

Wickham, Jerry, Env. Health

From: denis.l.brown@shell.com
Sent: Thursday, April 14, 2011 7:22 AM
To: Wickham, Jerry, Env. Health
Subject: FW: 060204 - 2301-2307 Lincoln Ave., Alameda - cumulative soil data figure
Attachments: 060204 site plan (F1, hist soil data).pdf; 060204-Master historical soil.xls

Jerry,

Enclosed are sampling results for the excavation at 2301 Lincoln. Based upon these results our recommendation would be to backfill and compact.

Peter's cell phone is below and if disagree with this please let us know as soon as you can.

Thanks Jerry.

Denis L. Brown
Sr Program Manger
Shell Oil Products US
Environmental Services

Ph- 707-865-0251
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From: Schaefer, Peter [<mailto:pschaefer@croworld.com>]
Sent: Wednesday, April 13, 2011 5:24 PM
To: Brown, Denis L SOPUS-DRN/439
Cc: Glaze, Dan
Subject: 060204 - 2301-2307 Lincoln Ave., Alameda - cummulative soil data figure

Denis,

I suspect that Bob is referring to the concentrations of benzene in EB-2 (0.44 mg/kg) & EB-3 (0.99 mg/kg), and ethylbenzene in EB-3 (12 mg/kg) that exceed commercial ESLs (benzene 0.27 mg/kg, ethylbenzene 4.7 mg/kg).

Results from the excavation in mg/kg:

Sample ID	TPHg	Benzene	Ethylbenzene	Location Description
HC-CN-13.5	2.27	0.0230	0.0215	Ex bottom-13.5' N
HC-CS-13	27.1	0.0535	0.141	Ex bottom-13' S
HC-E-6	20.4		0.182	East wall-6'
HC-E-12	1.31			East wall-12'
HC-W-6	25.2		0.966	West wall-6'
HC-W-8	17.0		0.173	West wall-8'
HC-N-6	0.951		0.0302	North Wall-6'
HC-N-8	127		2.24	North Wall-8'
HC-S-3	15.1			South wall-3

HC-S-7.5	1.08	0.015	0.0044	South wall-7.5
ESL-Comm	180	0.27	4.7	

Toluene and xylenes were not detected. I will call tomorrow to discuss. I will be at the site starting @ 0700. Call my cell @ (510) 385-0212 if needed.

Regards,


Peter Schaefer, CEG, CHG
Conestoga-Rovers & Associates

5900 Hollis Avenue, Suite A
Emeryville, California 94608-2008

Telephone: (510) 420-3319

Fax: (510) 420-9170

pschaefer@croworld.com

Think before you print 

Perform every task the safe way, the right way, every time!

I:\Shell6-chars\0602--060204-Alameda 2301-2307 Lincoln Ave\060204 FIGURES\060204 SITE PLAN (F2, HIST SOIL DATA).DWG

ID	Date	Depth	TPHg	Benzene
SB-1	07/24/1999	7.5	<1.0	<0.0050

ID	Date	Depth	TPHg	Benzene
SB-2	07/24/1999	7.5	<1.0	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-5-5'	02/24/2009	5	<0.50	<0.0050
MW-5-8'	02/24/2009	8	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
SB-5	07/24/1999	7.5	<1.0	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-2-10.5	08/15/2007	10.5	5.0	<0.0040

ID	Date	Depth	TPHg	Benzene
EB-8-1.5	08/15/2007	1.5	<0.98	<0.0049

ID	Date	Depth	TPHg	Benzene
B-6-5.25	07/13/2010	5.25	<0.50	<0.0050
B-6-8.0	07/13/2010	8	<0.50	<0.0050
B-6-9.5	07/13/2010	9.5	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
SB-4	07/24/1999	7.5	<1.0	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-1-3	08/15/2007	3	<0.18	<0.0042
MW-1-8.5	08/15/2007	8.5	1,600	<2.0
MW-1-12	08/15/2007	12	2.4	<0.0037
MW-1-14.5	08/15/2007	12	2.4	<0.0037

ID	Date	Depth	TPHg	Benzene
SB-3	07/24/1999	7.5	40*	<0.0050

ID	Date	Depth	TPHg	Benzene
B-5-5.5'	02/27/2007	5.5	<0.50	<0.0050
B-5-8.5'	02/27/2007	8.5	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-9-5.5'	03/25/2010	5.5	<0.50	<0.0050
MW-9-8.5'	03/25/2010	8.5	<0.50	<0.0050
MW-9-12'	03/25/2010	12	<0.50	<0.0050
MW-9-17.5'	03/25/2010	17.5	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
EB-10-2	08/16/2007	2	<1.5	<0.0051

ID	Date	Depth	TPHg	Benzene
B-8-5.5'	02/27/2007	5.5	<0.50	<0.0050
B-8-8.5'	02/27/2007	8.5	7,900	<20

ID	Date	Depth	TPHg	Benzene
EB-11-2	08/16/2007	2	<1.2	<0.0048

ID	Date	Depth	TPHg	Benzene
EB-4-6.5	08/16/2007	6.5	<0.19	<0.0043
EB-4-10.2	08/16/2007	10.2	<0.18	<0.0045
EB-4-13	08/16/2007	13	<0.16	<0.0041

ID	Date	Depth	TPHg	Benzene
SB-6	07/24/1999	5	<1.0	<0.0050

ID	Date	Depth	TPHg	Benzene
EB-9-2	08/15/2007	2	<0.96	<0.0048

ID	Date	Depth	TPHg	Benzene
B-7-5.5'	02/27/2007	5.5	<0.50	<0.0050
B-7-8.5'	02/27/2007	8.5	87	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-6-5'	02/26/2009	5	<0.50	<0.0050
MW-6-8'	02/26/2009	8	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
EB-6-9.5	08/16/2007	9.5	4.3	<0.12
EB-6-14	08/16/2007	14	<0.18	<0.0036

ID	Date	Depth	TPHg	Benzene
EB-1-10.5	08/16/2007	10.5	470	<6.6
EB-1-14	08/16/2007	14	<0.82	<0.0040

ID	Date	Depth	TPHg	Benzene
MW-4-5'	02/25/2009	5	<0.50	<0.0050
MW-4-8'	02/25/2009	8	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
MW-7-5'	02/25/2009	5	<0.50	<0.0050
MW-7-8'	02/25/2009	8	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
EB-2-9	08/16/2007	9	24	0.44
EB-2-13	08/16/2007	13	<0.15	<0.0045

ID	Date	Depth	TPHg	Benzene
MW-8-5'	02/23/2009	5	<0.50	<0.0050
MW-8-8'	02/23/2009	8	<0.50	<0.0050

ID	Date	Depth	TPHg	Benzene
EB-5-2.5	08/16/2007	2.5	<0.18	<0.0071
EB-5-9	08/16/2007	9	2.4	<0.21
EB-5-12.5	08/16/2007	12.5	<1.1	<0.0045

ID	Date	Depth	TPHg	Benzene
EB-3-9	08/16/2007	9	68	0.99
EB-3-11.8	08/16/2007	11.8	<0.18	<0.0042

EXPLANATION

- MW-1 ● Monitoring well location
- B-6 ⊙ Soil boring location (CRA, 7/2010)
- SVP-1 ◆ Soil vapor probe location (CRA, 2/2009, 3/2010)
- B-5 ○ Geoprobe boring location (CRA, 2/2009)
- EB-1 ⊙ Soil boring location (Geomatrix, 8/2007)
- SB-1 ⊙ Soil boring location (Basics Environmental, 7/1999)

- — — — — Electrical & Telecommunications line (E)
- — — — — Telecommunications & Cable TV line (T)
- — — — — Gas line (G)
- — — — — Storm drain line (STM)
- — — — — Sanitary sewer line (SAN)
- — — — — Water line (W)

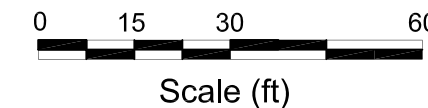
Sources:

1. Sanborn Fire Insurance Map, 1950
2. Majors Civil Engineering, 1982

ID	Date	Depth	TPHg	Benzene
SB-1	07/24/1999	7.5	<1.0	<0.0050

Notes:

Soil sample ID, date, depth in feet below grade (fbg), and concentrations in milligrams per kilogram (mg/kg)
TPHg = Total petroleum hydrocarbons as gasoline
<X = Not detected at reporting limit X
 - Values in **bold** are above the Environmental Screening Level (ESL)



FIGURE

1

Soil Chemical Concentration Map



Former Shell Service Station
 2301-2307 Lincoln Avenue
 Alameda, California

**HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
2301-2307 LINCOLN AVENUE, ALAMEDA, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHmo</i>	<i>TPHd</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl- benzene</i>	<i>Total Xylenes</i>	<i>MTBE</i>	<i>DIPE</i>	<i>ETBE</i>	<i>TAME</i>	<i>TBA</i>	<i>1,2-DCA</i>	<i>EDB</i>	<i>Total Lead</i>
SB-1	7/24/1999	7.5	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	---	---	---	---	---	---	---
SB-2	7/24/1999	7.5	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	---	---	---	---	---	---	---
SB-3	7/24/1999	7.5	---	---	40 ^a	<0.005	<0.005	0.012	<0.005	<0.05	---	---	---	---	---	---	---
SB-4	7/24/1999	7.5	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	---	---	---	---	---	---	---
SB-5	7/24/1999	7.5	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	---	---	---	---	---	---	---
SB-6	7/24/1999	5	---	---	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	---	---	---	---	---	---	---
MW-1-3.0	8/15/2007	3.0	---	---	<0.18	<0.0042	<0.0042	<0.0042	<0.0084	<0.0042	<0.0042	<0.0042	<0.0042	<0.085	<0.0042	<0.0042	---
MW-1-8.5	8/15/2007	8.5	---	---	1,600	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<40	<2.0	<2.0	---
MW-1-12.0	8/15/2007	12.0	---	---	2.4	<0.0037	<0.0037	<0.0037	<0.0074	<0.0037	<0.0037	<0.0037	<0.0037	<0.075	<0.0037	<0.0037	---
MW-1-14.5	8/15/2007	14.5	---	---	<0.16	<0.0052	<0.0052	<0.0052	<0.0104	<0.0052	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	---
MW-2-10.5	8/15/2007	10.5	---	---	5.0	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.079	<0.004	<0.004	---
EB-1-10.5	8/16/2007	10.5	---	---	470	<6.6	<6.6	100	<13.2	<6.6	<6.6	<6.6	<6.6	<130	<6.6	<6.6	4.5
EB-1-14.0	8/16/2007	14.0	---	---	<0.82	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.081	<0.004	<0.004	1.4
EB-2-9.0	8/16/2007	9.0	---	---	24	0.44	<0.27	3.7	<0.54	<0.27	<0.27	<0.27	<0.27	<5.3	<0.27	<0.27	21
EB-2-13	8/16/2007	13.0	---	---	<0.150	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045	<0.0045	<0.0045	<0.091	<0.0045	<0.0045	1.2
EB-3-9.0	8/16/2007	9.0	---	---	68	0.99	<0.73	12	1.0	<0.73	<0.73	<0.73	<0.73	<15	<0.73	<0.73	2.0
EB-3-11.8	8/16/2007	11.8	---	---	<0.18	<0.0042	<0.0042	<0.0042	<0.0084	<0.0042	<0.0042	<0.0042	<0.0042	<0.085	<0.0042	<0.0042	1.8
EB-4-6.5	8/16/2007	6.5	---	---	<0.19	<0.0043	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	<0.0043	<0.0043	<0.086	<0.0043	<0.0043	2.3
EB-4-10.2	8/16/2007	10.2	---	---	<0.18	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045	<0.0045	<0.0045	<0.091	<0.0045	<0.0045	1.8
EB-4-13.0	8/16/2007	13.0	---	---	<0.16	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	<0.0041	<0.0041	<0.0041	<0.082	<0.0041	<0.0041	1.7

**HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
2301-2307 LINCOLN AVENUE, ALAMEDA, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHmo</i>	<i>TPHd</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl- benzene</i>	<i>Total Xylenes</i>	<i>MTBE</i>	<i>DIPE</i>	<i>ETBE</i>	<i>TAME</i>	<i>TBA</i>	<i>1,2-DCA</i>	<i>EDB</i>	<i>Total Lead</i>
EB-5-2.5	8/16/2007	2.5	---	---	<0.18	<0.0071	<0.0071	<0.0071	<0.0142	<0.0071	<0.0071	<0.0071	<0.0071	<0.14	<0.0071	<0.0071	48
EB-5-9.0	8/16/2007	9.0	---	---	2.4	<0.21	<0.21	3.7	1.1	<0.21	<0.21	<0.21	<0.21	<4.2	<0.21	<0.21	2.6
EB-5-12.5	8/16/2007	12.5	---	---	<1.1	<0.0045	<0.0045	<0.0045	<0.0090	<0.0045	<0.0045	<0.0045	<0.0045	<0.089	<0.0045	<0.0045	1.5
EB-6-9.5	8/16/2007	9.5	---	---	4.3	<0.12	<0.12	1.8	<2.4	<0.12	<0.12	<0.12	<0.12	<2.4	<0.12	<0.12	2.5
EB-6-14.0	8/16/2007	14.0	---	---	<0.18	<0.0036	<0.0036	<0.0036	<0.0072	<0.0036	<0.0036	<0.0036	<0.0036	<0.072	<0.0036	<0.0036	2.0
EB-8-1.5	8/15/2007	1.5	---	---	<0.98	<0.0049	<0.0049	<0.0049	<0.0098	<0.020	---	---	---	---	---	---	40
EB-9-2.0	8/15/2007	2.0	---	---	<0.96	<0.0048	<0.0048	<0.0048	<0.0096	<0.019	---	---	---	---	---	---	2.0
EB-10-2.0	8/16/2007	2.0	---	---	<1.5	<0.0051	<0.0051	<0.0051	<0.012	<0.0051	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	550
EB-11-2.0	8/16/2007	2.0	---	---	<1.2	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	3.3
B-5-5.5'	2/27/2009	5.5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
B-5-8.5'	2/27/2009	8.5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
B-7-5.5'	2/27/2009	5.5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
B-7-8.5'	2/27/2009	8.5	---	---	87	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---
B-8-5.5'	2/27/2009	5.5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
B-8-8.5'	2/27/2009	8.5	---	---	7,900	<20	<20	120	150	<20	---	---	---	---	---	---	---
MW-4-5'	2/25/2009	5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-4-8'	2/25/2009	8	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-5-5'	2/24/2009	5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-5-8'	2/24/2009	8	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---

**HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
2301-2307 LINCOLN AVENUE, ALAMEDA, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHmo</i>	<i>TPHd</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl-benzene</i>	<i>Total Xylenes</i>	<i>MTBE</i>	<i>DIPE</i>	<i>ETBE</i>	<i>TAME</i>	<i>TBA</i>	<i>1,2-DCA</i>	<i>EDB</i>	<i>Total Lead</i>
MW-6-5'	2/26/2009	5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-6-8'	2/26/2009	8	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-7-5'	2/25/2009	5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-7-8'	2/25/2009	8	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-8-5'	2/23/2009	5	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-8-8'	2/23/2009	8	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---
MW-9-5.5'	3/25/2010	5.5	81	9.7 ^b	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	3.36
MW-9-8.5'	3/25/2010	8.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	2.45
MW-9-12'	3/25/2010	12	450	54 ^b	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	17.1
MW-9-17.5'	3/25/2010	17.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	1.85
B-6-5.25	7/13/2010	5.25	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.0050	<0.0050	2.18
B-6-8.0	7/13/2010	8	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.0050	<0.0050	2.72
B-6-9.5	7/13/2010	9.5	<25	<5.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.050	<0.0050	<0.0050	2.68
Shallow Soil (≤10 fbg) ESL^c:			2,500	180	180	0.27	9.3	4.7	11	8.4	---	---	---	110	0.48	0.044	750
Deep Soil (>10 fbg) ESL^d:			5,000	180	180	2.0	9.3	4.7	11	8.4	---	---	---	110	1.8	1.0	750

Notes:

All results in milligrams per kilogram (mg/kg) unless otherwise indicated.

fbg = feet below grade

TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015B

**HISTORICAL SOIL ANALYTICAL DATA
FORMER SHELL SERVICE STATION
2301-2307 LINCOLN AVENUE, ALAMEDA, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHmo</i>	<i>TPHd</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl- benzene</i>	<i>Total Xylenes</i>	<i>MTBE</i>	<i>DIPE</i>	<i>ETBE</i>	<i>TAME</i>	<i>TBA</i>	<i>1,2-DCA</i>	<i>EDB</i>	<i>Total Lead</i>
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TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015B

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before February 27, 2009, analyzed by EPA 8015M.

Benzene, toluene, ethylbenzene and total xylenes analyzed by EPA Method 8260B; before August 15, 2007, analyzed by EPA Method 8020.

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B, before August 15, 2007, analyzed by EPA Method 8020.

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method

EDB = 1,2-Dibromoethane analyzed by EPA

Lead analyzed by EPA Method 6010B

<x = Not detected at reporting limit x

--- = Not analyzed or no applicable ESL

ESL = Environmental screening level

a = Strongly aged gasoline or diesel range compounds are significant.

b = The sample chromatographic pattern for TPHd does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

c = San Francisco Bay Regional Water Quality Control Board commercial/industrial Environmental Screening Level for soil where groundwater is not a source of drinking water (Table B of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

d = San Francisco Bay Regional Water Quality Control Board commercial/industrial Environmental Screening Level for soil where groundwater is not a source of drinking water (Table D of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).