CAMBRIA

December 20, 2005

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

Re: **Monitoring Well Destruction Report**

> Former Shell Service Station 2800 Telegraph Avenue Oakland, California SAP Code 129450 Incident No. 97093398 Fuel Leak Case No. RO0000009



Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the destruction of two on-site and three off-site groundwater monitoring wells (SR-1, S-1, S-4, S-5, and S-10) at the above referenced site. The destruction and replacement of missing well S-3 was not completed during the field activities as Cambria was unsuccessful in locating the well until after the completion of the above noted well destructions. The well destructions were performed in accordance with Alameda County Health Care Services Agency's (ACHCSA) approval letter dated August 22. 2005 in response to Cambria's Site Investigation Work Plan, dated August 4, 2005. The wells were destroyed in accordance with San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) and ACHCSA guidelines for monitoring well abandonment.

SITE DESCRIPTION

The site is former Shell service station located on the corner of the intersection of 28th Ave and Telegraph Avenue in Oakland, California (Figures 1 and 2) and is currently occupied by a Kentucky Fried Chicken (KFC) restaurant. The site is surrounded by mixed commercial and residential development.

Cambria **Environmental** Technology, Inc.

270 Perkins Street Sonoma, CA 95476 Tel (707) 935-4850 Fax (707) 935-6649



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WELL DESTRUCTION ACTIVITIES

Cambria obtained well destruction permits W2005-0901(S-10), 0902 (S-4), 0903 (S-5), 0904 (S-1/SR-1), and 0905 (S-3/SR-3) from Alameda County Public Works Agency (ACPWA) prior to the well destruction activities (Appendix A). The four wells were destroyed on November 11, 2005 by Gregg Drilling and Testing, Inc. of Martinez, California, under the observation of Cambria field staff. Wells SR-1, S-1, S-4, S-5, and S-10 (Figure 2) were destroyed by pressure grouting, with approval from ACHCSA and ACPWA. The well casings were filled with cement grout, pressure seals were placed on top of the well casings and additional cement grout was pumped under pressure into the well casings so as to force the grout through the well screens out into the filter pack material at approximately 25 pounds per square inch for 15 minutes. Once the wells were completely grouted, concrete was placed in the cavity to bring the surface to grade to match the existing site conditions. No soil cuttings were generated during the field activities.

The Department of Water Resources Well Completion Logs compliance reporting requirements have been completed and are included with the attachments in Appendix B.

DESTRUCTION AND REPLACEMENT OF WELL S-3

Preliminary efforts were not successful in locating the missing onsite well S-3 during pre-field activities, thus the destruction and replacement of missing well S-3 was not completed during the field activities. Cambria continued with efforts to locate the missing well after the well destruction activities were completed. With the assistance of a geophysical survey, the missing well S-3 was finally located in the planter adjacent to the sidewalk along 28th Street (Figure 2). The well, with 4-inch metal casing, was buried under approximately 1-foot of soil, with no well box or well cap. Attempts to gauge groundwater depth or observe groundwater conditions were not successful as the well was full of soil to approximately 4 feet below grade (fbg).

The well permit to destroy and replace well S-3 [Permit #W2005-0905 (S-3/SR-3)] was extended by ACPWA until early second quarter 2006. Cambria proposes to complete the destruction and replacement of well S-3, in accordance with Cambria's August 4, 2005 *Site Investigation Work Plan*, during the first quarter of 2006. ACHCSA will be notified prior to implementation of this work and Cambria will prepare well destruction and installation report to document the activities approximately 60 days after the results of the soil samples have been received.



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CLOSING

If you have any questions regarding the contents of this document, please call Dennis Baertschi at (707) 268-3813.

Sincerely,

Cambria Environmental Technology, Inc.

Stewart A. Dalie IV Senior Staff Scientist

Senior Project Geologist

PG 6452

Attachments:

Figure 1. Site Vicinity/Well Location Map

Figure 2. Site Plan

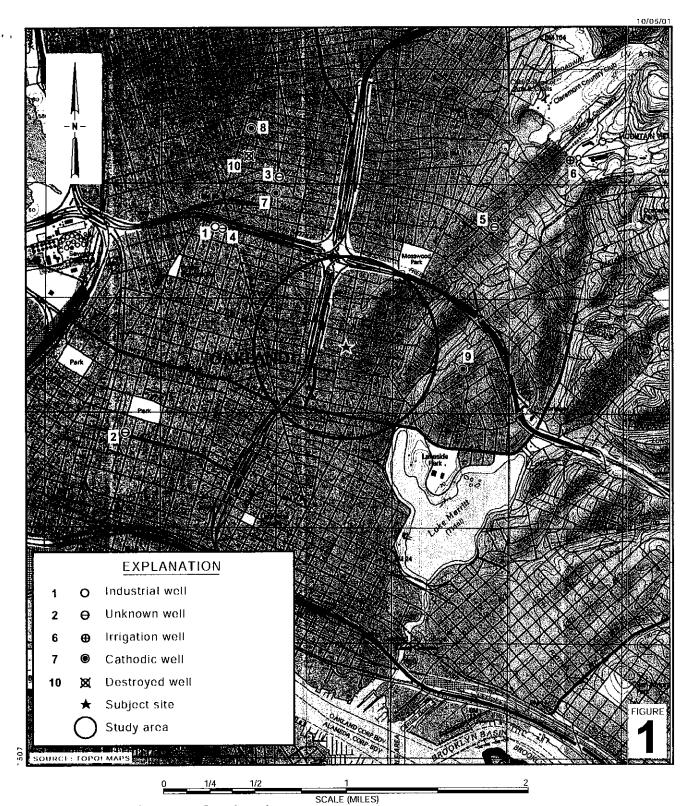
Well Destruction Permits Appendix A.

Department of Water Resources Well Completion Reports (without attachments) Appendix B.

Mr. Denis Brown, Shell cc:

Harmon Management Corp

1507 3



Former Shell Service Station / Current KFC Restaurant

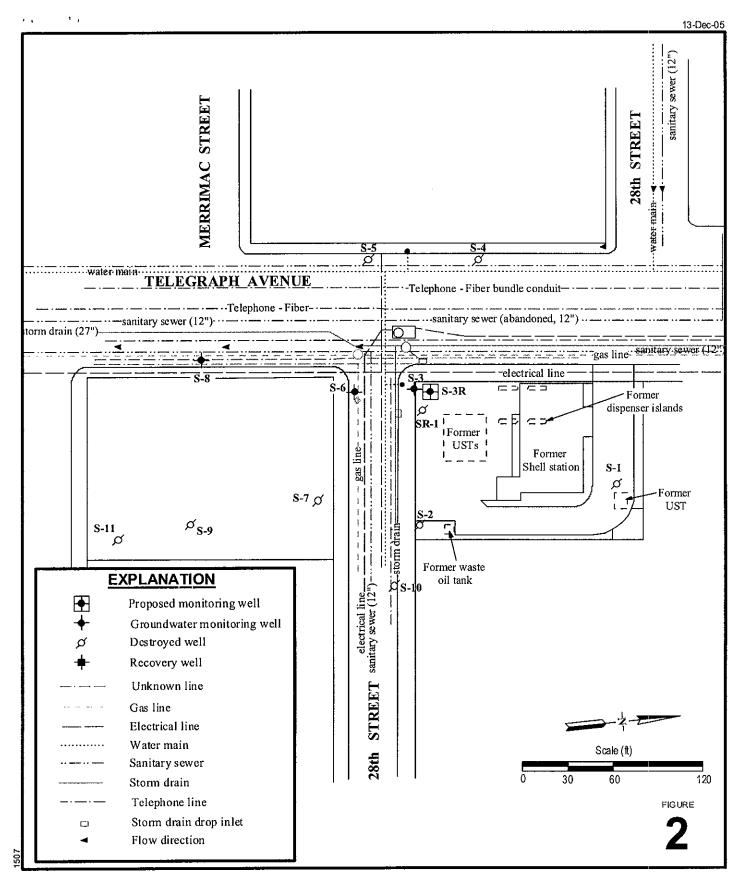
2800 Telegraph Avenue Oakland, California Incident #97093398



Site Vicinity / Well Location Map

CAMBRIA

(1/2 Mile Radius)



Former Shell Service Station

2800 Telegraph Avenue Oakland, California



Site Plan

Appendix A Well Destruction Permits

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 09/12/2005 By jamesy

Permits Issued:

W2005-0901 to W2005-0905

Application Id:

1126560438765

Site Location: Project Start Date: 2800 Telegraph Avenue, Oakland, CA 94609

11/10/2005

Applicant:

Cambria Environmental - Stewart A Dalie IV

Property Owner:

5900 Hollis St #A, Emeryville, CA 94608 Shell Oil Products Company

20945 Wilmington, Carson, CA 90810

Client:

** same as Property Owner **

Total Due:

Receipt Number: WR2005-2113

City of Project Site: Oakland

Completion Date: 11/11/2005

Permits Valid from 11/10/2005 to 11/11/2005

Phone: 510-420-3339

Phone: 707-865-0251

\$1500.00

Total Amount Paid:

\$1500.00

Paid By: CHECK

PAID IN FULL

Works Requesting Permits:

Well Destruction-Monitoring - 3 Wells

Driller: Gregg Drilling - Lic #: 485165 - Method: auger

Work Total: \$900.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	Orig. Permit #	DWR#
W2005- 0901	09/12/2005	02/08/2006	S10	10.00 in.	4.00 in.	15.00 ft	15.00 ft		
W2005- 0902	09/12/2005	02/08/2006	\$4	10.00 in.	4.00 in.	15.00 ft	15.00 ft		
W2005- 0903	09/12/2005	02/08/2006	\$ 5	10.00 in.	4.00 in.	15.00 ft	15.00 ft		

Specific Work Permit Conditions

- 1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's 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.
- 2. Compliance with the 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.
- 3. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, 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.
- 5. 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.

Alameda County Public Works Agency - Water Resources Well Permit

- 6. 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 work is being completed.
- 7. Pressure Grout with Cement (Less than 30 ft in depth)
- 8. Prior to installation of any monitoring wells into any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Work Total: \$600.00

9. Tremie Grout with Cement (More than 30 ft in depth)

Well Construction-Monitoring-Monitoring - 2 Wells

Driller: Gregg Drilling - Lic #: 485165 - Method: drill

Specifications

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Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2005- 0904	09/12/2005	02/08/2006	S-1/SR-1	10.00 in.	4.00 in.	15.00 ft	15.00 ft
W2005- 0905	09/12/2005	02/08/2006	\$-3/\$R-3	10.00 in.	4.00 in.	15.00 ft	15.00 ft

Specific Work Permit Conditions

- 1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, 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.
- 2. 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 work is being completed.
- 3. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or to the City and follow all City or County Ordinances No work shall begin until all the permits and requirements have been approved or obtained.
- 4. Compliance with the 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.

Alameda County Public Works Agency - Water Resources Well Permit

- 5. Drill out & Replace with New Well
- 6. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 7. 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.
- 8. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
- 9. Minimum surface seal thickness is two inches of cement grout placed by tremie
- 10. Minimum seal depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

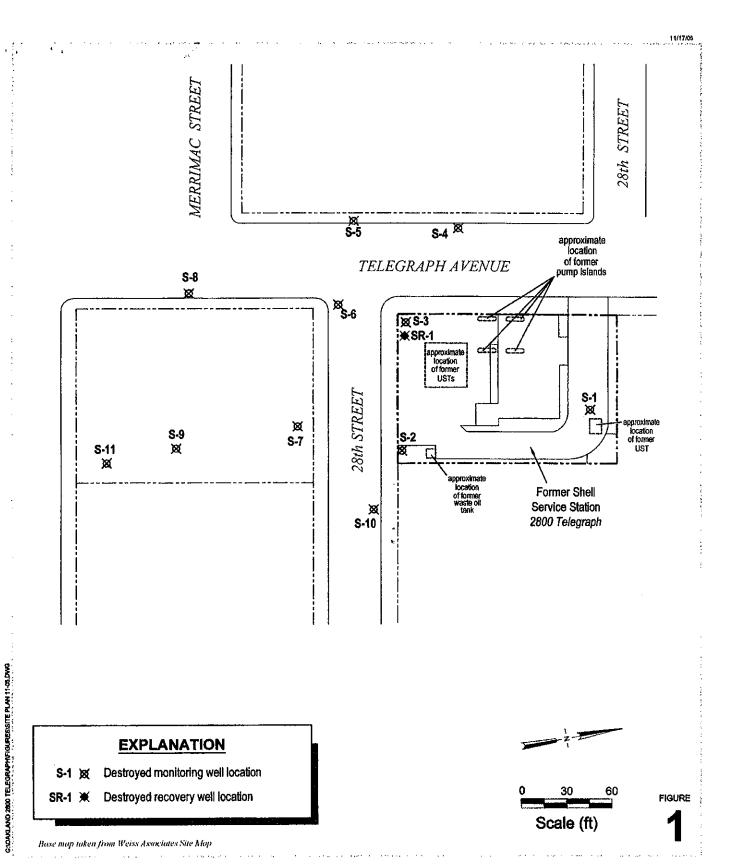
Appendix B

Department of Water Resources Well Completion Reports (with attachments)

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED



Former Shell Service Station

2800 Telegraph Avenue Oakland, California Incident No.97093398



Site Plan

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GeoStrategies Inc.

Log of Boring

SR-1

10/89 PRIMED BY PRICEG DATE REMSED DATE REMSED DATE REMSED DATE REMSED DATE REMSED DATE

	A Total Depth of Boring 35
	B Diameter of Boring 20 Drilling Method Bucket Auger
	C Top of Box Elevation Referenced to Mean Sea Level Referenced to Project Datum
	D Casing Length 35 f Material Schedule 40 PVC
	E Casing Diameter 6 I
	F Depth to Top Perforations 10 fr
3	G Perforated Length 25 ft Perforated Interval from 10 to 35 ft Perforation Type Machine Slot
	Perforation Size 0.020 I/
	H Surface Seal from 0 to 1 ft Seal Material Concrete
	I Backfill from 1 to 51/2 ft Backfill Material Cement Grout
	J Seal from 51/2 to 61/2 ft Seal Material Bentonite pellets
G	K Gravel Pack from 61/2 to 35 ft Pack Material Lonestar #2/12 sand
	L Bottom Seal ft Seal Material
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GSI

GeoStrategies Inc.

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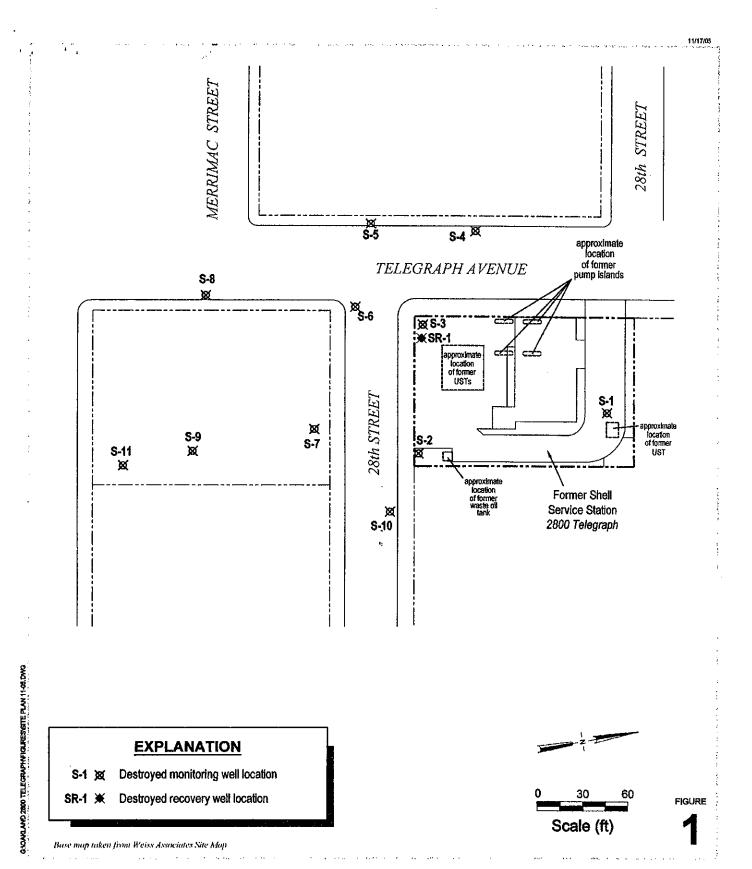
SR-1

DATE REVISED DATE REVISED DATE 7610 CMC GG 1262 10/89

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED



Former Shell Service Station

2800 Telegraph Avenue Oakland, California Incident No.97093398



Site Plan

NO. 8820011A Woodward-Clyde Consultants GETTLER RYAN PROJECT NAME. ELEVATION AND DATUM MONITORING WELL LOCATION 2800 Telegraph Avenue, Dakland CA: DATE STARTED DATE FINISHED 4/22/58 Bey Land Drilling DRILLING AGENCY SAMPLER Modified California COMPLETION 28.6 CME - 85 Truckmount PRILLING EQUIPMENT SAMPLES DIST. DRILL BIT CME CAIDIO 5 UNDIST. ST HEA DRILLING METHOD WATER FIRST 24 MRB. COMPL. 19 SIZE AND TYPE OF CASING 3F PVC CHECKED BY: LOGGED BY: FROM 27,5 TO 3.6 FT. TYPE OF PERFORATION 0.020° sleated M. Bonkowski S. Bluestone 12/20 Monterey Send FROM 20.5 TO 20 Fť. SIZE AND TYPE OF PACK FROM 70 FT. 1.5 Regionite Petèls 2.0 NO. 1 YPE OF SEA FT PROM 1,5 TO C.S. Concrete Grout NO. 2 Wall Sept. MATERIAL DESCRIPTION Construction - ASPHALT SILTY SAND (Cuttings)
dark brown, with fine to medium sand grains, little coarse \$M sand, moist, loose CI. puthed bt. 300 ps SILTY CLAY light offive gray and brown mortled, little fine sand, low plasticity, soff, moist, appears to be interbedded with thin layers (0.5' • 1' thick) of Silly Sand, trace to little black organic debris H Nu = 0No Hydrocarbon odor CL CLAY HNu = 0\$ No Hydrocarbon odd! light brown to olive gray mottled, little fine sand, medium plasticity, stiff, wat GC(?) CLAYEY GRAVEL? (Cuttings) (according to driller) SC CL H Nu = 0 No Hydrocarbon odor CLAYEY SAND to SANDY CLAY light brown and grey mottled, little coarse sand, some medium to fine sand, little gravel to 1.5°, moderate plasticity, medium CLAYEY GRAVEL to CLAYEY SAND with interbeds of SANDY CLAY to abt. 5° & SILTY SAND H Nu = 0 No Hydrocarbon odor light brown to gray motiled, moderate plasticity saturated, medium dense, saturated
GRAVEL Incompling to driller) H Nu - D CLAYEY SAND to SANDY CLAY No Hydrocarbon odor olive gray to light brown mottled, fine to medium sand, moderate plasticity, stiff (or med. dense), saturated Bottom of Well: 28.5 feet

LOG OF MONITORING WELL, NO.

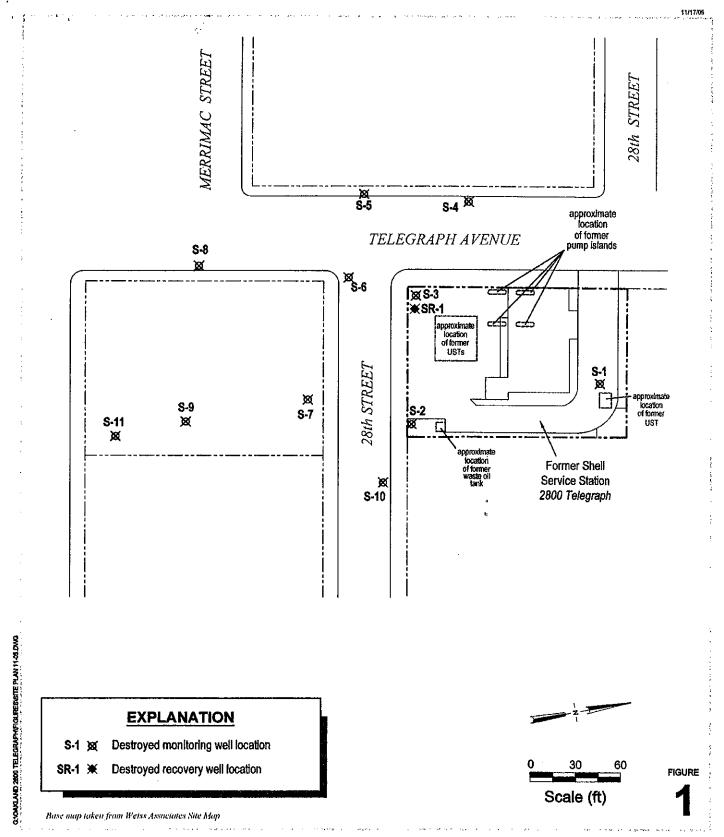
AHEET

OF

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED



Former Shell Service Station

2800 Telegraph Avenue Oakland, California Incident No.97093398



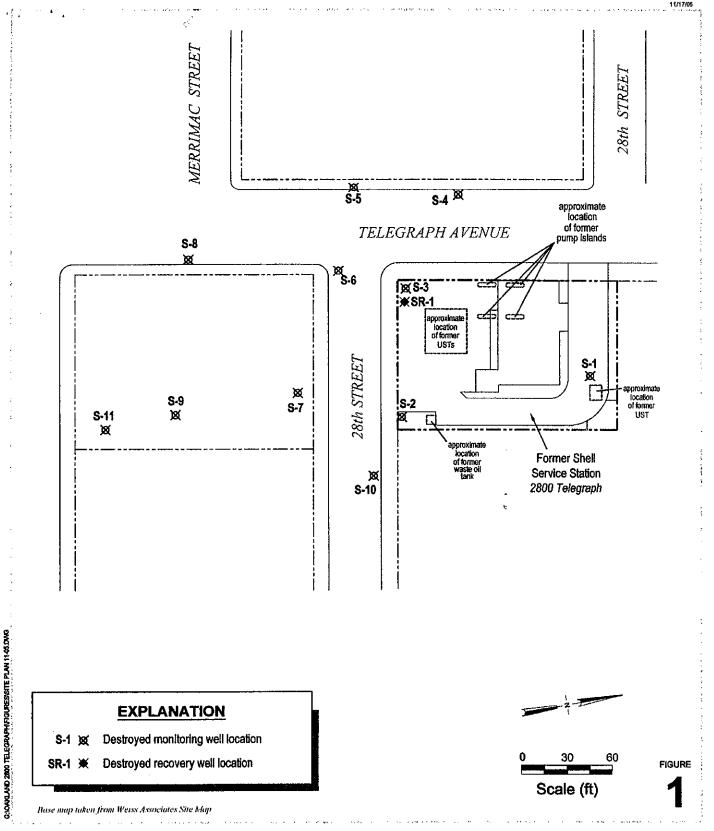
Site Plan

CAMBRIA

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

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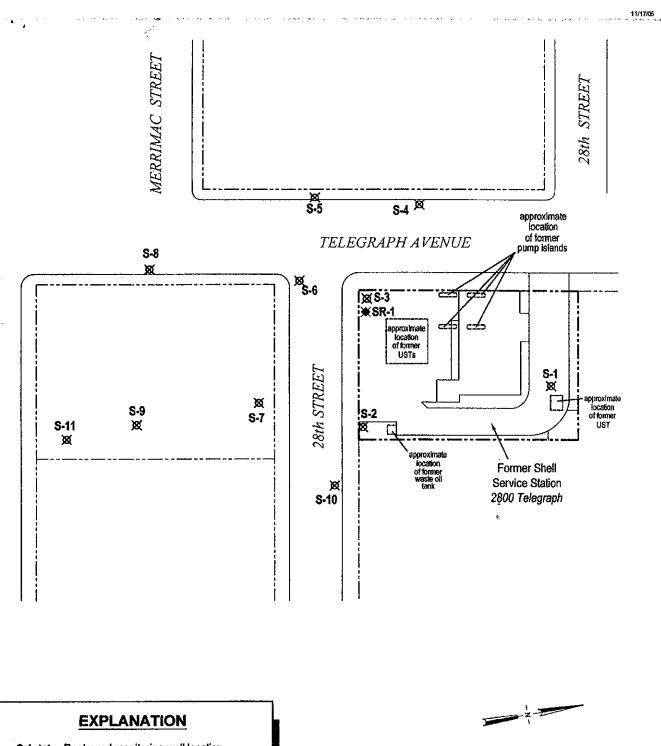
Former Shell Service Station

2800 Telegraph Avenue Oakland, California Incident No.97093398



Site Plan

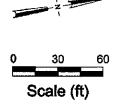
CAMBRIA



S-1 36 Destroyed monitoring well location

SR-1 * Destroyed recovery well location

Base map taken from Weiss Associates Site Map



1

FIGURE

Former Shell Service Station

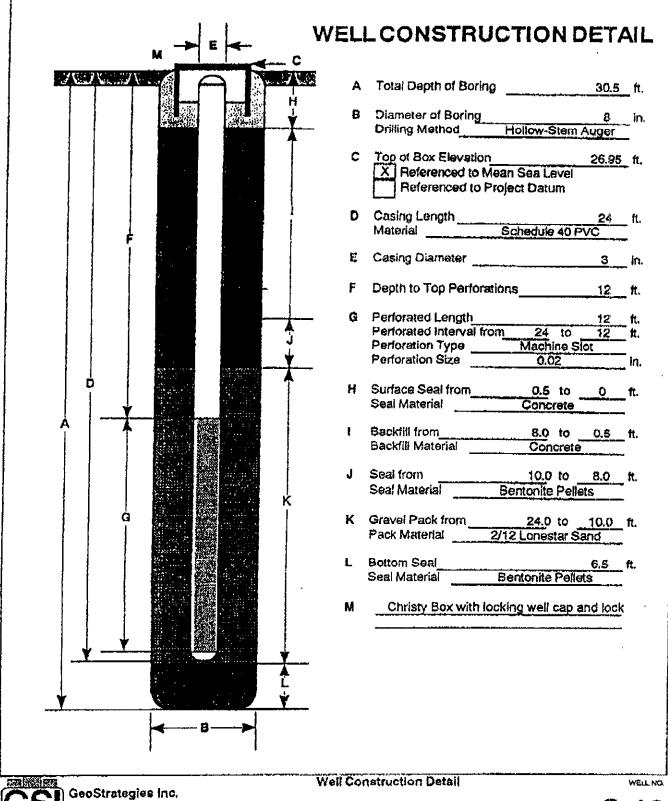
2800 Telegraph Avenue Oakland, California Incident No.97093398

GIOAKLAND 2000 TELEGRAPHFIGURESISTE PLAN 11-05 DWG



Site Plan

CAMBRIA



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S-10

JOB NOVBER REMEMBED BY RIGHTED DATE REMISSED DATE REMISSED DATE
7610 CLUP CEG 126 2 9/89

CONFIDENTIAL

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

REMOVED

Field los	cation of	boning:						Project No.:	7610	Date:	07/24/89	Boring	No:
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]		(See Plate	9 1)				Location:					
1		•						City:	Oakland, C			Sheet	1
								Logged by:	J. Vargas	Driller;	Bayland	of	2
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GeoStrategies Inc.

3358				
JOB NUMBER	REVIEWED BY PIGICEG	DATE	AEVISES DATE	PEVASED DATE
7610	Mup cx 4 1262	9/89		
7010	1,000 (2.0)			

Comparison Com	Field Too	etion of	poring:						Project No.:	7610		Date:	07/24/89	Boring No:
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Logoed by J. Vargas Driller Bayland of 2 Casing matifactor data: Casing matifactor data: Top of the Search Top]		(5	see Plate	1))	
Drilling method: Hollow-Stem Auger Hole deserted: 8-Inches 8 S&H 0 13 9 S-10-20 21 22 33 SANDY CLAY (CL) - yellowish brown (10YR 5/8), mactum siff, moist, 60-70% clay; 50% fine sand, trace siff, medium plasticity, interbedded fine gravel larging which are saturated, trace subarquiated with means assurated, trace subarquiated with means assurated, trace subarquiated with means assurated, trace subarquiated subarquiated of the complete subarquiated of the complete subarquiated of the complete subarquiated su	1												D	
Top of Box Elevation: 26.95 Details, Mean Sea-Levation: 3 1 1 1 1 1 1 1 1 1	ĺ											Crimer.	Bayland	9 2
Hote deemeter: 8-Inches 8 S&H 9 S-10-20 21 22 33 SANDY CLAY (CL) - yellowish brown (10YR 5/4), medium sign for gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 7 26 8 S&H 9 Sellow Sellow (10YR 5/4), medium sign for gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 8 S&H 9 Sellow (10YR 5/4), medium plastic, interbedded fine gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 8 S&H 9 Sellow (10YR 5/4), medium plastic, interbedded fine gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 8 S&H 9 Sellow (10YR 5/4), medium plastic, interbedded fine gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 8 Solidow (10YR 5/4), medium plastic, interbedded fine gravel target which are saturated, trace subangular coarse gravels, worm burrows, brown exidation, no chemical odor. 8 Solidow (10YR 5/4), medium plastic, interbedded fine to medium sand lamina at 19.5 feet. 9 Sellow (10YR 5/4), medium plastic, interbedded fine to medium sand lamina at 19.5 feet.	0.200		I I all and a	01 A.					Casing insta	navon qau	Ŗ;			
8 S&H 20 21 SANDY CLAY (CL) - yellowish brown (10VR 5/4). SANDY CLAY (CL) - yellowish brown (10VR 5/4). SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description Interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Description Interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Dote Description Interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Dote Description Interbedded fine to medium sand lamina at 19.5 feet. SANDY CLAY (CL) - yellowish brown (10VR 5/4). SANDY CLAY (CL) - yellowish brown (10VR 5/4). Mine Dote Dote Description SANDY CLAY (CL) - yellowish brown (10VR 5/4). SANDY CLAY (CL) - yellowish brown	L				ger				Top of Boy	-lavation:	200	<u> </u>		
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SANDY CLAY (CL) - yellowish brown (10VP 5/4), madium siff, moist; 60-70% clay; 30% fine sand; trace sill, medium plasticity, interbedded fine gravel lamina which are saturated, trace subangular coarse gravels, worm burrows, brown oxidation; no chemical odor. 27 28 8 S&H 29 8 S&H 30 9 9 31 Bottom of boring at 29.0 feet. Bottom of sample at 30.5 feet. 07/24/89 Semants:	0	1	 		20				interbe	dded fine	e to m	edium san	d lamina at	19.5 feet.
SANDY CLAY (CL) - yellowish brown (10YR 5/4), madium slift, moist; 60-70% clay; 30% fine sand; trace slift, moist; 60-70% clay; 60-70% cl				S-10-20				4 9/0/		-Mr				
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GeoStrategies Inc.

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