

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.1.brown@shell.com

August 19, 2005

Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re:

Well Destruction Report Former Shell Service Station 4411 Foothill Boulevard Oakland, California SAP Code 135686

Incident #98995746

Dear Mr. Wickham:

Attached for your review and comment is a copy of the Well Destruction Report for the above referenced site. 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

Sr. Environmental Engineer

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

Re: Well Destruction Report

Former Shell Service Station 4411 Foothill Boulevard Oakland, California Incident # 98995746 Cambria Project # 247-0897-006 ACHCSA Case #3769





Dear Mr. Wickham:

Cambria Environmental Technology, Inc. (Cambria) prepared this Well Destruction Report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). Cambria destroyed wells S-1 through S-5 on July 14, 2005 in anticipation of the upcoming redevelopment of the site. The well destruction procedures were completed in accordance with Alameda County Public Works Agency (ACPWA) and San Francisco Regional Water Quality Control Board guidelines.

SITE CHARACTERISTICS

Site Description: The site is a former Shell-branded service station located on the southwest corner of the Foothill Boulevard and High Street intersection in Oakland, California (Figures 1 and 2). Land use in the site vicinity is mixed commercial and residential, with gasoline service stations occupying the northeastern and northwestern corners of the intersection. Fremont High School is located on the southeastern intersection corner.

Sediment Lithology: Sandy clay underlies the site from approximately 6 to 10 feet below grade (fbg). Clayey sand with lenses of gravel underlies the sandy clay from approximately 10 to 13 fbg. Sandy clay underlies the clayey sand to the maximum on-site explored depth of 26 fbg.

Groundwater Characteristics and Monitoring Results: Groundwater has been monitored at the site since December 1992. During that time, groundwater depth has ranged from approximately 6 to 12 fbg. The calculated groundwater gradient typically trends to the south-southwest at 0.12 ft/ft. The second quarter 2005 maximum groundwater concentration of total petroleum hydrocarbons as gasoline was 13,000 parts per billion (ppb) in wells S-1 and S-4. During the

Cambria Environmental Technology, Inc.

5900 Hollis Street Suite A Emeryville, CA 94608 Tel (510) 420-0700 Fax (510) 420-9170

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second quarter 2005, the maximum concentrations of benzene and methyl tertiary butyl ether (MTBE) in groundwater were 1,900 ppb and 890 ppb, respectively, in S-4. Due to the destruction of the site's groundwater monitoring wells, quarterly monitoring has been suspended until construction is completed and monitoring wells have been re-installed.

WELL DESTRUCTION ACTIVITIES

3

Destruction Dates: July 14, 2005.

Wells Destroyed: Five wells: S-1 through S-5 (Figure 2).

Permit: ACPWA Permits # W05-0195 through W05-0199 (Attachment A).

Cambria Personnel Andy Ellsmore, Staff Geologist, Cambria

Present: David Gibbs, Project Geologist, Cambria

Drilling Company: Vironex Environmental Field Services (Vironex) of San Leandro,

California. (C-57 License # 705-927).

Destruction Methods: Vironex filled wells S-1 through S-5 with neat Portland Type I/II cement

grout from the bottom up using a tremie pipe. Once the wells were completely filled with grout, 25 pounds per square inch of air pressure were applied with a portable air compressor for approximately 5 minutes. After each well was pressurized, the space in the well casing was topped off with grout, the well vault was removed, and the resulting void was filled with concrete. Attachment B presents Cambria's Standard Field Procedures for Monitoring Well Destruction. Attachment C presents the

Department of Water Resources (DWR) well completion reports.

Discussion: Due to the absence of a grout inspector, the well destructions described

above were not verified by ACPWA. After repeated phone calls by Cambria, the inspector confirmed that he would arrive on site within an hour and a half. Cambria personnel waited on site for three hours while

attempting to contact the inspector, who never arrived.

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CLOSING

We appreciate the opportunity to work with you on this project. Please call David Gibbs at (510) 420-3363 if you have any questions or comments.

Sincerely,

Cambria Environmental Technology, Inc.

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Andy Ellsmore Staff Geologist

David M. Gibbs, P.G. Project Geologist

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Figures:

1 - Vicinity/Area Well Survey Map

2 - Site Plan

Attachments: A - ACPWA Permits

B - Cambria's Standard Field Procedures for Monitoring Well Destruction

No. 7804

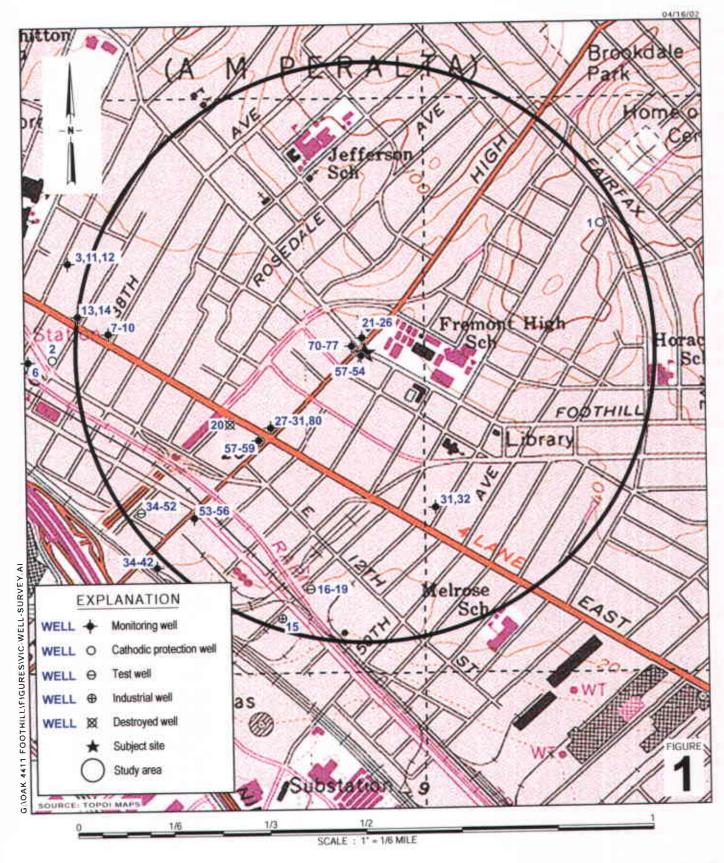
C - DWR Well Driller's Completion Reports

cc: Lenard Niles, URS Corporation, 1333 Broadway, Suite 800, Oakland, CA 94612

Tom Bauhs, Chevron Texaco, 6001 Bollinger Canyon Road, San Ramon, CA 94583 H.K. Phares Corporation, 10700 MacArthur Boulevard, Suite 200, Oakland, CA 94605-5260

Bill Phua, P.O. Box 10664, Oakland CA 94610-0664

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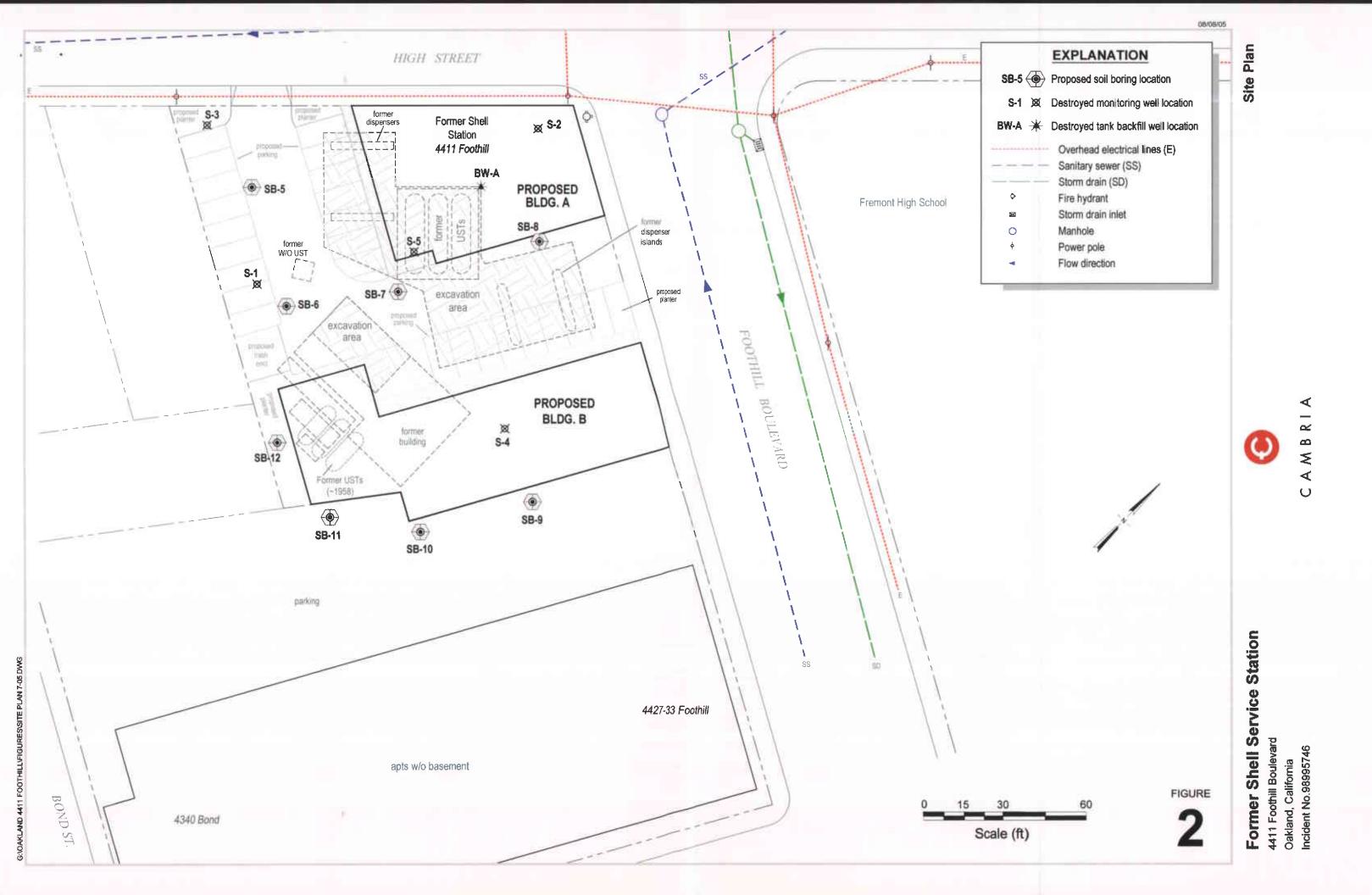
Former Shell Service Station

4411 Foothill Boulevard Oakland, California Incident #98995746



Vicinity/Area Well Survey Map

(1/2-Mile Radius)



ATTACHMENT A

ACPWA Permits



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 KLMHURST ST. HAYWARD CA. 94544-1395 PHONE (\$10) 670-6633 James Yob

FAX (510) 782-1939 WWW.8cfcwcd.org APPLICANYS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

POR APPLICANT TO COMPLETE	FOR OPENCE USE
LOCATION OF PROJECT HALL Fronthill Blvd.	PERMIT NUMBER WUS - UT 15 WELL NUMBER APN
	PERMIT CONDITIONS Circled Permit Requirements Apply
CLIENT OF Products (a. (U.S.) Address 20745 S. Wilmany Plunic S. (2) 643-9306 City (GCSCN) CA 150 Zip GOKIO	1. A pormit application should be submitted so as to arrive at the ACL'WA office five days prior to proposed starting date.
APPLICANT Name Cambria FW: Technology - St. Dully - Fax 510 420 19170 Address 5100 Halles sts sled Phone 510 420- 3339 City Fax Ecqually CA: Zip 9408	2. Julialit to ACPWA within 60 days after completion of permitted nelginal Department of Water Resources-West Completion Report. 3. Permit is visid if project not began within 90 days of approval date.
TYPR OF PROJECT Well Construction Genterhoical Investigation Cathodic Protection Corners Gentern O	B. WATER SUPPLY WELLS I. Minimum surface sent thickness is two inches of cement grout placed by tremic. Z. Minimum sent depth is 50 feet for municipal and industrial welfs or 20 feat for domestic and irrigation.
Water Supply ☐ Contamination ☐ Monitoring ☐ Well Destruction	wells unless a lessor depth is specially approved. C. GROUNDWATER MONITORING WELLS INCLUDING PIKZOMETERS
PROPOSED WATER SUPPLY WELL USE New Demestle 1) Replacement Dotniette L. Municipal U brigation C. Industrial I.) Other (1)	 Minimum surface sent thickness is two inches of coment grout placed by tromic. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. GEOTECHNICAL/CONTAMINATION
DRILLING METHOD: North Roberty Fi Air Roberty F: Auger In Cable FI Other X - Pressure growth DRILLIER'S NAME (Trues Doubled VIVONEX	Backfill bore hole by tremie with soment grout or coment grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. E. CATHODIC Fill hole mode zone with congrete plaged by tremie.
DRILLER'S NAME CONTROL DRILLER'S LICENSE NO. 1485-165 705927 Will debut subout lable.	F. WELL DESTRUCTION Send a map of work site! A separate pormit is required for walls deeper than 45 feet. G. SPECIAL CONDITIONS
WELL PROJECTS Dell Hole Dinmeterin. Maximum Casing Diameterin. Dopth Surface Seal Depth P. Owner's Well Number	NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geometrical and contamination investigations.
GEOTECHNICAL/CONTAMINATION PROJECTS Number of Borings Hole Diameter in Depth #. Well of	P July)
COMPLETION DATE TO JULY 15 0.5 CONSTRUCT	2-10-05
I hereby agree to comply with all requirements of this permit and Alameda County Ordinance APPLICANT'S SIGNATURE DATE 211 PLEASE PRINT NAME 5 toward A. Dale W. Rev.5-11-	0/05 (
	\smile

02/10/2005 11:16 FAX 510 420 9170

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ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 ELMIURST ST. IIAYWARD CA. 94544-1395 PHONE (\$10) 670-6633 James You

DRILLING PERMIT	APPLICATION
LOCATION OF PROJECT HALL FOOTH BIVEL.	PERMIT NUMBER W55-0196 WELL, NUMBER
	PERMIT CONDITIONS Circled Permit Requirements Apply
CLIENT Name Address 20945 5. W. Walle Phone 5. 23 645-936 6. City Curscul Charles Phone 5. 24 645-936 6. APPLICANT Name Cambric G. W. Telly Clay Address 5700 14c (15.5 fb. Ste A Phone 5.0 420-3335 f. City Ellery VIII.e. Ch. Zip G. 150-93 6. TYPE OF PROJECT Well Construction Cathodic Protection Water Supply Contamination Water Supply Well Destruction Monitoring Water Supply Well Destruction Well Destruction Well Destruction Water Supply Contamination Well Destruction PROPOSED WATER SUPPLY WELL USE New Domestic If Replacement Domestic If Municipal Industrial Other DRILLING METHOD: Mnd Rotary Cable Other DRILLER'S NAME CALL CONCA	Circled Permit Requirements Apply 1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date. 2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report. 3. Permit is void if prespect not began within 90 days of approval date. B. WATER SUPPLY WELLS 1. Minimum surface seal thickness is two inches of concent group placed by tremic. 2. Minimum earl depth is 50 feet for mainicipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS 1. Minimum aurface seal thickness is two inches, of cotnext grout placed by tremic. 2. Minimum aurface seal thickness is two inches, of cotnext grout placed by tremic. 2. Minimum and depth for monitoring wells is lite maximum depth practicable or 20 feet. D. GEOTECONICAL/CONTAMINATION Backfill bore hole by tremie with content grout or coment grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. E. CATHODIC Fill hole anode some with congruto placed by tremic. F. WELL DESTRUCTION Send a map of work situ, A separate permit is required
WELL PROJECTS Drill Hole Dlameter Casing Diameter Surface Scal Depth G. R. Owner's Well Number (5-2)	for wells deeper than 45 feet. G. SPECIAL CONDITIONS NOTE: One application exist be submitted for each well or well destruction. Multiple bothing on one application are secreptable for geotechnical and contamination investigations.
GEOTECHNICAL/CONTAMINATION PROJECTS Number of Borings Maximum Môle Diameter in Deput R STARTING DATE DETUCAL Way 15 05 COMPLETION DATE DULY 57 05 COMPLETIO	APPROVED DATE DATE



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 ELMHURST ST. HAYWARD CA. 94544-1395 PHONE (510) 678-6633 James Von

FAX (510) 782–1939 www.acfcwcd.org Applicants: Please attach a site map for all drilling permit applications Destruction of wells over 45 peet requires a separate permit application

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
LOCATION OF PROJECT HALL FOOTS BIVE	PERMIT NUMBER WELL NUMBER
	PERMIT CONDITIONS Circled Permit Requirements Apply
CLIENT Namo Stall Of Products (c. U.S.) Address 20 (c.S. U. White Phone Stall Egg-q306 City (cutsout A En Zip g. O.S.) APPLICANT Name Commonica Fur Tachuclegy Address 5700 Hallis St. St. A. Phone Tip (220, 3339) City Encryyille (A Zip g. 4608)	A GENERAL 1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to removed statistic date. 2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report. 3. Permit is void if project not begun within 90 days of approval date.
TYPE OF PROJECT Well Construction General Gracemics Gracemics General Gracemics Grace	B. WATER SUPPLY WELLS J. Minimum surface sent directness is two inches of coment grout placed by termic. Minimum sent depth is 50 feet for managinal and industrial wells on 20 feet for damestic and irrigation wells unless a lesser depth is specially approved. C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
PROPOSED WATER SUPPLY WELL USE New Domestic 17 Replacement Domestic 11 Municipal 11 httigation 11 Industrial 11 Office 11	 Minimum surface sent thickness is two inches, of coment grout placed by treatle. Minimum seal depth for monitoring wells is the unximum depth practicable or 20 feet. GROTECINICAL/CONTAMINATION
DRILLING METHOD: Mud Rotary () Air konny () Auger () Cable () Other X - Pressure () ()	Backfill bore hole by tremie with coment grout or coment growtend mixture. Upper two-three feet replaced in kind or with composted cuttings. E. CATHODIC
DRILLER'S LICENSE NO 985-165 705-92+	Fill hale anode zone with concepte placed by tremie. WELL DESTRUCTION Send a map of work site. A separate permit is required for wells deeper than 45 feet. G. SPECIAL CONDITIONS
WELL PROJECTS Delli Hole Diameter 10 in. Maximum Casing Diameter 11 in. Depth 70 R. Surface Scal Depth 5.5 R. Owner's Well Number 5.3	NOTE: One application must be submitted for each well or well destruction. Multiple buriage on one application are acceptable to recorded and contamination investigations.
GEOTECHNICAL/CONTAMINATION PROJECTS Number of Borings in.	Ry with)
COMPLETION DATE OF JULY 18 05 CONSTRUCTION	APPROVED DATE 2-10-05
Hereby agree to comply with all requirements of this permit and State County Ordinance APPLICANT'S SIGNATURE DATE 2/10 FLEASE PRINT NAME 5 10 Wart A. Darlie IV Rov.5-11-0	No. 73 68.

02/10/2005 11:14 FAX 510 420 9170

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ALAMEDA COUNTY PUBLIC WORKS AGENCY

DRILLING PERMIT APPLICATION

WATER RESOURCES SECTION 399 ELMHURST ST. HAYWARD CA. 94544-1395 PHONE (510) 670-6613 James You

FAX (518) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING FERMIT APPLICATIONS DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE FERMIT APPLICATION

FOR APPLICANT TO COMPLETE Bivel PERMIT NUMBER WELL NUMBER APN_ PERMIT CONDITIONS Circled Permit Requirements Apply CLIENT. GENERAL 1. A permit application should be submitted so as to <u>845</u>-4306 arrive at the ACPWA office five days prior to proposed starting date. Fuhilit 60 days after completion of remitted original Department of Water Resources-Well Completion Report. Fra 510 470 3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS 1. Minimum surface seal thickness is two inches of cement growt placed by tramic. TYPE OF PROJECT 2. Minimum seal depth is 50 feet for municipal and Geotechnical Investigation Well Construction Industrial wells or 20 foct for domestic and irrigation General Cathedic Protection wells unless a lesses depth is specially approved. Contanuation Water Supply C. GROUNDWATER MONITORING WELLS Well Destruction Monitoring INCLUDING PIEZOMETERS 1. Minimum surface seal thickness is two inches.of PROPOSED WATER SUPPLY WELL USE concut grout placed by tremie. New Domestic Replacement Donassic 2. Minimum seal depth for monitoring wells is the 11 Irrigation Municipal miximum depth practicable or 20 feet D. GEOTECHNICAL/CONTAMINATION o ŋ Other Industrial Backfill bore hole by transe with content grout or coment grout/sand nationire. Upper two-three feet replaced in kind DRILLING METHOD: Air Rotary Auger Mud Rotary or with compacted cuttings. Other Cable E. CATHODIC DRILLER'S LICENSE NO for wells deeper than 45 feet. G. SPECIAL CONDITIONS NOTE: One application must be submitted for each well or well WELL PROJECTS Maximum ZO ft. destruction. Multiple borings on one application are acceptable Drill Hole Diameter Depth_ Creding Diameter Owner's Well Number 5-4(SB-46) for geotechnical and contomination investigations. Surface Seal Depth GEOTECHNICAL/CONTAMINATION PROJECTS Number of Borings _____ STARTING DATE DETCUE **APPROVED** I hereby agree to comply with all requirements of this parmit and Chameda County Ordinance No. 73-68. PLEASE PRINT NAME 5-10 Wart



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 KLMHURST ST. HAYWARD CA. 94544-(395 PHONE (519) 670-6633 James You

FAX (510) 782-1939 WAYW.DEFEWED.OFG APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
LOCATION OF PROJECT HALL Foothall Blud.	PERMIT NUMBER _ W05-0/99
Daktrud CH.	WELL, NUMBER APN
	PREMIT CONDITIONS
Nama Stell Oil Preducts (o. (U.S)	Circled Permit Requirements Apply A. CENERAL
Address 20945 5, LUISMINS Phone (55) 145-9306 City (01.50N) CA TEN Zip 2015	1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
APPLICANT Name Cambria Faui Technology	2. Submit to ACPWA within 60 days after completion of combined original Department of Water Resources-
- Sty Dealte - Fix 510 476 1917-0 Address 5100 1/2/115 st 5/r A Phone 510 470 3339 Silv Ellafold VIII e (A. 210 9408	Well Completion Report. 3. Permit is void if project not hegun within 90 days of approval date.
	B. WATER SUPPLY WELLS L. Minimum surface seal thickness as two inches of
TYPE OF PROJECT Well Construction Geometrical Investigation	coment grout placed by transle. 2. Minimum sent depth is 50 feet for municipal and
Cathodic Protection G. General G. Water Supply G. Comamination G.	Industrial wells or 20 fees for domestic and irrigation wells unless a lesser depth is specially approved.
Munituring (1) Well Destruction	C. GROUNDWATER MONITORING WELLS INCLUDING PIRZOMETERS
PROPOSED WATER SUPPLY WELL USE New Domestic Q Replacement Domestic Q	 Minimum surface seal thickness is two inches, of compact grout placed by tremie.
Municipal II Irrigation III Industrial D Other D	2. Minimum seal depth for monitoring wells is the maximum depth practicable up 20 feet.
DRILLING METHOD:	D. GROTECHNICALICONTAMINATION Backfill bore hole by treatile with centent growt or commit
Mud Rotary D Air Rotary TI Pressure a rest	grow/soud mixture. Upper two-three feet replaced in kind or with compacted entings.
DRILLER'S NAME GIRGE DOUBLE	E. CATHODIC Fill hale anode zone with concrete placed by trumic.
DRILLER'S LICENSE NO. 12 85-1650	F.) WELL DESTRUCTION -DG# T Send a map of work site. A separate permit is required
well S-5	for wells deeper than 45 (eet. G. SPECIAL CONDITIONS
WELL PROJECTS Drill Hole Diameter 10 in, Maximum 10	NOTE: One application must be submitted for each well or well
Cosing Diameter 4 th. Dopth 2 ft. Surface Seal Depth 3 th. Owner's Well Number (5-5)	destruction. Moltiple borings un one application are acceptable for georechnical and contumbation investigations.
GEOTECHNICAL/CONTAMINATION PROJECTS Number of Borings Maximum Hale Diameter in. Depth ft.	
STARTING DATE DETTURN May 15+05 CARALLY	has a wat
COMPLETION DATE TO JULY 15 05 (COUST PORT)	APPROVED DATE
I hereby agree to camply with all requirements of this permit and Alameda County Ordinan	ce No. 73-68.
APPLICANT'S SIGNATURE DATE 2/1	0/05-
PLEASE PRINT NAME Stowart A. Deche II Rous II	190
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ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 399 ELMHURST ST. HAYWARD, CA. 94544-1395 PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W05-0195-0199

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
Destruction of Wells (Less than 45 feet in depth)

Destruction Requirements: PRESSURE GROUTING # 1

- Remove any casing(s) and annular seal to 3-5 feet below finished grade of original ground, whichever is the lower elevation. If well(s) are obstructed, then drill out to original depth.
- Destroy well by grouting neat coment with a tremic pipe or pressure grouting (25 psi for 5min.) to the bottom of the
 well and by filling with neat coment to three (3-5) feet below surface grade. Allow the sealing material to spill over
 the top of the easing to fill any annular space between easing and soil.
- 3. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.
- 4. Drilling permits are valid from the start date to the completion date. Permits can be extended by a phone call, but drilling permit applications will not be extended beyond 90 days from the approved start date. Permit is valid from May 1 to July 1, 2005.
- 5. Permitte, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statues regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where wok is being completed.
- Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this
 permit application. This permit may be voided if it contains incorrect information.
- 7. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
- 8. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including: permit number and site map.
- 9. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indennify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 10. Applicant shall contact George Bolton for a inspection time at 510-670-5594 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

ATTACHMENT B

Cambria's Standard Field Procedures for Monitoring Well Destruction

STANDARD FIELD PROCEDURES FOR MONITORING WELL DESTRUCTION

This document presents standard field methods for destroying groundwater monitoring wells. The objective of well destruction is to destroy wells in a manner that is protective of potential water resources. The two procedures most commonly used are pressure grouting and drilling out the well. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Pressure Grouting

Pressure grouting consists of injecting neat Portland cement through a tremie pipe under pressure to the bottom of the well. The cement is composed of about five gallons of water to a 94 lb. sack of Portland I/II Cement. Once the well casing is full of grout, it remains pressurized by applying pressure with a grout pump. The well casing can also be pressurized by extending the well casing to the appropriate height and filling it with grout. In either case, the additional pressure allows the grout to be forced into the sand pack. After grouting the sand pack and casing, the well vault is removed and the area resurfaced or backfilled as required.

Well Drill Out

When well drill out is required, the well location is cleared for subsurface utilities and a hollowstem auger drilling rig is used to drill out the well casing and filter pack materials. First, drill rods are dropped down the well and used to guide the augers as they drill out the well. Once the well is drilled out, the boring is filled with Portland cement injected through the augers or a tremie pipe under pressure to the bottom of the boring. The well vault is removed and the area resurfaced or backfilled as required.

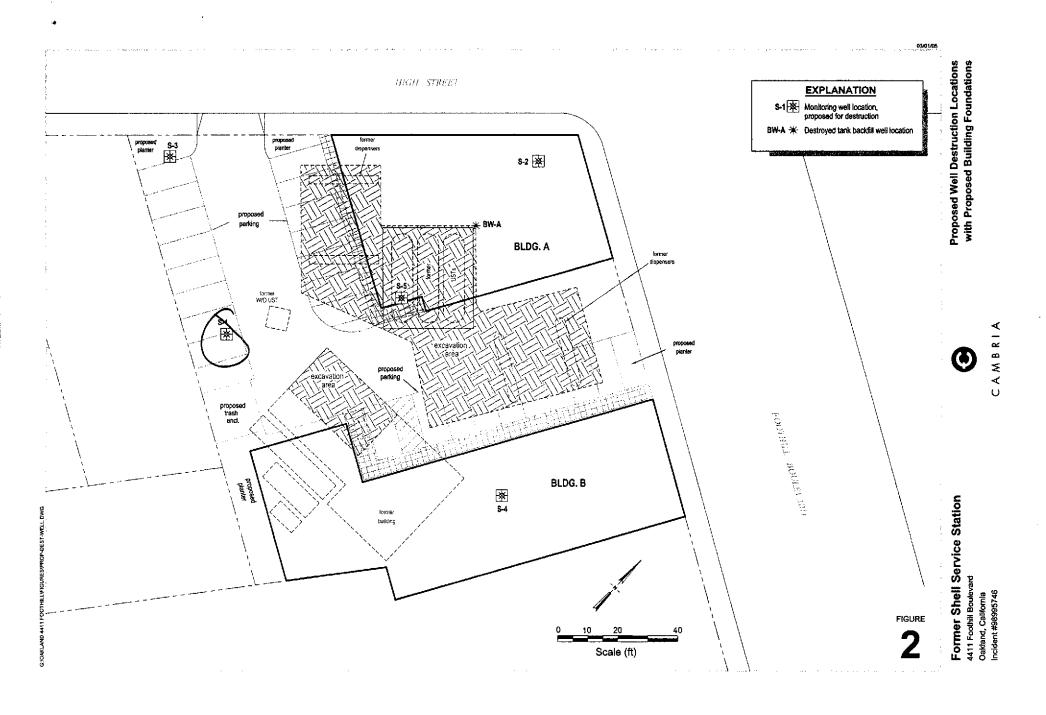
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ATTACHMENT C DWR Well Driller's Completion Reports

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED



CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED

телосапом 411 Foothill Boulevard, Oakland, CA						BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO 5-2		
RILLING CONTRACTOR Gregg Drilling				сомильтер 5/21/93		PIRST ENCOUNTERED W		BOTTOM OF BORING		
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					Tony Ramirez 9 Feet					
Nobile B-53				Contin	Continuous sample S-2					
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33			\mathbb{Z}				Same as	above, but m	oist.	
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52	~~	10				200	C1 /	CD AVET (CC)		
	•		7				Clayey	SKAVEL (GC); oravel: 30% cl	; brown; poorly g ay; 10% fine to co	raded; fine, sub-
		11	H				·			
31	•		4	ĺ			Clayey S	SAND (SC); bro	own-grey; poorly	graded; fine
31	PID (DD)	12	4				to coarse	e, angular to su	ub-rounded sand;	40% clay;
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	HYL	DA	_					000 000		PLATE
									NG LOG S-2 ND	C-2
ENVIR NMENTAL				- ,		RUCTION S-2				
TECHNO LOGIES, INC.									*	SHEET 1 OF 2
ECTIVE LOGIES, INC.									ice Station ll Boulevard	JOB NO.
ATE: June 7, 1993								Oaklar	nd, CA	12-010
PPROVED BY: John H. Turney, P.E.								WJC #204	-5508-3400	12-010

TE/LOCATION 411 Foothill Boulevard, Oakland, CA					kland, CA	BEGUN 5/21/93 COMPLETED		BORING DIAMETER 10 Inches	ancle/bearing 90 Degrees	BORENG NO S-2 BOTTOM OF BORENG		
Gregg Drilling						5/21/9		FIRST ENCOUNTERED WATER DEPTH 14 Feet		22 Feet		
PERATOR Age Rund						1		1	STATIC WATER DEPTH/DATE			
NELL MAKE & MODEL VIOLE KURICI						Tony Ramirez 9 Feet				WELL NO.		
Nobile B-53							Continuous sample S-2					
	MAJERIAL TH 40 PV	/C		0.020"	#2/12	ŧ	VEIL SEAL Veat cement over hydrated pellets Description of Weil 22 Feet					
Booms, ROOT	SPACE P	DEPTH	SAMPLE	WATER LEVEL	CONSTR.	GRAPHIC LOG	MATERI	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION				
			17				Clayey	SAND (SC); co	ontinued from sh	eet 1.		
			7				Clayey	GRAVEL (GC)); same as 10' to 1	1'.		
24		13	17						ame as 11' to 12.5'			
26			1	7>		******	, ,					
		14 —	4	Ā					nt brown; poorly sub-rounded san			
	10.8		L				Tieuru	mi, angular to	Sub-rounded san	d, 20% sut, wet.		
31		15					Clavev	SAND (SC): br	rown-grey; poorly	graded: fine		
			V						sub-rounded sand			
			7	1			wet.	. 0		, , ,		
21		16	1									
£1			17			1777				i		
		17 —	¥,			1///						
			K						brown; high plas			
18		18	u				to medi	ium, angular t	o sub-rounded sa	and; wet.		
			V]								
	-		7	1			Fat CLA	AY (CH); light	brown; high plas	ticity; moist.		
26		19 —	17	1								
			1	1								
		20	Υ,									
			K									
27		21	V									
			V]			Same a	s above.				
43	<u> </u>			1	\Box	<i>{////</i>						
	-	<u> </u>	t		Y Tarak	1111				, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
			\vdash	-								
		23	+	1								
						1						
	*PID	24]								
	(ppm)											
			_	•	<u>.</u>							
	HYI	⊃Re) -	•				SOIL BORI	ING LOG S-2	PLATE		
ENVIR NMENTAL					FNIT	\ T			ND	C-2		
								WELL CONST	FRUCTION S-2	SHEET 2 OF 2		
TECHNO LOGIES, INC.					GIES,	INC	.	Shell Ser	vice Station			
==			_						ill Boulevard	JOB NO.		
ATE: June 7, 1993									and, CA	12-010		
PPF	SOVED BY	: John H	Tı	irney, P	.E.			WIC #20	4-5508-3400			

Proposed Well Destruction Locations with Proposed Building Foundations

Former Shell Service Station 4411 Footbill Boulevard Oakland, California Incident #98995746

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STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED

пельосапом 411 Foothill Boulevard, Oakland, CA				BECUN 5/21/93		BORING DIAMETER 10 Inches	angle/bearing 90 Degrees	BORING NO S-3			
FILLING CONTRACTOR Fregg Drilling						COMPLETED FIRST ENCOUNTERED WATER DEPTH 5/21/93 14 Feet			BOTTOM OF BORING		
PERATOR						OCCED BY STATIC WATER DEPTH/DATE					
ed Hogan						Tony Ramirez 9 Feet					
fot	ile B-53		G 02		Contin	Continuous sample S-3					
ELL MATERIAL SLOT SIZE FILTER PACK WI							r hydrated pellet	s	POTION OF WELL 20 Feet		
,	HELD		EWATE	MEIT	GRAPHIK						
FOOT	SAVCE .	DEPTH	3 FAST	CONSTR	LOG	MATERI.	AL CLASSIFICA	TION & PHYSICAL	DESCRIPTION		
						ASPHA	LT				
		1	Ц			BASER	OCK				
						Sandy I	ean CLAY (CI	L); black; moderate	n plasticitus		
		2				30% fine	e to coarse, an	gular to sub-roun	ded sand:		
						dry.	, ,				
		з —				· ·			Į		
									į		
		4 —	\exists								
			-								
		5									
	2.1					// <u>}</u>					
38	2.1	6				Sandy L	ean CLAY (CI	.); olive-grey; mod	lerate plasticity;		
,ю						25% III	ne to coarse, ar	ngular to sub-rour	ided sand; dry.		
		7	4 -			Clayey S	SAND (SC): bro	own-grey; poorly ;	oraded: fine		
			4			to coarse	e, angular to si	ub-rounded sand;	25% clay;		
39		8	4			10% fine	e, sub-angular	to sub-rounded g	Tavel;		
	j	}	4		////	moist.					
			∕ ▼		////						
12			7 =		2221						
1		,,	7		////	Clavey S	SAND (SC): oli	Ve-orevi noorly or	raded: fine to		
	916	10	7			coarse, a	Clayey SAND (SC); olive-grey; poorly graded; fine to oarse, angular to sub-rounded sand; 25% clay; moist.				
12							, ,, ,, ,, ,, ,,		····		
		11				Clayey SAND (SC); olive-grey; poorly graded; fine to coarse, angular to sub-rounded sand; 25% clay; 15%					
	*PID	ľ				fine, sub	-angular to su	ib-rounded gravel	moist.		
	(ppm)	12			,						
	l		<u> </u>	· Filtri	000	Januy G	MAYEL (GF);	explanation on sh	eet Z.		
	HYD	RA.					SOIL BORIN	NG LOG S-3	PLATE		
		_		Tak ton A	т		AN		C-3		
ENVIR NMENTAL								RUCTION S-3	SHEET 1 OF 2		
TECHNO LOGIES, INC.							Shell Servi	ice Station			
						=	4411 Foothil	l Boulevard	JOB NO.		
ATE: June 7, 1993 PPROVED BY: John H. Turney, P.E.							Oaklan WIC #204-	-	12-010		
- 100	VED BI:	onn H. I	urney, P.I	<u> </u>			1110 #204-	-2200-2400			

RILLING CONTRACTOR					1		BORING DIAMETER 10 Inches FIRST ENCOUNTERED W 14 Feet	angle/bearing 90 Degrees ater depth	BORING NO S-3 BOTTOM OF BORING	
PERATOR 'ed Hogan						ny Ramirez 9 Feet			20 Feet	
Aob	MAKE & MOD ile B-53 MATERIAL TH 40 PV		SLOT SIZE 0.020"	FILTER PACK #2/12	Continu WELL SEAL	AMPLING METHOD Continuous sample S-3 VELL SEAL Jeat cernent over hydrated pellets WELL NO. BOTTOM OF WELL 20 Feet				
1001	SAVCE . HEYD: HETD	DEPTH	PAS FEAST		GRAPHIC LOG			FION & PHYSICAL DI		
90		13			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			brown; poorly grad ne to coarse sand; 1		
32		14	4					; brown; poorly gradelay; 10% fine to coo		
29	244	15 ——				Fat CLAY (CH); light brown with grey mottling; high plasticity; 10% fine to medium, angular to subrounded sand; wet.				
33		16						own; poorly graded		
~		17			angular to rounded sand; 20% clay; 10% fine grave Fat CLAY (CH); light brown; high plasticity; moist					
26		19								
22		20	4			Same as	above.			
	,	21								
		n								
	*PID	23								
	(ppm)							· · · · · · · · · · · · · · · · · · ·		
HYDR & -					T			NG LOG S-3 ND	PLATE C-3	
ENVIRA NMENTAL TECHNA LOGIES, INC.							WELL CONST	RUCTION S-3	SHEET 2 OF 2	
ATE: June 7, 1993							4411 Foothi Oaklar	ice Station Il Boulevard nd, CA	JOB NO. 12-010	
PPR	OVED BY:	John H. T	Furney, P	E.			W1C #204	-5508-3400	12-010	

EXPLANATION S-1 Monitoring well location, proposed for destruction BW-A * Destroyed tank backfill well location

FIGURE

Mate Straff proposed plantar S-2 🔯 proposed parking BLDG. A inomer dispensers proposed parking proposed trash enct. BLDG. B former building Scale (ft)

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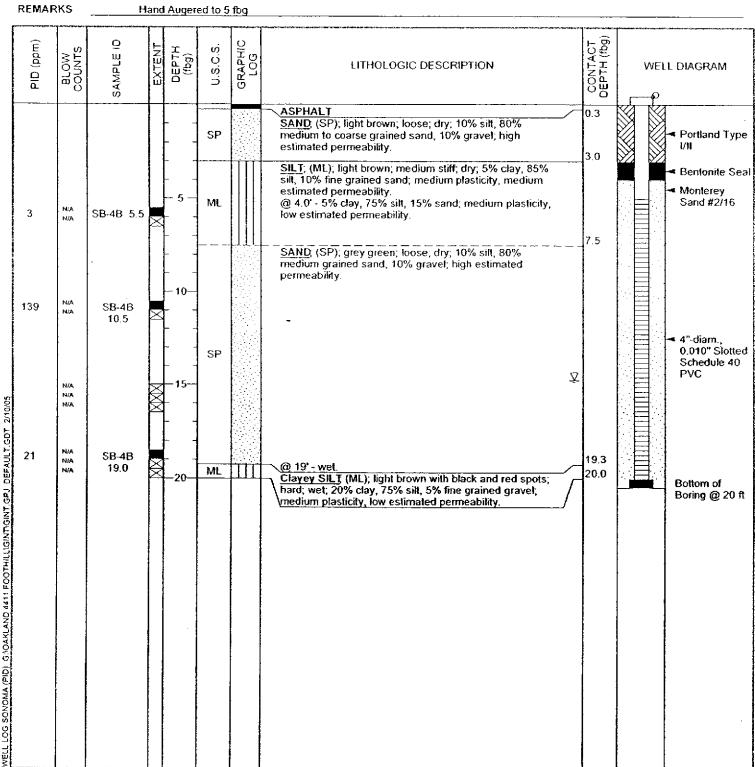
STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED



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

CLIENT NAME Shell Oil Products US BORING/WELL NAME S-4 (SB-4B) ___07-Jan-00 JOB/SITE NAME Shell-branded Service Station DRILLING STARTED LOCATION 4411 Foothill Blvd, Oakland DRILLING COMPLETED 07-Jan-00 PROJECT NUMBER 244-0897 WELL DEVELOPMENT DATE (YIELD) 29-Mar-00 DRILLER Gregg Drilling 39.06 **GROUND SURFACE ELEVATION** DRILLING METHOD Hollow-stem auger TOP OF CASING ELEVATION 38.70 ft 10" BORING DIAMETER SCREENED INTERVAL _ 5 to 20 fbg M. Gaffney LOGGED BY DEPTH TO WATER (First Encountered) 14.8 ft (07-Jan-00) REVIEWED BY S. Bork, RG# 5620 DEPTH TO WATER (Static) NΑ



PAGE 1 OF 1

EXPLANATION \$-1 Monitoring well location, proposed for destruction BW-A * Destroyed tank backfill well location

Former Shell Service Station
4411 Foothil Boulevard
Oakland, California
Incident #98995746

FIGURE

\$-3 ₩ S-2 A proposed BLDG. A formes dispensers former W/O UST proposed planter proposed parking proposed trash encl. BLDG. B Duilding

Scale (ft)

376-78 A-375 C

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STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

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oguu moilis Street Suite A Emeryville, CA 94608 Telephone: (510) 420-0700 Fax: (510) 420-9170

CLIENT NAME Shell Oil Products US BORING/WELL NAME S-5 JOB/SITE NAME Shell-branded Service Station DRILLING STARTED 09-May-02 4411 Foothill Blvd, Oakland LOCATION DRILLING COMPLETED 09-May-02 PROJECT NUMBER 244-0897 WELL DEVELOPMENT DATE (YIELD) NA DRILLER Gregg Drilling GROUND SURFACE ELEVATION DRILLING METHOD Hollow-stem auger TOP OF CASING ELEVATION NA BORING DIAMETER 10" SCREENED INTERVAL 5 to 22 fbg S. Couch LOGGED BY DEPTH TO WATER (First Encountered) 9.0 ft (09-May-02) REVIEWED BY M. Derby, PE# 55475 DEPTH TO WATER (Static) REMARKS Hand Augered to 5 fbg. Well located 50' southeast of the middle of northwest driveway. CONTACT DEPTH (fbg) PID (ppm) EXTENT U.S.C.S. DEPTH (fbg) BLOW GRAPHIC LOG SAMPLE LITHOLOGIC DESCRIPTION WELL DIAGRAM 0.3 FILL light brown; damp; silty, sandy. Portland Type I/II Cement Bentonite Seal 2"-diameter, 0.010" Slotted Schedule 40 PVC ∇ @ 9 fbg - wet. 12.0 SAND (SP) grayish brown; saturated; 10% silt, 90% 4"-diam., 0.010" Slotted Schedule 40 @ 15.0 fbg - strong odor detected. PVC SP 20.0 16 SILT (ML); light grayish brown; wet; 10% clay, 80% silt, ML 10% sand; odor detected. 22.0 Bottom of Boring @ 22 ft

PAGE 1 OF

EXPLANATION S-1 Monitoring well location, proposed for destruction BW-A * Destroyed lank backfill well location

110 h 37777

proposed parking

ligerouge Duildling

S-2 🕸

BLDG. A

BLDG, B

Scale (ft)

leimer dispensers

¥ 8W-A

proposed planter

parking

proposed trash end.

lowres WIO UST

\$-3 ₩

Former Shell Service Station 4411 Foothill Boulevard Oakland, California Incident #98995746

FIGURE

CAMBRIA