soil Gas Sampling — PRT System Operation

Basics

Using the Post-Run Tubing System, one can drive probe rods to the desired sampling depth, then insert and seal an internal tubing for soil gas sampling. The usual Geoprobe probe rods and driving accessories and the following tools are required:

- PRT Expendable Point Holder
- PRT Adapter
- Selected PRT Tubing

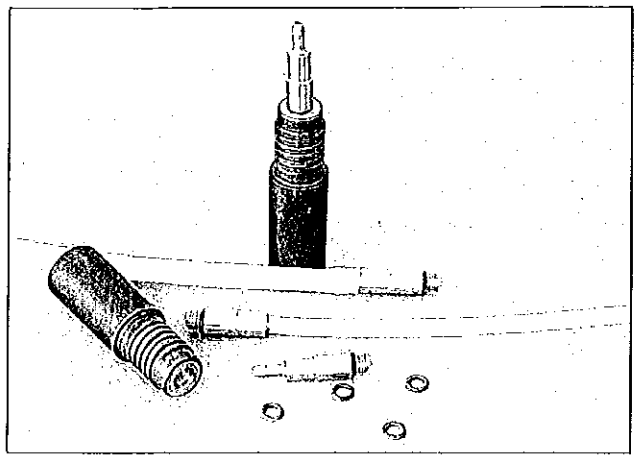
Preparation

1. Clean all parts prior to use. Install O-rings on the PRT Expendable Point Holder and the PRT adapter.
2. Inspect the probe rods and clear them of all obstructions.
3. TEST FIT the adapter with the PRT fitting on the expendable point holder to assure that the threads are compatible and fit together smoothly.

   NOTE: PRT fittings are left-hand threaded.

4. Push the adapter into the end of the selected tubing. Tape may be used on the outside of the adapter and tubing to prevent the tubing from spinning freely around the adapter during connection – especially when using Teflon tubing **(Figure 1)**.

   REMEMBER: The sample will not contact the outside of the tubing or adapter.



PRT SYSTEM PARTS
PRT Expendable Point Holder, PRT Adapters, Tubing, and O-rings.

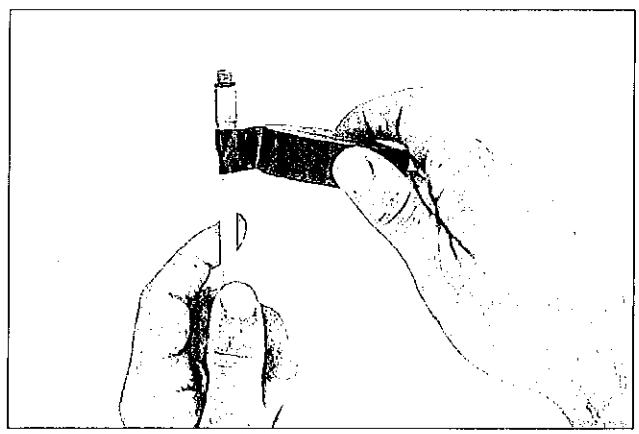


Figure 1. Securing adapter to tubing with tape. NOTE: Tape does not contact soil gas sample.

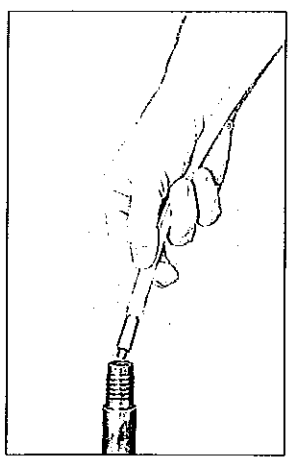


Figure 2. Insertion of tubing and PRT adapter.

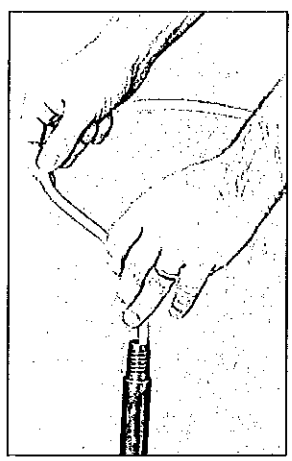
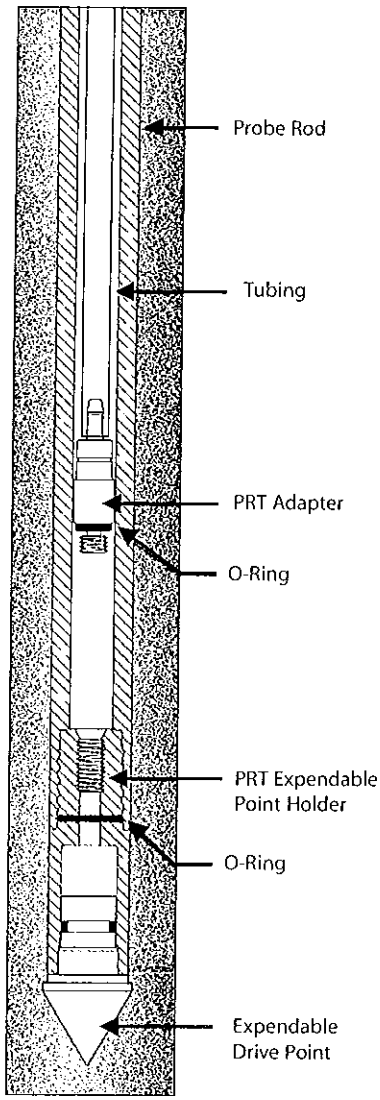


Figure 3. Engaging threads by rotating tubing.



A cross section of probe rods driven to depth and then retracted to allow for soil gas sampling. The PRT adapter and tubing are now fed through the rods and rotated to form a vacuum-tight connection at the point holder. The result is a continuous run of tubing from the sample level to the surface.

Probing

Drive the PRT tip configuration into the ground. Connect probe rods as necessary to reach the desired depth. After depth has been reached, disengage the expendable point by pulling up on the probe rods. Remove the pull cap from the top probe rod, and position the Geoprobe unit to allow room to work.

Connection

1. Insert the adapter end of the tubing down the inside diameter of the probe rods (**Figure 2**).

2. Feed the tubing down the rod bore until it hits bottom on the expendable point holder. Allow about 2 ft. (610 mm) of tubing to extend out of the hole before cutting it.

3. Grasp the excess tubing and apply some downward pressure while turning it in a counterclockwise motion to engage the adapter threads with the expendable point holder (**Figure 3**).

4. Pull up lightly on the tubing to test engagement of the threads. (Failure of adapter to thread could mean that intrusion of soil may have occurred during driving of probe rods or disengagement of drive point.)

Sampling

1. Connect the outer end of the tubing to the Silicone Tubing Adapter and vacuum hose (or other sampling apparatus).

2. Follow the appropriate sampling procedure for collecting a soil gas sample (**Figure 1**).

Removal

1. After collecting a sample, disconnect the tubing from the vacuum hose or sampling system.

2. Pull up firmly on the tubing until it releases from the adapter at the bottom of the hole. (Taped tubing requires a stronger pull.)

3. Remove the tubing from the probe rods. Dispose of polyethylene tubing or decontaminate Teflon tubing as protocol dictates.

4. Retrieve the probe rods from the ground and recover the expendable point holder with the attached PRT adapter.

5. Inspect the O-ring at the base of the PRT adapter to verify that proper sealing was achieved during sampling. The O-ring should be compressed. This seal can be tested by capping the open end of the point holder applying vacuum to the PRT adapter.

6. Prepare for the next sample.

Figure 1. Taking a soil gas sample for direct injection into a GC with the PRT system.

HORIZON ENVIRONMENTAL INC.
FIELD METHODS AND PROCEDURES

The following section describes field procedures that will be completed by Horizon Environmental Inc. (Horizon) personnel in performance of the tasks involved with this project.

1.0 HEALTH AND SAFETY PLAN

Field work performed by Horizon and subcontractors at the site will be conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document that describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP will be at the site and available for reference by appropriate parties during work at the site.

2.0 LOCATING UNDERGROUND UTILITIES

Prior to commencement of work on site, the location of underground utilities will be researched with the assistance of Underground Service Alert (USA). USA will contact the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Work associated with the boring and monitoring well installation will be preceded by manual hand augering to a minimum depth of 4 feet below grade to avoid contact with underground utilities.

3.0 DIRECT PUSH SOIL BORING AND SOIL SAMPLING PROTOCOL

Soil borings and soil sampling will be performed under the supervision of a Horizon geologist. The soil borings will be advanced using a truck-mounted direct-push rig. Soil sampling will be conducted using a 2-foot or 4-foot long split-barrel sampler lined with a clear inert PVC sample sleeve. The sampler is driven into the soil at approximately 5-foot intervals by a hydraulic-driven hammer. Upon recovery, the clear PVC sample sleeve is removed from the sampler and examined by the geologist. The clear PVC sample sleeve is cut with a saw, and a portion of the soil sample will be extruded and placed in a plastic bag and sealed for later screening with an hNu type organic vapor meter (OVM). Another portion of the extruded soil sample will be used for classification and description. Generally, the bottom portion of the sample will be sealed in the sample sleeve using Teflon sheets and plastic caps; labeled; and promptly placed in iced storage at approximately 4°C for transport to the laboratory. To reduce cross-contamination between samples, the split-barrel sampler will be washed in a soap solution and double-rinsed between each sampling event.

After the portion of the extruded soil sample is placed in the plastic bag, it will be allowed to warm, inducing volatilization of petroleum hydrocarbon vapors. The headspace vapors will be screened with the OVM. The highest observed reading will be recorded on the boring logs.

4.0 GROUNDWATER GRAB SAMPLES

Depth to groundwater will be measured to the nearest 0.01-foot using an electronic, hand- held water level indicator. The tip of the probe will be examined to evaluate whether a product sheen is present. Groundwater samples will be collected from each boring by installing a temporary PVC well casing into the boring and retrieving the groundwater sample with a small stainless steel bailer. To reduce cross-contamination between samples, the stainless steel bailer will be washed in a soap solution and double-rinsed before and after each sampling event.

The groundwater samples will then be transferred from the bailer to appropriate clean containers in such a manner as to minimize loss of volatile constituents, so that there is no headspace in the sample container and air bubbles are not present in the water samples when the sample containers are inverted. If air bubbles are found, resampling will occur. The water samples will be refrigerated and transported promptly to the analytical laboratory.

ATTACHMENT C

SOIL GAS SURVEY ANALYTICAL REPORT

7 January 2010

Mr. Ken Mateick
Horizon Environmental Inc.
4970 Windplay Drive, Suite C5
El Dorado Hills, CA 95762

SUBJECT: DATA REPORT - Horizon Environmental Inc. Project #1574.11
Former Beacon Station #12574
22315 Redwood Road, Castro Valley, California

TEG Project # 91221F

Mr. Mateick:

Please find enclosed a data report for the samples analyzed from the above referenced project for Horizon Environmental Inc. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 8 analyses on 8 soil vapor samples.

-- 8 analyses on soil vapors for aromatic volatile hydrocarbons (BTEX), the fuel oxygenate MtBE, and total petroleum hydrocarbons-gasoline by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

1,1 difluoroethane was used as a leak check compound around the probe rods during the soil vapor sampling. No leak check compound was detected in any of the vapor samples reported at or above the DTSC recommended leak check compound reporting limit of 10 ug/L of vapor.

TEG appreciates the opportunity to have provided analytical services to Horizon Environmental Inc. on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

teg

Horizon Environmental, Inc. Project #1574.11
Former Beacon Station #12574
22315 Redwood Road, Castro Valley, California

TEG Project #91221F

Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor
BTEX, MtBE, & TPH-gasoline (EPA method 8260B)

SAMPLE NUMBER:		Probe Blank	SG-1	SG-2	SG-2 dup	SG-3
SAMPLE DEPTH (feet):			4.5	5.0	5.0	5.0
PURGE VOLUME:			1	1	1	1
COLLECTION DATE:		12/21/09	12/21/09	12/21/09	12/21/09	12/21/09
COLLECTION TIME:		10:09	13:45	14:07	14:07	13:20
DILUTION FACTOR (VOCs):		1	1	1	1	1
	RL					
Benzene	30	nd	97	100	100	350
Toluene	200	nd	350	840	760	1300
Ethylbenzene	100	nd	110	230	240	110000
m,p-Xylene	200	nd	300	830	950	99000
o-Xylene	100	nd	nd	300	330	3700
Methyl-t-butyl ether (MtBE)	100	nd	nd	nd	nd	nd
TPH (gasoline range)	10000	nd	3600000	17000	16000	13000000
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		119%	122%	112%	120%	92%
Surrogate Recovery (1,4-BFB)		105%	114%	105%	116%	90%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Stephanie Seymour

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

teg

Horizon Environmental, Inc. Project #1574.11
Former Beacon Station #12574
22315 Redwood Road, Castro Valley, California

TEG Project #91221F

Analyses of SOIL VAPOR in micrograms per cubic meter of Vapor
BTEX, MtBE, & TPH-gasoline (EPA method 8260B)

SAMPLE NUMBER:		SG-4	SG-5	SG-5	SG-5
SAMPLE DEPTH (feet):		5.0	4.5	4.5	4.5
PURGE VOLUME:		1	1	3	7
COLLECTION DATE:		12/21/09	12/21/09	12/21/09	12/21/09
COLLECTION TIME:		14:51	11:05	11:24	11:45
DILUTION FACTOR (VOCs):		1	1	1	1
	RL				
Benzene	30	76	220	180	140
Toluene	200	360	2300	2400	2000
Ethylbenzene	100	110	340	400	360
m,p-Xylene	200	420	1300	1600	1400
o-Xylene	100	150	420	520	490
Methyl-t-butyl ether (MtBE)	100	nd	nd	nd	nd
TPH (gasoline range)	10000	nd	23000	22000	19000
1,1 Difluoroethane (leak check)	10000	nd	nd	nd	nd
Surrogate Recovery (DBFM)		125%	111%	117%	123%
Surrogate Recovery (1,4-BFB)		115%	98%	105%	112%

'RL' Indicates reporting limit at a dilution factor of 1
'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
Analyses performed by: Stephanie Seymour

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

TEG Project #91221F

CALIBRATION STANDARDS - Initial Calibration / LCS

Instrument: Agilent 5973N MSD

	INITIAL CALIBRATION		LCS	
COMPOUND	RF	%RSD	RF	%DIFF
Benzene	1.170	7.6%	1.206	3.1%
Toluene	0.717	12.1%	0.714	0.4%
Ethylbenzene	0.556	10.1%	0.585	5.2%
m,p-Xylene	0.695	9.8%	0.738	6.2%
o-Xylene	0.648	9.5%	0.709	9.4%
Methyl-t-butyl ether (MtBE)	0.621	6.2%	0.595	4.2%
TPH-Gasoline	0.908	9.0%	0.895	1.4%
Acceptable Limits		20.0%		15.0%

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Acenaphthene	V	S	4.4E+04		4.4E+04	1.2E+05		1.2E+05
Acenaphthylene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Acetone	V	L	6.6E+05		6.6E+05	1.8E+06		1.8E+06
Aldrin	NV	S						
Anthracene	V	S	2.2E+05		2.2E+05	6.1E+05		6.1E+05
Antimony	NV	S						
Arsenic	NV	S						
Barium	NV	S						
Benzene	V	L	8.4E+01	8.4E+01	6.3E+03	2.8E+02	2.8E+02	1.8E+04
Benzo(a)anthracene	NV	S						
Benzo(b)fluoranthene	NV	S						
Benzo(k)fluoranthene	NV	S						
Benzo(g,h,i)perylene	NV	S						
Benzo(a)pyrene	NV	S						
Beryllium	NV	S						
1,1-Biphenyl	V	S						
Bis(2-chloroethyl) ether	V	L	7.4E+00	7.4E+00		2.5E+01	2.5E+01	
Bis(2-chloroisopropyl) ether	V	L	3.4E+00	3.4E+00	2.9E+04	1.2E+01	1.2E+01	8.2E+04
Bis(2-ethylhexyl) phthalate	NV	S						
Boron	NV	S						
Bromodichloromethane	V	L	1.4E+02	1.4E+02	1.5E+04	4.6E+02	4.6E+02	4.1E+04
Bromoform (Tribromomethane)	NV	S						
Bromomethane	V	G	1.0E+03		1.0E+03	2.9E+03		2.9E+03
Cadmium	NV	S						
Carbon tetrachloride	V	L	1.9E+01	1.9E+01	8.3E+03	6.3E+01	6.3E+01	2.3E+04
Chlordane	NV	S						
p-Chloroaniline	NV	S						
Chlorobenzene	V	L	2.1E+05		2.1E+05	5.8E+05		5.8E+05
Chloroethane	V	G	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Chloroform	V	L	4.6E+02	4.6E+02	6.3E+04	1.5E+03	1.5E+03	1.8E+05
Chloromethane	V	G	1.9E+04		1.9E+04	5.3E+04		5.3E+04
2-Chlorophenol	V	L	3.7E+03		3.7E+03	1.0E+04		1.0E+04
Chromium (total)	NV	S						
Chromium III	NV	S						
Chromium VI	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Fluorene	V	S	2.9E+04		2.9E+04	8.2E+04		8.2E+04
Heptachlor	NV	S						
Heptachlor epoxide	NV	S						
Hexachlorobenzene	NV	S						
Hexachlorobutadiene	NV	S						
γ-Hexachlorocyclohexane (Lindane)	NV	S						
Hexachloroethane	NV	S						
Indeno(1,2,3-c,d)pyrene	NV	S						
Lead	NV	S						
Mercury (elemental)	V	S	1.9E+01		1.9E+01	5.3E+01		5.3E+01
Methoxychlor	NV	S						
Methylene chloride	V	L	5.2E+03	5.2E+03	8.3E+04	1.7E+04	1.7E+04	2.3E+05
Methyl ethyl ketone	V	L	1.0E+06		1.0E+06	2.9E+06		2.9E+06
Methyl isobutyl ketone	V	L	6.3E+05		6.3E+05	1.8E+06		1.8E+06
Methyl mercury	NV	S						
2-Methylnaphthalene	V	S						
tert-Butyl methyl ether	V	L	9.4E+03	9.4E+03	6.3E+05	3.1E+04	3.1E+04	1.8E+06
Molybdenum	NV	S						
Naphthalene	V	S	7.2E+01	7.2E+01	6.3E+02	2.4E+02	2.4E+02	1.8E+03
Nickel	NV	S						
Pentachlorophenol	NV	S						
Perchlorate	NV	S						
Phenanthrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Phenol	NV	S						
Polychlorinated biphenyls (PCBs)	NV	S						
Pyrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Selenium	NV	S						
Silver	NV	S						
Styrene	V	L	1.9E+05		1.9E+05	5.3E+05		5.3E+05
tert-Butyl alcohol	V	L						
1,1,1,2-Tetrachloroethane	V	L	3.2E+02	3.2E+02		1.1E+03	1.1E+03	
1,1,2,2-Tetrachloroethane	V	L	4.2E+01	4.2E+01	4.4E+04	1.4E+02	1.4E+02	1.2E+05
Tetrachloroethene	V	L	4.1E+02	4.1E+02	8.3E+04	1.4E+03	1.4E+03	2.3E+05
Thallium	NV	S						
Toluene	V	L	6.3E+04		6.3E+04	1.8E+05		1.8E+05

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Chrysene	NV	S						
Cobalt	NV	S						
Copper	NV	S						
Cyanide	NV	S	1.5E+04		1.5E+04	4.1E+04		4.1E+04
Dibenz(a,h)anthracene	NV	S						
Dibromochloromethane	V	S						
1,2-dibromo-3-chloropropane	V	L	1.3E+00	1.3E+00	4.2E+01	4.3E+00	4.3E+00	1.2E+02
1,2-Dibromoethane	V	S	4.1E+00	4.1E+00	1.9E+03	1.4E+01	1.4E+01	5.3E+03
1,2-Dichlorobenzene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
1,3-Dichlorobenzene	V	L	2.2E+04		2.2E+04	6.1E+04		6.1E+04
1,4-Dichlorobenzene	V	S	2.2E+02	2.2E+02	1.7E+05	7.4E+02	7.4E+02	4.7E+05
3,3-Dichlorobenzidine	NV	S						
Dichlorodiphenyldichloroethane (DDD)	NV	S						
Dichlorodiphenyldichloroethene (DDE)	NV	S						
Dichlorodiphenyltrichloroethane (DDT)	NV	S						
1,1-Dichloroethane	V	L	1.5E+03	1.5E+03	1.0E+05	5.1E+03	5.1E+03	2.9E+05
1,2-Dichloroethane	V	L	9.4E+01	9.4E+01	1.0E+03	3.1E+02	3.1E+02	2.9E+03
1,1-Dichloroethene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
cis-1,2-Dichloroethene	V	L	7.3E+03		7.3E+03	2.0E+04		2.0E+04
trans-1,2-Dichloroethene	V	L	1.5E+04		1.5E+04	4.1E+04		4.1E+04
2,4-Dichlorophenol	NV	S						
1,2-Dichloropropane	V	L	2.4E+02	2.4E+02	8.3E+02	8.2E+02	8.2E+02	2.3E+03
1,3-Dichloropropene	V	L	1.5E+02	1.5E+02	4.2E+03	5.1E+02	5.1E+02	1.2E+04
Dieldrin	NV	S						
Diethyl phthalate	NV	S						
Dimethyl phthalate	NV	S						
2,4-Dimethylphenol	V	S						
2,4-Dinitrophenol	NV	S						
2,4-Dinitrotoluene	NV	S						
1,4-Dioxane	NV	L						
Dioxin (2,3,7,8-TCDD)	NV	S						
Endosulfan	NV	S						
Endrin	NV	S						
Ethylbenzene	V	L	9.8E+02	9.8E+02	2.1E+05	3.3E+03	3.3E+03	5.8E+05
Fluoranthene	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Toxaphene	NV	S						
TPH (gasolines)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (middle distillates)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (residual fuels)	NV	L/S						
1,2,4-Trichlorobenzene	V	L	8.3E+02		8.3E+02	2.3E+03		2.3E+03
1,1,1-Trichloroethane	V	L	4.6E+05		4.6E+05	1.3E+06		1.3E+06
1,1,2-Trichloroethane	V	L	1.5E+02	1.5E+02	2.9E+03	5.1E+02	5.1E+02	8.2E+03
Trichloroethene	V	L	1.2E+03	1.2E+03	1.3E+05	4.1E+03	4.1E+03	3.5E+05
2,4,5-Trichlorophenol	V	S	7.3E+04		7.3E+04	2.0E+05		2.0E+05
2,4,6-Trichlorophenol	NV	S						
Vanadium	NV	S						
Vinyl chloride	V	G	3.1E+01	3.1E+01	2.1E+04	1.0E+02	1.0E+02	5.8E+04
Xylenes	V	L	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Zinc	NV	S						

Notes:

Soil gas screening levels intended to be protective of indoor air quality, calculated for volatile chemicals only.
Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).
Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200 (see Table E-1).
Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).
Target cancer risk = 1E-06, Target Hazard Quotient = 0.2 for all chemicals.
Residential soil gas:indoor air attenuation factor = 0.001 (1/1000). Commercial/industrial soil gas:indoor air attenuation factor = 0.0005 (1/2000).
Soil gas screening level for ethanol based on potential indoor air nuisance concerns (refer to Section 5.3.3 and Table H series).
soils or limited soil impacts and no groundwater source of VOCs.

Table 2. California Human Health Screening Levels for Indoor Air and Soil Gas

Chemical	[1]Indoor Air Human Health Screening Levels ($\mu g/m^3$)		[2]Shallow Soil Gas Human Health Screening Levels (Vapor Intrusion) ($\mu g/m^3$)	
	Residential Land Use	Commercial/ Industrial Land Use Only	Residential Land Use	Commercial/ Industrial Land Use Only
Benzene	8.40 E-02	1.41 E-01	3.62 E+01	1.22 E+02
Carbon Tetrachloride	5.79 E-02	9.73 E-02	2.51 E+01	8.46 E+01
1,2-Dichloroethane	1.16 E-01	1.95 E-01	4.96 E+01	1.67 E+02
cis-1,2-Dichloroethylene	3.65 E+01	5.11 E+01	1.59 E+04	4.44 E+04
trans-1,2-Dichloroethylene	7.30 E+01	1.02 E+02	3.19 E+04	8.87 E+04
Ethylbenzene	Postponed[3]	Postponed[3]	Postponed[3]	Postponed[3]
Mercury, elemental	9.40 E-02	1.31 E-01	4.45 E+01	1.25 E+02
Methyl tert-Butyl Ether	9.35 E+00	1.57 E+01	4.00 E+03	1.34 E+04
Naphthalene	7.20 E-02	1.20 E-01	3.19 E+01	1.06 E+02
Tetrachloroethylene	4.12 E-01	6.93 E-01	1.80 E+02	6.03 E+02
Tetraethyl Lead	3.65 E-04	5.11 E-04	2.06 E-01	5.78 E-01
Toluene	3.13 E+02	4.38 E+02	1.35 E+05	3.78 E+05
1,1,1-Trichloroethane	2.29 E+03	3.21 E+03	9.91 E+05	2.79 E+06
Trichloroethylene	1.22 E+00	2.04 E+00	5.28 E+02	1.77 E+03
Vinyl Chloride	3.11 E-02	5.24 E-02	1.33 E+01	4.48 E+01
m-Xylene	7.30 E+02	1.02 E+03	3.19 E+05	8.87 E+05
o-Xylene	7.30 E+02	1.02 E+03	3.15 E+05[4]	8.79 E+05[4]
p-Xylene	7.30 E+02	1.02 E+03	3.17 E+05	8.87 E+05

Reference: Appendix 1, OEHHA Target Indoor Air Concentrations and Soil-Gas Screening Numbers for Existing Buildings under Residential and Industrial/Commercial land uses.

Notes:

1. "Residential Land Use" screening levels generally considered adequate for other sensitive uses (e.g., day-care centers, hospitals, etc.). Commercial/industrial properties should be evaluated using both residential and commercial/industrial CHHSLs. A deed restriction that prohibits use of the property for sensitive purposes may be required at sites that are evaluated and/or remediated under a commercial/industrial land use scenario only.
Calculation of cumulative risk may be required at sites where multiple contaminants with similar health effects are present.
Carcinogens: CHHSLS based on target cancer risk of 10-6. Cal/EPA cancer slope factors used when available.
Noncarcinogens: CHHSLS based on target hazard quotient of 1.0.
2. Soil Gas: Screening levels based on soil gas data collected <1.5 meters (five feet) below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. Soil gas data should be collected and evaluated at all sites with significant areas of VOC-impacted soil. Screening levels also apply to sites that overlie plumes of VOC-impacted groundwater.
3. Calculation of a screening number for the chemical has been postponed (pp) until the toxicity criterion currently being developed by OEHHA is published as a final document.
4. Representative Screening Numbers for mixed xylenes. The representative value for mixed xylenes is based on the calculated lowest one amongst the three isomers.

ATTACHMENT D

BORING LOGS

HORIZON ENVIRONMENTAL INC.
4970 Windplay Drive, Suite 5
El Dorado Hills, California 95762
(916) 939-2170 -- Fax: (916) 939-2172

Boring No. B-1

Drilling Company: Well Test Inc.
Date Drilled: 12/23/09
Drilling Method: Direct Push
Sampling Method: Macro Core

Project No.: 1574.11
Site: Former Beacon No. 12574
Location: Castro Valley, CA
Geologist: Emil D. Kruck

Depth in Feet	Sample Number	Blow Count	Inches Driven	Inches Recovered	PID Reading (ppm)	Sampling Interval	Soil Description/ Comments	Soil Boring
		hand auger	0	0	-	0-1	Asphalt and aggregate baserock	
						1-2	SANDY SILT (ML) with gravel: gray, fine sand, loose to medium dense, moist, odor: FILL materials	
						2-3	*2-inch diameter bore hole*	
	4	push	24	12	38	4		
5						5	*neat cement*	
						6-7		
	8	push	48	16	52	8	Loose, fragments of white pebbles, angular rock fragments, moist, odor : FILL materials	
10						9-10		
						11	Loose, angular rocks 1-2" diameter, moist, odor: FILL materials	
	12	push	48	12	32	12		
	13	push	18	18	-	13		
						14	Increasing moisture content to wet, odor	
15						15		
	16	drive	30	30	13	16	SANDY SILT (ML): dark gray, stiff, low plasticity, moist, odor	
						17		
	18	drive	24	24	587	18	GRAVELLY SILT (GM): dark gray, fine gravel, hard, moist, odor	
20						19-20		
						21	moisture content increases to wet	
	22	drive	48	48	257	22	▽ first water	
						23		
						24	SILTY FINE SAND (SM): greenish gray, very fine sand, medium dense, wet, odor	
25						25		
	26	drive	48	24	51	26	Flowing sands	
						27-29	Total Depth = 26 feet	
30						30		

HORIZON ENVIRONMENTAL INC.
4970 Windplay Drive, Suite 5
El Dorado Hills, California 95762
(916) 939-2170 -- Fax: (916) 939-2172

Boring No. B-2

Drilling Company: Well Test Inc.
Date Drilled: 12/22/09
Drilling Method: Direct Push
Sampling Method: Macro Core

Project No.: 1574.11
Site: Former Beacon No. 12574
Location: Castro Valley, CA
Geologist: Emil D. Kruck

Depth In Feet	Sample Number	Blow Count	Inches Driven	Inches Recovered	PID Reading (ppm)	Sampling Interval	Soil Description/ Comments
		hand auger	0	0	-	0-1	Asphalt and aggregate base rock
						1-2	WELL GRADED SAND (SW): light brown, dense, moist, wood fragments, no odor: FILL materials
						2-3	
						3-4	
	4	push	24	12	1	4-5	*2-inch diameter bore hole*
5						5-6	
						6-7	*neat cement*
						7-8	
	8	push	48	12	1	8-9	Same as above: FILL materials
						9-10	
10						10-11	
						11-12	WELL GRADED SAND (SW): light brown, dense, moist, no odor: FILL materials
	12	push	48	48	2	12-13	
						13-14	
						14-15	
15						15-16	
	16	drive	48	48	24	16-17	CLAYEY SAND (SC): gray, coarse sand, dense, moist, odor
						17-18	
						18-19	CLAYEY GRAVEL (GC): gray, gravel to 1" diameter, dense, moist, odor
						19-20	
20	20	drive	48	48	34	20-21	Decreasing fine fraction, change in color to light brown Very dense
						21-22	
						22-23	SANDY SILT (ML): grayish brown, fine sand, stiff, low plasticity, moist, odor
	24	drive	48	48	16	23-24	
25						24-25	
						25-26	▽ first water
						26-27	SILTY SAND (SM): gray, fine to medium grained sand, medium dense, wet, no odor
	28	drive	48	48	2	27-28	Flowing sands
						28-29	Total Depth = 28 feet
30						29-30	

Soil Boring

HORIZON ENVIRONMENTAL INC.
4970 Windplay Drive, Suite 5
El Dorado Hills, California 95762
(916) 939-2170 -- Fax: (916) 939-2172

Boring No. B-3

Drilling Company: Well Test Inc.
Date Drilled: 12/23/09
Drilling Method: Direct Push
Sampling Method: Macro Core

Project No.: 1574.11
Site: Former Beacon No. 12574
Location: Castro Valley, CA
Geologist: Emil D. Kruck

Depth In Feet	Sample Number	Blow Count	Inches Driven	Inches Recovered	PID Reading (ppm)	Sampling Interval	Soil Description/ Comments
		hand auger	0	0	-	0–1	Asphalt and aggregate base rock
						1–4	SILTY CLAY (CL): black, soft, high plasticity, moist, no odor
							2-inch diameter bore hole
5						4–7	SILTY SAND (SM) and GRAVEL (GM): reddish brown, fine to medium angular gravel, medium dense, moist, no odor
							neat cement
	8	drive	48	38	0	7–8	
10						8–11	
	12	drive	48	40	1	11–12	FINE SAND (SP): green, loose, moist, no odor
						12–15	SILTY SAND (SM) and GRAVEL (GM): reddish brown, angular gravel, dense, moist, no odor
15							
	16	drive	48	48	2	15–19	Color varies throughout from reddish brown to greenish gray, sand and gravel contents vary, angular gravel, moist, no odor
20	20	drive	48	48	20	19–22	alternating layers of reddish brown sand and green silt with medium gravel, moist, no odor
						22–24	SILTY SAND (SM): gray to greenish gray, fine sand, dense, wet, no odor
	24	drive	48	48	0		▽ first water
25						24–26	CLAYEY SAND (SC) with gravel: brown to black, coarse sand; fine subangular gravel, dense, wet, no odor
	26	drive	24	24	1		
							Total Depth = 26 feet
30							

HORIZON ENVIRONMENTAL INC.
4970 Windplay Drive, Suite 5
El Dorado Hills, California 95762
(916) 939-2170 -- Fax: (916) 939-2172

Boring No. B-4

Drilling Company: Well Test Inc.
Date Drilled: 12/22/09
Drilling Method: Direct Push
Sampling Method: Macro Core

Project No.: 1574.11
Site: Former Beacon No. 12574
Location: Castro Valley, CA
Geologist: Emil D. Kruck

Depth In Feet	Sample Number	Blow Count	Inches Driven	Inches Recovered	PID Reading (ppm)	Sampling Interval	Soil Description/ Comments
		hand auger	0	0	-	0	Landscaping materials
						1	SILTY SAND (SM): yellowish gray, medium to coarse sand, loose, moist, no odor: FILL materials
						2	
						3	SILTY CLAY (CL): black, stiff, high plasticity, moist, no odor:
						4	
5						5	CLAYEY SAND (SC) with gravel: brown, medium to coarse sand, fine angular gravel, dense, moist, no odor
						6	
						7	*2-inch diameter bore hole*
	8	push	48	38	1	8	color changes to gray, no odor
						9	*neat cement*
10	10		-	-	-	10	
						11	
	12	push	48	38	196	12	color changes to greenish gray, odor
						13	
						14	
15						15	
	16	drive	48	40	1656	16	
						17	sand becomes coarser, odor
						18	
						19	CLAYEY GRAVEL (GC): greenish gray, fine to medium angular gravel, dense, moist, odor
20	20	drive	48	48	1850	20	
						21	CLAYEY SAND (SC): greenish gray, fine to medium sand, dense, moist, odor
						22	▽ first water
						23	
	24	drive	48	48	1368	24	Less dense, odor
25						25	
						26	
	27	drive	36	12	377	27	Flowing sands
						28	Total Depth = 27 feet
						29	
30						30	

Soil Boring

HORIZON ENVIRONMENTAL INC.
4970 Windplay Drive, Suite 5
El Dorado Hills, California 95762
(916) 939-2170 -- Fax: (916) 939-2172

Boring No. B-5

Drilling Company: Well Test Inc.
Date Drilled: 12/22/09
Drilling Method: Direct Push
Sampling Method: Macro Core

Project No.: 1574.11
Site: Former Beacon No. 12574
Location: Castro Valley, CA
Geologist: Emil D. Kruck

Depth In Feet	Sample Number	Blow Count	Inches Driven	Inches Recovered	PID Reading (ppm)	Sampling Interval	Soil Description/ Comments	Soil Boring
		hand auger	0	0	-	0-4	grass at surface; SILTY SAND(SM) and GRAVEL(GM): yellow, medium sand, fine grained, dense, moist, no odor: FILL materials; SILTY CLAY (CL): black, firm, high plasticity, moist, no odor	
5						4-6	CLAYEY SILT (ML): light brown, firm, moist, no odor	
	8	push	48	28	0	6-8	SILTY SAND (SM): reddish brown, medium to coarse sand, angular, medium dense, moist, no odor; *2-inch diameter bore hole*; *neat cement*	
10						10-12		
	12	push	48	48	1	12-15	SILTY SAND (SM): reddish brown, medium to coarse sand, angular, medium dense, moist, no odor	
15						15-16		
	16	push	48	48	174	16-19	SANDY SILT (ML): bluish gray, fine sand, firm to stiff, moist, odor	
20	20	push	48	48	1890	20-22	SANDY SILT (ML): bluish gray, fine sand, firm to stiff, moist, odor	
						22-24	SAND (SP): brown, coarse grained, medium dense, moist, odor	
	24	push	48	48	308	24-25	Less dense	
25						25-27	▽ first water	
	28	push	48	6	507	28	Flowing sands	
						28-30	Total Depth = 28 feet	
30								

ATTACHMENT E

SOIL AND GROUNDWATER

ANALYTICAL DATA

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Ken Mateik
Horizon Environmental
4970 Windplay Drive, Suite 5
El Dorado Hills, CA 95762

Subject : 16 Soil Samples
Project Name : Former Beacon 12574-Soil
Project Number : 1574.11
P.O. Number : 12574-034

Dear Mr. Mateik,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-5-20** Matrix : Soil Lab Number : 71375-04
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2.0**	0.50	mg/Kg	EPA 8260B	12/31/2009
Toluene	**26**	0.50	mg/Kg	EPA 8260B	12/31/2009
Ethylbenzene	**36**	0.50	mg/Kg	EPA 8260B	12/31/2009
Total Xylenes	**210**	0.50	mg/Kg	EPA 8260B	12/31/2009
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	mg/Kg	EPA 8260B	12/31/2009
TPH as Gasoline	**2800**	50	mg/Kg	EPA 8260B	12/31/2009
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	12/31/2009
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	12/31/2009
2-Bromochlorobenzene (Surr)	96.5		% Recovery	EPA 8260B	12/31/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-5-24** Matrix : Soil Lab Number : 71375-05
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.014**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**0.035**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**0.088**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**0.54**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**21**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-5-28** Matrix : Soil Lab Number : 71375-06
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.75**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Toluene	**0.55**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Ethylbenzene	**0.11**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Total Xylenes	**0.61**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**0.0071**	0.0050	mg/Kg	EPA 8260B	12/29/2009
TPH as Gasoline	**4.7**	1.0	mg/Kg	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	99.9		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-2-12** Matrix : Soil Lab Number : 71375-09
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-2-20** Matrix : Soil Lab Number : 71375-11
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-2-24** Matrix : Soil Lab Number : 71375-12
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-2-28** Matrix : Soil Lab Number : 71375-13
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/29/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	107		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-4-10** Matrix : Soil Lab Number : 71375-15
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.060**	0.060	mg/Kg	EPA 8260B	12/29/2009
Toluene	**< 0.060**	0.060	mg/Kg	EPA 8260B	12/29/2009
Ethylbenzene	**0.31**	0.15	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**0.19**	0.15	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.060**	0.060	mg/Kg	EPA 8260B	12/29/2009
TPH as Gasoline	**930**	15	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/30/2009
2-Bromochlorobenzene (Surr)	97.1		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-4-20** Matrix : Soil Lab Number : 71375-17
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1.1**	0.15	mg/Kg	EPA 8260B	12/30/2009
Toluene	**3.6**	0.15	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**5.6**	0.15	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**32**	0.15	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.15**	0.15	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**1200**	15	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	96.8		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	96.4		% Recovery	EPA 8260B	12/30/2009
2-Bromochlorobenzene (Surr)	97.8		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-4-27** Matrix : Soil Lab Number : 71375-19
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.12**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**0.0076**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**0.11**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	99.3		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-1-8** Matrix : Soil Lab Number : 71375-21
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**1.7**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-1-18** Matrix : Soil Lab Number : 71375-25
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.022**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	97.6		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	97.5		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-1-22** Matrix : Soil Lab Number : 71375-26
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.56**	0.090	mg/Kg	EPA 8260B	12/30/2009
Toluene	**2.2**	0.090	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**5.8**	0.090	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**34**	0.090	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.090**	0.090	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**560**	9.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	95.2		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	12/30/2009
2-Bromochlorobenzene (Surr)	89.8		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-1-26** Matrix : Soil Lab Number : 71375-27
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.038**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**0.070**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**0.12**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**0.87**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**17**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-3-20** Matrix : Soil Lab Number : 71375-31
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/30/2009

KIFF Analytical LLC

Report Number : 71375
Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**
Project Number : **1574.11**

Sample : **B-3-26** Matrix : Soil Lab Number : 71375-33
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	98.2		% Recovery	EPA 8260B	12/30/2009

Report Number : 71375

Date : 12/31/2009

QC Report : Method Blank Data

Project Name : **Former Beacon 12574-Soil**

Project Number : **1574.11**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/28/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/28/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/28/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/28/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/28/2009
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	12/28/2009
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	12/28/2009
Toluene - d8 (Surr)	99.5		%	EPA 8260B	12/28/2009
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/30/2009
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/30/2009
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/30/2009
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/30/2009
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	12/30/2009
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	12/30/2009
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	12/30/2009
Toluene - d8 (Surr)	98.6		%	EPA 8260B	12/30/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 71375

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**

Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene														
	71342-01	<0.0050	0.0402	0.0402	0.0378	0.0371	mg/Kg	EPA 8260B	12/29/09	94.1	92.2	2.00	67.8-120	25
Ethylbenzene														
	71342-01	<0.0050	0.0400	0.0400	0.0386	0.0379	mg/Kg	EPA 8260B	12/29/09	96.5	94.6	1.95	65.5-127	25
Methyl-t-butyl ether														
	71342-01	<0.0050	0.0403	0.0403	0.0315	0.0312	mg/Kg	EPA 8260B	12/29/09	78.0	77.5	0.671	57.0-122	25
P + M Xylene														
	71342-01	<0.0050	0.0389	0.0389	0.0350	0.0341	mg/Kg	EPA 8260B	12/29/09	90.0	87.5	2.82	62.5-124	25
Tert-Butanol														
	71342-01	<0.0050	0.200	0.200	0.194	0.190	mg/Kg	EPA 8260B	12/29/09	97.0	94.7	2.40	64.3-122	25
Toluene														
	71342-01	<0.0050	0.0400	0.0400	0.0372	0.0362	mg/Kg	EPA 8260B	12/29/09	93.1	90.5	2.85	65.7-120	25
Benzene														
	71375-11	<0.0050	0.0401	0.0399	0.0333	0.0332	mg/Kg	EPA 8260B	12/30/09	83.2	83.1	0.0382	67.8-120	25
Ethylbenzene														
	71375-11	<0.0050	0.0398	0.0397	0.0347	0.0347	mg/Kg	EPA 8260B	12/30/09	87.2	87.5	0.369	65.5-127	25
Methyl-t-butyl ether														
	71375-11	<0.0050	0.0402	0.0400	0.0352	0.0346	mg/Kg	EPA 8260B	12/30/09	87.8	86.6	1.42	57.0-122	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 71375

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 12/31/2009

Project Name : **Former Beacon 12574-Soil**

Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
P + M Xylene														
	71375-11	<0.0050	0.0388	0.0386	0.0347	0.0342	mg/Kg	EPA 8260B	12/30/09	89.5	88.5	1.10	62.5-124	25
Tert-Butanol														
	71375-11	<0.0050	0.199	0.198	0.177	0.176	mg/Kg	EPA 8260B	12/30/09	88.8	88.8	0.0335	64.3-122	25
Toluene														
	71375-11	<0.0050	0.0399	0.0397	0.0343	0.0341	mg/Kg	EPA 8260B	12/30/09	86.1	85.9	0.253	65.7-120	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 71375

Date : 12/31/2009

QC Report : Laboratory Control Sample (LCS)

Project Name : **Former Beacon 12574-Soil**

Project Number : **1574.11**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0406	mg/Kg	EPA 8260B	12/29/09	92.8	67.8-120
Ethylbenzene	0.0403	mg/Kg	EPA 8260B	12/29/09	100	65.5-127
Methyl-t-butyl ether	0.0406	mg/Kg	EPA 8260B	12/29/09	76.7	57.0-122
P + M Xylene	0.0392	mg/Kg	EPA 8260B	12/29/09	93.4	62.5-124
Tert-Butanol	0.202	mg/Kg	EPA 8260B	12/29/09	92.7	64.3-122
Toluene	0.0403	mg/Kg	EPA 8260B	12/29/09	92.6	65.7-120
Benzene	0.0399	mg/Kg	EPA 8260B	12/30/09	81.7	67.8-120
Ethylbenzene	0.0397	mg/Kg	EPA 8260B	12/30/09	86.3	65.5-127
Methyl-t-butyl ether	0.0400	mg/Kg	EPA 8260B	12/30/09	87.4	57.0-122
P + M Xylene	0.0386	mg/Kg	EPA 8260B	12/30/09	87.9	62.5-124
Tert-Butanol	0.198	mg/Kg	EPA 8260B	12/30/09	84.1	64.3-122
Toluene	0.0397	mg/Kg	EPA 8260B	12/30/09	85.9	65.7-120

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71375

Page 1 of 4

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK	California EDF Report? ☑ Yes ☐ No
Company / Address: Horizon Environmental 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762	Sampling Company Log Code: HEIE
Phone #: 916 - 939 - 2170 / Fax #: 916 - 939 - 2172	Global ID: T0600100155
Project #: 1574.11 / P.O. #: 12574-034	EDF Deliverable To (Email Address): kiffanalytical.com
Project Name: Former Beacon 12574-Soil	Sampler Signature: Emil D. Kruck
Project Address: 22315 Redwood Road, Castro Valley, CA 94546	

Sample Designation	Date	Time	Sampling	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container:	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Ice	Preservative:	Preservative:	Matrix: Water	Matrix: SOIL	Matrix: Air	Analysis Request: MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav(1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons(EPA 8260B)	Volatile Organics Full List(EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)		HOLD	TAT	For Lab Use Only
B-5-8	12/22/09	10:15				X							X	X				X															X	1 wk	01
B-5-12	"	10:25				X							X	X				X															X	1 wk	02
B-5-16	"	10:30				X							X	X				X															X	1 wk	03
B-5-20	"	10:40				X							X	X				X		X	X	X											X	1 wk	04
B-5-24	"	10:50				X							X	X				X		X	X	X											X	1 wk	05
B-5-28	"	11:05				X							X	X				X		X	X	X											X	1 wk	06
B-2-4	"	13:00				X							X	X				X															X	1 wk	07
B-2-8	"	13:15				X							X	X				X															X	1 wk	08
B-2-12	"	13:40				X							X	X				X		X	X	X											X	1 wk	09
B-2-16	"	13:52				X							X	X				X															X	1 wk	10

Relinquished by:	Date	Time	Received by:
Emil D. Kruck	12/28/09	0950	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	12/30/09	0950	Kiff Analytical

Remarks:

STANDARD TURN AROUND TIME (One Week)

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Copy - Originator
Rev: 051805

KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71375

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK	California EDF Report? ☑ Yes ☐ No
Company / Address: Horizon Environmental, 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762	Sampling Company Log Code: HEIE
Phone #: 916 - 939 - 2170 / Fax #: 916 - 939 - 2172	Global ID: T0600100155
Project #: 1574.11 / P.O. #: 12574-034	EDF Deliverable To (Email Address): kiffanalytical.com
Project Name: Former Beacon 12574-Soil	Sampler Signature: Emil D. Kruck
Project Address: 22315 Redwood Road, Castro Valley, CA 94546	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Ice	Matrix: Water	Matrix: SOIL	Matrix: Air	Analysis Request: MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav(1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)	HOLD	TAT	For Lab Use Only
B-2-20	12/22/09	14:00			X					X	X		X			X	X	X											X	1 wk	11
B-2-24		14:15			X					X	X		X			X	X	X											X	1 wk	12
B-2-28		14:40			X					X	X		X			X	X	X											X	1 wk	13
B-4-4		15:10			X					X	X		X																X	1 wk	14
B-4-10		15:15			X					X	X		X			X	X	X											X	1 wk	15
B-4-16		15:20			X					X	X		X																X	1 wk	16
B-4-20		15:30			X					X	X		X			X	X	X											X	1 wk	17
B-4-24		15:40			X					X	X		X																X	1 wk	18
B-4-27		16:00			X					X	X		X			X	X	X											X	1 wk	19
					X					X	X		X																	TAT	

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72 hr ☑ 1 wk

Relinquished by:	Date	Time	Received by:
Emil D. Kruck	12/28/09	0950	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	12/28/09	0950	Kiff Analytical

Remarks: **STANDARD TURN AROUND TIME (One Week)**

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Copy - Originator
Rev: 051805

KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71375

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK	California EDF Report? ☑ Yes ☐ No
Company / Address: Horizon Environmental 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762	Sampling Company Log Code: HEIE
Phone #: 916 - 939 - 2170 / Fax #: 916 - 939 - 2172	Global ID: T0600100155
Project #: 1574.11 / P.O. #: 12574-034	EDF Deliverable To (Email Address): kiffanalytical.com
Project Name: Former Beacon 12574-Soil	Sampler Signature: Emil D. Kruck
Project Address: 22315 Redwood Road, Castro Valley, CA 94546	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Ice	Matrix: Water	Matrix: SOIL	Matrix: Air	MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates(EPA 8260B)	Lead Scav(1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons(EPA 8260B)	Volatile Organics Full List(EPA 8260B)	Volatile Organics(EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)	HOLD	TAT	For Lab Use Only
B-1-4	12/23/09	7:30			X					X	X		X																X	1 wk	20
B-1-8		7:40			X					X	X		X		X	X	X												X	1 wk	21
B-1-12		7:50			X					X	X		X																X	1 wk	22
B-1-13		8:00			X					X	X		X																X	1 wk	23
B-1-16		8:05			X					X	X		X																X	1 wk	24
B-1-18		8:13			X					X	X		X		X	X	X												X	1 wk	25
B-1-22		8:30			X					X	X		X		X	X	X												X	1 wk	26
B-1-26		8:40			X					X	X		X		X	X	X												X	1 wk	27
B-3-9		10:15			X					X	X		X																X	1 wk	28
B-3-12		10:20			X					X	X		X																X	1 wk	29

Relinquished by:	Date	Time	Received by:
Emil D. Kruck	12/28/09	0950	
	12809	0950	Kiff Analytical

Remarks: STANDARD TURN AROUND TIME (One Week)

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present Yes / No

Distribution: White - Lab; Copy - Originator
Rev 051805

KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71375

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK

California EDF Report? ☑ Yes ☐ No

Company / Address: Horizon Environmental, 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762

Sampling Company Log Code: HEIE

Phone #: 916 - 939 - 2170
Fax #: 916 - 939 - 2172

Global ID: T0600100155

Project #: 1574.11
P.O. #: 12574-034

EDF Deliverable To (Email Address): kiffanalytical.com

Project Name: Former Beacon 12574-Soil

Sampler Signature: Emil D. Kruck

Project Address: 22315 Redwood Road, Castro Valley, CA 94546

Analysis Request columns: MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb; MTBE (EPA 8260B) @ 0.6 ppb; BTEX (EPA 8260B); TPH Gas (EPA 8260B); 5 Oxygenates (EPA 8260B); 7 Oxygenates (EPA 8260B); Lead Scav (1,2 DCA & 1,2 EDB-EPA 8260B); Volatile Halocarbons (EPA 8260B); Volatile Organics Full List (EPA 8260B); Volatile Organics (EPA 524.2 Drinking Water); TPH as Diesel (EPA 8015M); TPH as Motor Oil (EPA 8015M); Total Lead (EPA 6010); W.E.T. Lead (STLC); HOLD

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72 hr ☑ 1 wk

Sample Designation	Date	Time	Container: Poly	Preservative: None	Preservative: Ice	Matrix: SOIL	MTBE (EPA 8260B) @ 0.6 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	HOLD	TAT	For Lab Use Only
B-3-16	12/23/09	10:28	X	X	X	X				X	1 wk	30
B-3-20	12/23/09	11:30	X	X	X	X	X	X	X	X	1 wk	31
B-3-24	12/23/09	11:00	X	X	X	X				X	1 wk	32
B-3-26	12/23/09	11:15	X	X	X	X	X	X	X	X	1 wk	33

Relinquished by	Date	Time	Received by
Emil D. Kruck	12/24/09	0950	
	12/28/09	0950	Received by Laboratory: [signature] Kiff Analytical

Remarks: STANDARD TURN AROUND TIME (One Week)

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Copy - Originator
Rev. 051805

KHT Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: BAB Initials

SRG#: F1375 Date: 122809

Project ID: Former Beacon 12574 - Soil

Method of Receipt: ☒ Courier ☐ Over-the-counter ☐ Shipper

COC Inspection

Is COC present?	☒ Yes	☐ No	
Custody seals on shipping container?	☐ Intact	☐ Broken ☐ Not present	☒ N/A
Is COC Signed by Relinquisher?	☒ Yes ☐ No	Dated? ☒ Yes	☐ No
Is sampler name legibly indicated on COC?	☒ Yes	☐ No	
Is analysis or hold requested for all samples	☒ Yes	☐ No	
Is the turnaround time indicated on COC?	☒ Yes	☐ No	
Is COC free of whiteout and uninitialed cross-outs?	☒ Yes	☐ No, Whiteout ☐ No, Cross-outs	

Sample Inspection

Coolant Present: ☒ Yes ☐ No (includes water)

Temperature °C 2.8 Therm. ID# IR-5 Initial BAB Date/Time 122809 / 1340 BAB ☐ N/A

Are there custody seals on sample containers?	☐ Intact	☐ Broken	☒ Not present
Do containers match COC?	☒ Yes ☐ No ☐ No, COC lists absent sample(s)		☐ No, Extra sample(s) present
Are there samples matrices other than soil, water, air or carbon?	☐ Yes	☒ No	
Are any sample containers broken, leaking or damaged?	☐ Yes	☒ No	
Are preservatives indicated? ☐ Yes, on sample containers	☐ Yes, on COC	☐ Not indicated	☒ N/A
Are preservatives correct for analyses requested?	☐ Yes	☐ No	☒ N/A
Are samples within holding time for analyses requested?	☒ Yes	☐ No	
Are the correct sample containers used for the analyses requested?	☒ Yes	☐ No	
Is there sufficient sample to perform testing?	☒ Yes	☐ No	
Does any sample contain product, have strong odor or are otherwise suspected to be hot?		☐ Yes	☒ No

Receipt Details

Matrix SO Container type Sleeve # of containers received 33

Matrix _____ Container type _____ # of containers received _____

Matrix _____ Container type _____ # of containers received _____

Date and Time Sample Put into Temp Storage Date: 122809 Time: 1400

Quicklog

Are the Sample ID's indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	☒ Yes	☐ No		☐ N/A
Is the Project ID indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If project ID is listed on both COC and containers, do they all match?	☒ Yes	☐ No		☐ N/A
Are the sample collection dates indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If collection dates are listed on both COC and containers, do they all match?	☒ Yes	☐ No		☐ N/A
Are the sample collection times indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If collection times are listed on both COC and containers, do they all match?	☒ Yes	☐ No		☐ N/A

COMMENTS:

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Ken Mateik
Horizon Environmental
4970 Windplay Drive, Suite 5
El Dorado Hills, CA 95762

Subject : 5 Water Samples
Project Name : Former Beacon 12574-Water
Project Number : 1574.11
P.O. Number : 12574-034

Dear Mr. Mateik,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Subject : 5 Water Samples
Project Name : Former Beacon 12574-Water
Project Number : 1574.11
P.O. Number : 12574-034

Case Narrative

Repeat analysis by EPA Method 8260B yielded inconsistent results for sample B-4. The concentrations appear to vary between the bottles. The highest valid results have been reported.

Samples B-3, B-4, and B-5 were analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Sample : **B-1** Matrix : Water Lab Number : 71374-01
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**8200**	25	ug/L	EPA 8260B	12/29/2009
Toluene	**3400**	10	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	**1100**	10	ug/L	EPA 8260B	12/29/2009
Total Xylenes	**5800**	10	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**27**	10	ug/L	EPA 8260B	12/29/2009
Diisopropyl ether (DIPE)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Ethyl-t-butyl ether (ETBE)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Tert-amyl methyl ether (TAME)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Tert-Butanol	**66**	50	ug/L	EPA 8260B	12/29/2009
TPH as Gasoline	**46000**	1000	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	97.1		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	96.0		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Sample : **B-2** Matrix : Water Lab Number : 71374-02
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**120**	0.50	ug/L	EPA 8260B	12/29/2009
Toluene	**2.1**	0.50	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	**1.3**	0.50	ug/L	EPA 8260B	12/29/2009
Total Xylenes	**4.2**	0.50	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**3.9**	0.50	ug/L	EPA 8260B	12/29/2009
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/29/2009
TPH as Gasoline	**540**	50	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Sample : **B-3** Matrix : Water Lab Number : 71374-03
Sample Date :12/23/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2.0**	0.50	ug/L	EPA 8260B	12/29/2009
Toluene	**1.6**	0.50	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	**45**	0.50	ug/L	EPA 8260B	12/29/2009
Total Xylenes	**4.5**	0.50	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	12/29/2009
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	12/29/2009
TPH as Gasoline	**1100**	50	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	97.3		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	96.9		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Sample : **B-4** Matrix : Water Lab Number : 71374-04
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2800**	10	ug/L	EPA 8260B	12/29/2009
Toluene	**690**	10	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	**490**	10	ug/L	EPA 8260B	12/29/2009
Total Xylenes	**2000**	10	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**110**	2.5	ug/L	EPA 8260B	12/31/2009
Diisopropyl ether (DIPE)	**< 2.5**	2.5	ug/L	EPA 8260B	12/31/2009
Ethyl-t-butyl ether (ETBE)	**< 2.5**	2.5	ug/L	EPA 8260B	12/31/2009
Tert-amyl methyl ether (TAME)	**< 2.5**	2.5	ug/L	EPA 8260B	12/31/2009
Tert-Butanol	**100**	15	ug/L	EPA 8260B	12/31/2009
TPH as Gasoline	**26000**	1000	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	93.9		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	93.8		% Recovery	EPA 8260B	12/29/2009

KIFF Analytical LLC

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Sample : **B-5** Matrix : Water Lab Number : 71374-05
Sample Date :12/22/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**6400**	10	ug/L	EPA 8260B	12/29/2009
Toluene	**4000**	10	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	**1600**	10	ug/L	EPA 8260B	12/29/2009
Total Xylenes	**8300**	10	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	**10**	10	ug/L	EPA 8260B	12/29/2009
Diisopropyl ether (DIPE)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Ethyl-t-butyl ether (ETBE)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Tert-amyl methyl ether (TAME)	**< 10**	10	ug/L	EPA 8260B	12/29/2009
Tert-Butanol	**< 50**	50	ug/L	EPA 8260B	12/29/2009
TPH as Gasoline	**64000**	1000	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	92.6		% Recovery	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	93.1		% Recovery	EPA 8260B	12/29/2009

Report Number : 71374

Date : 01/04/2010

QC Report : Method Blank Data

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/28/2009
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/28/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/28/2009
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	12/28/2009
Toluene - d8 (Surr)	99.6		%	EPA 8260B	12/28/2009
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/29/2009
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/29/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/29/2009
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	12/29/2009
Toluene - d8 (Surr)	101		%	EPA 8260B	12/29/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2009
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2009
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/31/2009
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/31/2009

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 71374

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	71389-01	<0.50	40.6	40.5	37.8	38.2	ug/L	EPA 8260B	12/28/09	93.2	94.4	1.24	80-120	25
Diisopropyl ether	71389-01	<0.50	39.9	39.8	37.2	37.9	ug/L	EPA 8260B	12/28/09	93.4	95.2	1.98	80-120	25
Ethyl-tert-butyl ether	71389-01	<0.50	40.3	40.2	38.7	38.3	ug/L	EPA 8260B	12/28/09	96.1	95.2	0.880	76.5-120	25
Ethylbenzene	71389-01	<0.50	40.3	40.2	39.4	39.6	ug/L	EPA 8260B	12/28/09	97.8	98.4	0.671	80-120	25
Methyl-t-butyl ether	71389-01	9.2	40.6	40.6	47.6	47.0	ug/L	EPA 8260B	12/28/09	94.6	93.3	1.39	69.7-121	25
O-Xylene	71389-01	<0.50	40.4	40.3	40.1	40.3	ug/L	EPA 8260B	12/28/09	99.3	100	0.692	79.7-120	25
P + M Xylene	71389-01	<0.50	39.2	39.2	38.6	38.9	ug/L	EPA 8260B	12/28/09	98.4	99.4	0.951	76.8-120	25
Tert-Butanol	71389-01	<5.0	202	201	187	183	ug/L	EPA 8260B	12/28/09	92.6	90.9	1.89	80-120	25
Tert-amyl-methyl ether	71389-01	<0.50	40.3	40.2	38.5	38.3	ug/L	EPA 8260B	12/28/09	95.5	95.2	0.317	78.9-120	25
Toluene	71389-01	<0.50	40.3	40.2	38.8	38.9	ug/L	EPA 8260B	12/28/09	96.1	96.5	0.401	80-120	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	71388-01	<0.50	40.5	40.2	39.1	38.2	ug/L	EPA 8260B	12/29/09	96.6	95.0	1.72	80-120	25
Diisopropyl ether	71388-01	<0.50	39.8	39.5	36.7	36.1	ug/L	EPA 8260B	12/29/09	92.2	91.4	0.890	80-120	25
Ethyl-tert-butyl ether	71388-01	<0.50	40.2	39.9	37.0	38.1	ug/L	EPA 8260B	12/29/09	92.1	95.6	3.72	76.5-120	25
Ethylbenzene	71388-01	<0.50	40.2	39.9	41.1	39.5	ug/L	EPA 8260B	12/29/09	102	98.9	3.31	80-120	25
Methyl-t-butyl ether	71388-01	1.0	40.6	40.2	35.5	38.4	ug/L	EPA 8260B	12/29/09	85.1	92.8	8.71	69.7-121	25
O-Xylene	71388-01	<0.50	40.3	40.0	41.0	39.4	ug/L	EPA 8260B	12/29/09	102	98.6	3.12	79.7-120	25
P + M Xylene	71388-01	<0.50	39.2	38.8	41.1	39.3	ug/L	EPA 8260B	12/29/09	105	101	3.62	76.8-120	25
Tert-Butanol	71388-01	<5.0	201	200	197	182	ug/L	EPA 8260B	12/29/09	97.8	91.3	6.85	80-120	25
Tert-amyl-methyl ether	71388-01	<0.50	40.2	39.9	36.8	37.6	ug/L	EPA 8260B	12/29/09	91.6	94.4	3.06	78.9-120	25

KIFF ANALYTICAL, LLC
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Report Number : 71374

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	71389-01	<0.50	40.6	40.5	37.8	38.2	ug/L	EPA 8260B	12/28/09	93.2	94.4	1.24	80-120	25
Diisopropyl ether	71389-01	<0.50	39.9	39.8	37.2	37.9	ug/L	EPA 8260B	12/28/09	93.4	95.2	1.98	80-120	25
Ethyl-tert-butyl ether	71389-01	<0.50	40.3	40.2	38.7	38.3	ug/L	EPA 8260B	12/28/09	96.1	95.2	0.880	76.5-120	25
Ethylbenzene	71389-01	<0.50	40.3	40.2	39.4	39.6	ug/L	EPA 8260B	12/28/09	97.8	98.4	0.671	80-120	25
Methyl-t-butyl ether	71389-01	9.2	40.6	40.6	47.6	47.0	ug/L	EPA 8260B	12/28/09	94.6	93.3	1.39	69.7-121	25
O-Xylene	71389-01	<0.50	40.4	40.3	40.1	40.3	ug/L	EPA 8260B	12/28/09	99.3	100	0.692	79.7-120	25
P + M Xylene	71389-01	<0.50	39.2	39.2	38.6	38.9	ug/L	EPA 8260B	12/28/09	98.4	99.4	0.951	76.8-120	25
Tert-Butanol	71389-01	<5.0	202	201	187	183	ug/L	EPA 8260B	12/28/09	92.6	90.9	1.89	80-120	25
Tert-amyl-methyl ether	71389-01	<0.50	40.3	40.2	38.5	38.3	ug/L	EPA 8260B	12/28/09	95.5	95.2	0.317	78.9-120	25
Toluene	71389-01	<0.50	40.3	40.2	38.8	38.9	ug/L	EPA 8260B	12/28/09	96.1	96.5	0.401	80-120	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	71388-01	<0.50	40.5	40.2	39.1	38.2	ug/L	EPA 8260B	12/29/09	96.6	95.0	1.72	80-120	25
Diisopropyl ether	71388-01	<0.50	39.8	39.5	36.7	36.1	ug/L	EPA 8260B	12/29/09	92.2	91.4	0.890	80-120	25
Ethyl-tert-butyl ether	71388-01	<0.50	40.2	39.9	37.0	38.1	ug/L	EPA 8260B	12/29/09	92.1	95.6	3.72	76.5-120	25
Ethylbenzene	71388-01	<0.50	40.2	39.9	41.1	39.5	ug/L	EPA 8260B	12/29/09	102	98.9	3.31	80-120	25
Methyl-t-butyl ether	71388-01	1.0	40.6	40.2	35.5	38.4	ug/L	EPA 8260B	12/29/09	85.1	92.8	8.71	69.7-121	25
O-Xylene	71388-01	<0.50	40.3	40.0	41.0	39.4	ug/L	EPA 8260B	12/29/09	102	98.6	3.12	79.7-120	25
P + M Xylene	71388-01	<0.50	39.2	38.8	41.1	39.3	ug/L	EPA 8260B	12/29/09	105	101	3.62	76.8-120	25
Tert-Butanol	71388-01	<5.0	201	200	197	182	ug/L	EPA 8260B	12/29/09	97.8	91.3	6.85	80-120	25
Tert-amyl-methyl ether	71388-01	<0.50	40.2	39.9	36.8	37.6	ug/L	EPA 8260B	12/29/09	91.6	94.4	3.06	78.9-120	25

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.6	ug/L	EPA 8260B	12/28/09	93.8	80-120
Diisopropyl ether	39.9	ug/L	EPA 8260B	12/28/09	95.1	80-120
Ethyl-tert-butyl ether	40.3	ug/L	EPA 8260B	12/28/09	94.8	76.5-120
Ethylbenzene	40.3	ug/L	EPA 8260B	12/28/09	98.8	80-120
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	12/28/09	91.7	69.7-121
O-Xylene	40.4	ug/L	EPA 8260B	12/28/09	100	79.7-120
P + M Xylene	39.2	ug/L	EPA 8260B	12/28/09	100	76.8-120
Tert-Butanol	202	ug/L	EPA 8260B	12/28/09	91.9	80-120
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	12/28/09	93.8	78.9-120
Toluene	40.3	ug/L	EPA 8260B	12/28/09	96.9	80-120
Benzene	40.6	ug/L	EPA 8260B	12/29/09	95.0	80-120
Diisopropyl ether	39.9	ug/L	EPA 8260B	12/29/09	91.5	80-120
Ethyl-tert-butyl ether	40.3	ug/L	EPA 8260B	12/29/09	96.2	76.5-120
Ethylbenzene	40.3	ug/L	EPA 8260B	12/29/09	100	80-120
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	12/29/09	94.2	69.7-121
O-Xylene	40.4	ug/L	EPA 8260B	12/29/09	98.8	79.7-120
P + M Xylene	39.2	ug/L	EPA 8260B	12/29/09	102	76.8-120
Tert-Butanol	202	ug/L	EPA 8260B	12/29/09	94.0	80-120
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	12/29/09	95.0	78.9-120
Toluene	40.3	ug/L	EPA 8260B	12/29/09	99.1	80-120

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Diisopropyl ether	39.8	ug/L	EPA 8260B	12/31/09	100	80-120
Ethyl-tert-butyl ether	40.2	ug/L	EPA 8260B	12/31/09	100	76.5-120
Methyl-t-butyl ether	40.5	ug/L	EPA 8260B	12/31/09	97.0	69.7-121
Tert-Butanol	201	ug/L	EPA 8260B	12/31/09	98.2	80-120
Tert-amyl-methyl ether	40.2	ug/L	EPA 8260B	12/31/09	101	78.9-120

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71374

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK	California EDF Report? ☑ Yes ☐ No
Company / Address: Horizon Environmental 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762	Sampling Company Log Code: HEIE
Phone #: 916 - 939 - 2170 / Fax #: 916 - 939 - 2172	Global ID: T0600100155
Project #: 1574.11 / P.O. #: 12574-034	EDF Deliverable To (Email Address): kiffanalytical.com
Project Name: Former Beacon 12574-Water	Sampler Signature: Emil D. Kruck
Project Address: 22315 Redwood Road, Castro Valley, CA 94546	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Ice	Preservative:	Matrix: WATER	Matrix: Soil	Matrix: Air	Matrix:
B-1-	12/23/09	9:15	4						X			X		X			
B-2-	12/22/09	15:00	4						X			X		X			
B-3-	12/23/09	11:30	4						X			X		X			
B-4-	12/22/09	10:36	4						X			X		X			
B-5-	12/22/09	11:00	4						X			X		X			

Analysis Request

MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates(EPA 8260B)	Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons(EPA 8260B)	Volatile Organics Full List(EPA 8260B)	Volatile Organics(EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)				
		X	X	X													
		X	X	X													
		X	X	X													
		X	X	X													
		X	X	X													

TAT

☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72 hr ☑ 1 wk

TAT	For Lab Use Only
1 wk	01
1 wk	02
1 wk	03
1 wk	04
1 wk	05

Relinquished by:	Date	Time	Received by:
Emil D. Kruck	12/28/09	0950	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	12/28/09	0950	Kiff Analytical

Remarks: **STANDARD TURN AROUND TIME (One Week)**

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Copy - Originator
Rev: 051805

QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 71374
Date : 01/04/2010

Project Name : **Former Beacon 12574-Water**
Project Number : **1574.11**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Toluene														
	71388-01	<0.50	40.2	39.9	41.0	39.6	ug/L	EPA 8260B	12/29/09	102	99.2	2.55	80-120	25
Diisopropyl ether														
	71421-07	<0.50	39.9	39.9	39.7	39.5	ug/L	EPA 8260B	12/31/09	99.5	98.9	0.581	80-120	25
Ethyl-tert-butyl ether														
	71421-07	<0.50	40.3	40.3	40.2	40.3	ug/L	EPA 8260B	12/31/09	99.8	100	0.193	76.5-120	25
Methyl-t-butyl ether														
	71421-07	0.93	40.6	40.6	40.2	40.2	ug/L	EPA 8260B	12/31/09	96.7	96.5	0.196	69.7-121	25
Tert-Butanol														
	71421-07	<5.0	202	202	200	201	ug/L	EPA 8260B	12/31/09	98.9	99.5	0.597	80-120	25
Tert-amyl-methyl ether														
	71421-07	<0.50	40.3	40.3	39.2	39.4	ug/L	EPA 8260B	12/31/09	97.4	97.8	0.447	78.9-120	25

KIFF ANALYTICAL, LLC
2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.6	ug/L	EPA 8260B	12/28/09	93.8	80-120
Diisopropyl ether	39.9	ug/L	EPA 8260B	12/28/09	95.1	80-120
Ethyl-tert-butyl ether	40.3	ug/L	EPA 8260B	12/28/09	94.8	76.5-120
Ethylbenzene	40.3	ug/L	EPA 8260B	12/28/09	98.8	80-120
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	12/28/09	91.7	69.7-121
O-Xylene	40.4	ug/L	EPA 8260B	12/28/09	100	79.7-120
P + M Xylene	39.2	ug/L	EPA 8260B	12/28/09	100	76.8-120
Tert-Butanol	202	ug/L	EPA 8260B	12/28/09	91.9	80-120
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	12/28/09	93.8	78.9-120
Toluene	40.3	ug/L	EPA 8260B	12/28/09	96.9	80-120
Benzene	40.6	ug/L	EPA 8260B	12/29/09	95.0	80-120
Diisopropyl ether	39.9	ug/L	EPA 8260B	12/29/09	91.5	80-120
Ethyl-tert-butyl ether	40.3	ug/L	EPA 8260B	12/29/09	96.2	76.5-120
Ethylbenzene	40.3	ug/L	EPA 8260B	12/29/09	100	80-120
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	12/29/09	94.2	69.7-121
O-Xylene	40.4	ug/L	EPA 8260B	12/29/09	98.8	79.7-120
P + M Xylene	39.2	ug/L	EPA 8260B	12/29/09	102	76.8-120
Tert-Butanol	202	ug/L	EPA 8260B	12/29/09	94.0	80-120
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	12/29/09	95.0	78.9-120
Toluene	40.3	ug/L	EPA 8260B	12/29/09	99.1	80-120

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QC Report : Laboratory Control Sample (LCS)

Project Name : **Former Beacon 12574-Water**

Project Number : **1574.11**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Diisopropyl ether	39.8	ug/L	EPA 8260B	12/31/09	100	80-120
Ethyl-tert-butyl ether	40.2	ug/L	EPA 8260B	12/31/09	100	76.5-120
Methyl-t-butyl ether	40.5	ug/L	EPA 8260B	12/31/09	97.0	69.7-121
Tert-Butanol	201	ug/L	EPA 8260B	12/31/09	98.2	80-120
Tert-amyl-methyl ether	40.2	ug/L	EPA 8260B	12/31/09	101	78.9-120

KIFF ANALYTICAL, LLC
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KIFF Analytical LLC

2795 2nd Street Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 71374

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): KEN MATEIK	California EDF Report? ☑ Yes ☐ No
Company / Address: Horizon Environmental 4970 Windplay Drive, Suite 5, El Dorado Hills, CA 95762	Sampling Company Log Code: HEIE
Phone #: 916 - 939 - 2170 / Fax #: 916 - 939 - 2172	Global ID: T0600100155
Project #: 1574.11 / P.O. #: 12574-034	EDF Deliverable To (Email Address): kiffanalytical.com
Project Name: Former Beacon 12574-Water	Sampler Signature: Emil D. Kruck
Project Address: 22315 Redwood Road, Castro Valley, CA 94546	

Sample Designation	Sampling: Date	Sampling: Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Container:	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Ice	Preservative:	Matrix: WATER	Matrix: Soil	Matrix: Air	Matrix:
B-1-	12/23/09	9:15	4						X			X		X			
B-2-	12/22/09	15:00	4						X			X		X			
B-3-	12/23/09	11:30	4						X			X		X			
B-4-	12/22/09	10:36	4						X			X		X			
B-5-	12/22/09	11:00	4						X			X		X			

Analysis Request

MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates(EPA 8260B)	Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons(EPA 8260B)	Volatile Organics Full List(EPA 8260B)	Volatile Organics(EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 6010)	W.E.T. Lead (STLC)				
		X	X	X													
		X	X	X													
		X	X	X													
		X	X	X													
		X	X	X													

TAT

☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72 hr ☑ 1 wk

TAT	For Lab Use Only
1 wk	01
1 wk	02
1 wk	03
1 wk	04
1 wk	05

Relinquished by:	Date	Time	Received by:
Emil D. Kruck	12/28/09	0950	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	12/28/09	0950	Kiff Analytical

Remarks: **STANDARD TURN AROUND TIME (One Week)**

Bill to: ULTRAMAR Inc.
Attention: Mr. C. Shay Wideman

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Copy - Originator
Rev: 051805

Kirt Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: BAb Initials

SRG#: 71374 Date: 12-2809

Project ID: Former Beacon 1257-Water

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

COC Inspection

Is COC present?	[X] Yes	[ ] No	
Custody seals on shipping container?	[ ] Intact	[ ] Broken [ ] Not present	[X] N/A
Is COC Signed by Relinquisher? [X] Yes [ ] No Dated?	[X] Yes	[ ] No	
Is sampler name legibly indicated on COC?	[X] Yes	[ ] No	
Is analysis or hold requested for all samples	[X] Yes	[ ] No	
Is the turnaround time indicated on COC?	[X] Yes	[ ] No	
Is COC free of whiteout and uninitialed cross-outs?	[X] Yes	[ ] No, Whiteout [ ] No, Cross-outs	

Sample Inspection

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 1.8 Therm. ID# IR-5 Initial BAb Date/Time 122809 1340 [ ] N/A

Are there custody seals on sample containers?	[ ] Intact	[ ] Broken	[X] Not present
Do containers match COC? [X] Yes [ ] No [ ] No, COC lists absent sample(s)		[ ] No, Extra sample(s) present	
Are there samples matrices other than soil, water, air or carbon?	[ ] Yes	[X] No	
Are any sample containers broken, leaking or damaged?	[ ] Yes	[X] No	
Are preservatives indicated? [ ] Yes, on sample containers	[X] Yes, on COC	[ ] Not indicated	[ ] N/A
Are preservatives correct for analyses requested?	[X] Yes	[ ] No	[ ] N/A
Are samples within holding time for analyses requested?	[X] Yes	[ ] No	
Are the correct sample containers used for the analyses requested?	[X] Yes	[ ] No	
Is there sufficient sample to perform testing?	[X] Yes	[ ] No	

Does any sample contain product, have strong odor or are otherwise suspected to be hot? [ ] Yes [X] No

Receipt Details

Matrix WA	Container type VOA	# of containers received 20
Matrix	Container type	# of containers received
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 122809 Time: 1400

Quicklog

Are the Sample ID's indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Is the Project ID indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If project ID is listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection dates indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection dates are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	
Are the sample collection times indicated:	[ ] On COC	[ ] On sample container(s)	[X] On Both	[ ] Not indicated
If collection times are listed on both COC and containers, do they all match?	[X] Yes	[ ] No	[ ] N/A	

COMMENTS: (4of4)BAb

Sample 05 ~~(5of5)~~ has > 2/3 Void space. BAb 122809 1417

(4of4)BAb ≈ 1/3 BAb

Sample 04 ~~(5of5)~~ has ~~2/3~~ Void space. BAb 122809 1417