

RO415



Denis L. Brown

August 19, 2005

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

**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)

Re: Well Destruction Report  
Former Shell Service Station  
4411 Foothill Boulevard  
Oakland, California  
SAP Code 135686  
Incident #98995746

Alameda County  
AUG 24 2005  
Environmental Health

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,

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

Denis L. Brown  
Sr. Environmental Engineer

August 19, 2005

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

Alameda County  
AUG 24 2005  
Environmental Health



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

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**



***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 Present:*** Andy Ellsmore, Staff Geologist, Cambria  
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.

**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.**



Andy Ellsmore  
Staff Geologist

David M. Gibbs, P.G.  
Project Geologist

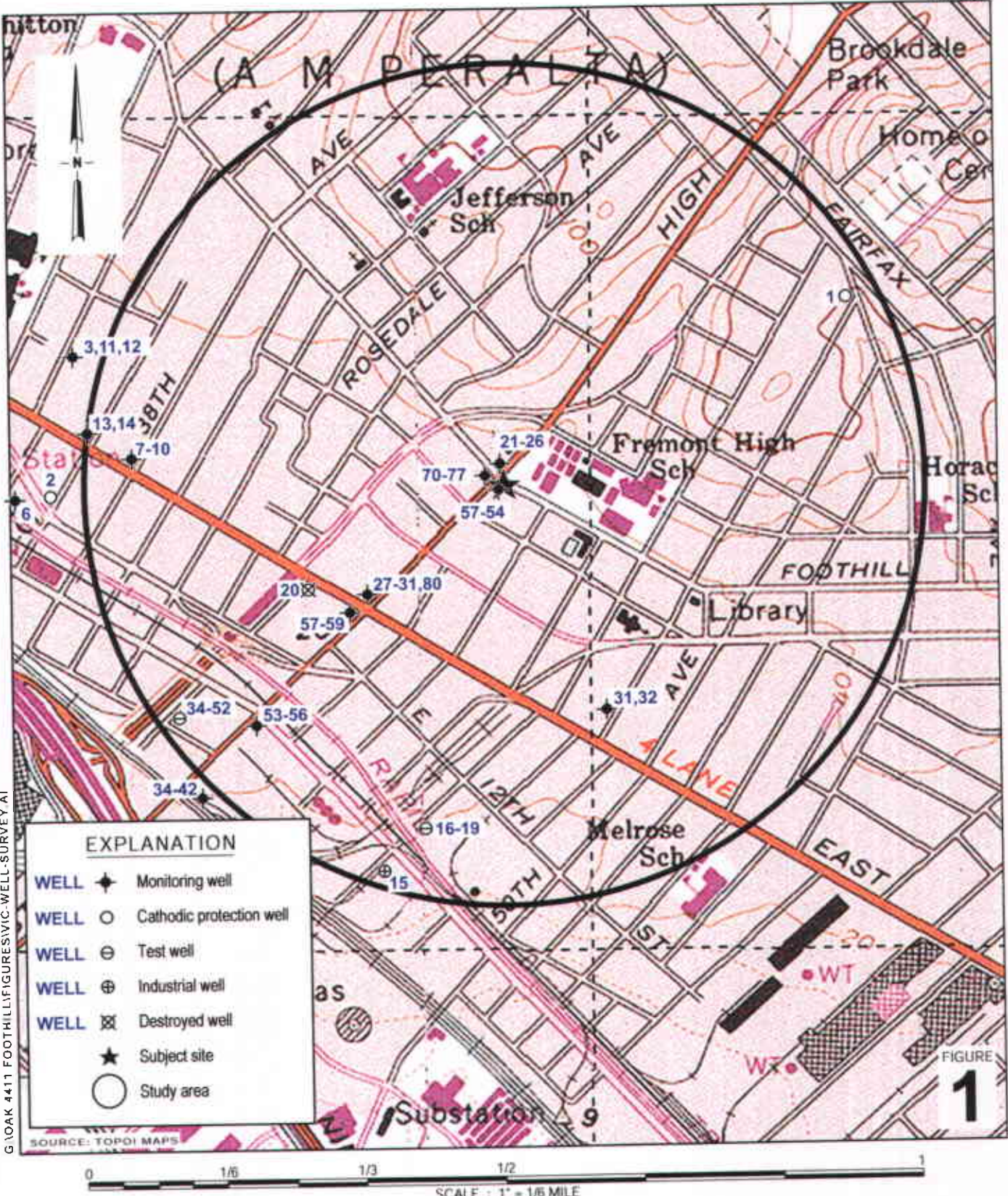


Figures: 1 - Vicinity/Area Well Survey Map  
2 - Site Plan

Attachments: A - ACPWA Permits  
B - Cambria's Standard Field Procedures for Monitoring Well Destruction  
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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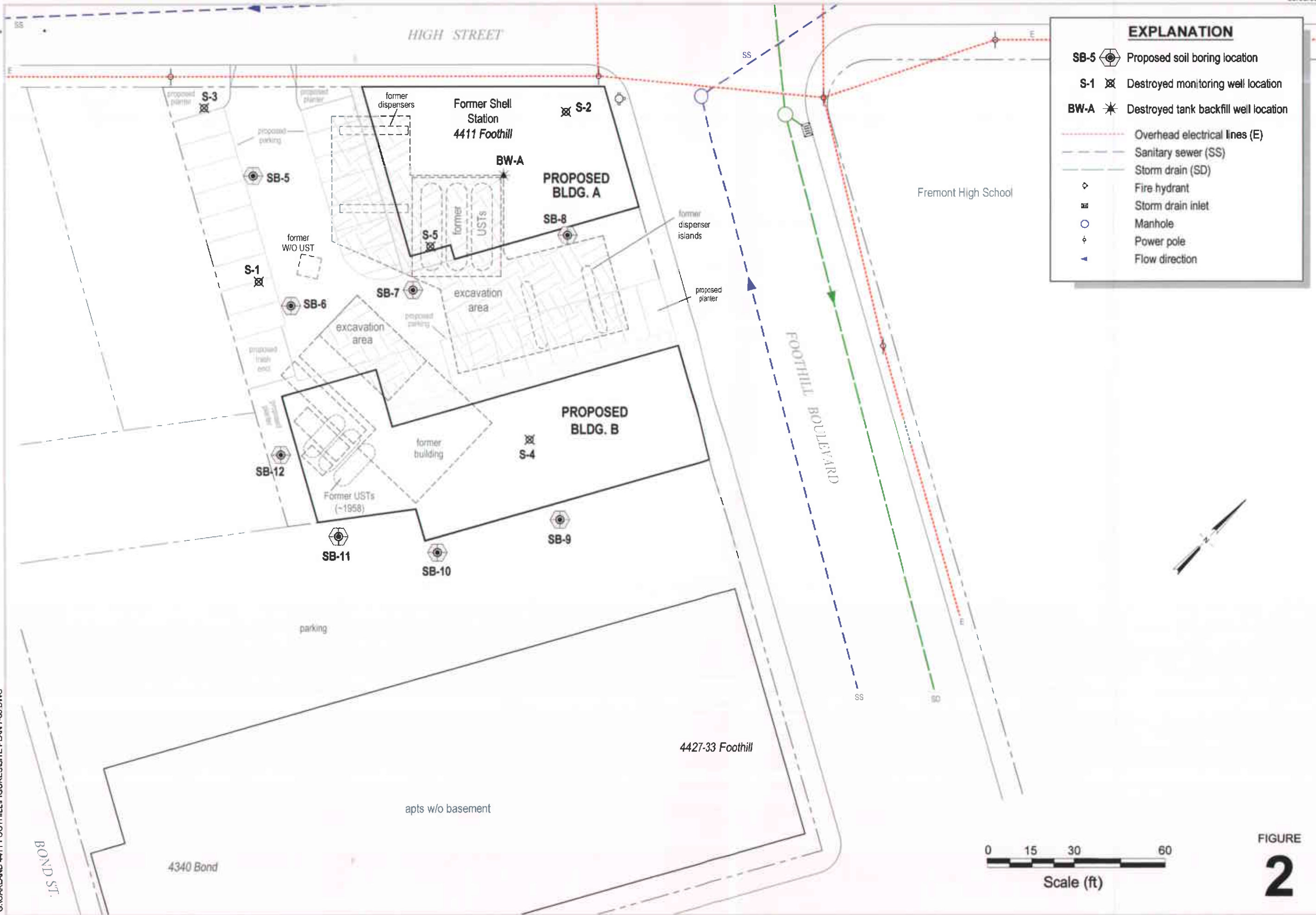
**Former Shell Service Station**  
 4411 Foothill Boulevard  
 Oakland, California  
 Incident #98995746



C A M B R I A

**Vicinity/Area Well Survey Map**  
 (1/2-Mile Radius)

FIGURE 1



EXPLANATION	
SB-5	Proposed soil boring location
S-1	Destroyed monitoring well location
BW-A	Destroyed tank backfill well location
- - - - -	Overhead electrical lines (E)
- - - - -	Sanitary sewer (SS)
- - - - -	Storm drain (SD)
◇	Fire hydrant
■	Storm drain inlet
○	Manhole
◇	Power pole
▶	Flow direction

Site Plan



C A M B R I A

Former Shell Service Station

4411 Foothill Boulevard  
Oakland, California  
Incident No. 98995746

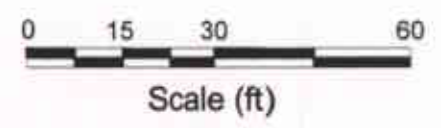
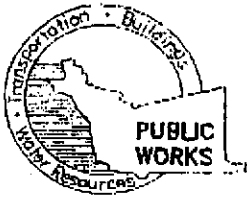


FIGURE 2

**ATTACHMENT A**  
**ACPWA Permits**



# 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

www.acfewed.org

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

LOCATION OF PROJECT 4411 Foothill Blvd.  
Oakland, CA.

FOR OFFICE USE

PERMIT NUMBER W05-0195  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Shell Oil Products Co. (U.S.)  
Address 20945 S. Wilshire Phone (510) 675-9306  
City Carson, CA Zip 90810

APPLICANT  
Name Cambria Sewi Technology  
- Stu Dulic - Fax 510 420 9170  
Address 5100 Hallis St Ste A Phone 510 420-3339  
City Emeryville, CA Zip 94608

### TYPE OF PROJECT

<u>Well Construction</u>		<u>Geotechnical Investigation</u>	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

### PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

### DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>X - pressure grout</u>	

DRILLER'S NAME Group Drilling Vironex  
DRILLER'S LICENSE NO. 485-165 705927

### WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum	_____ ft.
Casing Diameter	_____ in.	Depth	_____ ft.
Surface Seal Depth	_____ ft.	Owner's Well Number	<u>(S-1)</u>

### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings	_____	Maximum	_____ ft.
Hole Diameter	_____ in.	Depth	_____ ft.

STARTING DATE between May 1st 05 (Week of July)  
COMPLETION DATE To July 1st 05 starting 11th  
construction  
Schedule.

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 2/10/05

PLEASE PRINT NAME Stewart A. Dulic IV Rev. 5-11-04

### PERMIT CONDITIONS

Circled Permit Requirements Apply

#### A. GENERAL

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 project not begun within 90 days of approval date.

#### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal 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 surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

#### D. GEOTECHNICAL/CONTAMINATION

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

#### E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

#### F. WELL DESTRUCTION - DGA 2

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

#### G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [Signature] DATE 2-10-05





### ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

www.acfwwd.org

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 4411 Foothill Blvd.  
Oakland, CA

PERMIT NUMBER W05-0196  
WELL NUMBER \_\_\_\_\_  
AFN \_\_\_\_\_

CLIENT  
Name Shell Oil Products Co. (U.S.)  
Address 20945 S. W. Milpitas Phone (510) 845-9306  
City Carson, CA Zip 90810

APPLICANT  
Name Cambria Env. Technology  
- Stu Dalie - Fax 510 420 9170  
Address 5700 Hollis St. A Phone 510 420 3339  
City Emeryville, CA Zip 94608

#### TYPE OF PROJECT

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Well Construction | <input type="checkbox"/> Geotechnical Investigation  |
| <input type="checkbox"/> Cathodic Protection          | <input type="checkbox"/> General                     |
| <input type="checkbox"/> Water Supply                 | <input type="checkbox"/> Contamination               |
| <input type="checkbox"/> Monitoring                   | <input checked="" type="checkbox"/> Well Destruction |

#### PROPOSED WATER SUPPLY WELL USE

- |                                       |   |
|---------------------------------------|---|
| <input type="checkbox"/> New Domestic | <input type="checkbox"/> Replacement Domestic |
| <input type="checkbox"/> Municipal    | <input type="checkbox"/> Irrigation           |
| <input type="checkbox"/> Industrial   | <input type="checkbox"/> Other                |

#### DRILLING METHOD:

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> Mud Rotary | <input type="checkbox"/> Air Rotary | <input type="checkbox"/> Auger                       |
| <input type="checkbox"/> Cable      | <input type="checkbox"/> Other      | <input checked="" type="checkbox"/> - pressure grout |

DRILLER'S NAME Gary Dattney Vironex

DRILLER'S LICENSE NO. will 5-2  
985 165 705-927

#### WELL PROJECTS

Drill Hole Diameter 10 1/2 in. Maximum Depth 22 ft.  
Casing Diameter 4 in. Owner's Well Number (5-2)  
Surface Seal Depth 55 ft.

#### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

STARTING DATE between May 1st 05

COMPLETION DATE to July 1st 05

*(Week of July 1st 05)*  
*construction schedule*

#### PERMIT CONDITIONS

Circled Permit Requirements Apply

- A. GENERAL**
  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 project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS**
  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth is 50 feet for municipal 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 surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- D. GEOTECHNICAL/CONTAMINATION**  
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.
- E. CATHODIC**  
Fill hole anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION** - PG 49  
Send a map of work site. A separate permit is required for wells deeper than 45 feet.
- G. SPECIAL CONDITIONS**

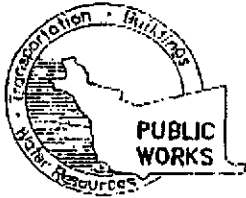
NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 2/10/05

PLEASE PRINT NAME Stewart A. Dalie IV Rev. 5-11-04

APPROVED [Signature] DATE 2-10-05



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

www.acfswed.org

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 4411 Foothill Blvd.  
Oakland, CA

PERMIT NUMBER W05-0197  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Shell Oil Products Co. (U.S.)  
Address 2045 S. Wilshire Phone (818) 845-9306  
City Carson, CA Zip 90810

APPLICANT  
Name Cambria Env. Technology  
- Stu Dulie - Fax 510 420 9170  
Address 5100 Hillside St. Phone 510 420 3339  
City Emeryville, CA Zip 94608

### TYPE OF PROJECT

Well Construction  
 Cathodic Protection  
 Water Supply  
 Monitoring  
 Geotechnical Investigation  
 General  
 Contamination  
 Well Destruction

### PROPOSED WATER SUPPLY WELL USE

New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

### DRILLING METHOD:

Mud Rotary  Air Rotary  Auger   
Cable  Other  - pressure grout

DRILLER'S NAME Gregg Drilling Vindex  
DRILLER'S LICENSE NO 985-165 705-927

### WELL PROJECTS

Drill Hole Diameter 10" in. Maximum  
Casing Diameter 4" in. Depth 20 R  
Surface Seal Depth 5.5 R. Owner's Well Number (S-3)

### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings \_\_\_\_\_ Maximum  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ R.

STARTING DATE between May 1st 05  
COMPLETION DATE to July 1st 05  
*(week of July 11th)*  
*construction schedule*

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73 68.

APPLICANT'S SIGNATURE Stewart A. Dulie IV DATE 2/10/05

PLEASE PRINT NAME Stewart A. Dulie IV Rev. 5-11-04

### PERMIT CONDITIONS

Circled Permit Requirements Apply

#### A. GENERAL

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 project not begun within 90 days of approval date.

#### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal 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 surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

#### D. GEOTECHNICAL/CONTAMINATION

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

#### E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

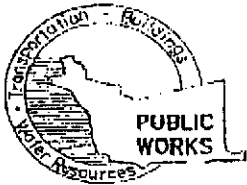
#### F. WELL DESTRUCTION

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

#### G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED \_\_\_\_\_ DATE 2/10/05



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

www.acfwd.org

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

LOCATION OF PROJECT 4411 Foothill Blvd.  
Dakland, CA

FOR OFFICE USE

PERMIT NUMBER W15-0198  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

### PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT  
Name Shell Oil Products Co. (US)  
Address 20945 S. Wilshire Phone (310) 445-9306  
City Carson, CA Zip 90810

APPLICANT  
Name Cambria Env. Technology  
Address 5700 Hillside St Phone 510 420 3339  
City Emeryville, CA Zip 94608

### TYPE OF PROJECT

Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

### PROPOSED WATER SUPPLY WELL USE

New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other \_\_\_\_\_

### DRILLING METHOD:

Mud Rotary  Air Rotary  Auger   
Cable  Other  pressure grout

DRILLER'S NAME Cross Drilling Vironex

DRILLER'S LICENSE NO. 705-1059 705-927

### WELL PROJECTS

Drill Hole Diameter 10" in. Maximum Depth 20 ft.  
Casing Diameter 4" in. Owner's Well Number S-4(SB-4B)  
Surface Seal Depth 4 ft. log attached.

### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

STARTING DATE between May 1st 05

COMPLETION DATE to July 1st 05

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

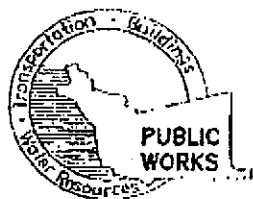
APPLICANT'S SIGNATURE [Signature] DATE 2/10/05

PLEASE PRINT NAME Stewart A. Dulie, IV Rev 5-11-04

- A. GENERAL**
  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 project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS**
  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth is 50 feet for municipal 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 surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- D. GEOTECHNICAL/CONTAMINATION**  
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.
- E. CATHODIC**  
Fill hole anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION - PG 4-1**  
Send a map of work site. A separate permit is required for wells deeper than 45 feet.
- G. SPECIAL CONDITIONS**

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED: [Signature] DATE 2-10-05



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

www.acfwed.org

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 4411 Foothill Blvd.  
Oakland, CA.

PERMIT NUMBER WAS-0199  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Shell Oil Products Co. (U.S.)  
Address 20945 S. W. Mills Phone (510) 495-9306  
City Carson, CA Zip 90810

APPLICANT  
Name Cambria Envi Technology  
- Stu Dulie - Fax 510 420 9170  
Address 5900 Hellis St Ste A Phone 510 420 3339  
City Emeryville, CA Zip 94608

#### TYPE OF PROJECT

<u>Well Construction</u>		<u>Geotechnical Investigation</u>	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/>

#### PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

#### DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>Pressure Grout</u>	

DRILLER'S NAME: Gregg Drilling

DRILLER'S LICENSE NO. 485-165

#### WELL PROJECTS

Well S-5

Drill Hole Diameter	<u>10"</u> in.	Maximum Depth	<u>22</u> ft.
Casing Diameter	<u>4"</u> in.	Owner's Well Number	<u>(S-5)</u>
Surface Seal Depth	<u>3</u> ft.		

#### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings	_____	Maximum Hole Diameter	_____ in.
		Depth	_____ ft.

STARTING DATE between May 1st '05  
COMPLETION DATE to July 1st '05  
*pending construction schedule*

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 2/10/05

PLEASE PRINT NAME Stewart A. Dulie IV Rev 5/1/00

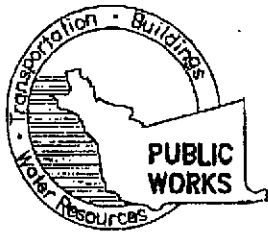
#### PERMIT CONDITIONS

Circled Permit Requirements Apply

- A. GENERAL**
  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 project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS**
  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth is 50 feet for municipal 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 surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- D. GEOTECHNICAL/CONTAMINATION**  
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.
- E. CATHODIC**  
Fill hole anode zinc with concrete placed by tremie.
- F. WELL DESTRUCTION - PG#7**  
Send a map of work site. A separate permit is required for wells deeper than 45 feet.
- G. SPECIAL CONDITIONS**

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [Signature] DATE 2-10-05



**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**

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.
2. Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing 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. Permittee, 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 statutes 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.
6. 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 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, property 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 hollow-stem 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.

**ATTACHMENT C**  
**DWR Well Driller's Completion Reports**

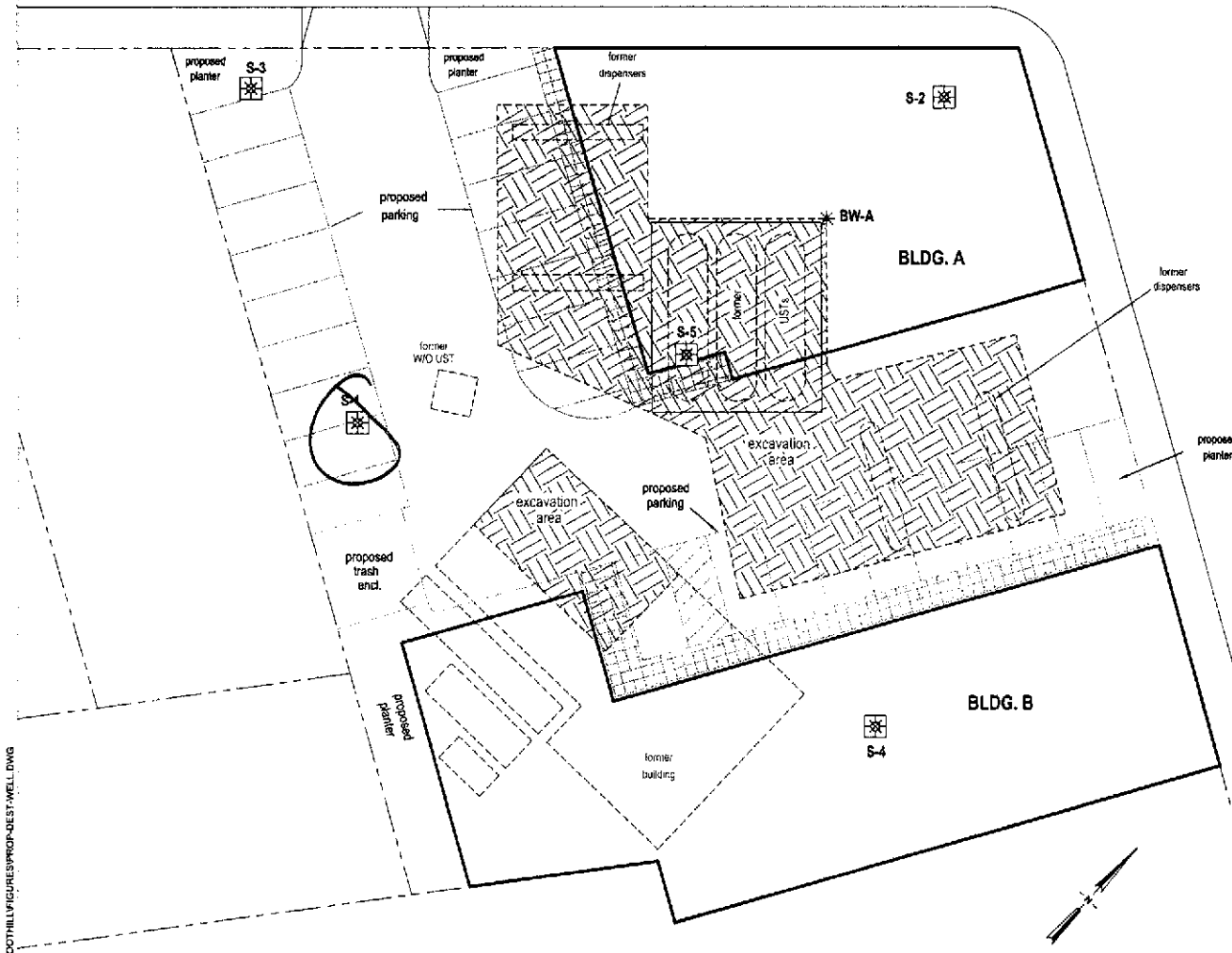


**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

HIGH STREET



**EXPLANATION**

S-1 Monitoring well location, proposed for destruction

BW-A Destroyed tank backfill well location

Proposed Well Destruction Locations with Proposed Building Foundations



C A M B R I A

Former Shell Service Station

4411 Foothill Boulevard  
Oakland, California  
Incident #98985746

FIGURE 2

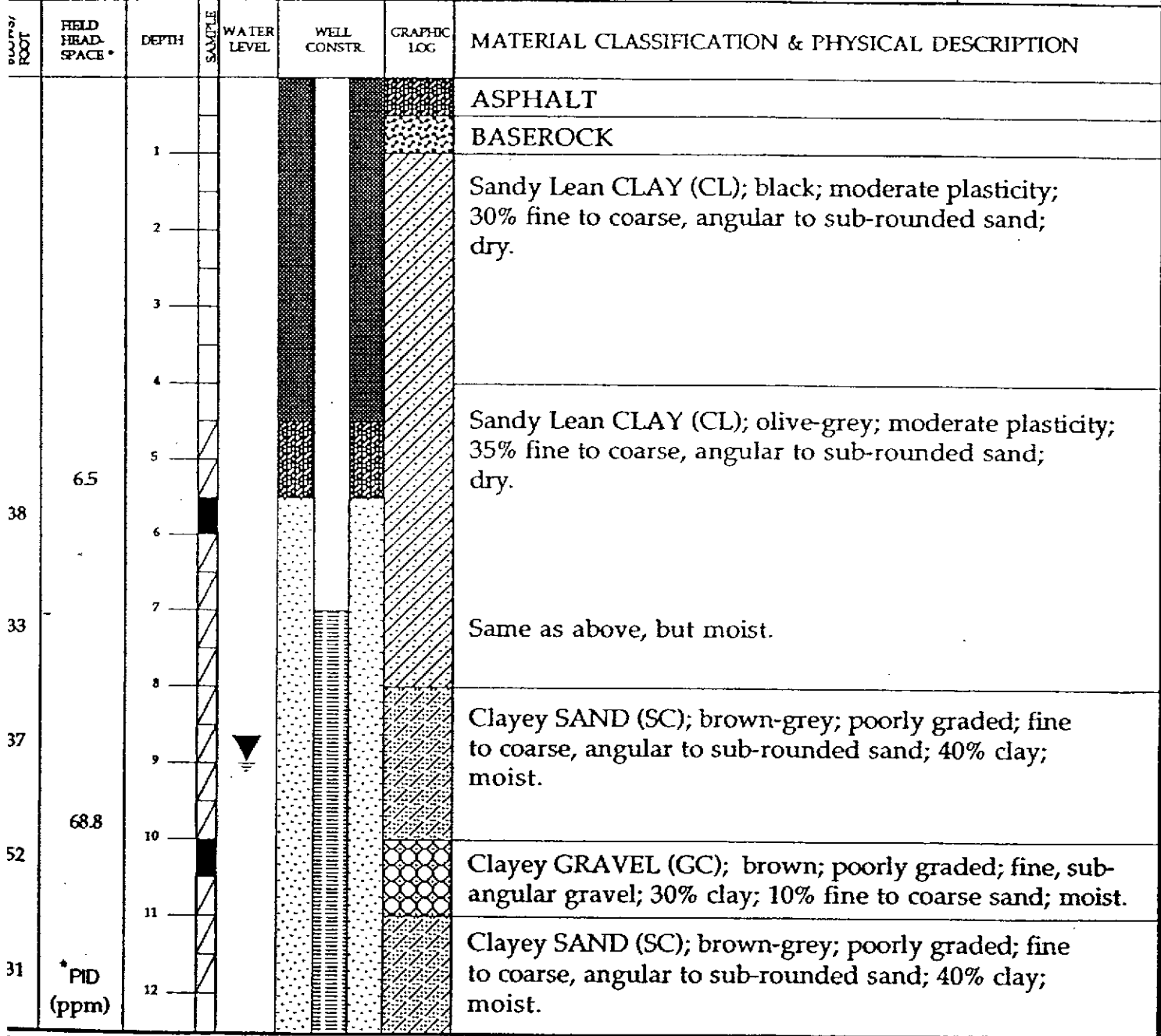
G:\OAKLAND 4411 FOOTHILL\FIGURES\PROP-DEST-WEEL.DWG

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

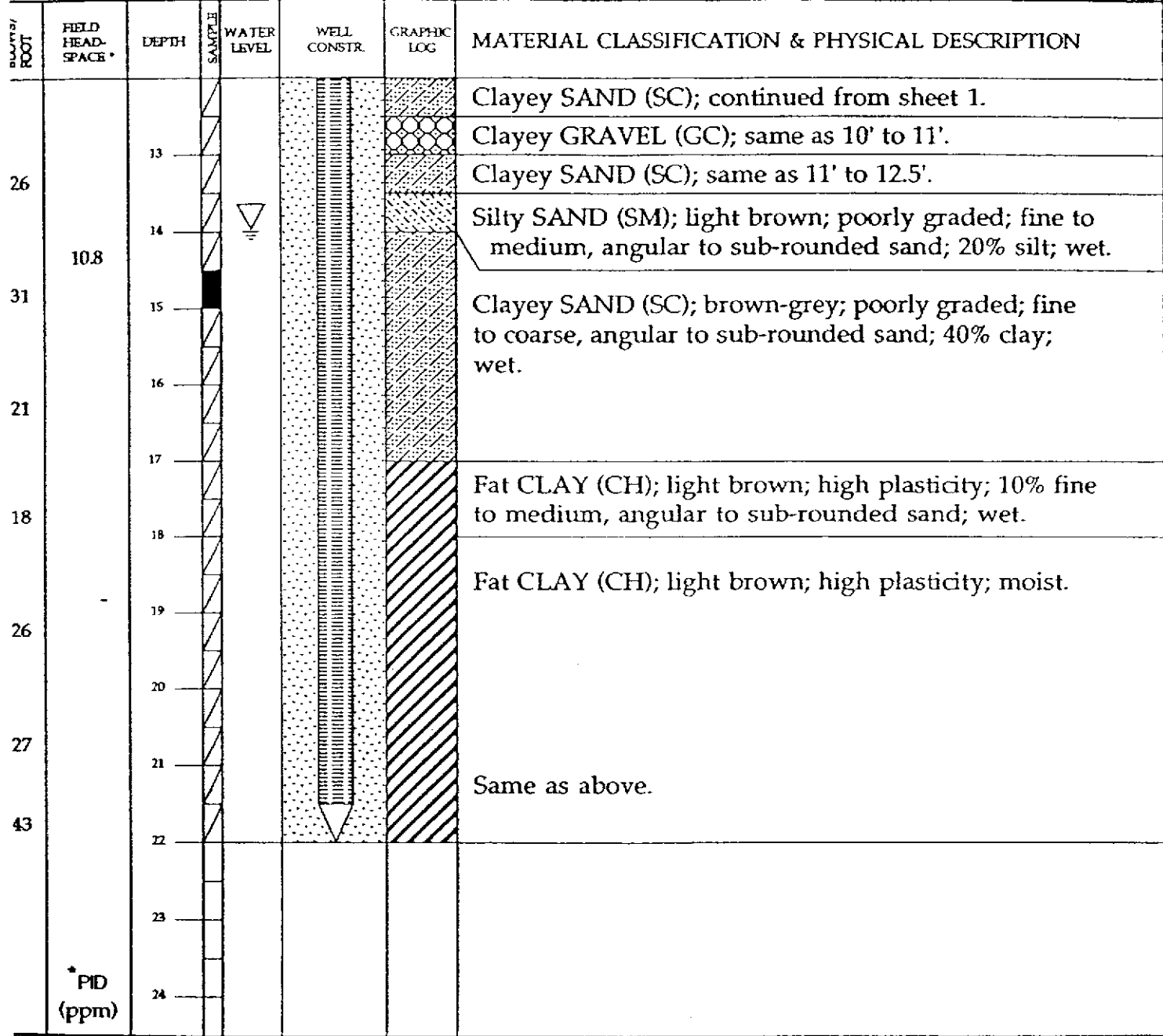
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SITE/LOCATION 411 Foothill Boulevard, Oakland, CA		BEGUN 5/21/93	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO S-2
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 5/21/93	FIRST ENCOUNTERED WATER DEPTH 14 Feet		BOTTOM OF BORING 22 Feet
OPERATOR Joe Ruud		LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 9 Feet		
RILL MAKE & MODEL Mobile B-53		SAMPLING METHOD Continuous sample			WELL NO. S-2
WELL MATERIAL " SCH 40 PVC	SLOT SIZE 0.020"	FILTER PACK #2/12	WELL SEAL Neat cement over hydrated pellets		BOTTOM OF WELL 22 Feet



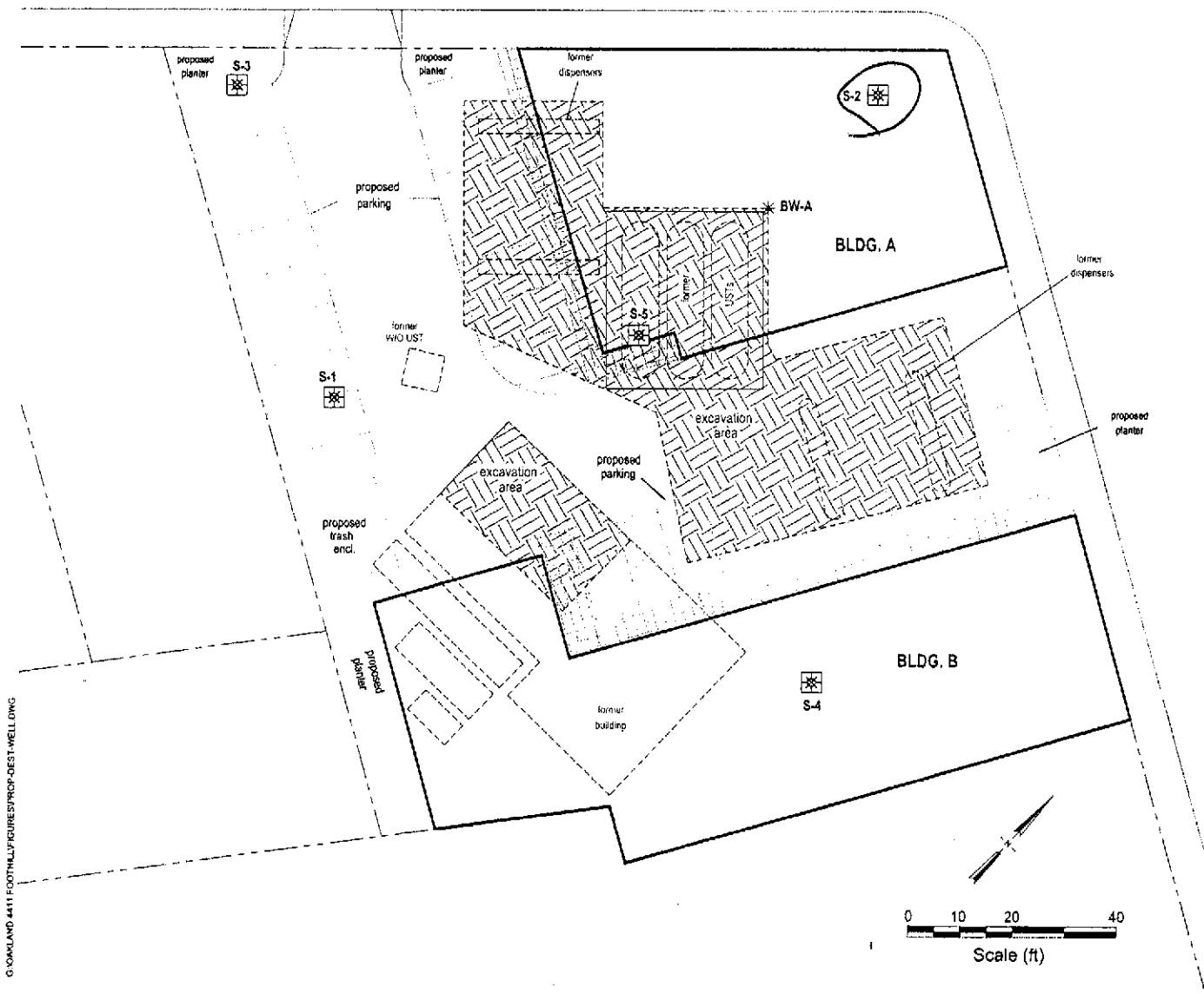
	<b>SOIL BORING LOG S-2 AND WELL CONSTRUCTION S-2</b>	<b>PLATE C-2</b>
	Shell Service Station 4411 Foothill Boulevard Oakland, CA WIC #204-5508-3400	<b>SHEET 1 OF 2</b>
DATE: June 7, 1993		<b>JOB NO. 12-010</b>
APPROVED BY: John H. Turney, P.E.		

SITE/LOCATION 411 Foothill Boulevard, Oakland, CA		BEGUN 5/21/93	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO S-2
DRILLING CONTRACTOR Jregg Drilling		COMPLETED 5/21/93	FIRST ENCOUNTERED WATER DEPTH 14 Feet		BOTTOM OF BORING 22 Feet
OPERATOR Aoe Riud		LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 9 Feet		
RILL MAKE & MODEL Mobile B-53		SAMPLING METHOD Continuous sample			WELL NO. S-2
WELL MATERIAL " SCH 40 PVC		SLOT SIZE 0.020"	FILTER PACK #2/12	WELL SEAL Neat cement over hydrated pellets	
					BOTTOM OF WELL 22 Feet





	SOIL BORING LOG S-2 AND WELL CONSTRUCTION S-2	PLATE C-2 SHEET 2 OF 2
	Shell Service Station 4411 Foothill Boulevard Oakland, CA WIC #204-5508-3400	JOB NO. 12-010
DATE: June 7, 1993 APPROVED BY: John H. Turney, P.E.		

16-11-1111



**EXPLANATION**

S-1  Monitoring well location, proposed for destruction

BW-A  Destroyed tank backfill well location

© OAKLAND 4411 FOOTHILL FIGURES/PROP-DEST-WEILLING

Proposed Well Destruction Locations  
with Proposed Building Foundations



C A M B R I A

FIGURE  
**2**

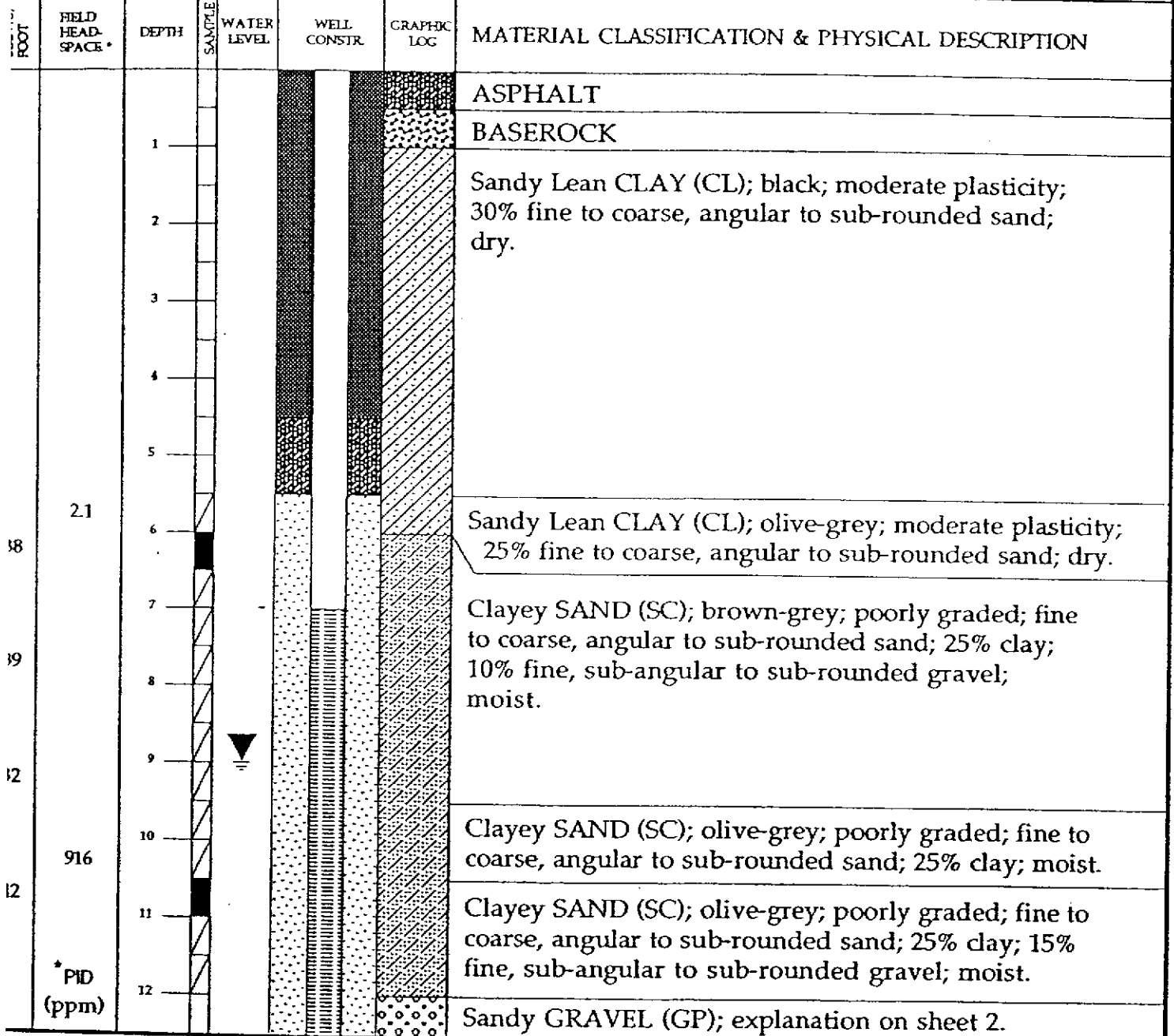
**Former Shell Service Station**  
4411 Foothill Boulevard  
Oakland, California  
Incident #98995746

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

SITE/LOCATION 411 Foothill Boulevard, Oakland, CA		BEGUN 5/21/93	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO S-3
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 5/21/93	FIRST ENCOUNTERED WATER DEPTH 14 Feet		BOTTOM OF BORING 20 Feet
OPERATOR Ted Hogan		LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 9 Feet		
DRILL MAKE & MODEL Mobile B-53		SAMPLING METHOD Continuous sample			WELL NO. S-3
CELL MATERIAL SCH 40 PVC		SLOT SIZE 0.020"	FILTER PACK #2/12	WELL SEAL Neat cement over hydrated pellets	BOTTOM OF WELL 20 Feet



**HYDRO-  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

DATE: June 7, 1993

APPROVED BY: John H. Turney, P.E.

**SOIL BORING LOG S-3  
AND  
WELL CONSTRUCTION S-3**

Shell Service Station  
4411 Foothill Boulevard  
Oakland, CA  
WIC #204-5508-3400

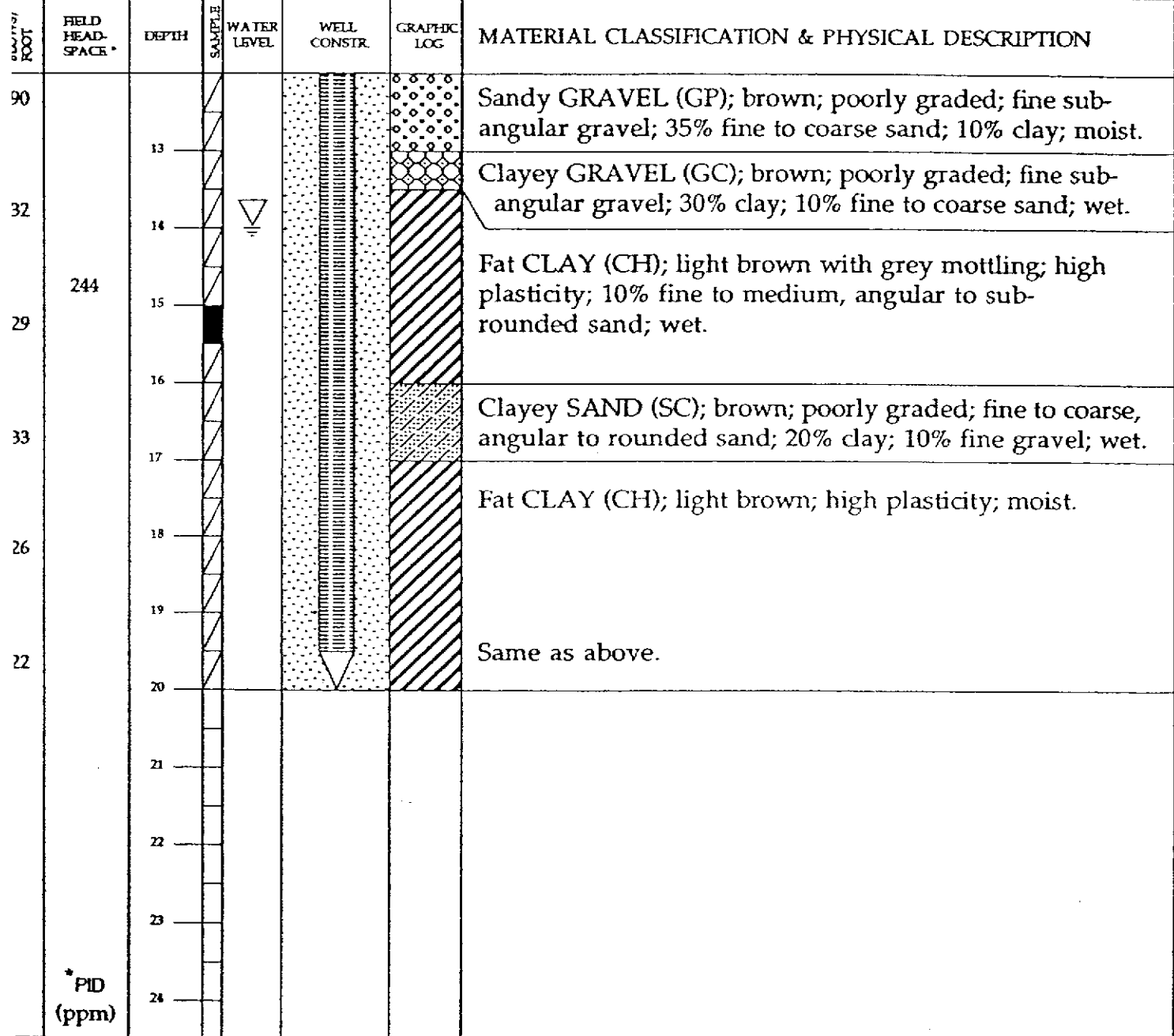
**PLATE  
C-3**

SHEET 1 OF 2

JOB NO.  
**12-010**

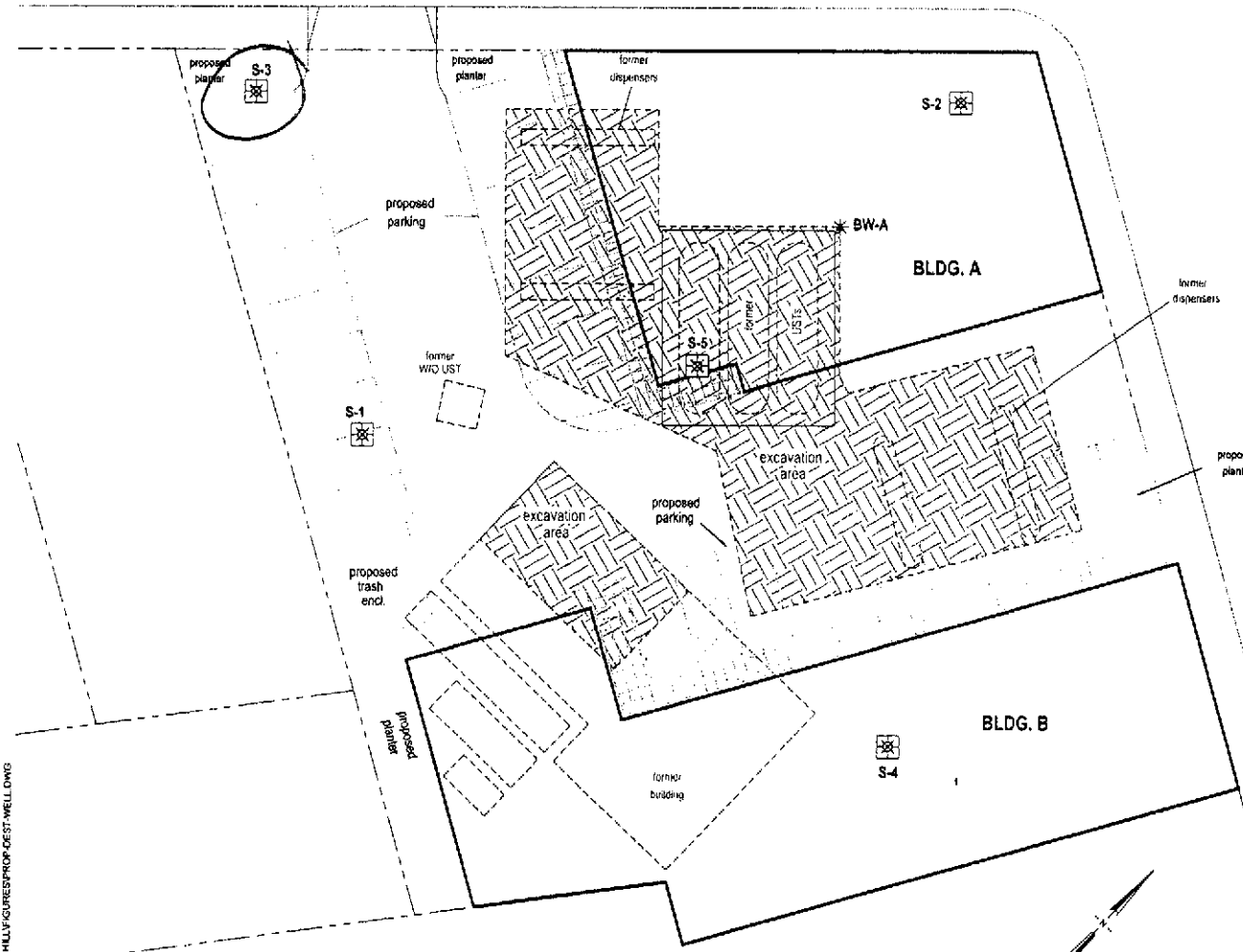


SITE/LOCATION 411 Foothill Boulevard, Oakland, CA		BEGUN 5/21/93	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO S-3
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 5/21/93	FIRST ENCOUNTERED WATER DEPTH 14 Feet		BOTTOM OF BORING 20 Feet
OPERATOR Ted Hogan		LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 9 Feet		
RIG MAKE & MODEL Mobile B-53		SAMPLING METHOD Continuous sample			WELL NO. S-3
WELL MATERIAL 1" SCH 40 PVC		SLOT SIZE 0.020"	FILTER PACK #2/12	WELL SEAL Neat cement over hydrated pellets	
					BOTTOM OF WELL 20 Feet





<b>HYDRO- ENVIRONMENTAL TECHNOLOGIES, INC.</b>	<b>SOIL BORING LOG S-3 AND WELL CONSTRUCTION S-3</b>	<b>PLATE C-3</b>
		<b>SHEET 2 OF 2</b>
ATE: June 7, 1993	Shell Service Station 4411 Foothill Boulevard Oakland, CA WIC #204-5508-3400	<b>JOB NO. 12-010</b>
APPROVED BY: John H. Turney, P.E.		

WALKWAY



**EXPLANATION**

S-1  Monitoring well location, proposed for destruction

BW-A  Destroyed tank backfill well location

Proposed Well Destruction Locations with Proposed Building Foundations



C A M B R I A

Former Shell Service Station

4411 Foothill Boulevard  
Oakland, California  
Incident #98995746

FIGURE 2

03/01/06 4411 FOOTHILL BOULEVARD PROP. DEST. WELL DWG

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STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

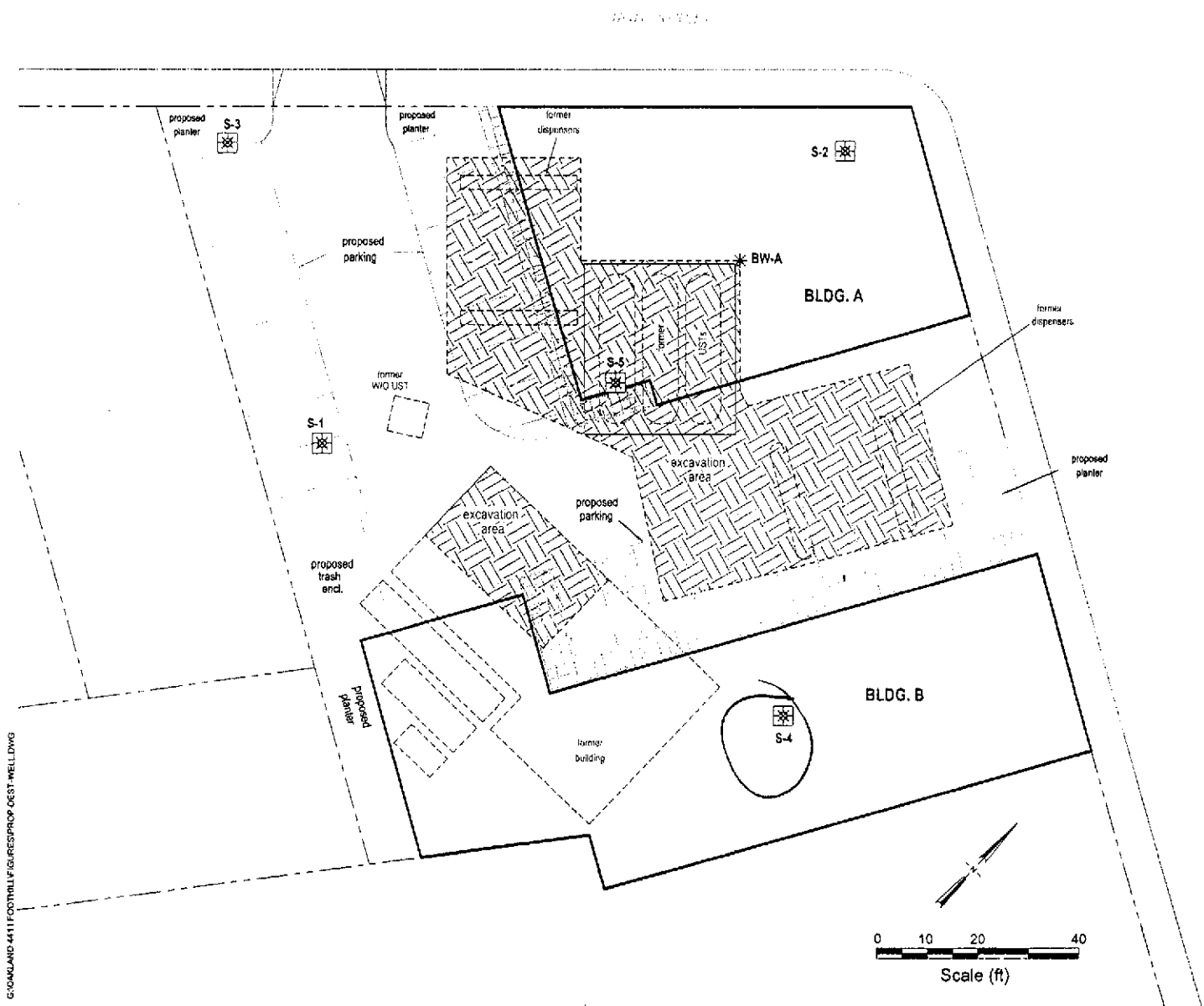
**REMOVED**



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	S-4 (SB-4B)
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED	07-Jan-00
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	07-Jan-00
PROJECT NUMBER	244-0897	WELL DEVELOPMENT DATE (YIELD)	29-Mar-00
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	39.06
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	38.70 ft
BORING DIAMETER	10"	SCREENED INTERVAL	5 to 20 fbg
LOGGED BY	M. Gaffney	DEPTH TO WATER (First Encountered)	14.8 ft (07-Jan-00)
REVIEWED BY	S. Bork, RG# 5620	DEPTH TO WATER (Static)	NA
REMARKS	Hand Augered 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
				0.3			ASPHALT	0.3	<p>Portland Type I/II</p> <p>Bentonite Seal</p> <p>Monterey Sand #2/16</p> <p>4" diam., 0.010" Slotted Schedule 40 PVC</p> <p>Bottom of Boring @ 20 ft</p>
3	N/A N/A	SB-4B 5.5		5	SP		SAND (SP); light brown; loose; dry; 10% silt, 80% medium to coarse grained sand, 10% gravel; high estimated permeability.	3.0	
				4.0	ML		SILT (ML); light brown; medium stiff; dry; 5% clay, 85% silt, 10% fine grained sand; medium plasticity, medium estimated permeability. @ 4.0' - 5% clay, 75% silt, 15% sand; medium plasticity, low estimated permeability.	7.5	
139	N/A N/A	SB-4B 10.5		10	SP		SAND (SP); grey green; loose; dry; 10% silt, 80% medium grained sand, 10% gravel; high estimated permeability.	7.5	
				15					
21	N/A N/A N/A	SB-4B 19.0		20	ML		@ 19' - wet Clayey SILT (ML); light brown with black and red spots; hard; wet; 20% clay, 75% silt, 5% fine grained gravel; medium plasticity, low estimated permeability.	19.3 20.0	

WELL LOG SONOMA (PID) G:OAKLAND 4411 FOOHILLGINT.GPJ DEFAULT.GDT 2/10/05



**EXPLANATION**

S-1 Monitoring well location, proposed for destruction

BW-A Destroyed tank backfill well location

Proposed Well Destruction Locations  
with Proposed Building Foundations



C A M B R I A

Former Shell Service Station

4411 Foothill Boulevard  
Oakland, California  
Incident #98995746

FIGURE  
**2**

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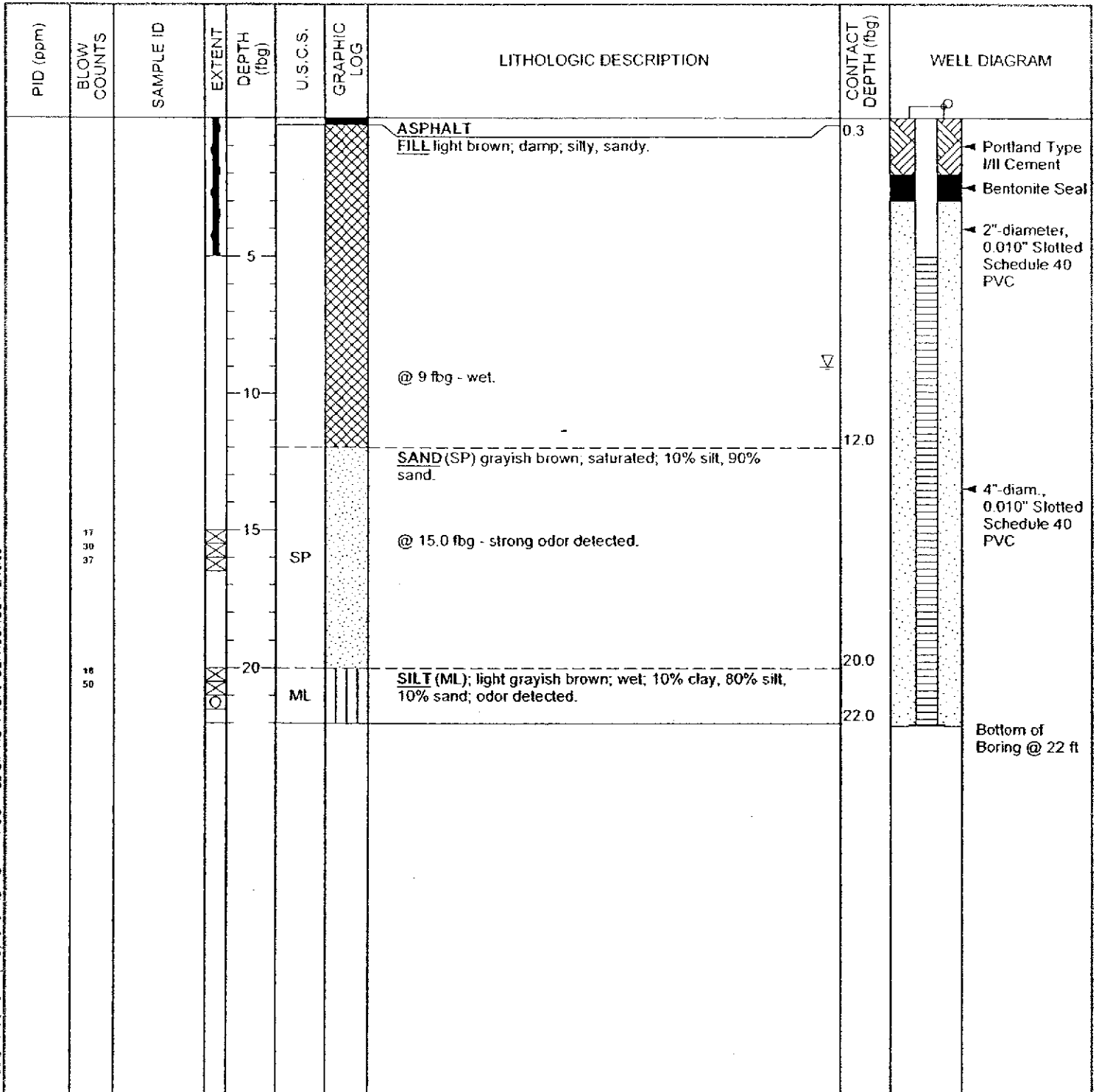
**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



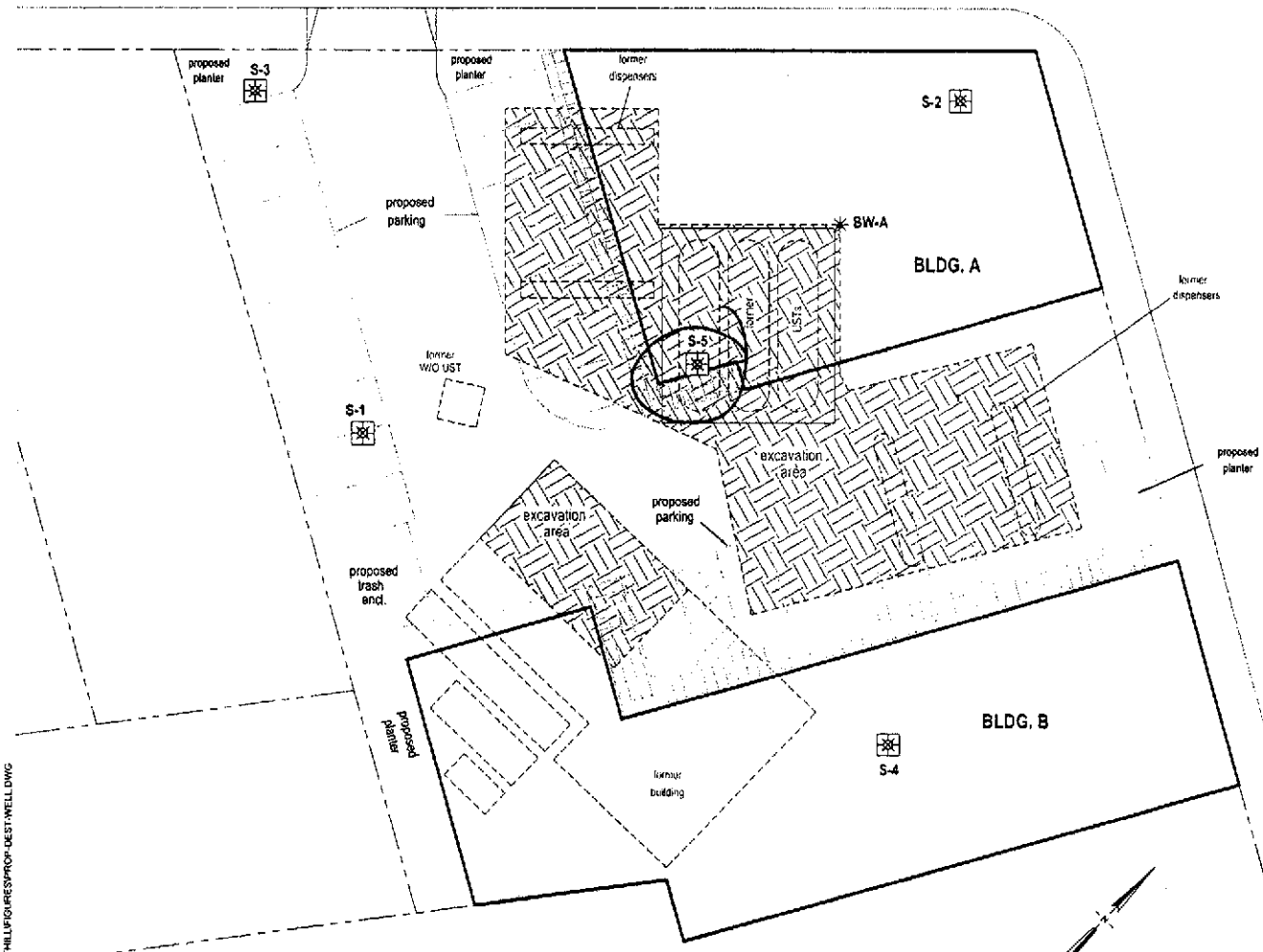
CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	S-5
JOB/SITE NAME	Shell-branded Service Station	DRILLING STARTED	09-May-02
LOCATION	4411 Foothill Blvd, Oakland	DRILLING COMPLETED	09-May-02
PROJECT NUMBER	244-0897	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	10"	SCREENED INTERVAL	5 to 22 fbg
LOGGED BY	S. Couch	DEPTH TO WATER (First Encountered)	9.0 ft (09-May-02)
REVIEWED BY	M. Derby, PE# 55475	DEPTH TO WATER (Static)	NA
REMARKS	Hand Augered to 5 fbg. Well located 50' southeast of the middle of northwest driveway.		





WELL LOG SONOMA (PID) G:\OAKLAND 4411 FOOHILL\GINT\GINT.GPJ DEFAULT GDT 2/10/05

G:\OAKLAND\411 FOOTHILL\FIGURES\PROP-BEST-WELL.DWG

03/01/05



**EXPLANATION**

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

Proposed Well Destruction Locations  
with Proposed Building Foundations



C A M B R I A

**Former Shell Service Station**  
 4111 Foothill Boulevard  
 Oakland, California  
 Incident #98995746

FIGURE  
**2**

