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Transmittal

Date: October 13, 2015 Reference No.: 240781

To: Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Former Shell Service Station, 2703 Martin Luther King Jr. Way, Oakland, California

No. of Copies	Description/Title	Drawing No./ Document Ref.	Issue
1	Soil Vapor Sampling Report		

Issued for: ☐ Your information ☒ As requested ☐ Construction ☐ Quotation
☐ Your approval/comments ☐ Returned to you ☐ For re-submission

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Remarks:
If you have any questions regarding the contents of this document, please call the GHD project manager Peter Schaefer at (510) 420-3319 or the Shell program manager Andrea Wing at (714) 713-1050.

Copy to: Andrea Wing, Shell Oil Products US
(electronic copy)

Rodney & Janet Kwan (property owners)

Monique Oatis (off-site property owner)

Completed by: Peter Schaefer Signed:
[Please Print]

Filing: Correspondence File

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Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: 2703 Martin Luther King Jr. Way, Oakland, California
PlaNet Site ID USF04645
PlaNet Project ID 27482
ACEH Case No. RO0000145

Dear Mr. Wickham:

I am informed and believe that, based on a reasonably diligent inquiry undertaken by GHD on behalf of Equilon Enterprises LLC dba Shell Oil Products US, the information and/or recommendations contained in the attached document is true, and on that ground I declare under penalty of perjury in accordance with Water Code section 13267 that this statement is true and correct.

As always, please feel free to contact me directly at (714) 731-1050 with any questions or concerns.

Sincerely,
Shell Oil Products US

Andrea A. Wing
Principal Program Manager

Soil Vapor Sampling Report

Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California

PlaNet Site ID	USF04645
PlaNet Project ID	27482
Agency No.	RO0000145

Shell Oil Products US

5900 Hollis Street Suite A Emeryville California 94608 USA

240781 | 15.04 | Report No 36 | October 13, 2015

Executive Summary

GHD sampled on-Site soil vapor probes VP-3 and VP-14 and off-Site soil vapor probes VP-12 and VP-13 at 3 and 5 fbg. On-Site soil vapor probe VP-2 at 3 and 5 fbg could not be sampled because the location was inaccessible, and off-site soil vapor probe VP-7 was not sampled due to an administrative error.

TPHg soil vapor sample concentrations in VP-3 at 5 fbg and VP-14 at 3 and 5 fbg exceeded RWQCB ESLs for residential and commercial land use in the April 16, 2015 and August 27, 2015 sampling events. Benzene concentrations in VP-14 at 3 and 5 fbg and ethylbenzene in VP-14 at 5 fbg also exceeded RWQCB ESLs for residential and commercial land use in both sampling events.

As discussed in a telephone conversation with ACEH on August 12, 2015, a conceptual Site model, human health risk assessment, and recommendations for implementing CRA's May 28, 2008 *Remedial Action Plan* will be submitted by December 16, 2015.

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Appendices

1. Introduction

GHD Services Inc. (GHD) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the soil vapor sampling event at the referenced Site. The soil vapor sampling event was requested in Alameda County Environmental Health's (ACEH's) July 21, 2015 letter.

The subject Site is a former service station located on the northwestern corner of Martin Luther King Jr. Way and 27th Street in a mixed commercial and residential area of Oakland, California (Figure 1). Currently, the Site is occupied by Auto Tech West and is used as an automotive repair shop (Figure 2).

A summary of previous work performed at the Site and additional background information is contained in Conestoga-Rovers & Associates' (CRA's) June 5, 2015 *Subsurface Investigation Report* and is not repeated herein.

2. Sampling Activities

2.1 Personnel Present

GHD Staff Geologist Scott Lewis sampled selected vapor probes under the supervision of California Professional Geologist Peter Schaefer.

2.2 Sampling Date

August 27, 2015.

2.3 Soil Vapor Sampling

GHD sampled on-Site soil vapor probes VP-3 and VP-14 and off-Site soil vapor probes VP-12 and VP-13 at 3 and 5 feet below grade (fbg). On-Site soil vapor probe VP-2 at 3 and 5 fbg could not be sampled because the location was inaccessible, and off-site soil vapor probe VP-7 was not sampled due to an administrative error.

Prior to sampling the selected existing probes, GHD purged three purge volumes of air from each vapor probe using a vacuum pump. Immediately after purging, GHD collected a soil vapor sample using a laboratory-supplied Tedlar® bag. During sampling, GHD connected the Teflon® tubing for each vapor probe to a lung box containing the Tedlar® bag, and the lung box chamber was connected to the vacuum pump. GHD then drew the sample into the Tedlar® bag by reducing the pressure in the lung box with the vacuum pump. Each sample was labeled, documented on a chain-of-custody, and submitted to Calscience for analysis within 72 hours.

To check the system for leaks, GHD placed a containment unit (or shroud) over the soil vapor probe surface casing and sampling manifold. Prior to soil vapor probe purging, GHD introduced helium into the containment unit to obtain a minimum 50 percent (%) helium content level. GHD confirmed the helium content within the containment unit using a helium meter. The helium meter readings are presented in Section 3.1. All samples were analyzed by the laboratory for helium, and GHD presents the results in Section 3.1 and on Table 1.

3. Findings

3.1 Leak Testing

GHD performed leak testing as described above, and up to 0.275 percent by volume (%*v*) helium was detected in the samples. As shown in the following table, the helium concentrations are below 5% of the concentration detected in the shroud, and the samples are considered valid.

Probe ID	Minimum helium concentration detected in shroud (%*v*)	Maximum acceptable helium concentration in sample (%*v*)	Helium concentration in sample (%*v*)
VP-3 at 3 fbg	61.3	3.07	0.106
VP-3 at 5 fbg	56.7	2.84	0.0265
VP-12 at 3 fbg	54.8	2.74	0.0284
VP-12 at 5 fbg	57.2	2.86	<0.0100
VP-13 at 3 fbg	56.1	2.81	<0.0100
VP-13 at 5 fbg	59.6	2.98	0.185
VP-14 at 3 fbg	55.8	2.79	0.0144
VP-14 at 5 fbg	56.7	2.84	0.275

The laboratory analytical report for helium is presented in Appendix A, and GHD includes the results on Table 1.

3.2 Soil Vapor

The soil vapor samples collected on August 27, 2015 contained up to 330,000,000 micrograms per cubic meter ($\mu g/m^3$) total petroleum hydrocarbons as gasoline (TPHg), 280,000 $\mu g/m^3$ benzene and 48,000 $\mu g/m^3$ ethylbenzene. No toluene, total xylenes, or naphthalene were detected in the samples.

Table 1 summarizes historical soil vapor analytical data. TPHg, benzene, and ethylbenzene results are shown on Figure 2, and the laboratory analytical report is presented in Appendix A.

4. Conclusions and Recommendations

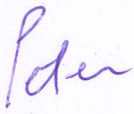
TPHg soil vapor sample concentrations in VP-3 at 5 fbg and VP-14 at 3 and 5 fbg exceeded San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs)[1] for residential and commercial land use in the April 16, 2015 and August 27, 2015 sampling events. Benzene concentrations in VP-14 at 3 and 5 fbg and ethylbenzene in VP-14 at 5 fbg also exceeded RWQCB ESLs for residential and commercial land use in both sampling events.

As discussed in a telephone conversation with ACEH on August 12, 2015, a conceptual Site model, human health risk assessment, and recommendations for implementing CRA's May 28, 2008 *Remedial Action Plan* will be submitted by December 16, 2015.

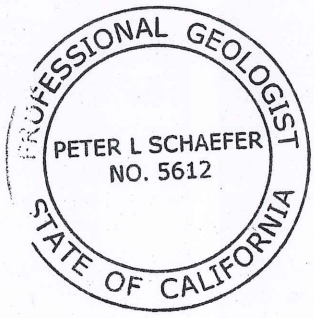
[1] *User's Guide: Derivation and Application of Environmental Screening Levels,* RWQCB, Interim Final 2013.

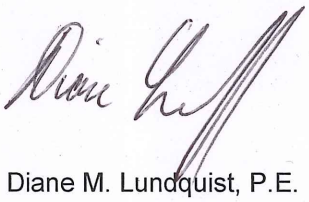
All of Which is Respectfully Submitted,

GHD

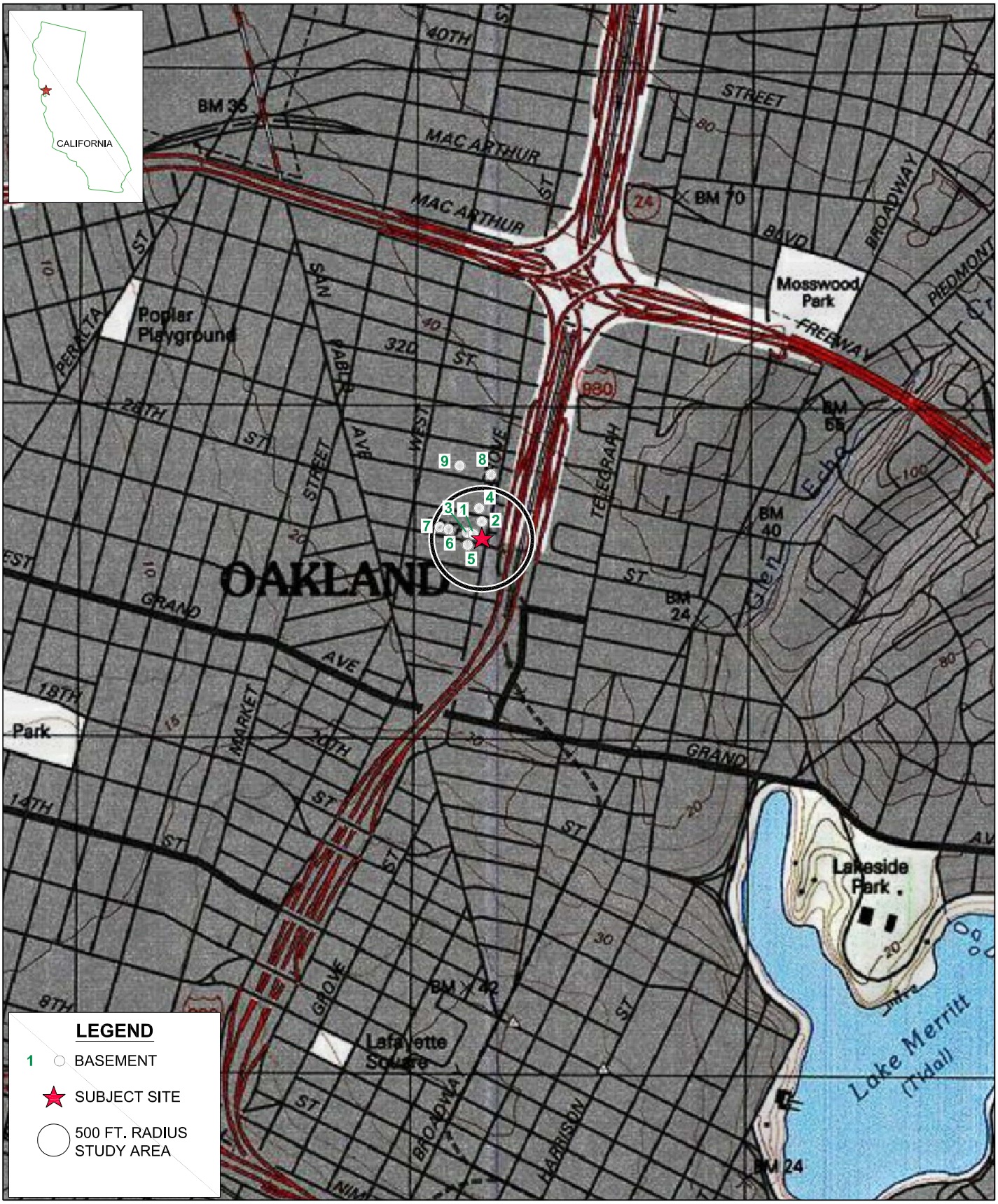


Peter Schaefer, CEG, CHG





Diane M. Lundquist, P.E.



Source: TOPO! MAPS

0 660 1320ft

FORMER SHELL SERVICE STATION
2703 MARTIN LUTHER KING JR. WAY
OAKLAND, CALIFORNIA

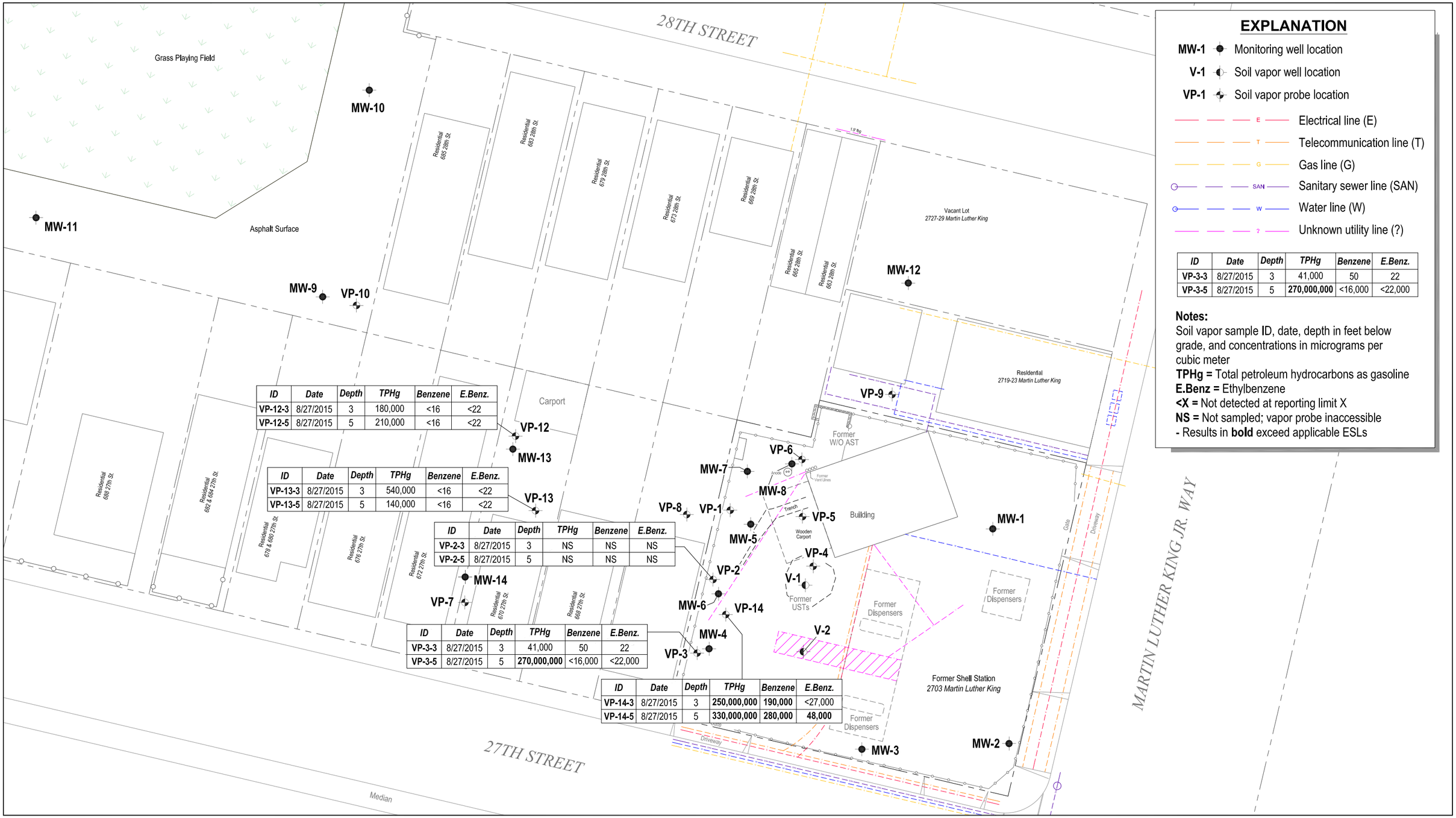
240781-15.04

Sep 23, 2015

VICINITY MAP

FIGURE 1

CAD File: I:\Shell\6-chars\2407--\240781-Oakland 2703 Martin Luther King\240781-FIGURES\240781-36-FIGURES\240781-15.04(036)GN-EM001.DWG



ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-12-3	8/27/2015	3	180,000	<16	<22
VP-12-5	8/27/2015	5	210,000	<16	<22

ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-13-3	8/27/2015	3	540,000	<16	<22
VP-13-5	8/27/2015	5	140,000	<16	<22

ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-2-3	8/27/2015	3	NS	NS	NS
VP-2-5	8/27/2015	5	NS	NS	NS

ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-3-3	8/27/2015	3	41,000	50	22
VP-3-5	8/27/2015	5	**270,000,000**	<16,000	<22,000

ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-14-3	8/27/2015	3	**250,000,000**	**190,000**	<27,000
VP-14-5	8/27/2015	5	**330,000,000**	**280,000**	**48,000**

EXPLANATION

- **MW-1** Monitoring well location
- **V-1** Soil vapor well location
- **VP-1** Soil vapor probe location
- Electrical line (E)
- Telecommunication line (T)
- Gas line (G)
- Sanitary sewer line (SAN)
- Water line (W)
- Unknown utility line (?)

ID	Date	Depth	TPHg	Benzene	E.Benz.
VP-3-3	8/27/2015	3	41,000	50	22
VP-3-5	8/27/2015	5	**270,000,000**	<16,000	<22,000

Notes:
Soil vapor sample **ID**, date, depth in feet below grade, and concentrations in micrograms per cubic meter
TPHg = Total petroleum hydrocarbons as gasoline
E.Benz = Ethylbenzene
<X = Not detected at reporting limit X
NS = Not sampled; vapor probe inaccessible
- Results in **bold** exceed applicable ESLs

Basemap from Virgil Chavez Land Surveying and Alameda County Assessors Parcel Map

0 15 30ft

Coordinate System:
CA ZONE 6 STATE PLANE
COORD SYSTEM NAD 83

FORMER SHELL SERVICE STATION
2703 MARTIN LUTHER KING JR. WAY
OAKLAND, CALIFORNIA

SOIL VAPOR CONCENTRATION MAP

240781-15.04
Oct 9, 2015

FIGURE 2

CAD File: I:\Shell6-chars\2407--\240781-Oakland 2703 Martin Luther King\240781-FIGURES\240781-36-FIGURES\240781-15.04(036)GN-EM002.DWG

Table 1

Historical Soil Vapor Analytical Data
Former Shell Service Station
2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Date	Depth (fbg)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Isobutane ($\mu g/m^3$)	Butane ($\mu g/m^3$)	Propane ($\mu g/m^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen & Argon (%v)	Helium (%v)
VP-1-3	05/30/2007	3	**5,500,000**	<510	690	<690	<2,090	---	---	---	---	---	---	---	---
VP-1-5	05/30/2007	5	Unable to sample; water in probe												
VP-2-3	05/30/2007	3	Unable to sample; water in probe												
VP-2-3	04/16/2015	3	Unable to sample; water in probe												
VP-2-3	08/27/2015	3	Unable to sample; probe inaccessible												
VP-2-5	05/30/2007	5	Unable to sample; water in probe												
VP-2-5	04/16/2015	5	Unable to sample; water in probe												
VP-2-5	08/27/2015	5	Unable to sample; probe inaccessible												
VP-3-3	05/30/2007	3	Unable to sample; water in probe												
VP-3-3	04/16/2015	3	Unable to sample; water in probe												
VP-3-3	08/27/2015	3	41,000	50	<19	22	<22	<52	---	---	---	<0.500	3.90	18.6	0.106
VP-3-5	05/30/2007	5	**31,000,000**	**760**	<75	<86	<256	---	---	---	---	---	---	---	---
VP-3-5	04/16/2015	5	**800,000,000**	<16,000	<19,000	<22,000	<22,000	<52,000	---	---	---	34.7	6.75	2.21	<0.0100
VP-3-5	08/27/2015	5	**270,000,000**	<16,000	<19,000	<22,000	<22,000	<52,000	---	---	---	21.5	5.80	11.1	0.0265
VP-4-3	05/30/2007	3	800,000	<79	240	<110	<320	---	---	---	---	---	---	---	---
VP-4-5	05/30/2007	5	680,000	<66	170	<90	<270	---	---	---	---	---	---	---	---
VP-5-3	05/30/2007	3	Unable to sample; water in probe												
VP-5-5	05/30/2007	5	Unable to sample; water in probe												
VP-6-3	05/30/2007	3	**3,500,000**	110	320	<55	160	---	---	---	---	---	---	---	---
VP-6-3	04/17/2008	3	<17,000	<2.3	<2.8	<3.2	<9.6	---	ND	ND	ND	---	---	---	---

Historical Soil Vapor Analytical Data
Former Shell Service Station
2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Date	Depth (fbg)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Isobutane ($\mu g/m^3$)	Butane ($\mu g/m^3$)	Propane ($\mu g/m^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen & Argon (%v)	Helium (%v)
VP-6-3	03/31/2009	3	Unable to sample; water in probe												
VP-6-3'	11/19/2009	3	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-6-5	05/30/2007	5	1,900,000	<100	410	<140	<420	---	---	---	---	---	---	---	---
VP-6-5	04/17/2008	5	**14,000,000**	3.6	<2.6	<3.0	<9.0	---	66.8	ND	ND	---	---	---	---
Ambient (near VP-6)	05/30/2007		<19,000	16	16	<3.1	<9.2	---	---	---	---	---	---	---	---
VP-6-5	03/31/2009	5	Unable to sample; water in probe												
VP-6-5'	11/19/2009	5	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-7-3	06/12/2007	3	<21,000	23	7,000	110	241	---	---	---	---	---	---	---	---
VP-7-3	10/30/2007	3	<19,000	<2.7	9.6	<3.6	<17.6	---	657.3	16.6	ND	---	---	---	---
VP-7-3	01/18/2008	3	23,000	4.3	23	3.4	13.8	---	ND	ND	ND	---	---	---	---
VP-7-3	04/17/2008	3	<16,000	<2.2	6.1	<3.0	<9.1	---	648.95	ND	ND	---	---	---	---
VP-7-3-DUP	04/17/2008	3	<16,000	<2.2	7.1	<3.0	<9.0	---	144.53	ND	ND	---	---	---	---
VP-7-3	07/24/2008	3	<19,000	<2.7	51	<3.6	<10.8	---	601.17	10.93	ND	---	---	---	---
Ambient (near VP-7)	07/24/2008		<16,000	<2.3	<2.7	<3.1	<9.2	---	ND	ND	ND	---	---	---	---
VP-7-3	03/31/2009	3	Unable to sample; water in probe												
VP-7-3'	11/19/2009	3	---	2.8	31	3.8	18	---	---	---	---	---	---	---	0.0100
VP-7-5	06/12/2007	5	<21,000	23	2,100	110	230	---	---	---	---	---	---	---	---
VP-7-5	10/30/2007	5	<18,000	<2.5	15	<3.4	<16.4	---	402.4	ND	ND	---	---	---	---
VP-7-5	01/18/2008	5	<20,000	<2.8	7.9	<3.8	<11.3	---	105.5	ND	ND	---	---	---	---
VP-7-5-DUP	01/18/2008	5	<19,000	<2.6	7.6	<3.6	<10.8	---	66.6	ND	ND	---	---	---	---
VP-7-5	04/17/2008	5	<15,000	<2.2	7.8	<2.9	<8.8	---	220.83	25.2	ND	---	---	---	---
VP-7-5	07/24/2008	5	Unable to sample; water in probe												
VP-7-5	03/31/2009	5	Unable to sample; water in probe												
VP-7-5'	11/19/2009	5	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-8-3	06/12/2007	3	<23,000	20	9,300	120	267	---	---	---	---	---	---	---	---
VP-8-3	10/30/2007	3	<24,000	<3.4	34	<4.6	<22.6	---	395.1	7.8	ND	---	---	---	---

Table 1

Historical Soil Vapor Analytical Data
Former Shell Service Station
2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Date	Depth (fbg)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Isobutane ($\mu g/m^3$)	Butane ($\mu g/m^3$)	Propane ($\mu g/m^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen & Argon (%v)	Helium (%v)
VP-8-3-DUP	10/30/2007	3	<18,000	<2.6	6.5	<3.5	<17.5	---	366.6	ND	ND	---	---	---	---
VP-8-3	01/18/2008	3	<18,000	<2.6	7.2	<3.5	<10.4	---	128.6	ND	ND	---	---	---	---
VP-8-3	04/17/2008	3	<16,000	<2.3	7.1	<3.1	<9.3	---	666.54	57.29	ND	---	---	---	---
VP-8-3	07/24/2008	3	<18,000	<2.5	290	14	38	---	ND	ND	ND	---	---	---	---
VP-8-3-DUP	07/24/2008	3	<19,000	<2.6	210	11	28.9	---	6.42	ND	ND	---	---	---	---
VP-8-3'	03/31/2009	3	<9,100	<2.5	5.2	<3.5	<14	---	<19	<19	<43	---	---	---	---
VP-8-3' DUP	03/31/2009	3	<8,100	<2.3	<2.7	<3.1	<12	---	<17	<17	<38	---	---	---	---
Ambient (near VP-8)	03/31/2009		<13,000	<3.7	17	<5.0	<20	---	<27	<27	<62	---	---	---	---
VP-8-3'	11/19/2009	3	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-8-5	06/12/2007	5	<22,000	33	11,000	120	278	---	---	---	---	---	---	---	---
VP-8-5	10/30/2007	5	<19,000	<2.6	8.5	<3.6	<17.6	---	468.3	5.9	ND	---	---	---	---
VP-8-5	01/18/2008	5	<19,000	<2.6	5.7	<3.5	<10.5	---	ND	ND	ND	---	---	---	---
VP-8-5	04/17/2008	5	<17,000	11	<1.9	<3.2	<9.6	---	59.43	9.98	ND	---	---	---	---
VP-8-5	07/24/2008	5	<17,000	<2.4	630	29	76	---	10.22	7.84	ND	---	---	---	---
VP-8-5	03/31/2009	5	Unable to sample; water in probe												
VP-8-5'	11/19/2009	5	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-9-5	08/08/2008	5	280	<3.9	17	<5.2	<10.4	---	ND	ND	ND	---	---	---	---
Ambient (near VP-9)	08/08/2008		280	<3.2	<3.8	<4.4	<8.8	---	ND	ND	ND	---	---	---	---
VP-9-5	12/31/2008	5	Unable to sample; water in probe												
VP-9-5	03/31/2009	5	Unable to sample; water in probe												
VP-9-5'	11/19/2009	5	---	<1.6	<19	<2.2	<8.7	---	---	---	---	---	---	---	<0.0100
VP-10	09/01/2010	5	<5,700	<19	35	<26	<52	---	---	---	---	<0.500	5.02	8.96	<0.0100
VP-12-3	04/16/2015	3	81,000	<16	<19	<22	<22	<52	---	---	---	<0.500	3.40	18.4	<0.0100
VP-12-3	08/27/2015	3	180,000	<16	<19	<22	<22	<52	---	---	---	<0.500	3.02	20.3	0.0284
VP-12-5	04/16/2015	5	130,000	<16	<19	<22	<22	<52	---	---	---	<0.500	1.33	13.7	<0.0100

Table 1

Historical Soil Vapor Analytical Data
Former Shell Service Station
2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Date	Depth (fbg)	TPHg (µg/m^3)	Benzene (µg/m^3)	Toluene (µg/m^3)	Ethyl-benzene (µg/m^3)	Total Xylenes (µg/m^3)	Naph-thalene (µg/m^3)	Isobutane (µg/m^3)	Butane (µg/m^3)	Propane (µg/m^3)	Methane (%v)	Carbon Dioxide (%v)	Oxygen & Argon (%v)	Helium (%v)
VP-12-5	08/27/2015	5	210,000	<16	<19	<22	<22	<52	---	---	---	<0.500	3.75	19.8	<0.0100
VP-13-3	04/16/2015	3	320,000	**770**	<190	<220	<220	<520	---	---	---	<0.500	1.09	21.0	0.299
VP-13-3	08/27/2015	3	540,000	<16	<19	<22	<22	<52	---	---	---	<0.500	1.49	21.6	<0.0100
VP-13-5	04/16/2015	5	35,000	<16	<19	<22	<22	<52	---	---	---	<0.500	1.38	18.1	<0.0100
VP-13-5	08/27/2015	5	140,000	<16	<19	<22	<22	<52	---	---	---	<0.500	0.735	22.2	0.185
VP-14-3	04/16/2015	3	**290,000,000**	**240,000**	<19,000	<22,000	<22,000	<52,000	---	---	---	11.3	9.97	2.49	<0.0100
VP-14-3	08/27/2015	3	**250,000,000**	**190,000**	<24,000	<27,000	<27,000	<66,000	---	---	---	7.75	12.4	3.15	0.0144
VP-14-5	04/16/2015	5	**270,000,000**	**690,000**	<19,000	**94,000**	<22,000	<52,000	---	---	---	11.8	8.11	5.50	0.0631
VP-14-5	08/27/2015	5	**330,000,000**	**280,000**	<30,000	**48,000**	<35,000	<84,000	---	---	---	14.4	12.6	3.60	0.275
ESLs [a]	**Commercial**		**2,500,000**	**420**	**1,300,000**	**4,900**	**440,000**	**360**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
	Residential		**300,000**	**42**	**160,000**	**490**	**52,000**	**36**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Notes:

TPHg = Total petroleum hydrocarbons as gasoline; analyzed by Modified EPA Method TO-3M GC/FID
Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B (M); prior to September 1, 2010 analyzed by Modified EPA Method TO-15
Naphthalene analyzed by EPA 8260B (M)
Isobutane, butane, and propane by EPA Method TO-15
Methane, carbon dioxide, and oxygen and argon analyzed by ASTM Method D-1946
Helium analyzed by ASTM Method D-1946 (M)
fbg = Feet below grade
µg/m^3 = Micrograms per cubic meter.
%v = Percent by volume
<x = Not detected at reporting limit x
ND = Not detected
--- = Not analyzed

Table 1

Historical Soil Vapor Analytical Data
Former Shell Service Station
2703 Martin Luther King Jr. Way, Oakland, California

Sample ID	Date	Depth (fbg)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	Naph-thalene ($\mu g/m^3$)	Isobutane ($\mu g/m^3$)	Butane ($\mu g/m^3$)	Propane ($\mu g/m^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen & Argon (%v)	Helium (%v)

ESL = Environmental screening level

NA = No applicable ESL

Results in **bold** exceed commercial environmental screening level

a = San Francisco Bay Regional Water Quality Control Board (RWQCB) shallow soil gas screening level for evaluation of potential vapor intrusion concerns from *User's Guide: Derivation and Application of Environmental Screening Levels, RWQCB, Interim Final 2013.*

Appendix A
eurofins/Calscience – Analytical Report

eurofins | Calscience

WORK ORDER NUMBER: 15-08-1957

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: GHD

Client Project Name: 2703 Martin Luther King Jr. Way, Oakland, CA

Attention: Peter Schaefer
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Approved for release on 09/10/2015 by:
Xuan Dang
Project Manager

ResultLink

Email your PM

eurofins | Calscience

Contents

Client Project Name: 2703 Martin Luther King Jr. Way, Oakland, CA
Work Order Number: 15-08-1957

eurofins | Calscience

Work Order Narrative

Work Order: 15-08-1957 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 08/28/15. They were assigned to Work Order 15-08-1957.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	GHD 5900 Hollis Street, Suite A Emeryville, CA 94608-2008	Work Order:	15-08-1957
		Project Name:	2703 Martin Luther King Jr. Way, Oakland, CA
		PO Number:	
		Date/Time Received:	08/28/15 10:00
		Number of Containers:	8
Attn:	Peter Schaefer		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
VP-3-3'	15-08-1957-1	08/27/15 14:48	1	Air
VP-3-5'	15-08-1957-2	08/27/15 15:30	1	Air
VP-12-3'	15-08-1957-3	08/27/15 09:51	1	Air
VP-12-5'	15-08-1957-4	08/27/15 10:14	1	Air
VP-13-3'	15-08-1957-5	08/27/15 10:58	1	Air
VP-13-5'	15-08-1957-6	08/27/15 11:26	1	Air
VP-14-3'	15-08-1957-7	08/27/15 13:18	1	Air
VP-14-5'	15-08-1957-8	08/27/15 14:04	1	Air

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Case Narrative

Work Order: 15-08-1957 Page 1 of 1

Modified EPA 8260 in Air

This method is used to determine the concentration of BTEX/Oxygenates/Naphthalene having a vapor pressure greater than 10^{-1} torr at 25°C at standard pressure in a air matrix. The method is similar to EPA TO-15 and uses air standards for calibration. Method specifics are listed in the table below. A known volume of sample is directed from the container (Summa® canister or Tedlar™ bag) through a solid multi-module (glass beads, tenex, cryofocuser) concentrator. Following concentration, the VOCs are thermally desorbed onto a gas chromatographic column for separation and then detected on a mass selective detector.

Comparison of Calscience TO-15 (Modified) versus EPA 8260 (Modified) in Air

Requirement	Calscience TO-15(M)	Calscience EPA 8260(M) in Air
BFB Acceptance Criteria	SW846 Protocol	SW846 Protocol
Initial Calibration	Allowable % RSD for each Target <= 30%, 10% of analytes allowed <= 40%	Allowable % RSD for each Target Analyte < 30%, 10% of analytes allowed < 40%
Initial Calibration Verification (ICV) - Second Source Standard (LCS)	Analytes contained in the LCS standard evaluated against historical control limits for the LCS	BTEX and MTBE only - <= 30%D
Daily Calibration Verification (CCV)	**Full List Analysis:** Allowable % Difference for each CCC analytes is <= 30%	BTEX and MTBE only - <= 30%D
	Target List Analysis: Allowable % Difference for each target analytes is <= 30%	
Daily Calibration Verification (CCV) - Internal Standard Area Response	Allowable +/- 50% (Range: 50% to 150%)	Allowable +/- 50% (Range: 50% to 150%)
Method Blank, Laboratory Control Sample and Sample - Internal Standard Area Response	Allowable +/- 50% of the mean area response of most recent Calibration Verification (Range: 50% to 150%)	Allowable +/- 50% of the mean area response of the most recent Calilbration Verification (Range: 50% to 150%)
Surrogates	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/- 3S	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/- 3S

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Detections Summary

Client:	GHD	Work Order:	15-08-1957
	5900 Hollis Street, Suite A	Project Name:	2703 Martin Luther King Jr. Way, Oakland, CA
	Emeryville, CA 94608-2008	Received:	08/28/15
Attn:	Peter Schaefer		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VP-3-3' (15-08-1957-1)						
Carbon Dioxide	3.90		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	18.6		0.500	%v	ASTM D-1946	N/A
Helium	0.106		0.0100	%v	ASTM D-1946 (M)	N/A
Benzene	50		16	ug/m3	EPA 8260B (M)	N/A
Ethylbenzene	22		22	ug/m3	EPA 8260B (M)	N/A
TPH as Gasoline	41000		7000	ug/m3	EPA TO-3M	N/A
VP-3-5' (15-08-1957-2)						
Methane	21.5		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	5.80		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	11.1		0.500	%v	ASTM D-1946	N/A
Helium	0.0265		0.0100	%v	ASTM D-1946 (M)	N/A
TPH as Gasoline	270000000		1400000	ug/m3	EPA TO-3M	N/A
VP-12-3' (15-08-1957-3)						
Carbon Dioxide	3.02		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	20.3		0.500	%v	ASTM D-1946	N/A
Helium	0.0284		0.0100	%v	ASTM D-1946 (M)	N/A
TPH as Gasoline	180000		7000	ug/m3	EPA TO-3M	N/A
VP-12-5' (15-08-1957-4)						
Carbon Dioxide	3.75		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	19.8		0.500	%v	ASTM D-1946	N/A
TPH as Gasoline	210000		7000	ug/m3	EPA TO-3M	N/A
VP-13-3' (15-08-1957-5)						
Carbon Dioxide	1.49		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	21.6		0.500	%v	ASTM D-1946	N/A
TPH as Gasoline	540000		7000	ug/m3	EPA TO-3M	N/A
VP-13-5' (15-08-1957-6)						
Carbon Dioxide	0.735		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	22.2		0.500	%v	ASTM D-1946	N/A
Helium	0.185		0.0100	%v	ASTM D-1946 (M)	N/A
TPH as Gasoline	140000		7000	ug/m3	EPA TO-3M	N/A
VP-14-3' (15-08-1957-7)						
Methane	7.75		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	12.4		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	3.15		0.500	%v	ASTM D-1946	N/A
Helium	0.0144		0.0100	%v	ASTM D-1946 (M)	N/A
Benzene	190000		20000	ug/m3	EPA 8260B (M)	N/A
TPH as Gasoline	250000000		1400000	ug/m3	EPA TO-3M	N/A

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* MDL is shown

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Detections Summary

Client:	GHD	Work Order:	15-08-1957
	5900 Hollis Street, Suite A	Project Name:	2703 Martin Luther King Jr. Way, Oakland, CA
	Emeryville, CA 94608-2008	Received:	08/28/15
Attn:	Peter Schaefer		Page 2 of 2

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
VP-14-5' (15-08-1957-8)						
Methane	14.4		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	12.6		0.500	%v	ASTM D-1946	N/A
Oxygen (+ Argon)	3.60		0.500	%v	ASTM D-1946	N/A
Helium	0.275		0.0100	%v	ASTM D-1946 (M)	N/A
Benzene	280000		26000	ug/m3	EPA 8260B (M)	N/A
Ethylbenzene	48000		35000	ug/m3	EPA 8260B (M)	N/A
TPH as Gasoline	330000000		1400000	ug/m3	EPA TO-3M	N/A

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-3'	**15-08-1957-1-A**	**08/27/15 14:48**	**Air**	**GC 65**	**N/A**	**08/28/15 10:38**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	3.90	0.500	1.00	
Oxygen (+ Argon)	18.6	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-5'	**15-08-1957-2-A**	**08/27/15 15:30**	**Air**	**GC 65**	**N/A**	**08/28/15 10:57**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	21.5	0.500	1.00	
Carbon Dioxide	5.80	0.500	1.00	
Oxygen (+ Argon)	11.1	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-3'	**15-08-1957-3-A**	**08/27/15 09:51**	**Air**	**GC 65**	**N/A**	**08/28/15 11:20**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	3.02	0.500	1.00	
Oxygen (+ Argon)	20.3	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-5'	**15-08-1957-4-A**	**08/27/15 10:14**	**Air**	**GC 65**	**N/A**	**08/28/15 11:40**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	3.75	0.500	1.00	
Oxygen (+ Argon)	19.8	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-3'	**15-08-1957-5-A**	**08/27/15 10:58**	**Air**	**GC 65**	**N/A**	**08/28/15 11:59**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	1.49	0.500	1.00	
Oxygen (+ Argon)	21.6	0.500	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-5'	**15-08-1957-6-A**	**08/27/15 11:26**	**Air**	**GC 65**	**N/A**	**08/28/15 12:17**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	0.735	0.500	1.00	
Oxygen (+ Argon)	22.2	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-3'	**15-08-1957-7-A**	**08/27/15 13:18**	**Air**	**GC 65**	**N/A**	**08/28/15 12:47**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	7.75	0.500	1.00	
Carbon Dioxide	12.4	0.500	1.00	
Oxygen (+ Argon)	3.15	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-5'	**15-08-1957-8-A**	**08/27/15 14:04**	**Air**	**GC 65**	**N/A**	**08/28/15 13:05**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	14.4	0.500	1.00	
Carbon Dioxide	12.6	0.500	1.00	
Oxygen (+ Argon)	3.60	0.500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-444-263**	**N/A**	**Air**	**GC 65**	**N/A**	**08/28/15 10:19**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	0.500	1.00	
Carbon Dioxide	ND	0.500	1.00	
Oxygen (+ Argon)	ND	0.500	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: ASTM D-1946 (M)
Units: %v

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-3'	**15-08-1957-1-A**	**08/27/15 14:48**	**Air**	**GC 55**	**N/A**	**08/28/15 10:36**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.106	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-5'	**15-08-1957-2-A**	**08/27/15 15:30**	**Air**	**GC 55**	**N/A**	**08/28/15 11:28**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.0265	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-3'	**15-08-1957-3-A**	**08/27/15 09:51**	**Air**	**GC 55**	**N/A**	**08/28/15 12:13**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.0284	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-5'	**15-08-1957-4-A**	**08/27/15 10:14**	**Air**	**GC 55**	**N/A**	**08/28/15 13:09**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	ND	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-3'	**15-08-1957-5-A**	**08/27/15 10:58**	**Air**	**GC 55**	**N/A**	**08/28/15 13:32**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	ND	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-5'	**15-08-1957-6-A**	**08/27/15 11:26**	**Air**	**GC 55**	**N/A**	**08/28/15 14:00**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.185	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-3'	**15-08-1957-7-A**	**08/27/15 13:18**	**Air**	**GC 55**	**N/A**	**08/28/15 14:47**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.0144	0.0100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-5'	**15-08-1957-8-A**	**08/27/15 14:04**	**Air**	**GC 55**	**N/A**	**08/28/15 15:39**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	0.275	0.0100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	ASTM D-1946 (M)
		Units:	%v
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-872-847**	**N/A**	**Air**	**GC 55**	**N/A**	**08/28/15 10:14**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
Helium	ND	0.0100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-3'	**15-08-1957-1-A**	**08/27/15 14:48**	**Air**	**GC/MS K**	**N/A**	**08/30/15 00:19**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	50	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	22	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	109	47-156	
1,2-Dichloroethane-d4	97	47-156	
Toluene-d8	82	47-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-5'	**15-08-1957-2-A**	**08/27/15 15:30**	**Air**	**GC/MS K**	**N/A**	**08/30/15 05:05**	**150829L03**

Comment(s): - Reporting limit is elevated due to high levels of non-target hydrocarbons.

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16000	1000	
Toluene	ND	19000	1000	
Ethylbenzene	ND	22000	1000	
p/m-Xylene	ND	43000	1000	
o-Xylene	ND	22000	1000	
Xylenes (total)	ND	22000	1.00	
Naphthalene	ND	52000	1000	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	101	47-156	
1,2-Dichloroethane-d4	90	47-156	
Toluene-d8	67	47-156	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-3'	**15-08-1957-3-A**	**08/27/15 09:51**	**Air**	**GC/MS K**	**N/A**	**08/30/15 02:41**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	ND	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	105	47-156	
1,2-Dichloroethane-d4	94	47-156	
Toluene-d8	102	47-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-5'	**15-08-1957-4-A**	**08/27/15 10:14**	**Air**	**GC/MS K**	**N/A**	**08/30/15 01:54**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	ND	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	107	47-156	
1,2-Dichloroethane-d4	94	47-156	
Toluene-d8	104	47-156	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-3'	**15-08-1957-5-A**	**08/27/15 10:58**	**Air**	**GC/MS K**	**N/A**	**08/30/15 03:28**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	ND	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	106	47-156	
1,2-Dichloroethane-d4	94	47-156	
Toluene-d8	101	47-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-5'	**15-08-1957-6-A**	**08/27/15 11:26**	**Air**	**GC/MS K**	**N/A**	**08/30/15 01:06**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	ND	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	104	47-156	
1,2-Dichloroethane-d4	95	47-156	
Toluene-d8	101	47-156	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-3'	**15-08-1957-7-A**	**08/27/15 13:18**	**Air**	**GC/MS K**	**N/A**	**08/30/15 05:53**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	190000	20000	1250	
Toluene	ND	24000	1250	
Ethylbenzene	ND	27000	1250	
p/m-Xylene	ND	54000	1250	
o-Xylene	ND	27000	1250	
Xylenes (total)	ND	27000	1.00	
Naphthalene	ND	66000	1250	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	108	47-156	
1,2-Dichloroethane-d4	92	47-156	
Toluene-d8	63	47-156	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-5'	**15-08-1957-8-A**	**08/27/15 14:04**	**Air**	**GC/MS K**	**N/A**	**08/30/15 06:40**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	280000	26000	1600	
Toluene	ND	30000	1600	
Ethylbenzene	48000	35000	1600	
p/m-Xylene	ND	69000	1600	
o-Xylene	ND	35000	1600	
Xylenes (total)	ND	35000	1.00	
Naphthalene	ND	84000	1600	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	107	47-156	
1,2-Dichloroethane-d4	91	47-156	
Toluene-d8	67	47-156	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ug/m3
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-116-920**	**N/A**	**Air**	**GC/MS K**	**N/A**	**08/29/15 21:54**	**150829L03**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	16	1.00	
Toluene	ND	19	1.00	
Ethylbenzene	ND	22	1.00	
p/m-Xylene	ND	43	1.00	
o-Xylene	ND	22	1.00	
Xylenes (total)	ND	22	1.00	
Naphthalene	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	103	47-156	
1,2-Dichloroethane-d4	96	47-156	
Toluene-d8	101	47-156	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: EPA TO-3M
Units: ug/m3

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-3'	**15-08-1957-1-A**	**08/27/15 14:48**	**Air**	**GC 13**	**N/A**	**08/28/15 10:30**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	41000	7000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-3-5'	**15-08-1957-2-A**	**08/27/15 15:30**	**Air**	**GC 13**	**N/A**	**08/28/15 10:55**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	270000000	1400000	200	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-3'	**15-08-1957-3-A**	**08/27/15 09:51**	**Air**	**GC 13**	**N/A**	**08/28/15 11:19**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	180000	7000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-12-5'	**15-08-1957-4-A**	**08/27/15 10:14**	**Air**	**GC 13**	**N/A**	**08/28/15 11:38**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	210000	7000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-3'	**15-08-1957-5-A**	**08/27/15 10:58**	**Air**	**GC 13**	**N/A**	**08/28/15 11:52**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	540000	7000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-13-5'	**15-08-1957-6-A**	**08/27/15 11:26**	**Air**	**GC 13**	**N/A**	**08/28/15 12:08**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	140000	7000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-3'	**15-08-1957-7-A**	**08/27/15 13:18**	**Air**	**GC 13**	**N/A**	**08/28/15 12:48**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	250000000	1400000	200	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VP-14-5'	**15-08-1957-8-A**	**08/27/15 14:04**	**Air**	**GC 13**	**N/A**	**08/28/15 13:31**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	330000000	1400000	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M
		Units:	ug/m3
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**098-01-005-6626**	**N/A**	**Air**	**GC 13**	**N/A**	**08/28/15 09:34**	**150828L01**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	7000	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Sample Duplicate

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
VP-3-5'	**Sample**	**Air**	**GC 13**	**N/A**	**08/28/15 10:55**	**150828D01**
VP-3-5'	**Sample Duplicate**	**Air**	**GC 13**	**N/A**	**08/28/15 11:05**	**150828D01**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
TPH as Gasoline	266500000	265100000	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: ASTM D-1946
Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-444-263	**LCS**	**Air**	**GC 65**	**N/A**	**08/28/15 09:44**	**150828L01**
099-16-444-263	**LCSD**	**Air**	**GC 65**	**N/A**	**08/28/15 10:02**	**150828L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	4.500	4.252	94	4.384	97	80-120	3	0-30	
Carbon Dioxide	15.00	14.75	98	15.42	103	80-120	4	0-30	
Carbon Monoxide	6.990	6.356	91	6.566	94	80-120	3	0-30	
Oxygen (+ Argon)	4.010	4.207	105	4.337	108	80-120	3	0-30	
Nitrogen	69.50	68.57	99	70.61	102	80-120	3	0-30	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Project: 2703 Martin Luther King Jr. Way, Oakland, CA

Date Received: 08/28/15
Work Order: 15-08-1957
Preparation: N/A
Method: ASTM D-1946 (M)
Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-847	**LCS**	**Air**	**GC 55**	**N/A**	**08/28/15 09:30**	**150828L01**
099-12-872-847	**LCSD**	**Air**	**GC 55**	**N/A**	**08/28/15 09:52**	**150828L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Helium	1.000	0.9416	94	0.9478	95	80-120	1	0-30	
Hydrogen	1.000	0.9379	94	0.9428	94	80-120	1	0-30	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-116-920	**LCS**	**Air**	**GC/MS K**	**N/A**	**08/29/15 17:59**	**150829L03**
099-16-116-920	**LCSD**	**Air**	**GC/MS K**	**N/A**	**08/29/15 18:49**	**150829L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	79.87	83.08	104	83.79	105	60-156	44-172	1	0-40	
Toluene	94.21	106.4	113	105.4	112	56-146	41-161	1	0-43	
Ethylbenzene	108.6	122.7	113	122.0	112	52-154	35-171	1	0-38	
p/m-Xylene	217.1	261.3	120	257.4	119	42-156	23-175	2	0-41	
o-Xylene	108.6	127.8	118	125.4	116	52-148	36-164	2	0-38	
Methyl-t-Butyl Ether (MTBE)	90.13	94.15	104	94.53	105	45-147	28-164	0	0-25	
Tert-Butyl Alcohol (TBA)	151.6	171.7	113	171.6	113	60-140	47-153	0	0-35	
Diisopropyl Ether (DIPE)	104.5	108.9	104	107.8	103	60-140	47-153	1	0-35	
Ethyl-t-Butyl Ether (ETBE)	104.5	106.4	102	104.9	100	60-140	47-153	1	0-35	
Tert-Amyl-Methyl Ether (TAME)	104.5	101.0	97	101.0	97	60-140	47-153	0	0-35	
Naphthalene	131.1	148.5	113	148.0	113	60-140	47-153	0	0-30	
Ethanol	188.4	223.6	119	222.3	118	47-137	32-152	1	0-35	
1,1-Difluoroethane	67.54	83.56	124	82.70	122	78-156	65-169	1	0-35	
Isopropanol	61.45	62.23	101	61.80	101	78-156	65-169	1	0-35	

Total number of LCS compounds: 14
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

GHD		Date Received:	08/28/15
5900 Hollis Street, Suite A		Work Order:	15-08-1957
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M
Project: 2703 Martin Luther King Jr. Way, Oakland, CA			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
098-01-005-6626	**LCS**	**Air**	**GC 13**	**N/A**	**08/28/15 09:22**	**150828L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	932500	840900	90	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 15-08-1957 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

- [x] CALSCIENCE (_____)
- [ ] SPL (_____)
- [ ] XENCO (_____)
- [ ] TEST AMERICA (_____)
- [ ] OTHER (_____)

Please Check Appropriate Box:

[ ] ENV. SERVICES	[ ] MOTIVA RETAIL	[ ] SHELL RETAIL
[ ] MOTIVA SD&CM	[x] CONSULTANT	[ ] LUBES
[ ] SHELL PIPELINE	[ ] OTHER _____	

Print Bill To Contact Name: Peter Schaefer 240781

PO #:

PlaNet Project ID:

PlaNet Site ID: 27482

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 8-27-15

PAGE: 1 of 1

SAMPLING COMPANY: GHD Services Inc.	LOG CODE: CRAW	SITE ADDRESS: Street and City: 2703 Martin Luther King Jr. Way, Oakland	State: CA
ADDRESS: 5900 Hollis Street, Suite A, Emeryville, CA 94608		GLOBAL ID NO.: T0600101876	
PROJECT CONTACT (Hardcopy or PDF Report to): Peter Schaefer		EDF DELIVERABLE TO (Name, Company, Office Location): Anni Kreml, CRA, Emeryville	PHONE NO.: 510-420-3343
TELEPHONE: 510-420-3319	FAX: 510-420-9170	E-MAIL: peter.schaefer@ghd.com	E-MAIL: shell.em.edf@craworld.com
		CONSULTANT PROJECT NO.: 240781-15.04-****	
		SAMPLER NAME(S) (Print): Scott Lewis	LAB USE ONLY: 15-08-1957

TURNAROUND TIME (CALENDAR DAYS): [x] STANDARD (14 DAY) [ ] 5 DAYS [ ] 3 DAYS [ ] 2 DAYS [ ] 24 HOURS [ ] RESULTS NEEDED ON WEEKEND

[ ] LA - RWQCB REPORT FORMAT [ ] UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

Copy of final report to Shell.Lab.Billing@craworld.com

Please report EPA 8260 & TO-3 results in µg/m3 and CH4, CO2, O2+Ar, and He results in %v

[x] SHELL CONTRACT RATE APPLIES
[ ] STATE REIMBURSEMENT RATE APPLIES
[ ] EDD NOT NEEDED
[x] RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPHg (TO-3) (carbon range C6-C12)	BTEX & naphthalene (EPA 8260B)	O2, CO2, & Methane (ASTM 1946)	Helium (ASTM 1946M)	TEMPERATURE ON RECEIPT C° / Container PID Readings or Laboratory Notes
	~~VP-2-3'~~	~~8/27/15~~		~~Vapor~~					c	1	~~X~~	~~X~~	~~X~~	~~X~~	
	~~VP-2-5'~~	~~8/27/15~~		~~Vapor~~					c	1	X	X	X	X	
1	VP-3-3'	8/27/15	1448	Vapor						1	X	X	X	X	
2	VP-3-5'	8/27/15	1530	Vapor						1	X	X	X	X	
3	VP-12-3'	8/27/15	0951	Vapor						1	X	X	X	X	
4	VP-12-5'	8/27/15	1014	Vapor						1	X	X	X	X	
5	VP-13-3'	8/27/15	1058	Vapor						1	X	X	X	X	
6	VP-13-5'	8/27/15	1126	Vapor						1	X	X	X	X	
7	VP-14-3'	8/27/15	1318	Vapor						1	X	X	X	X	
8	VP-14-5'	8/27/15	1404	Vapor						1	X	X	X	X	

Relinquished by: (Signature) Scott Lewis	Received by: (Signature) ECI	Date: 8-27-15	Time: 1720
Relinquished by: (Signature) to GSO 8/27/15 1730	Received by: (Signature) ECI	Date: 08-28-15	Time: 1000
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

05/2/06 Revision

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800-322-5555 www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:
PARSONS , GHD
Delivery Instructions:

Signature Type: REQUIRED

Tracking #: 529082050

NPS

ORC
GARDEN GROVE

A

D92845A

41752056

Print Date: 8/27/2015 2:46 PM

LABEL INSTRUCTIONS:

Do not copy or **reprint this label for additional shipments - each package must have a unique barcode.**

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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WORK ORDER NUMBER: 15-08- 1957

SAMPLE RECEIPT CHECKLIST

BOX 1 OF 1

CLIENT: GHD Svcs

DATE: 08 / 28 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC5 (CF:-0.2°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☑ Air ☐ Filter Checked by: 300

CUSTODY SEAL:

Box ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 300

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 300

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☑ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 300

s = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH Reviewed by: SL

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