



**CONESTOGA-ROVERS  
& ASSOCIATES**

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www.CRAworld.com

**TRANSMITTAL**

DATE: November 1, 2011 REFERENCE NO.: 060204  
PROJECT NAME: 2301-2307 Lincoln Avenue, Alameda  
TO: Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**RECEIVED**  
*9:57 am, Nov 03, 2011*  
Alameda County  
Environmental Health

Please find enclosed:  Draft  Final  
 Originals  Other  
 Prints  
Sent via:  Mail  Same Day Courier  
 Overnight Courier  Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Monitoring Well and Soil Vapor Probe Destruction Work Plan

As Requested  For Review and Comment  
 For Your Use  \_\_\_\_\_  
 \_\_\_\_\_

**COMMENTS:**  
If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)  
Alan A. and Beverly M. Sebanc, Trustees, 2805 Ralston Avenue, Hillsborough, CA 94010  
Jake Torrens, AMEC Geomatrix, Inc., 2101 Webster Street, 12<sup>th</sup> Floor, Oakland, CA 94612

Completed by: Peter Schaefer Signed:

Filing: **Correspondence File**



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

**Denis L. Brown**  
**Shell Oil Products US**  
HSE – Environmental Services  
20945 S. Wilmington Ave.  
Carson, CA 90810-1039  
Tel (707) 865 0251  
Fax (707) 865 2542  
Email [denis.l.brown@shell.com](mailto:denis.l.brown@shell.com)

Subject: 2301-2307 Lincoln Avenue  
Alameda, California  
SAP Code 165255  
Incident No. 97767044  
Agency No. RO0002971

Dear Mr. Wickham,

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (707) 865-0251 with any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Denis L. Brown", is located below the word "Sincerely,".

Denis L. Brown  
Senior Program Manager



## **MONITORING WELL AND SOIL VAPOR PROBE DESTRUCTION WORK PLAN**

**FORMER SHELL SERVICE STATION  
2301-2307 LINCOLN AVENUE  
ALAMEDA, CALIFORNIA**

**SAP CODE           165255  
INCIDENT NO.    97767044  
AGENCY NO.      RO0002971**

**NOVEMBER 1, 2011  
REF. NO. 060204 (21)**  
This report is printed on recycled paper.

**Prepared by:  
Conestoga-Rovers  
& Associates**

5900 Hollis Street, Suite A  
Emeryville, California  
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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). The proposed well and vapor probe destructions are required for final case closure per Alameda County Environmental Health's (ACEH's) October 27, 2011 letter.

The site is a former Shell service station located at the northeastern corner of Lincoln Avenue and Oak Street in Alameda, California (Figure 1). The area surrounding the site is mixed commercial and residential. The current site layout (Figure 2) includes a parking lot and commercial building housing a convenience store, a cleaners (not a dry cleaner), and a laundromat. The former service station layout included a station building, two dispenser islands, and seven fuel underground storage tanks (USTs). According to the Alameda Fire Department, the seven USTs were removed from the site in June 1982.

## 2.0 WORK TASKS

### 2.1 PERMIT

CRA will obtain an appropriate drilling permit from Alameda County Public Works Agency.

### 2.2 HEALTH AND SITE SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

### 2.3 UTILITY CLEARANCE

CRA will mark proposed drilling locations, and the locations will be cleared through Underground Service Alert and a private line locator prior to drilling.

### 2.4 MONITORING WELL DESTRUCTION

CRA proposes to properly destroy eight monitoring wells (MW-1 through MW-3 and MW-5 through MW-9). The wells will be destroyed by backfilling with neat cement.

under pressure (pressure grouting). The well vaults will be removed, and the surface pavement patched with concrete to match the surrounding grade. CRA includes the well logs in Appendix A. The proposed scope of work will be performed under the supervision of a professional geologist or engineer.

## **2.5 SOIL VAPOR PROBE DESTRUCTION**

CRA proposes to properly destroy seven soil vapor probes (SVP-1 through SVP-4 and SVP-6 through SVP-8). The soil vapor probes will be destroyed by over-drilling using an air-/water-knife drill rig and backfilling with neat cement. The probe vaults will be removed, and the surface pavement patched with concrete to match the surrounding grade. CRA includes the well logs in Appendix A. The proposed scope of work will be performed under the supervision of a professional geologist or engineer.

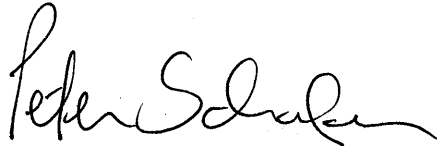
## **2.6 REPORT PREPARATION**

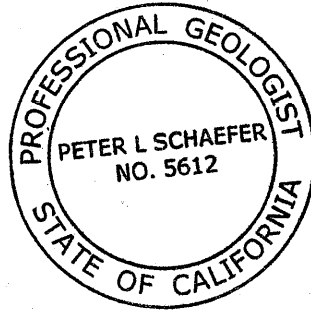
Following completion of the well destructions, CRA will submit a brief report documenting the activities.

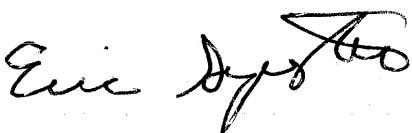
## **3.0 SCHEDULE**

CRA will implement the well destructions upon approval of this work plan by ACEH and receipt of appropriate permits. The work is tentatively scheduled for November 2011.

All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES

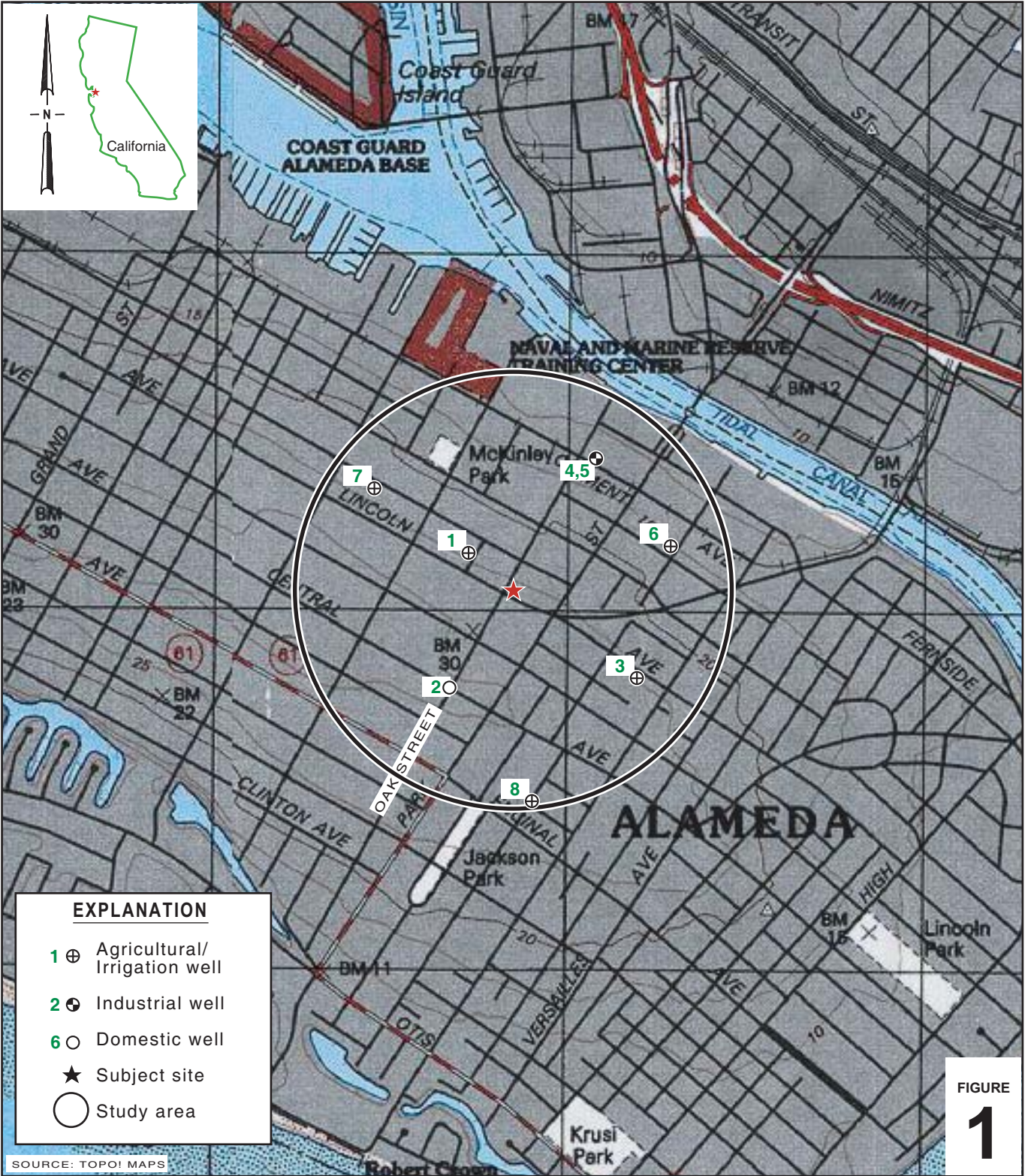
  
Peter Schaefer, CEG, CHG



  
Eric Syrstad, PG



FIGURES



I:\Shell\6-chars\0602--\060204-Alameda 2301-2307 Lincoln Ave\060204 FIGURES\060204 VICINITY.A1

### Former Shell Service Station


















2301-2307 Lincoln Avenue  
Alameda, California



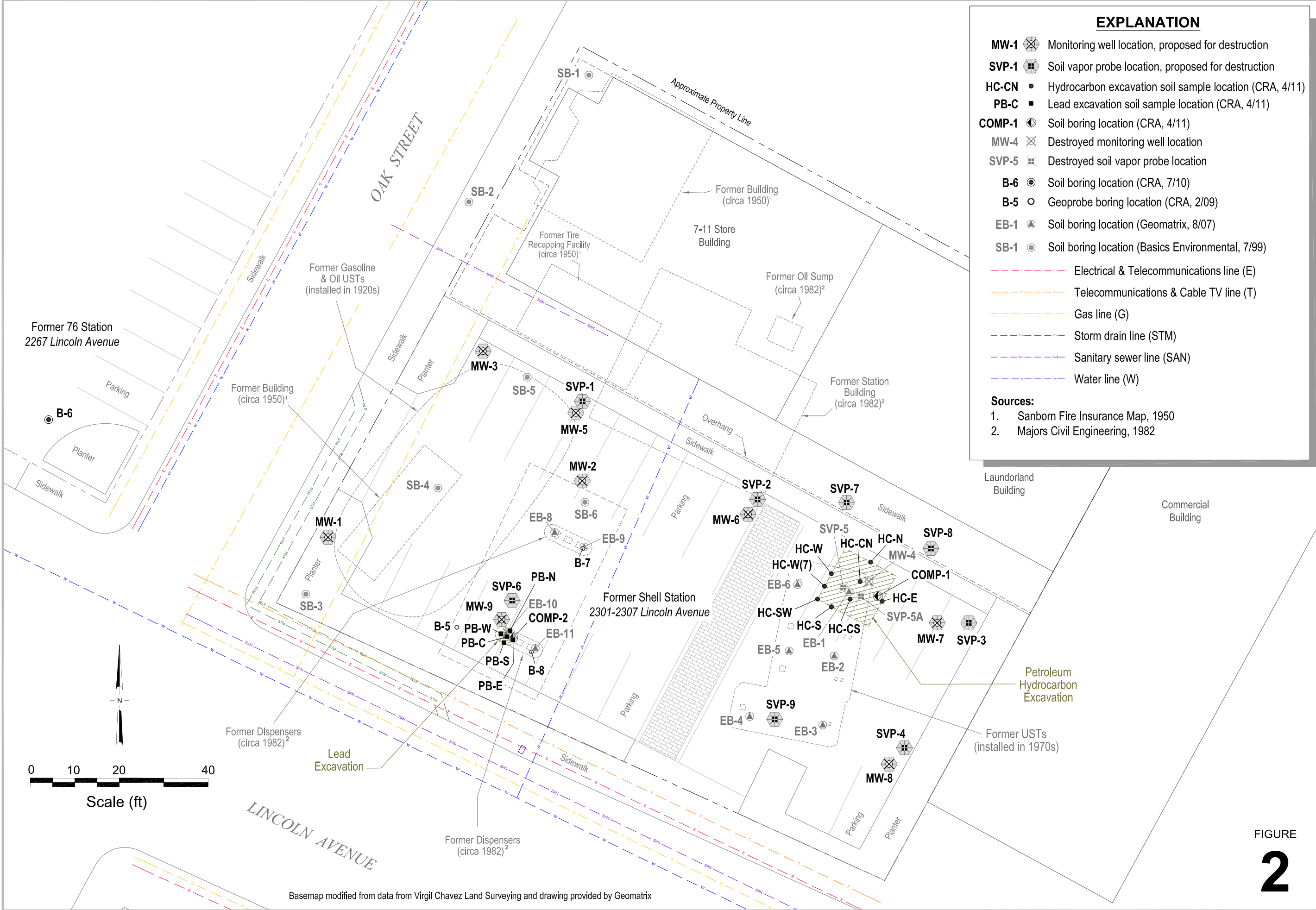
**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map

**EXPLANATION**

- MW-1**  Monitoring well location, proposed for destruction
- SVP-1**  Soil vapor probe location, proposed for destruction
- HC-CN**  Hydrocarbon excavation soil sample location (CRA, 4/11)
- PB-C**  Lead excavation soil sample location (CRA, 4/11)
- COMP-1**  Soil boring location (CRA, 4/11)
- MW-4**  Destroyed monitoring well location
- SVP-5**  Destroyed soil vapor probe location
- B-6**  Soil boring location (CRA, 7/10)
- B-5**  Geoprobe boring location (CRA, 2/09)
- EB-1**  Soil boring location (Geomatrix, 8/07)
- SB-1**  Soil boring location (Basics Environmental, 7/99)
-  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



I:\Shell\6-chars\0602--\060204-Alameda 2301-2307 Lincoln Ave\060204 FIGURES\060204 SITE PLAN.DWG

Basemap modified from data from Virgil Chavez Land Surveying and drawing provided by Geomatrix

FIGURE  
**2**



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

APPENDIX A

WELL LOGS

PROJECT: 2310-2307 LINCOLN AVENUE Alameda, California		<b>Log of Well No. MW-1</b>	
BORING LOCATION: N: 2106525.98; E: 6058071.59		TOP OF CASING ELEVATION AND DATUM: 28.61' MSL (NAVD 88)	
DRILLING CONTRACTOR: Vironex, Inc.		DATE STARTED: 8/15/07	DATE FINISHED: 8/15/07
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 18.0	SCREEN INTERVAL (ft.): 7.3-12.1
DRILLING EQUIPMENT: Geoprobe 66DT		DEPTH TO WATER (ft.): NA	FIRST COMPL. CASING: 8.4 1" Sch. 40 PVC
SAMPLING METHOD: Geoprobe DT-22 dual-tube sampling system [5' x 2.25"]		LOGGED BY: C. Payne	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: R. Schultz	REG. NO. CHG 833

DEPTH (feet)	SAMPLES			OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: 28.96' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot			
1					SANDY SILT (ML): very dark brown (10YR 2/2), moist, 60% fines, 40% fine sand, nonplastic, very soft	
2					POORLY GRADED SAND with GRAVEL (SP): dark brown (10YR 3/3), moist, 60% fine sand, 25% fine gravel, 5% fines	
3					POORLY GRADED SAND (SP): dark brown (10YR 3/3), moist, 95% fine sand, 5% fines	
4						
5					CLAYEY SAND (SC): dark yellowish brown (10YR 3/4), moist, 65% fine sand, 35% low plasticity fines	
6				0.7	POORLY GRADED SAND with SILT (SP-SM): dark yellowish brown (10YR 4/4), moist, 90% fine sand, 10% nonplastic fines	
7				1.1	CLAYEY SAND (SC) very dark gray (10GY 2.5/)	
8				23.2		
9				1804		
10				1800		
11				1872	wet	
12				82		
13				30.7	olive brown (2.5Y 4/3)	
14				11.7	dark yellowish brown (10YR 4/4)	
15				1.3 2.1		

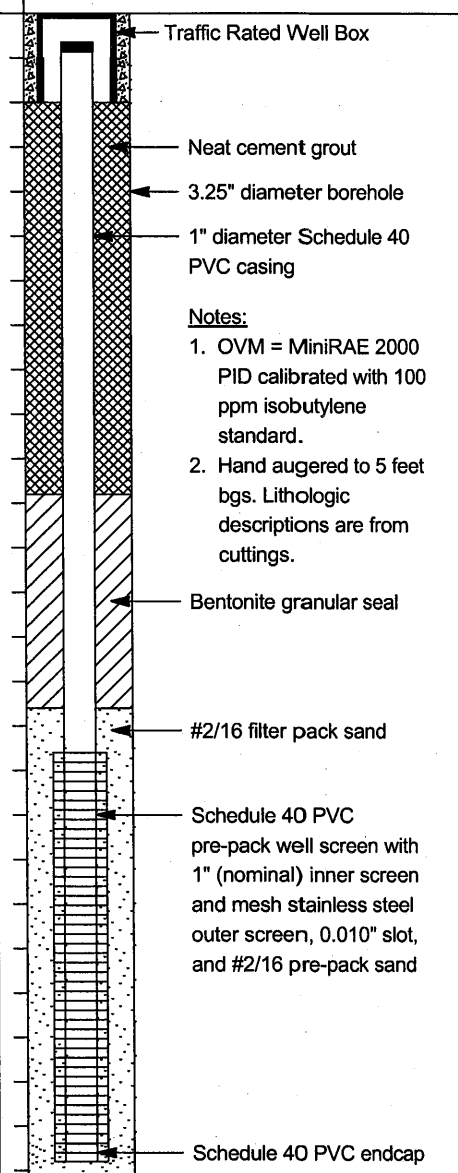
OAKWELLV\_PPACKTOC (REV. 9/2007)

## Log of Well No. MW-1 (cont'd)

DEPTH (feet)	SAMPLES				OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot	Foot			
16					1.4	POORLY GRADED SAND with SILT (SP-SM): cont'd	<p><u>Notes:</u></p> <ol style="list-style-type: none"> <li>OVM = MiniRAE 2000 PID calibrated with 100 ppm isobutylene standard.</li> <li>Hand augered to 5 feet bgs. Lithologic descriptions are from cuttings.</li> <li>Lithologic descriptions are from adjacent companion boring, located approximately 3' south of well MW-1.</li> <li>Boring location coordinates based on the California Coordinate System NAD 83, Zone III.</li> </ol>
17					1.4		
18		X			1		
18						Bottom of boring at 18.0 feet	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							

PROJECT: 2310-2307 LINCOLN AVENUE Alameda, California		<b>Log of Well No. MW-2</b>	
BORING LOCATION: N: 2106538.71; E: 6058128.88		TOP OF CASING ELEVATION AND DATUM: 28.94' MSL (NAVD 88)	
DRILLING CONTRACTOR: Vironex, Inc.		DATE STARTED: 8/15/07	DATE FINISHED: 8/15/07
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 13.1	SCREEN INTERVAL (ft.): 8.3-12.9
DRILLING EQUIPMENT: Geoprobe 66DT		DEPTH TO WATER (ft.): NA	COMPL.: 9.3
SAMPLING METHOD: Geoprobe DT-22 dual-tube sampling system [5' x 2.25"]		LOGGED BY: C. Payne	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: R. Schultz	REG. NO. CHG 833

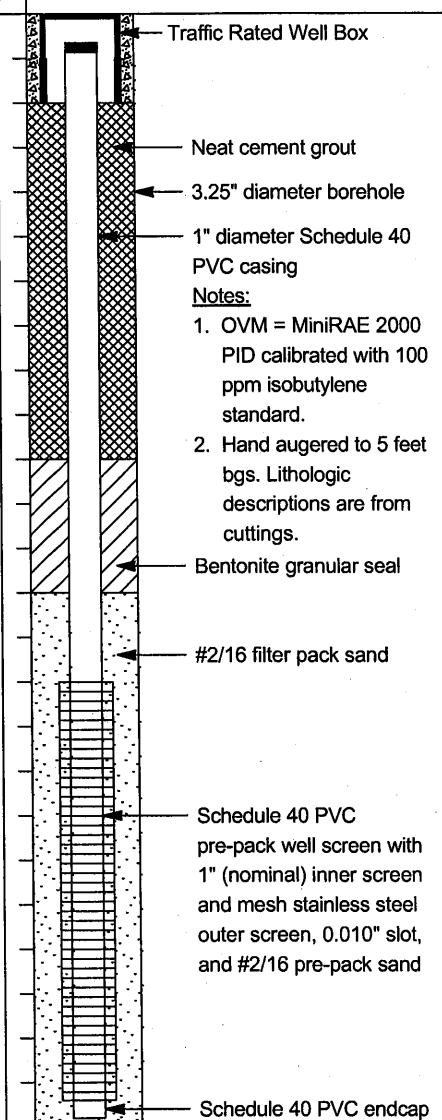
DEPTH (feet)	SAMPLES			OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: 29.39' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot			
0					ASPHALTIC CONCRETE: (4 inches thick)	
1					POORLY GRADED GRAVEL with SILT and SAND (GP-GM): dark grayish brown (10YR 4/2), moist, 60% fine to coarse gravel, 30% fine to coarse sand, 10% nonplastic fines [FILL]	
2					POORLY GRADED SAND with SILT and GRAVEL (SP-SM): dark brown (10YR 3/3), moist, 60% fine to coarse sand, 30% fine to coarse gravel, 10% nonplastic fines, contains brick debris [FILL]	
3				0		
4				0		
5				0	contains glass debris, bone and shell fragments, and wood debris	
6						
7						
8						
9						
10					POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC): wet	
11					POORLY GRADED SAND (SP): brown (10YR 4/3), wet, 95% fine to coarse sand, 5% fines	
12						
13					Bottom of boring at 13.0 feet	
14						
15						



OAKWELLV\_PPACCTOC (REV. 9/2007)

PROJECT: 2310-2307 LINCOLN AVENUE Alameda, California		<b>Log of Well No. MW-3</b>	
BORING LOCATION: N: 2106567.94; E: 6058106.52		TOP OF CASING ELEVATION AND DATUM: 28.39' MSL (NAVD 88)	
DRILLING CONTRACTOR: Vironex, Inc.		DATE STARTED: 8/15/07	DATE FINISHED: 8/15/07
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 13.0	SCREEN INTERVAL (ft.): 7.5-12.2
DRILLING EQUIPMENT: Geoprobe 66DT		DEPTH TO WATER (ft.): NA	FIRST COMPL. CASING: 8.4 1" Sch. 40 PVC
SAMPLING METHOD: Geoprobe DT-22 dual-tube sampling system [5' x 2.25"]		LOGGED BY: C. Payne	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: R. Schultz	REG. NO. CHG 833

DEPTH (feet)	SAMPLES		OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample Blows/ Foot			
				Surface Elevation: 29.09' MSL	
0				ASPHALTIC CONCRETE: (4 inches thick)	
1			0	POORLY GRADED GRAVEL with SILT and SAND (GP-GM): dark grayish brown (10YR 4/2), moist, 60% fine to coarse gravel, 30% fine to coarse sand, 10% nonplastic fines [FILL]	
2				POORLY GRADED SAND with SILT and GRAVEL (SP-SM): dark brown (10YR 3/3), moist, 60% fine to coarse sand, 30% fine to coarse gravel, 10% nonplastic fines [FILL]	
3			0	POORLY GRADED SAND (SP): dark yellowish brown (10YR 4/4), moist, 95% fine sand, 5% fines	
4					
5			0	dark yellowish brown (10YR 3/4)	
6				CLAYEY SAND (SC)	
7			0	CLAYEY SAND (SC)	
8				CLAYEY SAND (SC)	
9					
10			0	mottled dark yellowish brown (10YR 3/4) and brown (10YR 5/3) wet	
11					
12			0	brown (10YR 5/3)	
13			0		
13.1				Bottom of boring at 13.1 feet	







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 Emeryville, CA 94608  
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 Fax: 510-420-9170

# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-5
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	18-Feb-09
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	24-Feb-09
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Direct-push & hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	10", 2" below 18 fbg.	<b>SCREENED INTERVALS</b>	8 to 18 fbg
<b>LOGGED BY</b>	E. Reinhart	<b>DEPTH TO WATER (First Encountered)</b>	10.00 fbg
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>	Air knifed to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							<b>ASPHALT</b> Silty SAND (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 75% fine to medium sand.	0.3	<p>Portland Type I/II            4" diam., Schedule 40 PVC            Bentonite Seal            Monterey Sand #2/12            4"-diam., 0.020" Slotted Schedule 40 PVC</p>
0.0									
0.0		MW-5- 5'		5			@ 5' - strong brown (7.5YR 4/6); 30% silt, 70% fine to medium sand.		
0.0		MW-5- 8'					@ 8' - moist.		
0.0							@ 9- wet; 25% silt, 75% fine to medium sand.		
0.0				10	SM		@ 10' - brown (7.5YR 4/4); 30% silt, 70% fine sand.		
0.0									
0.0									
0.0				15			@ 14' - yellowish brown (10YR 5/4);		
0.0				20				20.0	

WELL LOG (PID) \SHELL16-CHARS\060204-10648E9-1060204-GINT.GPJ DEFAULT.GDT 4/1/09

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 Emeryville, CA 94608  
 Telephone: 510-420-0700  
 Fax: 510-420-9170

# BORING / WELL LOG

<b>CLIENT NAME</b>	<u>Shell Oil Products US</u>	<b>BORING/WELL NAME</b>	<u>MW-5</u>
<b>JOB/SITE NAME</b>	<u>Former Shell Service Station</u>	<b>DRILLING STARTED</b>	<u>18-Feb-09</u>
<b>LOCATION</b>	<u>2301-2307 Lincoln Avenue, Alameda, CA</u>	<b>DRILLING COMPLETED</b>	<u>24-Feb-09</u>

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0									
0.0									
0.0							@ 23' - 30% silt, 70% fine to medium sand.		
0.0				25	SM				
0.0							@ 28' - 40% silt, 60% fine sand.		
0.0							@ 29' - brown (10YR 4/3); 20% silt, 80% fine to medium sand.		
0.0				30			@ 30' - brown (10YR 5/3).		
		MW-5 GW@31'-34'					@ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0	
								34.0	Bottom of Boring @ 34 fbg

WELL LOG (PID) I:\SHELL\US-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09



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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-6
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	19-Feb-09
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	21-Feb-09
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Direct-push & hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	10", 2" below 18 fbg.	<b>SCREENED INTERVALS</b>	8 to 18 fbg
<b>LOGGED BY</b>	E. Reinhart	<b>DEPTH TO WATER (First Encountered)</b>	9.00 fbg
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>	Air knifed to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0							<b>ASPHALT</b> <b>Silty SAND (SM)</b> ; very dark brown (7.5YR 2.5/3); dry; 25% silt, 75% fine to medium sand.	0.3	Portland Type I/II 4" diam., Schedule 40 PVC Bentonite Seal
0.0		MW-6- 5'		5			@ 5' - yellowish brown (10YR 5/4).		
0.0		MW-6- 8'					@ 7' - moist.		
0.0							@ 9' - wet.		
0.0				10	SM		@ 10' - 20% silt, 80% fine to medium sand.		Monterey Sand #2/12 4"-diam., 0.020" Slotted Schedule 40 PVC
0.0							@ 14' - 20% silt, 80% fine sand.		
0.0				15			@ 15' - 20% silt, 80% fine to medium sand.		
0.0				20				20.0	

WELL LOG (PID) I:\SHELL18-CHARS\060204-10648E9-1060204-GINT.GPJ DEFAULT.GDT 4/1/09

Continued Next Page



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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	MW-6
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	19-Feb-09
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	21-Feb-09

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0							@ 20' - dark yellowish brown (10YR 4/4); 25% silt, 75% fine to medium sand.		
0.0									
0.0				25	SM		@ 25' - light olive brown (2.5Y 5/4); 25% silt, 75% fine sand.		
0.0							@ 27' - no recovery.		
0.0							@ 29' -dark grayish brown (2.5Y 4/2); 20% silt, 80% fine to medium sand.		
0.0				30					
		MW-6 GW@31 -34'					@ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0	
								34.0	Bottom of Boring @ 34 fbg

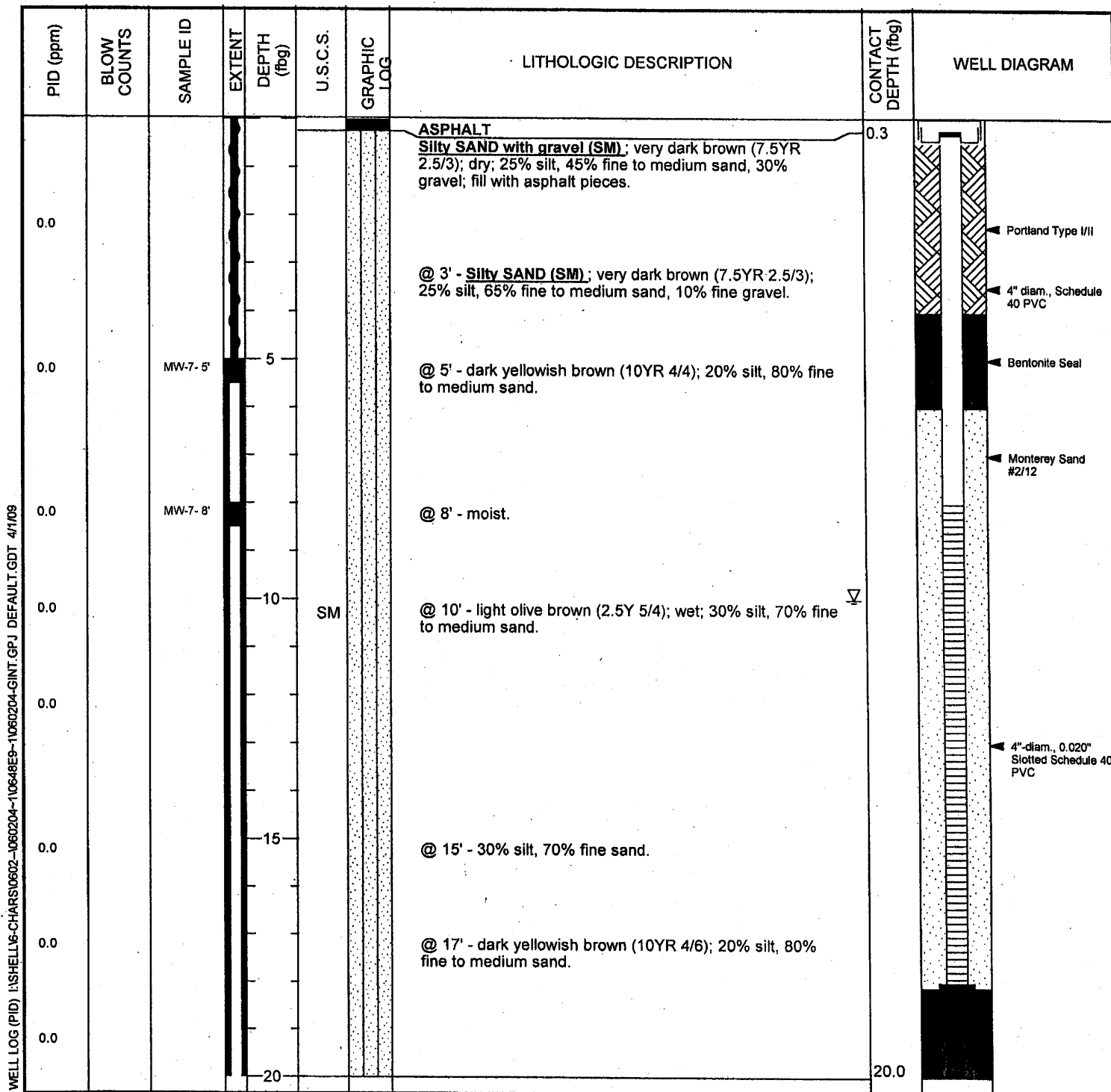
WELL LOG (PID) I:\SHELL16-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09



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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	MW-7
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	17-Feb-09
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	25-Feb-09
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Direct-push & hollow-stem auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	10", 2" below 18 fbg.	SCREENED INTERVALS	8 to 18 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered)	10.00 fbg
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA
REMARKS	Air knifed to 5 fbg		



WELL LOG (PID) I:\SHELL\6-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09

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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-8
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	17-Feb-09
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	23-Feb-09
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Direct-push & hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	10", 2" below 18 fbg.	<b>SCREENED INTERVALS</b>	8 to 18 fbg
<b>LOGGED BY</b>	E. Reinhart	<b>DEPTH TO WATER (First Encountered)</b>	9.00 fbg
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>	Air knifed to 5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0							<b>ASPHALT</b> Silty SAND (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 65% fine to medium sand, 10% fine gravel.	0.3	<p>Portland Type I/II            4" diam. Schedule 40 PVC            Bentonite Seal            Monterey Sand #2/12            4" diam. 0.020" Slotted Schedule 40 PVC</p>
0.0		MW-8-5'		5			@ 5' - brown (10YR 4/3).		
0.0							@ 6' - 30% silt, 70% fine sand.		
0.4							@ 7' - moist.		
0.0		MW-8-8'					@ 9' - wet.		
0.0				10	SM		@ 10' - strong brown (7.5YR 5/6).		
0.0							@ 15' - 30% silt, 70% fine to medium sand.		
1.3				15			@ 17' - brown (7.5YR 4/2).		
0.0									
0.0				20				20.0	

WELL LOG (PID) I:\SHELL\US-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09

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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	MW-8
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	17-Feb-09
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	23-Feb-09

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.4							@ 20' - olive brown (2.5Y 4/4).		
0.0									
0.0				25	SM		@ 25' - 15% silt, 85% fine to medium sand.		
0.0							@ 27' - dark gray (2.5Y 4/1); 45% silt, 55% fine to medium sand.		
0.0							@ 28' - 30% silt, 70% fine to medium sand.		
0.0							@ 29' - olive brown (2.5Y 4/3).		
0.0				30			@ 30' - brown (10YR 4/3); 20% silt, 80% fine to medium sand.		
		MW-8 GW@31'-34'					@ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0	
								34.0	Bottom of Boring @ 34 fbg

WELL LOG (PID) I:\SHELL\116-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09

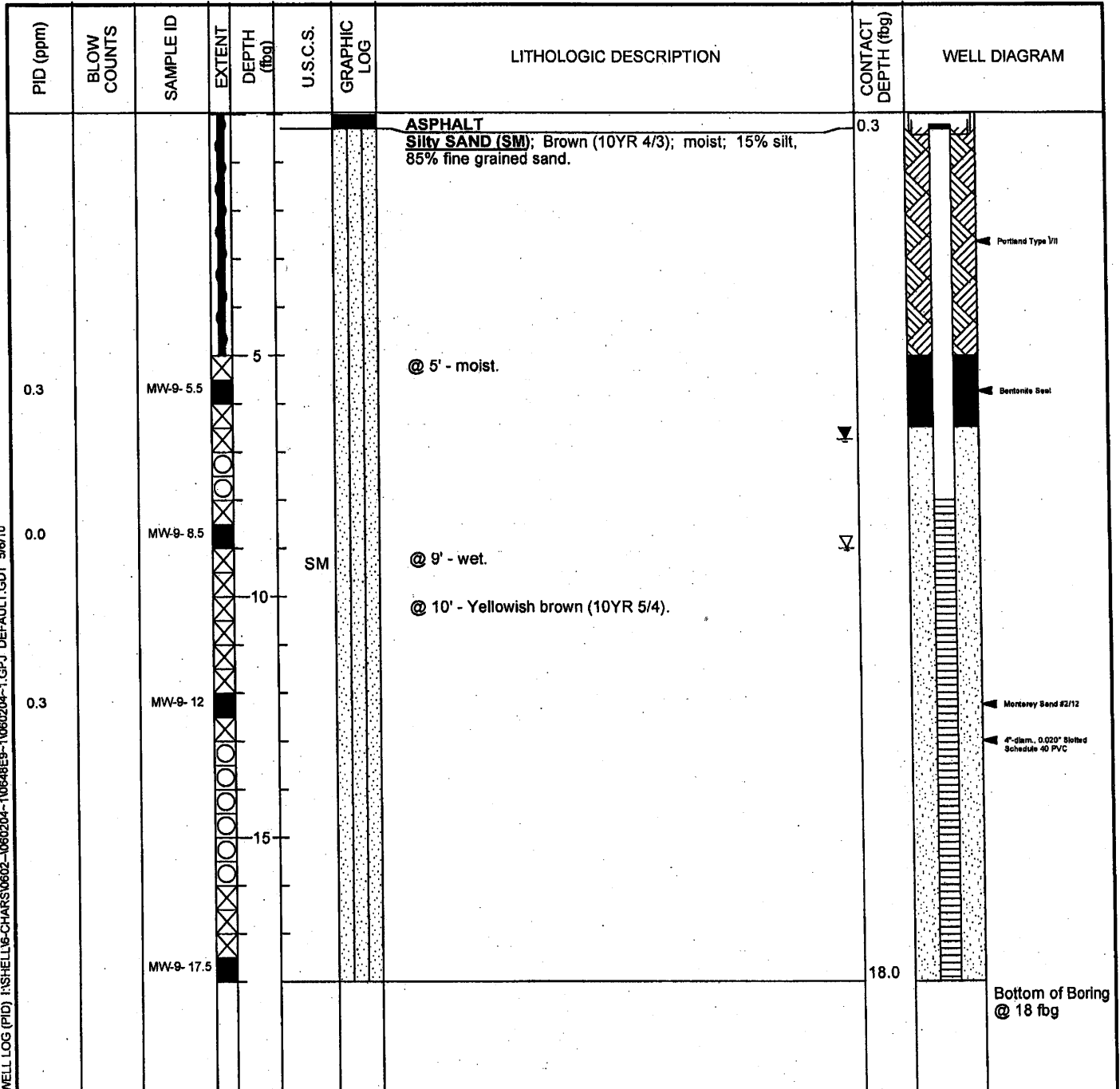




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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	MW-9
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	23-Mar-10
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	25-Mar-10
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	21-Apr-10 (72 gallons)
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	26.04 ft above msl
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	25.70 ft above msl
<b>BORING DIAMETER</b>	10"	<b>SCREENED INTERVALS</b>	8 to 18 fbg
<b>LOGGED BY</b>	S. Lewis	<b>DEPTH TO WATER (First Encountered)</b>	9.00 fbg
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	6.74 fbg
<b>REMARKS</b>			



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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	SVP-1
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	19-Feb-09
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	19-Feb-09
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Air-knife	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	3"	<b>SCREENED INTERVALS</b>	4.9 to 5 fbg
<b>LOGGED BY</b>	E. Reinhart	<b>DEPTH TO WATER (First Encountered)</b>	NA
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0				0.3		ASPHALT	ASPHALT	0.3	<p>Portland Type I/II</p> <p>Bentonite Seal</p> <p>Monterey Sand #2/12</p> <p>High Density Porous Polyethylene Soil Vapor Implant</p> <p>Bottom of Boring @ 5 fbg</p>
				5.0	SM	Silty SAND (SM): very dark brown (7.5YR 2.5/3); dry; 25% silt, 75% fine to medium sand.	5.0		

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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-2
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	19-Feb-09
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	19-Feb-09
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3"	SCREENED INTERVALS	4.9 to 5 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0					SM		<b>ASPHALT</b> <b>Silty SAND (SM)</b> ; very dark brown (7.5YR 2.5/3); dry; 25% silt, 65% fine to medium sand, 10% fine gravel.	0.3	<ul style="list-style-type: none"> <li>Portland Type I/II</li> <li>Bentonite Seal</li> <li>Monterey Sand #2/12</li> <li>High Density Porous Polyethylene Soil Vapor Implant</li> <li>Bottom of Boring @ 5 fbg</li> </ul>
				5				5.0	

WELL LOG (PID) I:\SHELL\16-CHARS\0602-1060204-10648E9-1060204-GINT.GPJ DEFAULT.GDT 4/1/09



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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-3
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	18-Feb-09
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	18-Feb-09
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3"	SCREENED INTERVALS	4.9 to 5 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0							<b>ASPHALT</b> Silty SAND with gravel (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 45% fine to medium sand, 30% gravel; fill, asphalt pieces 1-3", garbage.	0.3	<ul style="list-style-type: none"> <li>Portland Type I/II</li> <li>Bentonite Seal</li> <li>Monterey Sand #2/12</li> <li>High Density Porous Polyethylene Soil Vapor Implant</li> <li>Bottom of Boring @ 5 fbg</li> </ul>
				5	SM		@ 2' - Silty SAND (SM); 25% silt, 65% fine to medium sand, 10% fine gravel.	5.0	

WELL LOG (PID) \SHELL\US-CHARS\0602-1060204-GINT.GPJ DEFAULT.GDT 4/1/09



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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	SVP-4
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	25-Mar-10
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	25-Mar-10
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Air-knife	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	3"	<b>SCREENED INTERVALS</b>	2-2.1, 5-5.1
<b>LOGGED BY</b>	S. Lewis	<b>DEPTH TO WATER (First Encountered)</b>	NA
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0				5	SM		<b>ASPHALT</b> <b>Silty SAND (SM)</b> ; Very dark brown (7.5YR 2.5/3); dry; 25% silt, 65% fine to medium grained sand, 10% fine gravel.	0.3	

WELL LOG (PID) I:\SHELL\6-CHARS\0602-060204-1\0648E9-1\060204-1.GPJ DEFAULT.GDT 5/6/10



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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	SVP-6
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	23-Mar-10
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	23-Mar-10
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Air-knife	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	4"	<b>SCREENED INTERVALS</b>	NA
<b>LOGGED BY</b>	S. Lewis	<b>DEPTH TO WATER (First Encountered)</b>	NA
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						ASPHALT	0.3	<p>Bentonite Seal</p> <p>Monteary Sand #212 1"-diam., 0.020" Slotted Schedule 40 PVC</p> <p>Bottom of Boring @ 5.1 fbg</p>
			5	SM		Silty SAND (SM); Brown (10YR 4/3); dry; 15% silt, 85% fine sand.	5.1	

WELL LOG (PID) I:\SHELL\6-CHARS\0602-060204-1\0648E9-1\060204-1.GPJ DEFAULT.GDT 5/6/10



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# BORING / WELL LOG

<b>CLIENT NAME</b>	Shell Oil Products US	<b>BORING/WELL NAME</b>	SVP-7
<b>JOB/SITE NAME</b>	Former Shell Service Station	<b>DRILLING STARTED</b>	23-Mar-10
<b>LOCATION</b>	2301-2307 Lincoln Avenue, Alameda, CA	<b>DRILLING COMPLETED</b>	23-Mar-10
<b>PROJECT NUMBER</b>	060204	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling, C-57 #485165	<b>GROUND SURFACE ELEVATION</b>	NA
<b>DRILLING METHOD</b>	Air-knife	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	4"	<b>SCREENED INTERVALS</b>	NA
<b>LOGGED BY</b>	S. Lewis	<b>DEPTH TO WATER (First Encountered)</b>	NA
<b>REVIEWED BY</b>	P. Schaefer	<b>DEPTH TO WATER (Static)</b>	NA
<b>REMARKS</b>			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.3			<b>CONCRETE</b>	0.3	<p>Bentonite Seal</p> <p>Monterey Sand #2/12 1"-diam., 0.020" Slotted Schedule 40 PVC</p> <p>1"-diam., 0.020" Slotted Schedule 40 PVC Monterey Sand #2/12</p> <p>Bottom of Boring @ 5.4 fbg</p>
			5	SM		<b>Silty SAND (SM);</b> Very dark grayish brown (10YR 5/3); dry; 15% silt, 80% fine grained sand, 5% fine gravel.	5.4	

WELL LOG (PID) [:\SHELL\B-CHARS\0602-060204-10648ES-1060204-1.GPJ DEFAULT.GDT 5/8/10



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# BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-8
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	23-Mar-10
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	23-Mar-10
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVALS	NA
LOGGED BY	S. Lewis	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft)	WELL DIAGRAM
				5	SM		<p><b>Silty SAND with Gravel (SM)</b>; Brown (10YR 4/3); dry; 20% silt, 60% fine grained sand, 20% fine gravel.</p> <p><b>Silty SAND (SM)</b>; 15% silt, 85% fine sand.</p>	5.4	<p>Bentonite Seal</p> <p>Monterey Sand #212 1"-diam., 0.020" Slotted Schedule 40 PVC</p> <p>1"-diam., 0.020" Slotted Schedule 40 PVC</p> <p>Bottom of Boring @ 5.4 ft</p>

WELL LOG (PID) I:\SHELL\6-CHARS\0602-060204-10648E9-1060204-1.GPJ DEFAULT.GDT 5/8/10