

5900 Hollis Street, Suite A Emeryville, California 94608

Telephone: (510) 420-0700 Fax: (510) 420-9170

www.CRAworld.com

			IRAN	SMITTA	L
DATE: Jul	ly 12, 2012			ERENCE NO.:	240472
To: Jer	rry Wickha	m	PRO	JECT NAME:	105 Fifth Street, Oakland
T 1	han with the	inty Environmer	ntal Health		RECEIVED
_113	31 Harbor	Bay Parkway, Su	iite 250		10:55 am, Jul 16, 2012
Al	ameda, Cal	lifornia 94502-65	77		Alameda County Environmental Health
Please find end	closed:	Draft Originals Prints		Final Other	
Sent via:	8	Mail Overnight Cou	ırier 🛚	Same Day OtherC	Courier GeoTracker and Alameda County FTP
QUANTIT				DESCRI	PTION
1 ☑ As Reque ☐ For Your	ested	Destruction Wo		v and Comme	nt
COMMENTS If you have ar (510) 420-3319	ny question	s regarding the	content of t	his documen	t, please contact Peter Schaefer at
Copy to:	Arthur	Brown, Shell Oil R. & Mary A. H s, CA 94024			copy) , Trustees et al, 820 Loyola Drive, Los
Completed by	7: Peter S	chaefer		Signed:	Peter Sch. L.
Filing: Corre	espondence	File		1 1 1 1 1	



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

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

Re:

Shell-branded Service Station

105 Fifth Street Oakland, California SAP Code 135700 Incident No. 98995757 ACEH Case No. RO0000487

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.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown

Senior Program Manager



WELL DESTRUCTION WORK PLAN

SHELL-BRANDED SERVICE STATION 105 FIFTH STREET OAKLAND, CALIFORNIA

SAP CODE

135700

INCIDENT NO.

98995757

AGENCY NO.

RO0000487

Prepared by: Conestoga-Rovers & Associates

5900 Hollis Street, Suite A Emeryville, California U.S.A. 94608

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FIGURE 1

VICINITY MAP

FIGURE 2

SITE PLAN

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APPENDIX A

WELL AND VAPOR PROBE LOGS

1.0 <u>INTRODUCTION</u>

Conestoga-Rovers & Associates (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). The proposed well destructions are required for final case closure per Alameda County Environmental Health's (ACEH's) July 3, 2012 letter.

The site is an active Shell-branded Service Station located on the western corner of Fifth Street and Oak Street in Oakland, California (Figure 1). Currently, the site layout consists of a kiosk, four underground storage tanks, and two dispenser islands (Figure 2). The area surrounding the site is of mixed commercial and residential use.

2.0 WORK TASKS

2.1 PERMITS

CRA will obtain an appropriate permit from Alameda County Public Works Agency and an encroachment permit from the City of Oakland.

2.2 <u>HEALTH AND SITE SAFETY PLAN (HASP)</u>

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 <u>UTILITY CLEARANCE</u>

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

2.4 MONITORING WELL AND VAPOR PROBE DESTRUCTION

CRA proposes to properly destroy six monitoring wells (MW-1 through MW-6), nine soil vapor probes (SVP-1 through SVP-6, SVP-8, SVP-9, and SVP-10), and one near sub-slab soil vapor probe (SVP-7). The monitoring wells will be destroyed by backfilling with neat cement under pressure (pressure grouting). The soil vapor probes will be destroyed by drilling out the probe boring with an air-knife. The near sub-slab soil

vapor probe will be destroyed by drilling out the probe tubing with a hammer drill. The well and soil vapor probe vaults will be removed, and the surface pavement will be patched with concrete to match the surrounding grade. CRA includes the well and probe logs in Appendix A. The proposed scope of work will be performed under the supervision of a professional geologist or engineer.

2.5 <u>REPORT PREPARATION</u>

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 receipt of the appropriate permits.

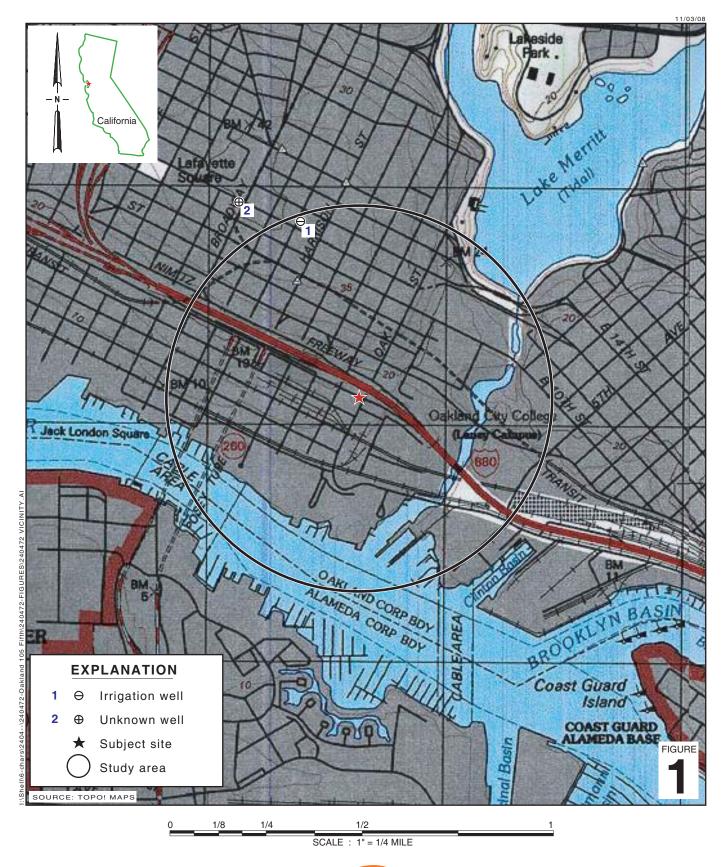
All of Which is Respectfully Submitted, CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

PETER L SCHAEFER TO NO. 5612

Eric A. Syrstad, PG

FIGURES



Shell-branded Service Station

105 Fifth Street Oakland, California



Vicinity Map



Shell-branded Service Station
105 Fifth Street
Oakland, California

FIGURE

EXPLANATION SVP-1 Soil vapor probe location (2009-2012); proposed for destruction MW-1 Monitoring well location; proposed for Lakeside Recycling Oakland Inner Harbor **T-1** ★ Tank backfill well location (1,800 ft.) Soil boring location (2002) Soil boring location (2001) STREET SB-1 Soil boring location (1998) △ Soil sample location Planter Location of Sensitive Receptor Relative to Site FOURTH Overhead electrical line (OE) (Oakland Inner Harbor - 1,800 ft. S 29° W) Shell Station Electrical line (E) 105 Fifth St. SVP-5 SVP-4 Telecommunication line (T) STREET Unknown utility line SB-2 € SVP-7 Water line (W) MW-1 Storm drain line (STM) FIFTH Islands Sanitary sewer line (SAN) SVP-8 SVP-6 Flow direction Conley Consulting D-4 Group SB-3 Manhole SB-4 Vault Box Cho Kwan, CPA SVP-3 MW-5 Hong Lih Food 00 00 Storm drain inlet Products, Inc. SVP-9 00 🗆 🗆 0 Feet below grade Sierra Salon **Note:** All utility locations are approximate ○○USTs□ □。) SVP-1 VB Vacant Office SVP-10----12"Ø SD Residential Use, Second Floor & SB-11 MW-6 Above SB-12 • SB-10 ° SB-9 SB-8 12"Ø SS FL = 9.14 fbg | MH FL = 4.32 fbg ____ _ _ _ _ 24"Ø SD 24"Ø SD 24"Ø SD OAK STREET SB-6 SB-7 ⊚ HIGHWAY 880 (ELEVATED) Cash & Carry W&H Wholesale Juice Appeal Smart Food Service ON-RAMP Produce & Food LLC. FOURTH STREET MW-4 880 80

Scale (ft)

APPENDIX A

WELL AND VAPOR PROBE LOGS



Cambria Environmental Technology, Inc. 5900 Hollis Street, Sulte A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

LOCATI PROJECT DRILLE DRILLIN BORING LOGGE	E NAME ON OT NUME R IG METH B DIAME D BY _	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Equiva Services LLC pak105 105 Fifth Street, Oakland, California 244-0472 Gregg Drilling Hollow-stern auger 10" T. Buggle Darryk Atalde Hand augered to 5' bgs.					BORING/WELL NAME MW-1 DRILLING STARTED 14-May-99 DRILLING COMPLETED 14-May-99 WELL DEVELOPMENT DATE (YIELD) NA GROUND SURFACE ELEVATION 15.49' ft above msl SCREENED INTERVALS 4 to 24 fbg DEPTH TO WATER (First Encountered) 15.8 fbgNA DEPTH TO WATER (Static) NA				
PID (ppm)	BLOW	SAMPLEID	EXTENT	ОЕРТН (fbg)	U.S.C.S.	GRAPHIC LOG	LITH	OLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL	. DIAGRAM	
3,5	2 3 8 13 15 20 N/A N/A	MW-1@ 5.5	5		SP		SAND (SAND); brogravel; low plasticity 2 4' - 5% slit, 95% s 2 4' - 5% clay, 5% s	silt, 90% sand.	▼		Portland Type /ii Bentonite Seal Monterey Sand #3 4"-diam., 0.010" Slotted Schedule 40 PVC	
0 0	7 10 20	MW-1 @20).5	-20-								
0	3/18	NW-1 @2	5.6	25-				· · · · · · · · · · · · · · · · · · ·	25.5		Bottom of Boring @ 25,5 fbg	



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LOCATION PROJECT DRILLEN DRILLIN BORING LOGGE	E NAME ON OT NUMB R IG METH DIAMET DIBY VED BY	00 10 ER 20 ER 10	ak105 05 Fit 44-04 Gregg Iollow 0" . Bug Darryk	th Stre 72 Drilling -stem a	et, Oal	iand, C	California	BORING/WELL NAME MW-2 DRILLING STARTED 14-May-99 DRILLING COMPLETED 14-May-99 WELL DEVELOPMENT DATE (YIELD) NA GROUND SURFACE ELEVATION 13.92' ft above ms) SCREENED INTERVALS 4 to 24 fbg DEPTH TO WATER (First Encountered) 14.0 fbgNA				\\\\\\\\\\\\
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHO	DLOGIC DESCRIPTION		CONTACT DEPTH (fbg)	WELL	DIAGRAM
402 279	4 4 6 10 15 26	MW-2 @5.1		- 5	ML SP		plasiticity; high estin	lack; soft; 60% sllt, 40% sand nated permeability. rey-black; soft; moist, 30% sll r; high estimated permeability rust, grey; soft; wet; 5% slit, ; high estimated permeability	t, 70%	7.5		Portland Type I/II Bentonite Seal Monterey Sand #3
134	17 30 50 50 8 8	MW-2 @2		-15	SP							0.010" Slotted Schedule 40 PVC
LOG (PID) MICCAMENVDC/SONOMA SHELLMONLAND TO FIF I NUMBER CONTRACTOR (PID) MICCAMENTAL (PI	2 2 3	MW-2 @	25.5	25-	- GM	10000000000000000000000000000000000000	Silty SAND (ML); silt, 80% sand; low	brown, rust; soft; wet; 5% clar plasiticity; high estimated pe	y, 15% rmeability,	22.5		Bottom of Boring @ 25.5 fbg

PAGE 1 OF 1



Cambria Environmental Technology, Inc. 5900 Hollis Street, Sulte A Emeryville, CA 94608 Telephone: 510-420-0700 Fax: 510-420-9170

CLIENT	JENT NAME Equiva Services LLC						BORING/WELL NAME MW-3					
	E NAME		k108			·		DRILLING STARTED 14-May-99				
LOCATI	ON				et, O	kland, (California	DRILLING COMPLETED 14-May-99				
PROJEC	CT NUME	BER24	<u>4-04</u>	72				WELL DEVELOPMENT DATE (YIELD) NA				
DRILLE				Drilling				GROUND SURFACE ELEVATION		<u>14.46' 1</u>	<u>tabove ma</u>	<u> </u>
DRILLIN	IG METH			-stem	auger	(Limited	d Access Rig)					
BORING	3 DIAME.							SCREENED INTERVALS 5 to 25 fbg				
LOGGE	_		Bug					DEPTH TO WATER (First Encoun	tered)		fbgNA	<u> </u>
REVIEW	VED BY_			Ataid				DEPTH TO WATER (Static)		NA		¥
REMAR	KS _	He	and s	ugere	ed to 5	bgs.			··········			
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHO	DLOGIC DESCRIPTION		CONTACT DEPTH (fbg)	WELL	. DIAGRAM
⊏	"ō	88	삐	-		ō				8일	г -Ф	
	N/A						<u>ASPHALT</u>			0.B		
	N/A			-5-	SP		Silty SAND (SM); bl low plasiticity; high e	ack; soft; moist; 30% silt, 70% sand; estimated permeability.				Portland Type / Bentonite Seal Monterey Sand #3
28.7	N/A N/A	MW-3 @6.5	Ž		_		SAND (SP); brown	rust; soft; molst; 5% silt, 95% sand;		7.5		Stille #5
71.1	AIM AIM AIM	MW-3 @11.5	X	- 10 			low plasiticity; high e	astimated permeability.	五			
	n/a n/a n/a	MW-3 @18.6	X	 15 	SP			r, rust; soft-medium; wet.				4"-diam., 0.010" Slotted Schedule 40 PVC
57.1	NA NA NA	MW-3 @21.	XX		7		@ 17.5 - brown, gre silt, 80% sand; med	ey, rust; medium; wet; 10% clay,10% llum-high estimated permeability.	. 1			
EL LOG (PID) MOCAMENVOCSONOMASHELL	N/A N/A N/A	MW-3 @25.	•	- - 25-	 					25.0		Bottom of Boring @ 25 fbg
31 LOG (PID) WI												



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BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME MW-4
JOB/SITE NAME	oak105	DRILLING STARTED 12-Feb-01
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 12-Feb-01
PROJECT NUMBER	244-0472	WELL DEVELOPMENT DATE (YIELD) NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION 12.31' ft above mal
DRILLING METHOD	Hollow-stem auger	
BORING DIAMETER	8"	SCREENED INTERVALS10 to 25 fbg_

DEPTH TO WATER (First Encountered) 10.0 fbg (12-Feb-01) LOGGED BY S. Couch REVIEWED BY S. Bork, RG# 5626 **DEPTH TO WATER (Static)** NA

REMARKS Hand augered to 5'. CONTACT DEPTH (fbg) SAMPLE ID GRAPHIC LOG PID (ppm) BLOW U.S.C.S. EXTENT DEPTH (fbg) LITHOLOGIC DESCRIPTION WELL DIAGRAM ASPHALT FILL; brown; damp; 10% silt, 90% fine to medium grained sand. Portland Type 5.0 SAND (SP); black; damp; 10% silt, 90% fine grained sand; no plasticity. MW-4-5.0 ■ Bentonite Seal SP Monterey Sand #2/12 10.0 ∇ Silty SAND(SM); dark reddish brown; moist; 25% sllt, 75% fine grained sand; oxidation; low plasticity. MW-4- 10.0 WELL LOG (PID) NYOCAMENVDCISONOMA SHELLYOAKLAND 105 FIFTINGINTIOAKIOE GPJ DEFAULT.GDT 11/21/06 SM 15.0 MW-4- 15.0 Clavey SAND(SC); greyIsh brown; wet; 20% clay, 80% fine grained sand; low to medium plasticity. SC 2"-dlam., 0.020" Slotted Schedule 40 PVC 20.0 Silty SAND(SM); grey; saturated; 5% clay, 15% silt, 80% fine grained sand; low plasticity. MW-4- 20.0 SM 25.0 Bottom of Boring @ 25 fbg



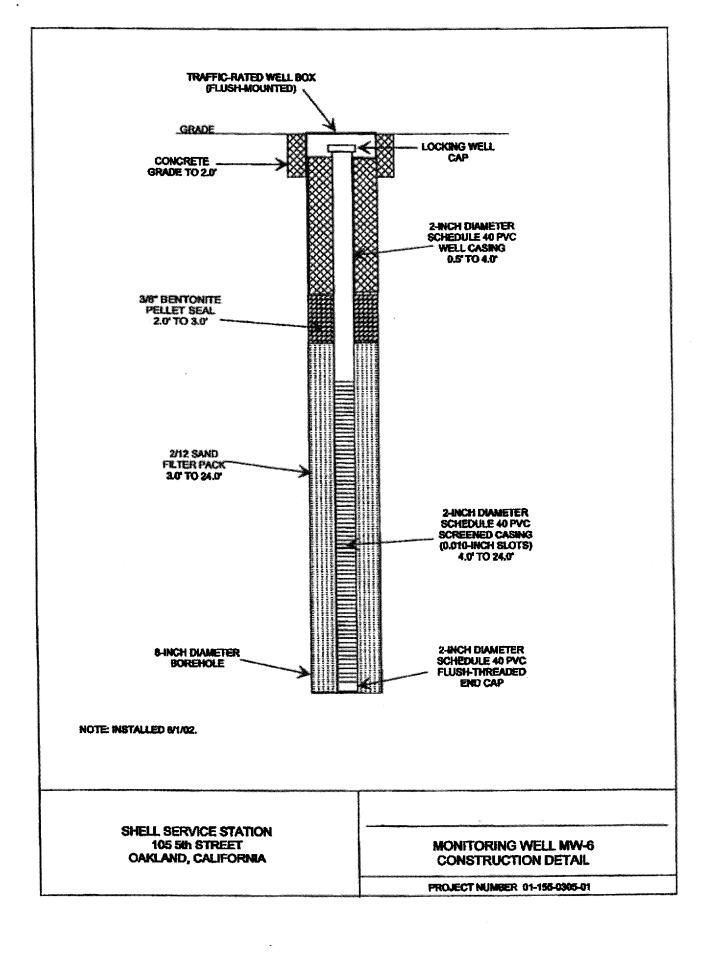
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BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME MW-5
JOB/SITE NAME	oak105	DRILLING STARTED 08-Mar-02
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 08-Mar-02
PROJECT NUMBER_	244-0472	WELL DEVELOPMENT DATE (YIELD) 29-Mar-02
DRILLER _	Gregg Drilling	GROUND SURFACE ELEVATION 15.05 ft above msl
DRILLING METHOD_	Hollow-stem auger	
BORING DIAMETER	4"	SCREENED INTERVALS 4 to 24 fbg
LOGGED BY	S. Couch	DEPTH TO WATER (First Encountered) 10.0 fbg (08-Mar-02)
REVIEWED BY	D. Lyndquist, PE	DEPTH TO WATER (Static) 5.98 fbg (12-Apr-02)
DEMARKS	Hand augusted to E the I costed approximately EO	north of the LICT complex

Hand augered to 5 fbg. Located approximately 50' north of the UST complex CONTACT DEPTH (fbg) SAMPLE ID GRAPHIC LOG BLOW PID (ppm) EXTENT U.S.C.S. DEPTH (fbg) LITHOLOGIC DESCRIPTION WELL DIAGRAM ASPHALT
SAND (SP); black; soft; damp; 5% slit, 95% fine sand; strong odor; no plasticity. 0.5 ▼ Portland Type I/II Cement Bentonite Seal Monterey Sand #2/12 @ 5 fbg- greenish black; damp; 15% slit, 85% fine sand; strong odor; no plasticity. SP MW-6- 5.0 Ţ. 고 10.0 Silty SAND(SM); grayish brown; wet; 20% silt, 80% fine sand; odor; low plasticity. MW-5- 10.0 WELL LOG (PID) MIOCAMENVOCISONOMA SHELLYQAYCAND 105 FIFTHIGINTIOAK105, GPJ DEFAULT, GDT 1121/DB 4"-diam., 0.010" Slotted Schedule 40 PVC 0 15 fbg- reddish brown; wet; 5% clay, 20% slit, 75% fine sand; odor; low plasticity. MW-5- 16.0 SM MW-5- 20.0 @ 20 fbg- reddish dark brown. MW-5-23,5 @ 23.5 fbg- stiff; 20% slit, 80% sand; weathered 24.0 Bottom of sandstone fragments. Boring @ 24 fbg .

OR	CMPART EGO DR ETHOU	LLING	DIGILLAN		Te	IDAG CUA	DALL CREW: BORBY, JOSE TER INC. TOTAL DEPTH OF SCRING (F	CATE DRILLED: AUGUST 1, 20	02
НО		TEM AUGER	PWMETIVE			men tres	***	JAMES LOET	TERLE
	<u>LIT-SPQ</u>	711			40 40		IMMEDICACE PAR.	PEYEWED BY. H. BAUER	
Ē	HE SO	SAMPLE ID	BLOWS PER 8 IN	₽Ē	9 10 10 10 10 10 10 10 10 10 10 10 10 10	8001 BR058	DESCRIPTION OF SUB	SURFACE MATERIALS	
0		***************************************	3			SM	inch asphall surface; hand-sugered to	5 feet below ground surfac	•
5	enne sters Gest sters	mvaas					/ELL-GRADED SAND with SILT: black- PA clay, 16% silt, 76% sand, 6% gravel) rood.	brown, moist, fine- to coers , with singular fragments of	egraless/ tock and
0		WW-8-10.8		i i		SM	ILTY SAND: light brown, wet, fine-grain	ned, (5% clay, 20% ellt, 78%	sand).
		W-6-18.5	₽¥¥	NN			rown, (5% clay, 38% sit, 60% sand).		
		MW-6-20.5 IAW-6-24	NEA	nua Nia			ILTY SAND with CLAY: brown, wet, fin and). Ight brown.	e-grained, (15% clay, 40% ai	11,47%
							oring terminated at 24 feet below grou	nd surface.	
_									
		PO=1	rraundsseder (dissers		164 = m	d manage			
L	427,247 241,47		and the	•	**********	*** 		BORING MW-6	
***************************************		4	1				PROJECT NUMBER 01-150	-0305-01 PAGE	I OF 1
41-16		ereye.							





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700 Fax: 510-420-9170

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME SVP-1	
JOB/SITE NAME	Shell Branded Service Station	DRILLING STARTED 05-Aug-09	
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 05-Aug-09	
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION _	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3"	SCREENED INTERVALS	4.66 to 4.75 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered	ı) NA 💆
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA Y

REMARKS CONTACT DEPTH (fbg) SAMPLE ID PID (ppm) BLOW COUNTS U.S.C.S. GRAPHIC LOG DEPTH (fbg) EXTENT LITHOLOGIC DESCRIPTION WELL DIAGRAM **ASPHALT** ■ Flush-grade 5" well 0.5 Silty SAND(SM); very dark brown (10YR 2/2); dry; 40% silt, 60% sand. 1/4" teflon sample tubing Portland Type I/II SM ■ Bentonite Seal ■ Monterey Sand #2/12 1" Polyethylene vapor screen 5.0 Bottom of Boring @ 5 fbg WELL LOG (PID) I:\SHELL\6-CHARS\2404-\240472~\12437FE~\1\OAK\105.GPJ DEFAULT.GDT 8/28/09



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700 Fax: 510-420-9170

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME SVP-2		
JOB/SITE NAME	Shell Branded Service Station	DRILLING STARTED 05-Aug-0)9	
OCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 05-Aug-0)9	
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIEL	.D) NA	
ORILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA	
ORILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	4.66 to 4.75 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encounted	ered) NA	Ž
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA	Ž
DEMARKS		, ,		

REMARKS					DEF THE FORM TEXT (State)		
PID (ppm) BLOW COUNTS	SAMPLE ID	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
		_ _ _ _ 5 ·	- ML		ASPHALT Clayey Silt(ML); very dark brown (10YR 2/2); dry; 40% clay, 60% silt.	5.0	Flush-grade 5" well box 1/4" teflon sample tubing Portland Type I/II Bentonite Seal Monterey Sand #2/12 1" Polyethylene vapor screen Bottom of Boring @ 5 fbg



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700 Fax: 510-420-9170

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME SVP-3
JOB/SITE NAME	Shell Branded Service Station	DRILLING STARTED 05-Aug-09
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 05-Aug-09
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD) NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION NA
BORING DIAMETER	3"	SCREENED INTERVALS 4.66 to 4.75 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered) NA
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)

REI	MAR	KS								
(man) Cla	FID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
WELL LOG (PID) I:\SHELL\6-CHARS\2404—\240472~1\2437FE~1\OAK105.GPJ DEFAULT.GDT 8/28/09					5	SM		ASPHALT Silty SAND (SM); very dark brown (10YR 2/2); dry; 40% silt, 60% sand.	5.0	Flush-grade 5" well box 1/4" teflon sample tubing Portland Type I/II Bentonite Seal Monterey Sand #2/12 1" Polyethylene vapor screen Bottom of Boring @ 5 fbg



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CLIENT NAME	Equiva Services LLC	BORING/WELL NAME SVP-4		
JOB/SITE NAME	Shell Branded Service Station	DRILLING STARTED 07-Aug-09		
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 07-Aug-09		
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD)	NA	
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION _	NA	
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	4.66 to 4.75 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered	J) NA	$\overline{\nabla}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA	Y
		• • • • • • • • • • • • • • • • • • • •		

REMARKS CONTACT DEPTH (fbg) SAMPLE ID BLOW COUNTS PID (ppm) EXTENT DEPTH (fbg) U.S.C.S. GRAPHIC LOG LITHOLOGIC DESCRIPTION WELL DIAGRAM <u>ASPHALT</u> Flush-grade 5" well 0.5 Silty SAND(SM); very dark brown (10YR 2/2); dry; 40% silt, 60% sand. 1/4" teflon sample tubing Portland Type I/II SM Bentonite Seal ■ Monterey Sand #2/12 1" Polyethylene vapor screen 5.0 5 Bottom of Boring @ 5 fbg WELL LOG (PID) I:\SHELL\6-CHARS\2404-\240472~\\2437FE~\\OAK\105.GPJ DEFAULT.GDT 8/28/09



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CLIENT NAME	Equiva Services LLC	BORING/WELL NAME SVP-5	
JOB/SITE NAME	Shell Branded Service Station	DRILLING STARTED 07-Aug-09	
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 07-Aug-09	
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3"	SCREENED INTERVALS	4.66 to 4.75 fbg
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered) NA 💆
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA ¥

REMARKS CONTACT DEPTH (fbg) SAMPLE ID BLOW COUNTS GRAPHIC LOG PID (ppm) EXTENT U.S.C.S. DEPTH (fbg) LITHOLOGIC DESCRIPTION WELL DIAGRAM **ASPHALT** 0.5 ✓ Flush-grade 5" well box Silty SAND(SM); very dark brown (10YR 2/2); dry; 40% silt, 60% sand. 1/4" teflon sample tubing Portland Type I/II SM Bentonite Seal ✓ Monterey Sand✓ #2/121" Polyethylene vapor screen 5.0 **Bottom of Boring** @ 5 fbg WELL LOG (PID) INSHELLIG-CHARS12404-1240472~112437FE~110AK105.GPJ DEFAULT.GDT 8/28/09



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CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-6		
JOB/SITE NAME	Shell-Branded Service Station	DRILLING STARTED	26-Jul-10		
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED	26-Jul-10		
PROJECT NUMBER	240472	WELL DEVELOPMENT DA	TE (YIELD)	NA	-
DRILLER	Gregg Drilling	GROUND SURFACE ELEV	ATION	NA	
DRILLING METHOD	Airknife	TOP OF CASING ELEVATI	ON _	NA	
BORING DIAMETER	6"	SCREENED INTERVALS		NA	
LOGGED BY	E. Swan	DEPTH TO WATER (First I	- (Encountered	NA	Ž
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static		NA	Y

REMARI	KS	· · · · · · · · · · · · · · · · · · ·							
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
		·		_	-		CONCRETE Silty SAND (SM); very dark brown (10YR 2/2); dry; 45% silt, 55% fine to medium grained sand.	0.6	Flush-grade 6" well box Portland Type I/II Bentonile Seel
				- -	- SM				Bentonile Seal Monkerey Sand \$2/12 1" Vapor well sorten Bentonile Seal
			1	5 -				5.0	Monitory Sand #2/12 1 't vapor well screen Bottom of Bori 5 fbg
					·				
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CLIENT NAME	Shell Oil Products US	BORING/WELL NAME SVP-8	
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED 16-Nov-11	
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 16-Nov-11	
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD) NA	
DRILLER	Vapor Tech Services	GROUND SURFACE ELEVATION NA	
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION NA	
BORING DIAMETER	4 "	SCREENED INTERVALS NA	
LOGGED BY	W. Martinez	DEPTH TO WATER (First Encountered)	na $\overline{\Sigma}$
REVIEWED BY	P. Schaefer PG#5612	DEPTH TO WATER (Static)	NA ¥

				otal de	pui,			`,
COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						ASPHALT GRAVEL with silt and sand (GW-GM); very dark brown (10YR 2/2); moist; 10% silt, 20% fine sand, 70% fine gravel; fill.	0.5	Concrete
-			<u>-</u>	GW GM		@ 1.5 fbg; cobble sized concrete, wood, and glass fragments present.	1.6	■ Bentonite Seal
		2	<u> </u>					■ 1/4" -inner diameter Teflon Tubing ■ 1" Porous plastic probe ■ Monterey Sand #2/12
						Silty SAND (SM); very dark brown (10YR 2/2); moist; 20% silt, 80% fine sand; wood and glass fragments present; fill. @ 3.5 fbg; 6" layer of sea shells.	3.5	■ Bentonite Seal 1/4" -Inner diamete Teflon tubing
			5	SM				■ Monterey Sand #2/12 ■ 1" Porous Plastic probe
							5.5	Bottom of Boring @ 5.5 fbg
	COUNTS	COUNTS SAMPLE ID	COUNTS SAMPLE ID EXTENT		GW GM	GW GM	GRAVEL with silt and sand (GW-GM); very dark brown (10YR 2/2); moist; 10% silt, 20% fine sand, 70% fine gravel; fill. @ 1.5 fbg; cobble sized concrete, wood, and glass fragments present. GW GM Silty SAND (SM) : very dark brown (10YR 2/2); moist; 20% silt, 80% fine sand; wood and glass fragments present; fill. @ 3.5 fbg; 6" layer of sea shells.	GRAVEL with silt and sand (GW-GM); very dark brown (10YR 2/2); moist; 10% silt, 20% fine sand, 70% fine gravel; fill. @ 1.5 fbg; cobble sized concrete, wood, and glass fragments present. Silty SAND (SM); very dark brown (10YR 2/2); moist; 20% silt, 80% fine sand; wood and glass fragments present; fill. @ 3.5 fbg; 6" layer of sea shells. 3.5 SM



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CLIENT NAME	Shell Oil Products US	BORING/WELL NAME SVP-9
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED 16-Nov-11
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED 16-Nov-11
PROJECT NUMBER	240472	WELL DEVELOPMENT DATE (YIELD) NA
DRILLER	Vapor Tech Services	GROUND SURFACE ELEVATION NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION NA
BORING DIAMETER	4"	SCREENED INTERVALS NA
LOGGED BY	W. Martinez	DEPTH TO WATER (First Encountered) NA \(\sqrt{2}\)
REVIEWED BY	P. Schaefer PG#5612	DEPTH TO WATER (Static) NA
DEMARKS	Airknifed to total depth	

REMAR	KS		Airkn	ifed to t	otal de	pth.				
PID (ppm)	BLOW	SAMPLEID	EXTENT	DEРТН (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELI	L DIAGRAM
111 SV PROBESV240472-1.GPJ DEFAULT.GDT 1/20/12					CL		Planter soil and roots CLAY with sand (CL); weak red (2.5YR 4/2); moist; 50% clay, 30% silt, 20% fine sand; medium plasticity; fill. Clayey SAND (SC); very dark brown (10YR 2/2); moist; 20% clay, 80% fine sand; wood and shell fragments present; fill.	1.5		Concrete Bentonite Seal 1/4" -inner diameter Teflon Tubing 1" Porous plastic probe Monterey Sand #2/12
WELL LOG (PID) 1:SHELL6-CHARS22404-2240472-OAKLAND 105 FIFTH240472-GINT240472-2011 SV PROBESS240472-1.GPJ DEFAULT.GDT 1/20/72 2 2 2				- 5	sc			5.5		■ Bentonite Seal 1/4"-inner diameter Teflon tubing ■ Monterey Sand #2/12 ■ 1" Porous Plastic probe Bottom of Boring @ 5.5 fbg
WELL LOG (PID) FISHELLIS										



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SVP-10 **CLIENT NAME** Shell Oil Products US **BORING/WELL NAME** 16-Nov-11 **JOB/SITE NAME** Shell-branded Service Station **DRILLING STARTED** DRILLING COMPLETED _ 16-Nov-11 LOCATION 105 Fifth Street, Oakland, California WELL DEVELOPMENT DATE (YIELD) NA **PROJECT NUMBER** 240472 Vapor Tech Services **GROUND SURFACE ELEVATION** NA **DRILLER** NA Airknife TOP OF CASING ELEVATION **DRILLING METHOD** NA **BORING DIAMETER SCREENED INTERVALS** LOGGED BY W. Martinez DEPTH TO WATER (First Encountered)_ NA **DEPTH TO WATER (Static)** NA **REVIEWED BY** P. Schaefer PG#5612 REMARKS Airknifed to total depth.

REMAR			·	iied to	total de	pui.			A
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
ROBES/240472~1.GPJ DEFAULT.GDT 1/20/12					GW GM		GRAVEL with silt and sand (GW-GM); very dark brown (10YR 2/2); moist; 10% silt, 20% fine sand, 70% fine gravel; fill. Gravelly SILT (ML); very dark brown (10YR 2/2); moist; 5% clay, 60% silt, 10% fine sand, 25% fine gravel; low plasticity; trace wood fragments present; fill.	0.5	Concrete Bentonite Seal 1/4"-inner diameter Teflon tubing 1" Porous Plastic probe Monterey Sand #2/12
WELL LOG (PID) i.1SHELL\G-CHARS\Z404-\Z40472-OAKLAND 105 FIFTH\Z40472-GINT\Z40472-2011 SV PROBES\Z40472-1.GPJ DEFAULT.GDT 1/20/12					SP SM		SAND with silt (SP-SM); very dark brown (10YR 2/2); moist; 10% silt, 80% fine sand, 10% fine gravel; fill.	5.0	■ Bantonite Seal 1/4"-inner diameter Teflon tubing ■ Monterey Sand #2/12 ■ 1" Porous Plastic probe
WELL LOG (PID) 1:\SHELL\G-CHARS\2404-\240472-O				5	SM		Silty SAND (SM) very dark brown (10YR 2/2); 15% silt, 85% fine sand; fill.	5.8	Bottom of Boring @ 5.8 fbg