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|-------------|----------------------|---|--|
| DATE: | Septem | nber 4, 2012 R EFERENCE No.: 060119 | |
| | | PROJECT NAME: 2350 (2368) Harrison | Street, Oakland |
| To: | Jerry W | Vickham | |
| | Alame | da County Environmental Health RECEIVE | D |
| | | Jarhor Bay Parkway Suite 250 | |
| | | 11:00 am, Sep 0 | |
| | | da, California 94502-6577 Alameda Cou Environmental I | |
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| QUAN | TITY | DESCRIPTION | |
| 1 | | Well Destruction Work Plan | |
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| СОММЕ | NTS: | | |
| | | uestions regarding the contents of this document, please call Peter Schae | fer at |
| (510) 420- | 3319. | | |
| Copy to: | | Denis Brown, Shell Oil Products US (electronic copy) | |
| | - | Richard Burge, 490 Grand Avenue, Suite 100, Oakland, CA 94610 | |
| Complete | d by: | Peter Schaefer Signed: Hun Schaefe | |
| Filing: | Correspo | ndence File | |



Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Denis L. Brown Shell Oil Products US

HSE – Environmental Services 20945 S. Wilmington Ave. Carson, CA 90810-1039 Tel (707) 865 0251 Fax (707) 865 2542 Email denis.1.brown@shell.com

Re:

Former Shell Service Station 2350 (2368) Harrison Street Oakland, California SAP Code 173318 Incident No. 97743969 ACEH No. RO0000505

Dear Mr. Wickham:

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

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

Sincerely,

Denis L. Brown

Senior Program Manager



WELL DESTRUCTION WORK PLAN

FORMER SHELL SERVICE STATION 2350 (2368) HARRISON STREET OAKLAND, CALIFORNIA

SAP CODE

173318

INCIDENT NO.

97743969

AGENCY NO.

RO0000505

SEPTEMBER 4, 2012
REF. NO. 060119 (24)
This report is printed on recycled paper.

Prepared by: Conestoga-Rovers & Associates

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APPENDIX A

WELL AND VAPOR PROBE LOGS

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). The proposed well destructions are required for final case closure per Alameda County Environmental Health's (ACEH's) August 23, 2012 letter.

The site is a former Shell service station located on the southern corner of Harrison Street and Bay Place in Oakland, California (Figure 1). The layout of the former station (whose address was 2368 Harrison Street) included underground fuel storage tanks (USTs), a waste oil UST, three dispenser islands, and a station building (Figure 2). All USTs and fuel distribution and dispensing facilities have been removed. The site is currently occupied by a 7-Eleven Store (whose address is 2350 Harrison Street), and the area surrounding the station is of mixed commercial and residential use.

2.0 WORK TASKS

2.1 PERMITS

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

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

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

2.3 UTILITY CLEARANCE

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

2.4 MONITORING WELL AND VAPOR PROBE DESTRUCTION

CRA proposes to properly destroy six monitoring wells (S-1 through S-6), four soil vapor probes (SVP-1 through SVP-3 and SVP-2A), and two near sub-slab soil vapor probes (SVP-4 and SVP-5). The monitoring wells will be destroyed by backfilling with

neat cement under pressure (pressure grouting). The soil vapor probes will be destroyed by drilling out the probe boring with an air-knife. The near sub-slab soil vapor probes will be destroyed by drilling out the probe tubing with a hammer drill. The well and soil vapor probe vaults will be removed, and the surface pavement will be patched with concrete to match the surrounding grade. CRA includes the well and probe logs in Appendix A. The proposed scope of work will be performed under the supervision of a professional geologist or engineer.

2.5 REPORT PREPARATION

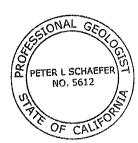
Following completion of the well destructions, CRA will submit a brief report documenting the activities.

3.0 SCHEDULE

CRA will implement the well destructions upon receipt of the appropriate permits.

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

Peter Solution



Peter Schaefer, CEG, CHG

Eric A. Syrstad, PG

FIGURES

Former Shell Service Station

2350 (2368) Harrison Street Oakland, California



Vicinity Map

APPENDIX A

WELL AND VAPOR PROBE LOGS



REVIEWED BY

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

Fax: 510-420-9170

P. Schaefer

BORING/WELL NAME Shell Oil Products US **CLIENT NAME** JOB/SITE NAME **DRILLING STARTED** Former Shell Service Station 2350 Harrison Street, Oakland, CA LOCATION PROJECT NUMBER 060119 DRILLER WDC Exploration DP/HSA **DRILLING METHOD BORING DIAMETER** 10-inch E. Reinhart-Koylu/P. Schaefer · LOGGED BY

03-Jun-08

DRILLING COMPLETED 05-Jun-08

NA WELL DEVELOPMENT DATE (YIELD) NA **GROUND SURFACE ELEVATION**

TOP OF CASING ELEVATION

ŇΑ

6 to 15.5 fbg SCREENED INTERVALS

DEPTH TO WATER (First Encountered) 8.2 fbg (05-Jun-08)

DEPTH TO WATER (Static) 8.46 fbg (05-Jun-08)

REMARKS Cleared to 5 fbg using Water Knife CONTACT DEPTH (fbg) GRAPHIC LOG BLOW EXTENT PID (ppm) DEPTH (fbg) U.S.C.S SAMPLE WELL DIAGRAM LITHOLOGIC DESCRIPTION Surface: Concrete, 4-inches thick.

FILL: Silty CLAY with Gravel: Dark yellowish brown (10YR 4/2); stiff; 55% clay, 20% silt, 15% fine grained sand, 10% angular gravel; medium plasticity; low estimated permeability. 0.3 Portland Type 4.0 Sandy, Silty CLAY: Dark yellowish brown (10YR 4/2); stiff; 55% clay, 30% silt, 15% fine grained sand; medium plasticity; low estimated permeability.

@ 5-feet: Silty CLAY with trace Sand: Olive black (5Y CL S-1-5\5 12 2/1); moist; 60% clay, 30% silt, 10% very fine grained sand; medium plasticity; low estimated permeability.
Clayey SILT with trace Sand: Olive black (5Y 2/1); 7.0 S-1-6.5 10.6 ML 8.0 6/19/08 moist; 30% clay, 60% silt, 10% very fine to fine grained sand; low plasticity; moderately low estimated Monterey Sand #3 permeability.

Silty CLAY with trace Sand: Olive black (5Y 2/1); wet;
65% clay, 25% silt, 10% very fine to fine grained sand; low plasticity; moderately low estimated permeability. **DEFAULT.GDT** @ 10-feet: Mottled dark yellowish orange and dusky yellow green (10YR 6/6 and 5GY 5/2); moist; 60% clay, 4"-diam. C:IDOCUMENTS AND SETTINGS\EREINHARTKOYLU\DESKTOP\HARRISON B-LOGS\GPJ CL 30% silt, 10% sand; medium low plasticity; low estimated 0 0.020" Slotted permeability. Schedule 40 @ 13.2-feet: <u>Sandy, Silty CLAY</u>: Moderate yellowish brown (10YR 5/4); 55% clay, 25% silt, 20% sand; medium **PVC** 0 @ 14-feet: <u>Silty CLAY with trace Sand</u>: Mottled dark yellowish orange and dusky yellow green (10YR 6/6 and 5GY 5/2); 60% clay, 30% silt, 10% sand. 16.0 **Bottom of Boring** @ 16 fbg WELL LOG (PID)



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

BORING/WELL NAME Shell Oil Products US CLIENT NAME 02-Jun-08 **DRILLING STARTED** Former Shell Service Station JOB/SITE NAME DRILLING COMPLETED 05-Jun-08 2350 Harrison Street, Oakland, CA LOCATION WELL DEVELOPMENT DATE (YIELD) NA PROJECT NUMBER 060119 NA **GROUND SURFACE ELEVATION** WDC Exploration DRILLER TOP OF CASING ELEVATION NA DP/HSA **DRILLING METHOD** 6 to 15.5 fbg **SCREENED INTERVALS BORING DIAMETER** 10-inch DEPTH TO WATER (First Encountered) 9.0 fbg (05-Jun-08) LOGGED BY E. Reinhart-Koylu/P. Schaefer **DEPTH TO WATER (Static)** 14.55 fbg (05-Jun-08) P. Schaefer REVIEWED BY

| LITHOLOGIC DESCRIPTION Continue Continu | REM | IAR | KS . | <u>C</u> | lear | ed to 5 | fbg us | ing Wa | ter Knife | | |
|--|--------------------------------------|-----|------|-----------|--------|-------------------------------------|----------|----------------|--|------------------------|---|
| FILL: Sandy GRAVEL: 25% sand; 75% gravel (up to 3" diameter); high estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; medium plasticity; very low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; medium plasticity; very low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; low estimated permeability. Silty CLAY: Dark gray (N3); stiff; low estimated permeability. Silty CLAY: Dark gray (N3) | PID (ppm) | | BLOW | SAMPLE ID | EXTENT | DEPTH (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (fbg) | WELL DIAGRAM |
| | 1 10.0 | 6 | | S-2-5 .5 | | | CL | | Surface: Asphalt Top/Concrete, 6-inches thick. FILL: Sandy GRAVEL: 25% sand; 75% gravel (up to 3" diameter); high estimated permeability. Silty CLAY: Dark gray (N3); stiff; moist; 65% clay, 35% silt; medium plasticity; very low estimated permeability. © 5-feet: Dusky green (5G 3/2); moist; 70% clay, 30% silt; low estimated permeability. | 3.0 | |
| | RRISON B-LOGS GPJ DEFAULT GDT 6/19/0 | | | | | - 10- - - - - 15- | | | 4/1); slightly moist; 10% silt, 60% sand, 30% gravel; non-plastic; high estimated permeability. Silty CLAY with trace Sand: Mottled dark yellowish orange and dusky brown (10YR 6/6 and 5YR 2/2); moist; 60% clay, 30% silt, 10% very fine grained sand; medium plasticity; low estimated permeability. @ 11.5-feet: Black spots. @ 13-feet: Moderate yellowish brown (10YR 5/4) with | | Sand #3 4"-diam., 0.020" Slotted Schedule 40 PVC |
| 81 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | S-2-1 5.5 | | | | | | 116.0 | Bottom of Boring |



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| CLIENT NAME | Shell Oil Products US | BORING/WELL NAME | S-3 | | |
|-----------------|-----------------------------------|-------------------------|------------|----------------------|----------------|
| JOB/SITE NAME | Former Shell Service Station | DRILLING STARTED | 03-Jun-08 | | |
| LOCATION | 2350 Harrison Street, Oakland, CA | DRILLING COMPLETED | 05-Jun-08 | | |
| PROJECT NUMBER | 060119 | WELL DEVELOPMENT DA | TE (YIELD) | NA | |
| DRILLER | WDC Exploration | GROUND SURFACE ELEV | ATION | NA | |
| DRILLING METHOD | DP/HSA | TOP OF CASING ELEVATION | ON | NA | |
| BORING DIAMETER | 10-inch | SCREENED INTERVALS | _ | 6 to 21 fbg | |
| LOGGED BY | E. Reinhart-Koylu | DEPTH TO WATER (First E | ncountere | d) NA | $\bar{\Delta}$ |
| REVIEWED BY | P. Schaefer | DEPTH TO WATER (Static) |) | 7.87 fbg (05-Jun-08) | Ţ |

REMARKS Cleared to 5 fbg using Water Knife CONTACT DEPTH (fbg) SAMPLE ID GRAPHIC LOG BLOW PID (ppm) EXTENT U.S.C.S. DEPTH (fbg) WELL DIAGRAM LITHOLOGIC DESCRIPTION Surface: Asphalt Top/ Concrete, 4-inches thick.
FILL: Sandy GRAVEL with cobbles: :Moderate 0.3 yellowish brown (10YR 5/4); 30% fine to coarse grained sand; 60% fine to coarse gravel, 10% cobbles. Portland Type @ 2-feet; Fill contains red brick. 3.0 Silty, Sandy CLAY: Dark gray (N3); stiff, 65% clay, 20% silt, 15% fine grained sand; medium plasticity; low CL estimated permeability. 5.0 Silty, Clayey SAND: Grayish black (N2); medium dense; S-3-5 3.8 moist; 20% clay, 30% silt, 50% fine grained sand; medium plasticity; moderate estimated permeability. SM ¥ Monterey WELL LOG (PID) C:DOCUMENTS AND SETTINGSIEREINHARTKOYLUDESKTOPIHARRISON B-LOGS.GPJ DEFAULT.GDT 6/19/08 Sand #3 @ 9-feet: Medium dark gray (N4). 10.0 Silty CLAY: Olive gray (5Y 4/1); stiff; moist; 75% clay, 25% silt; high plasticity; low estimated permeability. S-3-1 0 1.4 4"-diam., 0.020" Slotted @ 12-feet: <u>Silty CLAY with Sand</u>: Dark yellowish orange (10YR 6/6); very stiff; slightly moist; 70% clay, 20% silt, 5% coarse grained sand; medium plasticity; low estimated permeability. Schedule 40 PVC @ 14-feet: Silty, Sandy CLAY: 55% clay, 20% silt, 25% fine to coarse grained sand. 1.8 S-3-1 5 CL @ 19-feet: Silty, Sandy CLAY: Moderate yellowish brown (10YR 5/4); very stiff; dry; 60% clay, 20% silt, 20% S-3-1 9.5 S-3-2 0 fine grained sand; high plasticity; low estimated permeability. @ 22-feet: Silty CLAY: Stiff; slightly moist; 75% clay, 25% silt. 25.0 S-3-2 4.5 **Bottom of Boring** @ 25 fbg



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| CLIENT NAME | Shell Oil Products US | BORING/WELL NAME S-4 |
|-----------------|-----------------------------------|---|
| JOB/SITE NAME | Former Shell Service Station | DRILLING STARTED 02-Jun-08 |
| LOCATION | 2350 Harrison Street, Oakland, CA | DRILLING COMPLETED 04-Jun-08 |
| PROJECT NUMBER | 060119 | WELL DEVELOPMENT DATE (YIELD) NA |
| DRILLER | WDC Exploration | GROUND SURFACE ELEVATION NA |
| DRILLING METHOD | DP/HSA | TOP OF CASING ELEVATION NA |
| BORING DIAMETER | 10-inch | SCREENED INTERVALS 6 to 21 fbg |
| LOGGED BY | E. Reinhart-Koylu | DEPTH TO WATER (First Encountered) 19.0 fbg (04-Jun-08) |
| REVIEWED BY | P. Schaefer | DEPTH TO WATER (Static) 13.11 fbg (05-Jun-08) |
| | | |

| REMAR | KS | Cleared to 5 fbg using Water Knife | | | | | | | |
|--|------|------------------------------------|--------|--------------------|----------|----------------|---|------------------------|------------------------------|
| PID (ppm) | BLOW | SAMPLE ID | EXTENT | рертн (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (fbg) | WELL DIAGRAM |
| | | | | | | | Surface: Asphalt Top/ Concrete, 6-inches thick. FILL: Sandy GRAVEL with cobbles: Moderate yellowish brown (10YR 5/4); 5% silt, 25% fine to coarse grained sand, 60% fine to coarse gravel, 10% cobbles; non-plastic; high estimated permeability. @ 3-feet: FILL: Silty CLAY with Sand: Grayish black | 0.5 | Portland Type I/II |
| 41.5 | | S-4-5 | | - 5 - | | | (N2); stiff; 70% clay, 20% silt, 10% fine grained sand; high plasticity; very low estimated permeability. Silty SAND: Gravish black (N2); loose; wet; 25% silt, | 5.0 | |
| T 6/19/08 | | | | | SM | | 75% sand; non-plastic; moderate estimated permeability. Silty CLAY: Grayish black (N2); soft; wet; 85% clay, 15% silt; high plasticity; low estimated permeability. | 7.0 | Monterey Sand #3 |
| GPJ DEFAULT.GD | | S-4-1 0 | | —10 <u> —</u> - | | | @ 10-feet: <u>Silty, Sandy CLAY</u> : Olive gray (5Y 3/2); medium stiff; moist; 55% clay, 20% silt, 25% fine grained sand; high plasticity; moderate estimated permeability. @ 12-feet: Medium light gray (N6); 40% clay, 25% silt, | | 4"-diam., 0.020" Slotted |
| WELL LOG (PID) C:DOCUMENTS AND SETTINGS:EREINHARTKOYLUDESKTOPHARRISON B-LOGS:GPJ DEFAULT.GDT 6/19/08 | | S-4-1 5 | | - - -15- | CL | | 35% fine to medium grained sand. @ 13-feet: Angular coarse grained sand. @ 14-feet: Silty CLAY: Dark greenish gray (5GY 4/1); 65% clay, 35% silt; low estimated permeability. @ 15-feet: Mottled dark greenish gray and moderate yellowish brown (5GY 4/1 and 10YR 5/4); 75% clay, 25% silt. | Y | Schedule 40 PVC |
| ARTKOYLU\DESKI | | S-4-1 9.5 | | | | | @ 17-feet: Moderate yellowish brown (10YR 5/4) with grayish brown (5YR 3/2) specks (~1 mm in size); stiff; slightly moist; 80% clay, 20% silt. @ 19-feet: Wet. | Ā | |
| INGS/EREINH, | | S-4-2 0 S-4-2 0.5 | | | e . | | | 21.0 | Bottom of Boring @ 21 fbg |
| AENTS AND SETT | | | | | | | | | |
| (PID) C:VDOCUA | | | | | | | | | |
| WELL LOG | | | | | | | | | |



CLIENT NAME

LOCATION

DRILLER

LOGGED BY

REVIEWED BY

Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-9700 Fax: 510-420-9170

P. Schaefer

Shell Oil Products US **JOB/SITE NAME** Former Shell Service Station 2350 Harrison Street, Oakland, CA PROJECT NUMBER _ 060119 WDC Exploration **DRILLING METHOD** DP/HSA BORING DIAMETER 10-inch E. Reinhart-Koylu/P. Schaefer

BORING/WELL NAME 03-Jun-08 **DRILLING STARTED** DRILLING COMPLETED 05-Jun-08

WELL DEVELOPMENT DATE (YIELD) NA

NΑ **GROUND SURFACE ELEVATION** TOP OF CASING ELEVATION NA

SCREENED INTERVALS 6 to 15.5 fbg

DEPTH TO WATER (First Encountered) 9.2 fbg (05-Jun-08)

'10.50 fbg (05-Jun-08) **DEPTH TO WATER (Static)**

| REMARI | KS | C | lear | ed to 5 | fbg us | ing Wa | ter Knife |
|-----------|------|-----------|--------|----------------|----------|----------------|---|
| PID (ppm) | BLOW | SAMPLE ID | EXTENT | DEPTH (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION CONTACT DEPTH (Bg) DEPTH (Bg) OF THE CONTACT DESCRIPTION |
| | | | | _ | | | Surface: Asphalt. FILL: Sandy GRAVEL: Moderate yellowish brown (10YR 5/4); 5% silt, 30% coarse grained sand, 65% coarse gravel; non-plastic; high estimated permeability. Silty, Sandy CLAY: Dark gray (N3); stiff; 60% clay, 20% Portland Type |
| | | | | | CL | | silt, 15% sand, 5% gravel; medium plasticity; low estimated permeability. |
| 92 | | S-5-6 | | | ML | | Sandy SILT with trace Clay: Brownish black (5YR 2/1); moist; 5% clay, 70% silt, 25% very fine grained sand. Silty CLAY with trace Sand:Brownish black (5YR 2/1); Montarey |
| 8,6 | | S-6-9 | - | - 10- | CL | | moist; 60% clay, 35% silt, 5% sand; moderate estimated permeability. @ 9-feet: Wet. @ 10-feet: Olive gray (5Y 3/2); 60% clay, 30% silt, 10% |
| 1.5 | | S-6-1 2.5 | | - - | | | sand. 4"-diam., 0.020" Slotte Schedule 40 |
| 1.3 | | 00455 | | - 15- | CL | | Clavey SiLT with Sand and trace GravelOlive gray (5Y 4/1); moist; 25% clay, 50% silt, 20% fine to coarse grained sand, 5% fine gravel. Silty CLAY: Olive gray (5Y 4/1); moist; 60% clay, 40% silt; moderate estimated permeability. |
| | | S-6-1 5.5 | | | | | Bottom of Bor @ 16 fbg |
| . s | | | | | | | |
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Fax: 510-420-9170

S-6 BORING/WELL NAME **CLIENT NAME** Shell Oil Products US 05-Jun-08 Former Shell Service Station **DRILLING STARTED JOB/SITE NAME** DRILLING COMPLETED 05-Jun-08 2350 Harrison Street, Oakland, CA LOCATION NA WELL DEVELOPMENT DATE (YIELD) **PROJECT NUMBER** 060119 NΑ **WDC** Exploration **GROUND SURFACE ELEVATION** DRILLER TOP OF CASING ELEVATION NA **DRILLING METHOD** DP/HSA 6 to 15.5 fbg 10-inch **SCREENED INTERVALS BORING DIAMETER** DEPTH TO WATER (First Encountered) 8.8 fbg (05-Jun-08) E. Reinhart-Koylu/P. Schaefer LOGGED BY **DEPTH TO WATER (Static)** 7.32 fbg (05-Jun-08) **REVIEWED BY** P. Schaefer Cleared to 5 fbg using Water Knife REMARKS

CONTACT DEPTH (fbg) GRAPHIC LOG BLOW COUNTS PID (ppm) DEPTH (fbg) U.S.C.S. EXTENT SAMPLE WELL DIAGRAM LITHOLOGIC DESCRIPTION Surface: Asphalt Top/ Concrete, 6-inches thick. FILL: Sandy GRAVEL with Cobbles: Moderate 0.5 yellowish brown (10YR 5/4); stiff; 5% silt, 20% sand, 60% angular gravel, 15% cobbles; non-plastic; high estimated Portland Type permeability. 3.0 1/11 Silty, Sandy CLAY: Dark gray (N3); stiff; 65% clay, 20% silt, 15% fine grained sand; medium plasticity; low CL estimated permeability. 5.0 SAND with trace SIIt: Greenish black (5GY 2/1); wet; 10% silt, 90% fine to medium grained sand. 1 S-6-6 Ť SM WELL LOG (PID) C:DOCUMENTS AND SETTINGSIEREINHARTKOYLUDESKTOPIHARRISON B-LOGS.GPJ DEFAULT.GDT 6/19/08 S-6-7.5 Monterey 1 Sand #3 Ā 10.0 Silty CLAY with trace Sand:Dark greenish gray (5GY 4/1); wet; 60% clay, 30% silt, 10% sand; medium plasticity; moderate estimated permeability. 0 4"-diam., @ 12-feet: Dark yellowish orange (10YR 6/6); moist; 70% 0.020" Slotted clay, 20% silt, 10% sand. Schedule 40 CL 0 PVC 16.0 **Bottom of Boring** @ 16 fbg



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| CLIENT NAME | Shell Oil Products US | BORING/WELL NAME | SVP-1 | | |
|-----------------|-----------------------------------|-------------------------|-------------|-----------------|----------------|
| JOB/SITE NAME | Former Shell Service Station | DRILLING STARTED | 18-May-09 | | |
| LOCATION | 2350 Harrison Street, Oakland, CA | DRILLING COMPLETED | 18-May-09 | | |
| PROJECT NUMBER | | WELL DEVELOPMENT DAT | E (YIELD) _ | NA | |
| DRILLER | Gregg Drilling, C-57 #485165 | GROUND SURFACE ELEVA | TION _ | NA | |
| DRILLING METHOD | | TOP OF CASING ELEVATION | ON _ | NA | |
| BORING DIAMETER | | SCREENED INTERVALS | _ | 4.42 to 4.5 fbg | |
| LOGGED BY | E. Reinhart | DEPTH TO WATER (First E | ncountered) | NA | $\bar{\Delta}$ |
| REVIEWED BY | P. Schaefer | DEPTH TO WATER (Static) | | NA | <u> </u> |
| KEAICAAED DI _ | 1,001100101 | · · | | | |

REMARKS CONTACT DEPTH (fbg) GRAPHIC LOG SAMPLE ID BLOW COUNTS EXTENT PID (ppm) DEPTH (fbg) U.S.C.S. WELL DIAGRAM LITHOLOGIC DESCRIPTION Flush-grade 5" well box ASPHALT
Sandy SILT with gravel (ML); dark yellowish brown
(10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% coarse gravel; low to medium plasticity; fill. 0.3 1/4" teflon sample tubing ML Portland Type I/Ii @ 2' - 60% silt, 30% fine to coarse sand, 10% coarse 27.4 3.0 CLAY (CL); black (2.5Y 2.5/1); moist; 95% clay, 5% silt; high plasticity. WELL LOG (PID) 1:SHELLIG-CHARS/06071-U060119-OAKLAND 2350 (2368) HARRISON STUGG0119-GINT/060119-GINT.GPJ DEFAULT.GDT 6/17/09 Bentonite Seal Monterey Sand

#2/12
1/4" diam. HDPE
screen
Bottom of Boring

@ 5 fbg CL 5.0



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

| CLIENT NAME | Shell Oil Products US | BORING/WELL NAME SVP-2 | | |
|-----------------|-----------------------------------|------------------------------------|-----------------|---------------------|
| JOB/SITE NAME | Former Shell Service Station | DRILLING STARTED 21-May-09 | | |
| LOCATION | 2350 Harrison Street, Oakland, CA | DRILLING COMPLETED 21-May-09 | | |
| PROJECT NUMBER | 060119 | WELL DEVELOPMENT DATE (YIELD) | NA | |
| | Gregg Drilling, C-57 #485165 | GROUND SURFACE ELEVATION | NA | |
| DRILLER | | TOP OF CASING ELEVATION | NA | |
| DRILLING METHOD | Air-knife | SCREENED INTERVALS | 4.42 to 4.5 fbg | |
| BORING DIAMETER | 6" | DEPTH TO WATER (First Encountered) | | $\overline{\nabla}$ |
| LOGGED BY | E. Reinhart | | NA | |
| REVIEWED BY | P. Schaefer | DEPTH TO WATER (Static) | IVA | |

| REMARKS Compared to the property of the pro | REVIEWE | DBY | P | . Scl | aefer | | | DEPTH TO WATER (Static) | NA | 1 |
|--|-----------|--------|-----------|--------|----------------|----------|----------------|---|-----|---|
| ASPHALT Sandy SILT with gravel (ML); dark yellowish brown (10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% coarse gravel; medium plasticity. ML ASPHALT Sandy SILT with gravel (ML); dark yellowish brown (10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% Portland Type I/II | REMARKS | S | | | | | | | | |
| Sandy SiLT with gravel (ML); dark yellowish brown (10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% coarse gravel; medium plasticity. ML Portland Type I/II | PID (ppm) | COUNTS | SAMPLE ID | EXTENT | DEPTH (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | | |
| | | 18 NOO | SAM | | | ML | GR | Sandy SILT with gravel (ML); dark yellowish brown (10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% coarse gravel; medium plasticity. | 0.3 | box 1/4" teflon sample tubing Portland Type I/II Bentonite Seal Monterey Sand #2/12 1/4" diam. HDPE screen Bottom of Boring |



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| CLIENT NAME | Shell Oil Products US | BORING/WELL NAME SVP | -3 | | |
|-----------------|-----------------------------------|-----------------------------|----------|-----------------|--------------|
| JOB/SITE NAME | Former Shell Service Station | DRILLING STARTED 19-N | /lay-09 | | |
| LOCATION | 2350 Harrison Street, Oakland, CA | DRILLING COMPLETED 19-N | /lay-09 | | |
| PROJECT NUMBER | 060119 | WELL DEVELOPMENT DATE (Y | IELD) _ | NA | |
| DRILLER | Gregg Drilling, C-57 #485165 | GROUND SURFACE ELEVATION | N | NA | |
| DRILLING METHOD | Air-knife | TOP OF CASING ELEVATION | _ | NA | |
| | | SCREENED INTERVALS | | 4.42 to 4.5 fbg | |
| BORING DIAMETER | 6" E. Reinhart | DEPTH TO WATER (First Encou | untered) | NA | $ar{\Delta}$ |
| LOGGED BY | E. Reilliait | DEPTH TO WATER (Static) | | NA | Y |

REVIEWED BY REMARKS CONTACT DEPTH (fbg) SAMPLE ID GRAPHIC LOG PID (ppm) U.S.C.S. BLOW COUNTS DEPTH (fbg) EXTENT WELL DIAGRAM LITHOLOGIC DESCRIPTION ASPHALT
Sandy SILT with gravel (ML); dark yellowish brown
(10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% ▼ Flush-grade 5" well box 0.3 1/4" teflon sample coarse gravel; low to medium plasticity; fill. tubing Portland Type I/II ML @ 2' - 65% silt, 35% fine to coarse sand. 27.4 SAND (SW); dark gray (2.5Y 4/1); moist; 5% silt; 95% fine to medium sand. WELL LOG (PID) 1:SHELL16-CHARS10601-U060119-OAKLAND 2350 (2368) HARRISON ST1060119-GINT1060119-GINT1.GPJ DEFAULT.GDT 6/17/09 Bentonite Seal Monterey Sand #2/12 1/4" diam. HDPE SW 5.0 screen Bottom of Boring @ 5 fbg



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| Ellielyviie, | CM 34000 |
|--------------|--------------|
| Telephone: | 510-420-0700 |
| | |
| Fax: 510-4 | 20-9170 |

SVP-2a **BORING/WELL NAME CLIENT NAME** Shell Oil Products US 26-Feb-10 **DRILLING STARTED** Former Shell Service Station JOB/SITE NAME 26-Feb-10 DRILLING COMPLETED _ 2350 (2368) Harrison Street, Oakland, CA LOCATION NΑ WELL DEVELOPMENT DATE (YIELD) PROJECT NUMBER 060119 NΑ Gregg Drilling, C-57 #485165 **GROUND SURFACE ELEVATION DRILLER** TOP OF CASING ELEVATION NA Air-knife **DRILLING METHOD** 1.75 to 1.85 fbg **SCREENED INTERVALS** 3" **BORING DIAMETER** NA **DEPTH TO WATER (First Encountered)** LOGGED BY E. Swan **DEPTH TO WATER (Static)** NA **REVIEWED BY** P. Schaefer

| REMAR | KS | | Air kr | ifed to | 2 fbg | | | | |
|--|------|-----------|--------|----------------|----------|----------------|--|------------------------|---|
| PID (ppm) | BLOW | SAMPLE ID | EXTENT | DEPTH (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (fbg) | WELL DIAGRAM |
| | | | | _ | ML | | ASPHALT Sandy SILT with gravel (ML); dark yellowish brown (10YR 4/6); moist; 50% silt, 30% fine to coarse sand, 20% coarse gravel; low to medium plasticity; fill. | 2.0 | Flush-grade 6"well box Portland Type I/II 1/4" OD Teflon Tubing Bentonite Seal Monterey Sand Vapor Probe Screen |
| | | | | | | | | | Bottom of Boring @ 2 fbg |
| | | | | | | | | | |
| 7/10 | | | | | | | | | |
| WELL LOG (PID) 1:\SHELL\G-CHARS\0601-\060119-1\064AE2-1\060119-GINT.GPJ DEFAULT.GDT 4/7/10 | | | | | · | | | | |
| AE2~1/060119-GINT. | | | | | | | | | |
| 06010601191064 | | | | | | | | | |
| NSHELLY6-CHARSY | | | | | | | | | |
| WELL LOG (PID) | | | | | | | | | |