LIBITZKY
PROPERTY
COMPANIES

October 12, 2011

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: CONDUIT STUDY AND WORK PLAN ADDENDUM CERTIFICATION
County File # RO 2991
Acts Full Gospel Church & Industrial Properties
8410 Amelia Street
Oakland, California

Dear Ms. Jakub:

You will find attached one copy of the following document prepared by P&D Environmental, Inc.

- Conduit Study and Work Plan Addendum dated October 12, 2011 (document 0453.W2).

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-mentioned document for the subject site is true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at 510-652-4950.

Sincerely,

Libitzky Property Companies

Kevin Perkins

Attachment

PHK
0453.L2

P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

October 12, 2011
Work Plan 0453.W2

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: CONDUIT STUDY AND WORK PLAN ADDENDUM
County File # RO 2991
Acts Full Gospel Church & Industrial Properties
8410 Amelia Street
Oakland, California

Dear Ms. Jakub:

P&D Environmental, Inc. (P&D) is pleased to present this Conduit Study and Work Plan Addendum for the subject site in accordance with your August 16, 2011 letter that commented on P&D's August 9, 2010 Soil Gas Investigation Work Plan (document 0543.W1A). A Site Vicinity Map showing the different buildings at the site is attached as Figure 1, and a Site Vicinity Map Aerial Photograph is attached as Figure 2. Suspected Underground Storage Tank (UST) features identified at the site in the February 29, 2008 Basics Environmental, Inc. (Basics) Phase I Environmental Site Assessment for the subject site are shown in Figure 3. Because of parallax in the aerial photographs, the figures are approximate only, and all measurements should be field-verified.

BACKGROUND

Potential UST-related features identified in the February 29, 2008 Basics Phase I Environmental Site Assessment for the subject site are as follows.

1. A vent pipe mounted on the east side of Building B.
2. A small raised concrete foundation (approximately 2 feet by 2 feet) with fastening bolts was observed at the east side of the subject site. The function of this small raised concrete foundation could not be determined, however, the feature was identified as potentially the location of a former fuel dispenser.
3. One-inch pipes were observed at the northwest corner of Building C, to the southwest of a drain located at the west side of the paved area that is located to the south of Building B. Although the function of the pipes could not be determined, the report stated that the piping appeared to be possibly part of a former vent pipe associated with a former underground storage tank.
4. A small raised concrete foundation (approximately 2 feet by 2 feet) with fastening bolts was observed at the east side of the subject site. The function of this small raised concrete foundation could not be determined, however, the feature was identified as potentially the location of a former fuel dispenser.

The area of detail for suspected UST features located on the east side of the building is shown in Figure 3. The details are shown in Figure 4. Investigations discussed below determined that a former sodium hydroxide tank associated with the vent pipe (Item 1 above) and the suspected former fuel dispenser located at the east side of the subject site (Item 2 above) may have been located in the northern portion of the area shown in Figure 4. However, piping that may have been connected to an UST had been disconnected and partially plugged with concrete. Additionally, an exploratory excavation to a depth of 7.5 feet bgs in the center of an anomalous metal detector zone failed to locate a buried UST.

In the southern portion of Figure 4 a steel gasoline UST filled with water measuring 4 feet in diameter was located at a depth of 5.5 feet bgs and was determined to be connected to piping that extended to the suspected former fuel dispenser located at the east side of the subject site (Item 4 above).

The one-inch pipes identified on the northwest corner of Building C (Item 3 above) were identified by an underground utility locator as an abandoned natural gas regulator.

Sodium Hydroxide UST Area

On September 8, 2011 P&D personnel evaluated the UST features identified on the east side of Building B (items 1 and 2 above). Selected pictures taken on the east side of the subject site by P&D personnel on April 18, 2008 at the time that P&D was overseeing drilling at locations SB1 through SB6 at the subject site are provided in Appendix A. The Tassafaronga Village is a housing complex that was developed by the Oakland Housing Authority on the property located on the east side of G Street and the north side of 85th Avenue between September 2007 and May 2010. The pictures in Appendix A do not show the currently-existing landscaping that was installed adjacent to the subject site building on the west side of G Street as part of the Tassafaronga Village development project.

Review of the digital images in Appendix A shows the following.

- Image 6 is a view southwestward showing the central portion of the area of detail (Figure 4). The southernmost two of the three utility poles for the pole-mounted transformers are visible.
- Images 7 and 12 are a view westward showing the northern portion of the area of detail (Figure 4). All three of the utility poles for the pole-mounted transformers are visible. The vent pipe (Item 1 above) is located to the right of the northernmost utility pole (the utility pole on the right) and immediately to the left of the loading dock roll up door. A chemical transfer pump located adjacent to the wall is located immediately to the left of the southernmost utility pole (the utility pole on the left). The pump is mounted on a concrete pad. A vertical steel pipe that is connected to the pump is observed to penetrate the ground immediately to the left of the southernmost utility pole. A separate concrete pad is also visible to the right of the pump between the two utility poles, and a vertical steel pipe that is similar in diameter and height to the pipe that is connected to the pump is observed between the two utility poles adjacent to the concrete pad.
- Image 8 shows the top of the vent pipe (Item 1 above).
- Image 13 is a detail of the base of the three utility poles.

- Image 14 shows the two southernmost utility poles and that the two concrete pads are separate pads on either side of the leftmost utility pole. The red and white markings coincide with the southernmost extent of an "anomalous metal detector zone" identified in a DRAFT geophysical survey map dated April 2008 prepared by NORCAL Geophysical Consultants, Inc.
- Image 16 is a close-up of the pump. A second pipe is observed to penetrate the building wall and elbow away from the pump near the location where the pipe from the pump penetrates the building wall.
- Image 19 shows the pump on the left behind the southernmost utility pole and provides a closeup view of the vertical pipe that is located adjacent to the concrete pad that is located to the right of the pump. Two vertical bolts are observed on the right side of the top of the concrete pad. This is the suspected location identified as Item 2, a suspected dispenser island. The bolts are interpreted as being related to mounting a pump on the concrete pad that does not presently have a pump. The open end of the second pipe is also visible in this image, and the end of the pipe is filled with a white powder substance. White powder on the concrete pad beneath the end of the pipe appears to have originated from the end of the pipe.

During the September 8, 2011 site investigation the vertical pipe observed between the two southernmost utility poles in the 2008 images was not present at the site. A sample of the white powder in the open end of the pipe was placed into a glass bottle and mixed with water. The resulting pH was measured with pH paper to be 11. The union between the pump and the vertical pipe that penetrates the ground was disconnected and a white cakey substance that crushed to powder was observed to partially fill the pipe. The pipe was measured with a steel tape to extend approximately 18 inches below the ground surface, and a viscous amber-colored fluid was collected from the bottom of the pipe. The pH of the viscous amber-colored fluid was also measured to have a pH of 11 using pH paper. The subsurface portion of the pipe was exposed and was determined to extend approximately 5 feet to the south, where it terminated and was plugged with concrete.

Samples of the powder and the amber-colored fluid were collected from the pipe interior into glass bottles, stored in a cooler with ice, and submitted to McCampbell Analytical Inc. in Pittsburg, California (McCampbell) for analysis. Chain of custody procedures were observed for all sample handling. The solid sample was analyzed for total sodium using EPA Method 6010B (ICP), and for total and speciated alkalinity as calcium carbonate using modified analytical method 2320B. The liquid sample was not analyzed. The sample results for the solid showed 80,000 mg/kg sodium was detected, and that 56,200 mg/kg of the 77,000 mg/kg calcium carbonate was identified as hydroxide. A copy of the laboratory analytical report is attached in Appendix B.

Gasoline UST

On September 12, 2011 JR Associates (JRA) of San Jose evaluated UST feature Items 3 and 4. The one-inch pipes identified on the northwest corner of Building C (Item 3 above) were identified as an abandoned natural gas regulator. A pipe that was present in the suspected former fuel dispenser (Item 4) was traced with a magnetometer to the landscaping adjacent to G Street and then northward approximately 25 feet where the magnetic signal ended.

On September 16, 2011 P&D personnel returned to the site and hand excavated at the location where the magnetic signal for the piping ended. The pipe was observed to elbow from horizontal to vertical at this location. Hand excavation near this location with an 8-inch diameter hand auger encountered the top of an UST at a depth of 5.5 feet bgs and a fill port pipe that extended to approximately 6 inches below the ground surface. Water was encountered in the excavation at a depth of approximately 4.5 feet bgs. The fill port was sounded using a steel tape, however an obstruction was encountered in the fill port at a depth of 5.5 feet bgs. Efforts to collect a fluid sample from the bottom of the fill pipe using a polyethylene tube and a peristaltic pump were unsuccessful (no liquid was present in the fill pipe. I addition, an exploratory excavation adjacent to the base of building foundation at the base of the vent pipe was excavated to a depth of 2.5 feet bgs. No subsurface evidence of a vent pipe was observed at this location.

On September 21, 2011 P&D personnel returned to the site and disconnected the pipe that connected the UST to the fuel dispenser at the location where the pipe elbowed from horizontal to vertical over the UST. The total depth of the UST was measured using a steel tape and was determined to be 9.5 feet bgs. Water was not encountered in the horizontal portion of the pipe, however water was observed in the vertical portion of the pipe connected to the UST at a depth of approximately 2 feet bgs. A water sample was collected from the UST using a polyethylene tube and a peristaltic pump with a silicone tube in the pump rollers. The water sample was pumped directly into two 40-millilter VOA vials and one 1-liter glass amber bottle. All of the sample containers were provided by the laboratory and preserved with hydrochloric acid. All of the sample containers were capped with Teflon-lined screw caps. The VOAs were overturned and tapped to ensure that no air bubbles were present.

The sample containers were stored in a cooler with ice, and submitted to McCampbell for analysis. Chain of custody procedures were observed for all sample handling. The sample was analyzed for TPH-G using EPA Method 5030B/8015M; TPH-D using EPA Method 3510C/8015M; VOCs including fuel oxygenates and lead scavengers using EPA Method 8260B; and for total lead using EPA Method E200.9. TPH-G and TPH-D were detected at concentrations of 100,000 and 35,000 ug/L, respectively; benzene, toluene, ethylbenzene, and xylenes were detected at concentrations of 15,000, 24,000, 650, and 4,700 ug/L, respectively; 1,2-DCA (a historical anti-knock additive in leaded fuels) and 1,2,4-Trimethylbenzene (a common petroleum fuel component), and 1,2,4-Trimethylbenzene (a common petroleum fuel component) were detected at concentrations of 1,200, 2,600 and 620 ug/L, respectively; and total lead was detected at a concentration of 1,500 ug/L. The laboratory notes for the TPH-D results identified the TPH-D compounds as consisting predominantly of gasoline-range compounds but also including some diesel-range compounds with no recognizable pattern. A copy of the laboratory analytical report is attached in Appendix B.

Offsite TCE Source

Based on the observations and sample results for the piping in Area A, the piping was connected to a sodium hydroxide UST that was removed. Based on the sample results collected from the gasoline UST, no HVOCs other than 1,2-DCA (a historical anti-knock additive in leaded fuels) were detected and the only detected compounds in the UST were petroleum fuel components that indicate the UST formerly contained gasoline. No evidence of TCE was detected in the gasoline UST.

As discussed on pages 2 and 3 of P&D's August 9, 2010 Sol Gas Investigation Work Plan, the former Continental Plating facility was formerly located approximately at the intersection of 85th Avenue and E Street, immediately upgradient (east) of the subject site. Appendix A of the August 9, 2010 work plan provides groundwater grab sample information obtained by others for the property immediately to the east of the subject site prior to construction of the Tassafaronga Village. Figure 5 is a Site Vicinity Aerial Photograph Showing TCE in Groundwater based on available water quality data for the subject site and for the Tassafaronga Village site. Figure 6 is a Site Vicinity Detail Aerial Photograph Showing TCE in Groundwater based on available water quality data for the subject site and for the Tassafaronga Village site. Review of Figures 5 and 6 shows that a TCE groundwater plume appears to originate in the vicinity of the upgradient former Continental Plating site and extends downgradient beneath the subject site through onsite borehole locations SB6 and SB3.

The TCE detected at the subject site does not originate at the subject site based on investigation of all UST features identified in the Basics Phase I report and none of the UST features being identified as related to a solvent UST or solvent system, in conjunction with a well-established TCE plume that originates from an offsite upgradient source (the water quality data suggests that the source is a former plating shop). P&D requests that the county environmental health department provide an opinion regarding this conclusion. P&D recommends that a permit be obtained from the City of Oakland Fire Department Hazmat Division for closure of the gasoline UST. P&D also recommends that the remaining sodium hydroxide system piping be removed and disposed of properly. Based on the absence of any petroleum compounds (with the exception of MTBE) detected in any of the borehole grab groundwater samples collected in 2008 in the vicinity of the UST (SB1 and SB6) and downgradient of the UST (SB2, SB3 and SB4), P&D does not anticipate that evidence of a substantial release from the UST will be encountered during UST closure.

CONDUIT STUDY

On September 28, 2011 JRA identified onsite underground utilities as shown on Figure 7. The sewer pipes could not be located by the instrumentation used during the conduit study.

On October 2, 2011 The Plumbing Ministry of Oakland, California identified sewer pipes at locations shown on Figure 7. The locations of sewer pipes between the bathrooms and the known sewer pipes could not be determined because sewer cleanouts were not present at any of the bathrooms, and the vent pipe diameters were too small for the camera that was used to perform the survey.

AMENDED WORK PLAN

Basics prepared a Limited Phase II Environmental Site Sampling Report dated May 7, 2008 that documented the drilling of six boreholes (SB1 through SB6) and the collection of soil and groundwater samples from the boreholes on April 24, 2008. Field measurements in 2011 show that location SB6, the adjacent loading dock, and the associated vent pipe and pole-mounted transformers are each approximately 50 feet farther north than identified on the 2008 report Soil Boring Locations map. Amended work plan elements that incorporate comments provided in the August 16, 2011 county environmental health department letter are provided below.

Soil Gas Well Locations

Based on review of the TCE concentrations detected in groundwater at the subject site during the 2008 investigation, in conjunction with the information obtained during the conduit study, the locations of proposed permanent soil gas wells SG1 through SG4 are shown in Figures 6 and 8. The rationale for each of the locations is as follows.

- SG1 – To evaluate soil gas conditions adjacent to a sewer pipe trench on the upgradient side of the property in the vicinity of the TCE plume.
- SG2 – To evaluate soil gas conditions adjacent to a sewer pipe trench near the downgradient side of the property in the vicinity of the TCE plume.SG3 – To evaluate soil gas conditions in the central portion of the building and in a potential central portion of the TCE plume.
- SG4 – To evaluate soil gas conditions on the upgradient side of the property in the vicinity of the TCE plume, and also at a location that is immediately downgradient of the gasoline UST.

Each of the proposed permanent soil gas wells will be constructed to a total depth of 4.0 feet bgs with a high density polyethylene (HDPE) filter at the bottom of the tubing for each soil gas well. Difluoroethane (DFA) will be used as a tracer gas during sample collection. Analysis of the samples from each soil gas well will be performed for the full suite of TO-15 analytes, including the tracer gas DFA, and for oxygen, carbon dioxide and methane using method Modified ASTM D-1946. Analysis of the soil gas sample collected from the well that is closest to the gasoline UST (SG4) will also include TPH-Gasoline using modified EPA Method TO-15.

Soil Gas Well Construction

The permanent soil gas wells will be constructed and sampled as follows. The boreholes for soil gas wells will be drilled to a total depth of 4.0 feet bgs using a 5-inch outside diameter hand auger. The soil from the boreholes will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System and monitored with a Photoionization Dectector equipped with a 10.6 eV bulb and calibrated with a 100 ppm isobutylene standard. No soil samples from the boreholes will be retained for laboratory analysis.

The wells will be constructed to a total depth of 4.0 feet bgs. A 0.250-inch outside diameter (0.187-inch inside diameter) Teflon tube with a porous HDPE filter at the bottom of the tubing will be placed in the center of each borehole to a total depth of 3.5 feet bgs (0.5 feet above the bottom of the borehole). The top of the tubing will be capped with a Swagelok cap. The lowermost 1.0 foot of the borehole will be filled with #2/12 washed sack sand. Bentonite pellets will be placed in the borehole above the filter sand to a height of one foot above the sand. The remaining annular space will be filled with bentonite slurry to approximately one foot bgs. The top of the well will be covered with a locking well vault.

All drilling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Any soil or water generated during drilling will be stored in drums at the site pending characterization and disposal.

Soil Gas Well Sampling

At least 48 hours after well construction, soil gas samples will be collected from each of the new soil gas wells. The soil gas sampling manifold for each location will be assembled in a 35-gallon Rubbermaid bin that has been modified by cutting viewing ports into the sides of the bin and covering the viewing ports with transparent polycarbonate sheets. The shroud lid includes two gauntlet nitrile gloves for adjustment of equipment inside the bin while the bin lid is in place. A typical soil gas sampling manifold is shown in Figure 4 of P&D's August 9, 201 Soil Gas Investigation Work Plan. The Rubbermaid bin will also be modified to include a hole measuring approximately two inches square in the bottom of the bin to allow the bin to cover the soil gas well while still allowing access to the well through the bottom of the bin. At the time that the sampling manifold is assembled, the vacuum for the sample canister will be checked with a vacuum gauge and recorded.

Prior to sampling, a 10 minute leak check of the sampling manifold will be performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum. No purge testing for purge volume determination will be performed because the samples will be collected using Summa canisters. Following successful verification of the manifold leak check, a default of three purge volumes will be extracted prior to sample collection. The purge time will be calculated using a nominal flow rate provided by the flow controller of 150 milliliters per minute.

Following completion of the leak check and following completion of purging three volumes, a tracer gas (DFA) will be sprayed into the shroud. The shroud lid for the bin includes two gauntlet nitrile gloves for adjustment of equipment inside the bin while the bin lid is in place and a viewing port covered with a transparent polycarbonate sheet. The gloves in the lid of the bin will be used to open the sample canister valve. Once the vacuum for the 1-liter Summa canister has decreased to 5 inches of mercury, the gloves in the lid of the bin will be used to close the sample canister valve. The pressure gage on the inlet side of the flow controller will be monitored during sample collection to ensure that the vacuum applied to the soil gas well does not exceed 100 inches of water. During soil gas sample collection into the 1-liter Summa canister, a sample of the shroud will be collected into a 1-liter Tedlar bag that will be connected to the interior of the shroud by a polyethylene tube that penetrates the wall of the shroud. The Tedlar bag will be placed in a vacuum chamber and a vacuum will be created in the vacuum chamber using a vacuum pump.

One duplicate soil gas sample will be collected using a stainless steel sampling tee for the Summa canisters using methods described above. Following soil gas sample collection, a PID will be connected to the Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas Summa canister samples will be stored in a box and promptly shipped to the laboratory for extraction and analysis. The Tedlar bags will be stored in a cooler with the lid closed. Chain of custody procedures will be observed for all sample handling. Measurements of vacuums, purging and equilibration time intervals, and PID readings will be recorded on Soil Gas Sampling Data Sheets.

New polyethylene tubing and Tedlar bags, and new or clean vacuum gages, stainless steel sampling manifolds, and Summa canisters will be used at each sample collection location. A new

or clean stainless steel tee will be used in the sampling manifold for collection of the duplicate sample.

Report Preparation

Following completion of soil gas sample collection, a report will be prepared. The report will document soil gas sample collection methods and sample results, and will include a site plan showing sample collection locations, copies of field data sheets generated during sample collection, copies of the soil gas sample laboratory reports, tables summarizing the sample results, preliminary risk and hazard analysis for potential vapor intrusion to indoor air, and the stamp of a professional geologist.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.

Paul H. King
California Professional Geologist #5901
Expires: 12/31/11

Attachments:

Figure 1 – Site Vicinity Map
Figure 2 – Site Vicinity Aerial Photograph
Figure 3 – Site Vicinity Map Showing Suspected UST Features Identified By Basics
Figure 4 – Site Vicinity Map Area of Detail
Figure 5 – Site Vicinity Aerial Photograph Showing TCE in Groundwater
Figure 6 – Site Vicinity Aerial Photograph Detail Showing TCE in Groundwater
Figure 7 – Underground Utility Map
Figure 8 – Underground Utility Map Showing Proposed Soil Gas Well Locations

Appendix A – Digital Images Taken On April 18, 2008
Appendix B – Laboratory Analytical Results and Chain of Custody Documentation

PHK/sjc
0453.W2

FIGURES

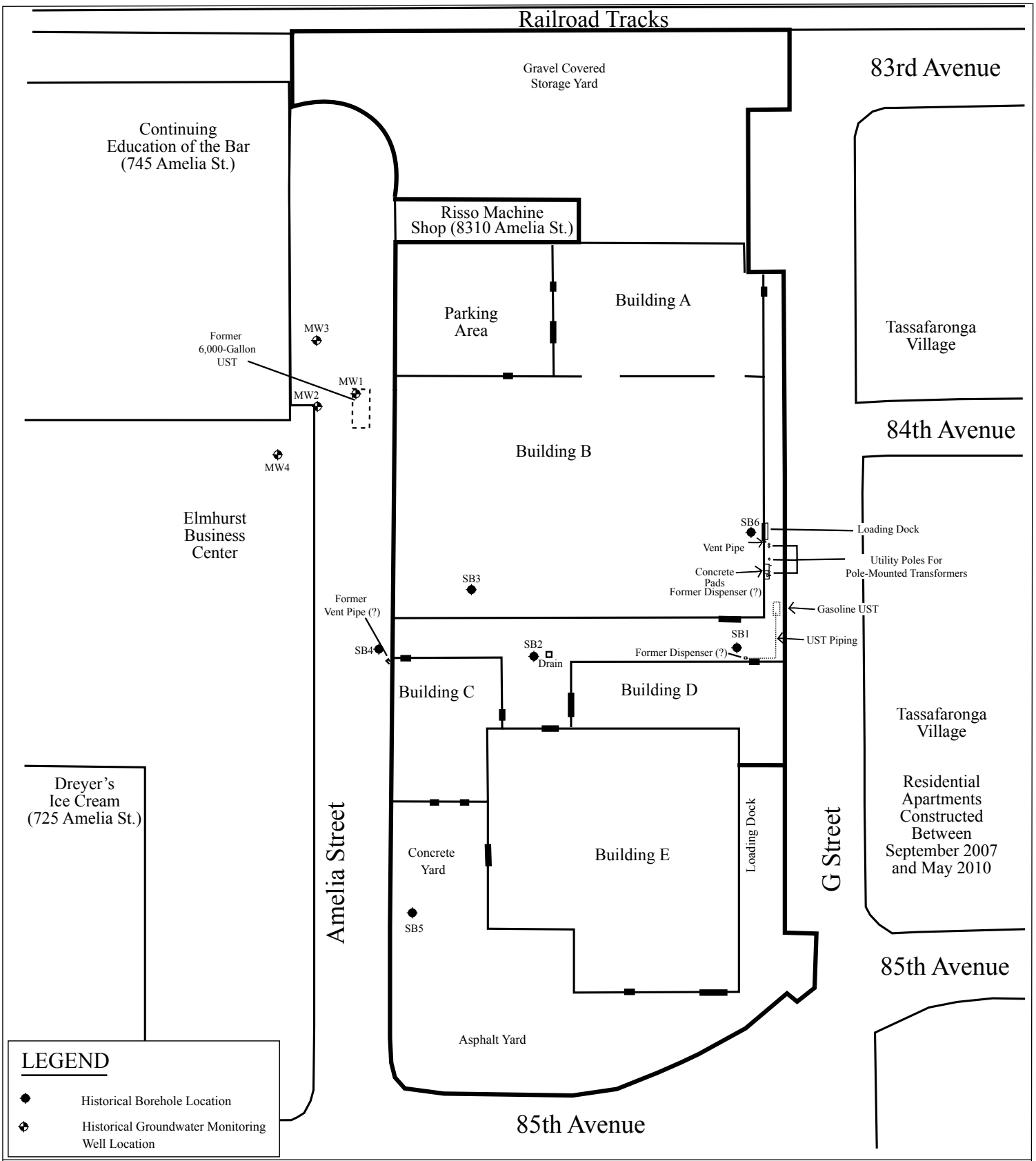

Figure 1
Site Vicinity Map
8410 Amelia Street
Oakland, California

Base Map From:
Basics Environmental, Inc., May 2008

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 40 80
Approximate Scale in Feet

N

Figure 2
Site Vicinity Aerial Photograph
8410 Amelia Street
Oakland, California

Base Map From:
Basics Environmental, Inc., May 2008
Google Earth, Image dated October 2009

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 40 80
Approximate Scale in Feet

N

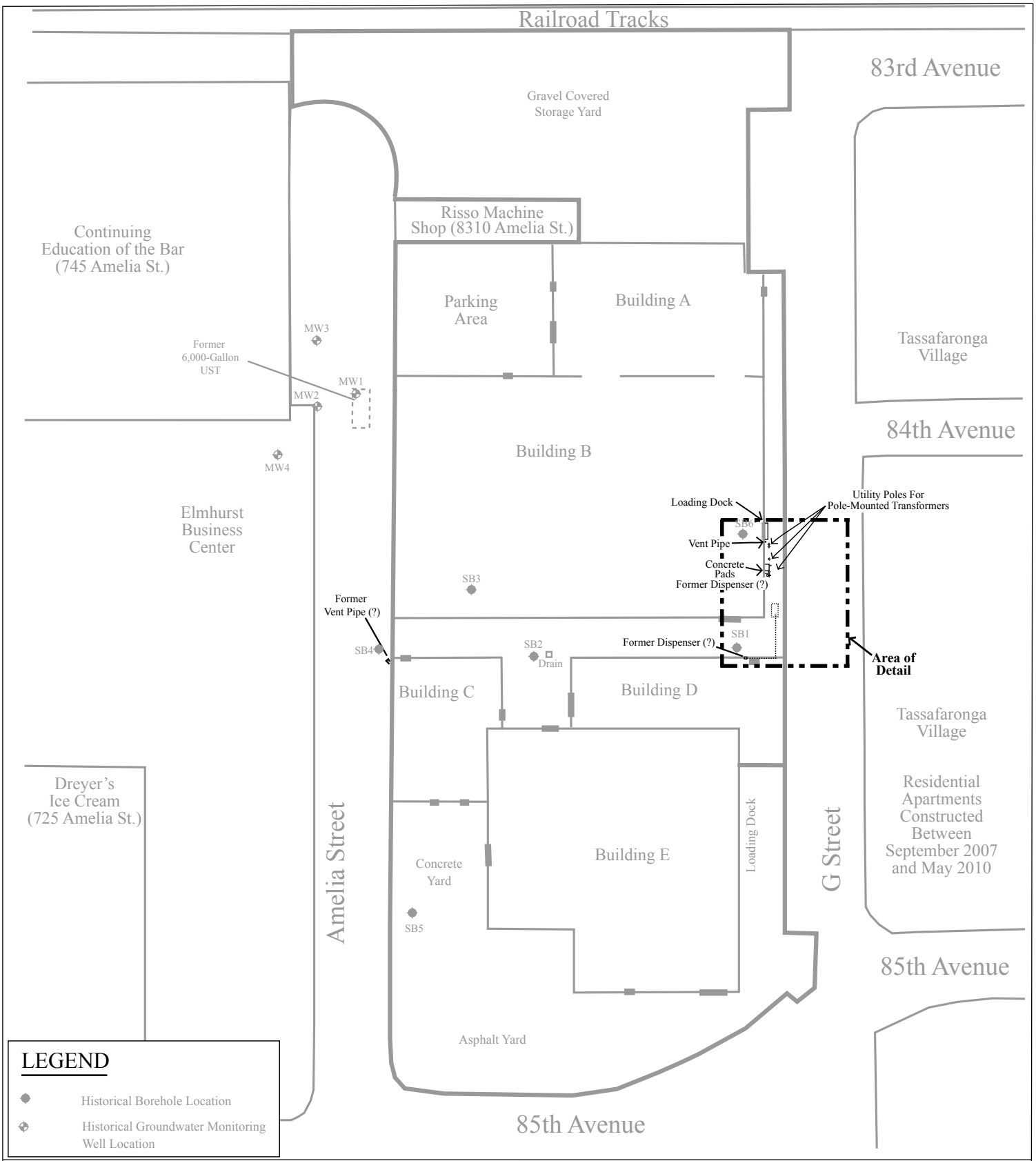

Figure 3
Site Vicinity Map Showing Suspected UST Features Identified By Basics
8410 Amelia Street
Oakland, California

Base Map From: Basics Environmental, Inc., May 2008	P&D Environmental, Inc. 55 Santa Clara Avenue Oakland, CA 94610	0 40 80 Approximate Scale in Feet N

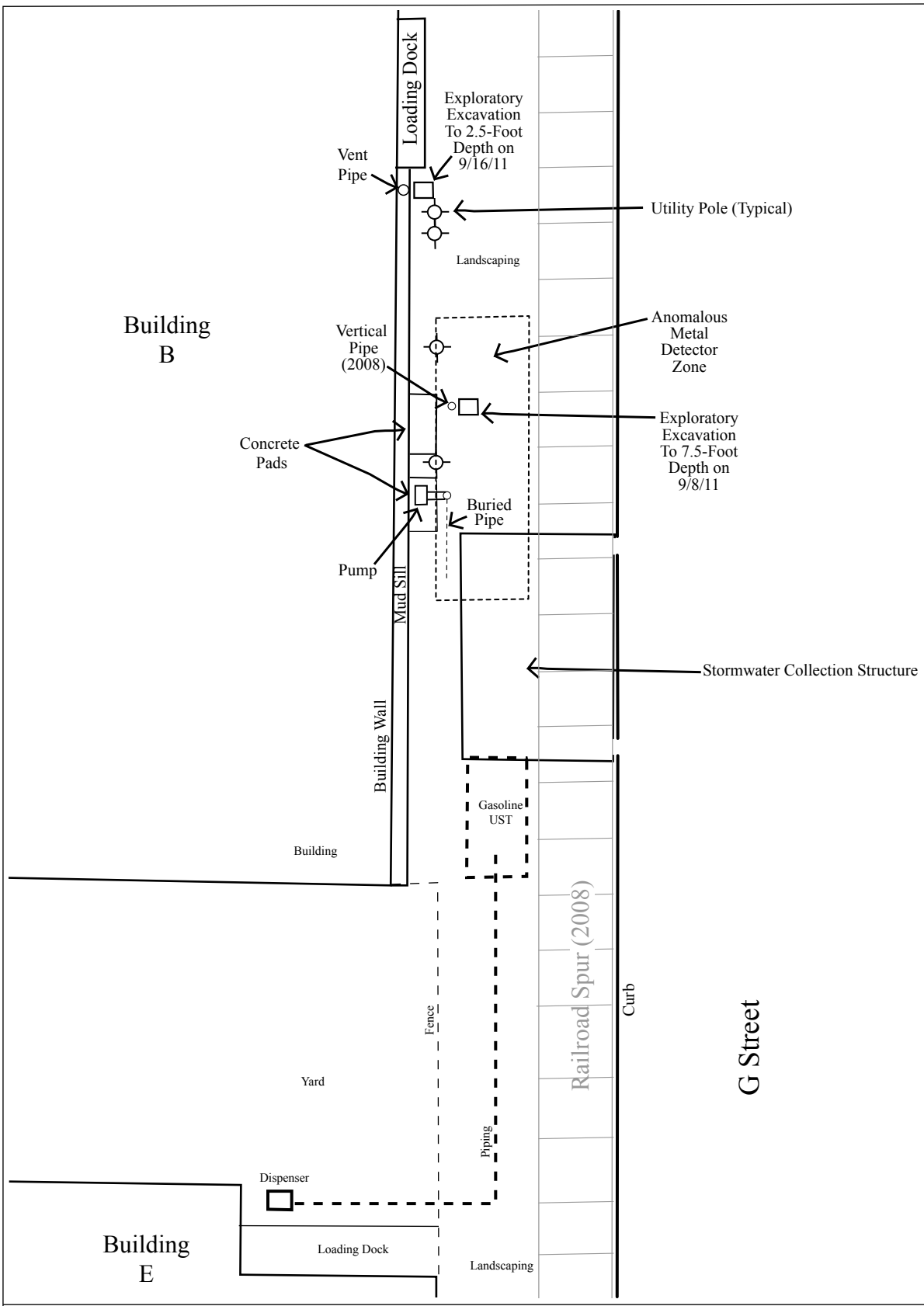

Figure 4
Site Vicinity Map Area of Detail
8410 Amelia Street
Oakland, California

Base Map From: P&D Environmental, Inc., October 2011	P&D Environmental, Inc. 55 Santa Clara Avenue Oakland, CA 94610	0 5 10 Approximate Scale in Feet N

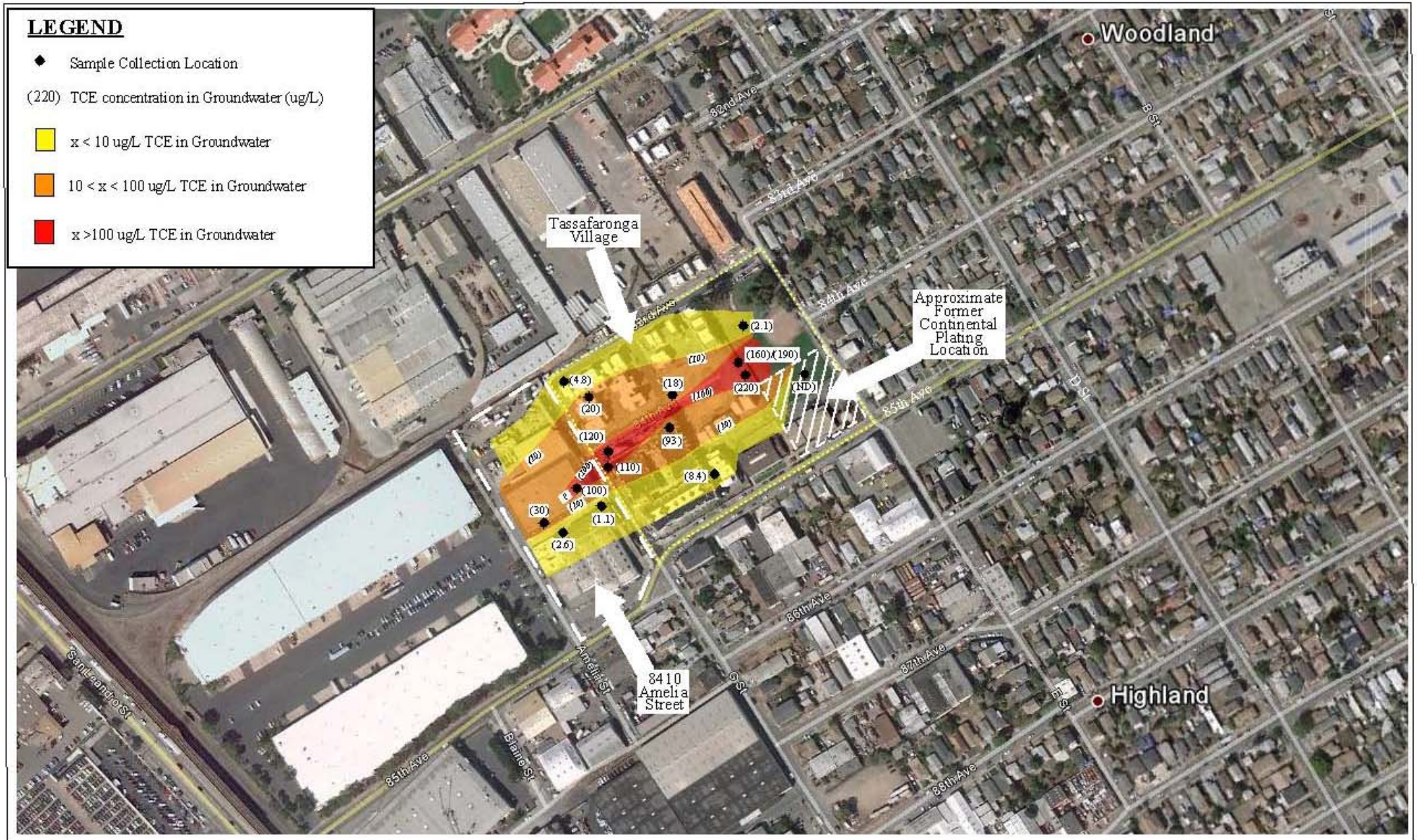

Figure 5
Site Vicinity Aerial Photograph Showing TCE in Groundwater
8410 Amelia Street
Oakland, California

Base Map From:
Google Earth, Image dated October 2009

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 350 700
Approximate Scale In Feet

N

Figure 6
Site Vicinity Aerial Photograph Detail Showing TCE in Groundwater
8410 Amelia Street
Oakland, California

Base Map From:
Google Earth, Image dated October 2009

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 175 350
Approximate Scale In Feet

N

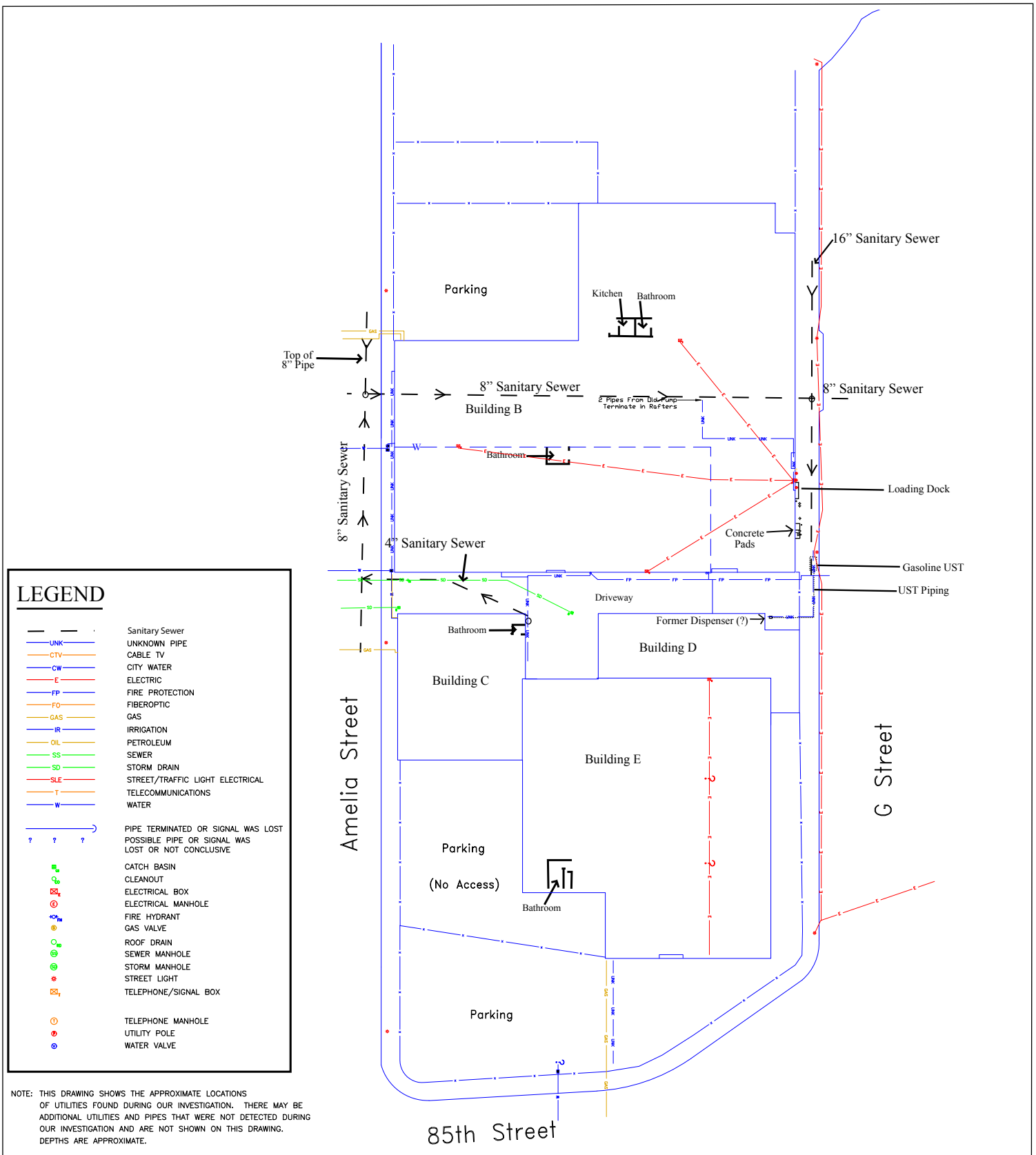

Figure 7
Underground Utility Map
8410 Amelia Street
Oakland, California

Base Map From:
Basics Environmental, Inc., May 2008,
JR Associates, September 2011,
The Plumbing Ministry, October 2011,
P&D Environmental, Inc., October 2011

P&D Environmental, Inc.
55 Santa Clara Avenue
Oakland, CA 94610

0 40 80
Approximate Scale in Feet

N

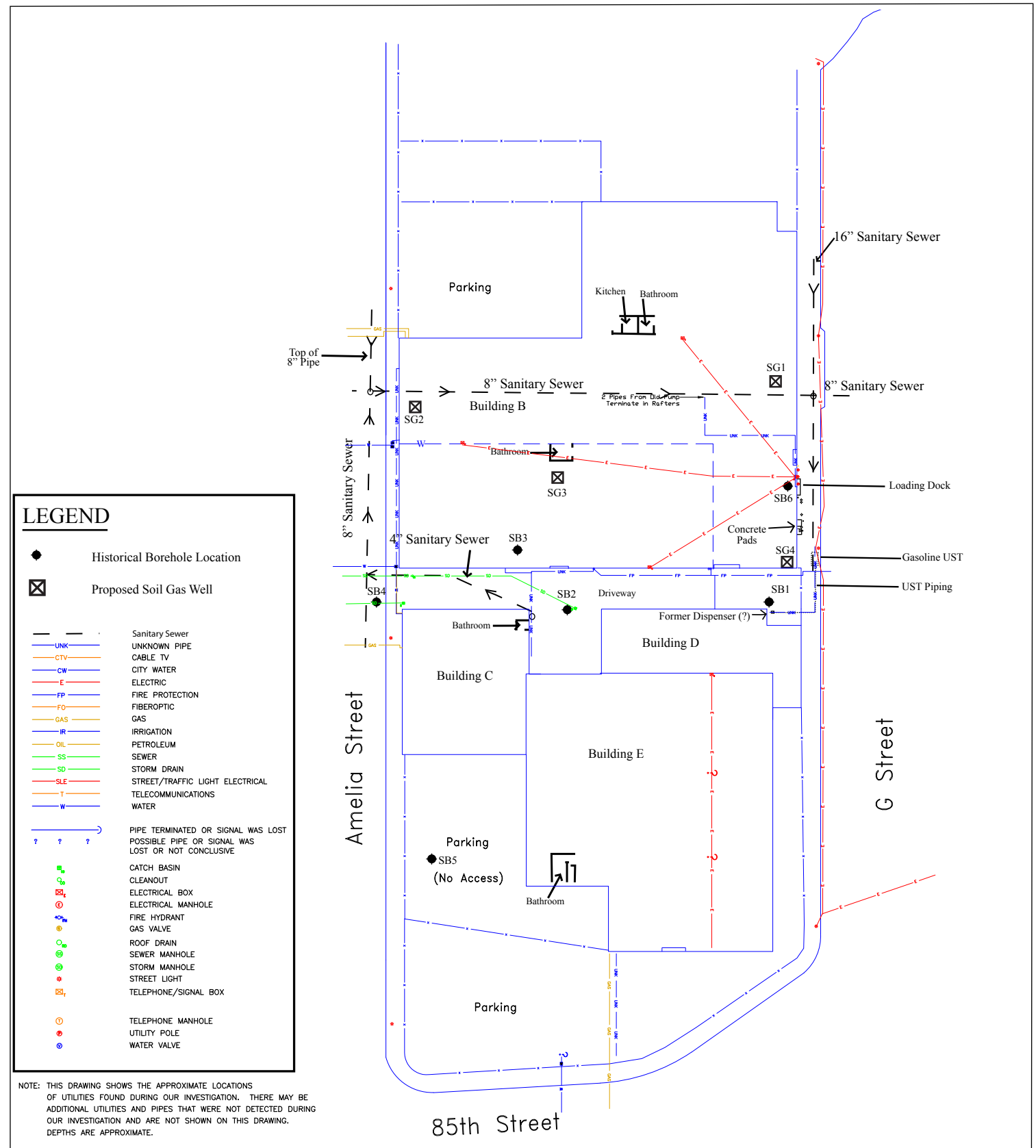

Figure 8
Underground Utility Map Showing Proposed Soil Gas Well Locations
8410 Amelia Street
Oakland, California

Base Map From: Basics Environmental, Inc., May 2008, JR Associates, September 2011, The Plumbing Ministry, October 2011, P&D Environmental, Inc., October 2011	P&D Environmental, Inc. 55 Santa Clara Avenue Oakland, CA 94610	0 40 80 Approximate Scale in Feet N

APPENDIX A

Digital Images Taken on April 18, 2008

- **Image 6**
- **Image 7**
- **Image 8**
- **Image 12**
- **Image 13**
- **Image 14**
- **Image 16**
- **Image 19**

Image 6

Image 7

Image 8

Image 12

Image 13

Image 14


18 5:02PM
Image 16

Image 19

APPENDIX B

Laboratory Analytical Reports and Chain of Custody Documentation

- **McCampbell Work Order # 1109186 sodium and alkalinity analysis of powder from piping**
- **McCampbell Work Order # 1109560 petroleum hydrocarbon, VOC, and Lead analysis of liquid from UST**

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

P & D Environmental	Client Project ID: #0533; 8410 Amelia St, Oakland	Date Sampled: 09/08/11
		Date Received: 09/08/11
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 09/14/11
Oakland, CA 94610	Client P.O.:	Date Completed: 09/14/11

WorkOrder: 1109186

September 14, 2011

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0533; 8410 Amelia St, Oakland,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD 1109186

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER: 0533

PROJECT NAME: 8410 Amelia St, Oakland

SAMPLED BY: (PRINTED & SIGNATURE) Paul H. King Paul H. King

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): Sodium	Alkalinity	PRESERVATIVE	REMARKS
Liquid from Pipe	9/8/11	9:30AM	Liquid	From Pipe Into 40ml VOA (no HCl)	1	X	X	ICE	Normal Turn Around Time * on hold per P.K 9/8/11
Solid from Pipe	"	9:45AM	Solid	From Pipe Into 40ml VOA (no HCl)	1	X	X	"	"

ICE/t° 5.0
GOOD CONDITION ____ APPROPRIATE
HEAD SPACE ABSENT ____ CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____

PRESERVATION	VOAS	O&G	METALS	OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Paul H. King	9/8/11	1532	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
	9/8/11	1645	
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

Total No. of Samples (This Shipment): 2
Total No. of Containers (This Shipment): 2

LABORATORY: McCampbell Analytical

LABORATORY CONTACT: Angela Rydelius

LABORATORY PHONE NUMBER: (877) 252-9262

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: Powder when hydrated has pH = 11, in field.
Liquid has pH = 11, in field.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1109186 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0533; 8410 Amelia St, Oakland

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: **5 days**

Date Received: **09/08/2011**
Date Printed: **09/08/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1109186-002	Solid from Pipe	Solid	9/8/2011 9:45	☐	A	A										

Test Legend:

1	Alka(spe)_Solid	2	ALKIMET_Solid	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **9/8/2011 5:55:26 PM**

Project Name: **#0533; 8410 Amelia St, Oakland**

Checklist completed and reviewed by: Zoraida Cortez

WorkOrder N°: **1109186** Matrix: Liquid/Solid

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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P & D Environmental	Client Project ID: #0533; 8410 Amelia St, Oakland	Date Sampled: 09/08/11
		Date Received: 09/08/11
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 09/09/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 09/09/11

Total & Speciated Alkalinity as Calcium Carbonate*

Extraction method: SM2320B Analytical methods: SM2320Bm Work Order: 1109186

Lab ID	Client ID	Matrix	Total*	Carbonate*	Bicarbonate*	Hydroxide*	DF	Comments
002A	Solid from Pipe	S	77,000	20,800	ND	56,200	1	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	ug/L
	S	400	400	400	400	mg CaCO3/kg

*water samples are reported in mg calcium carbonate/L and soil/sludge samples in mg calcium carbonate/kg. Hydroxide, Carbonate & Bicarbonate alkalinity measure @ end-point of pH = 8.3 & 4.5 per SM2320B.

DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0533; 8410 Amelia St, Oakland	Date Sampled: 09/08/11
		Date Received: 09/08/11
	Client Contact: Paul King	Date Extracted: 09/08/11
	Client P.O.:	Date Analyzed: 09/13/11

ICP Metals*

Extraction method: SW3050B Analytical methods: SW6010B Work Order: 1109186

Lab ID	Client ID	Matrix	Extraction Type	Sodium	DF	% SS	Comments
1109186-002A	Solid from Pipe	S	TOTAL	80,000	10	120	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	TOTAL	150	mg/kg

*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means low or no surrogate due to matrix interference; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: **SM2320B (Alkalinity)** **Matrix:** **S** **WorkOrder:** **1109186**

Method Name: SM2320Bm | Units: mg CaCO3/kg | BatchID: 60940

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
1109186-002A	77,000	1	76,300	1	0.913	<20

BATCH 60940 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109186-002A	09/08/11 9:45 AM	09/09/11	09/09/11 3:00 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

DHS ELAP Certification 1644

QA/QC Officer

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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR 6010B

W.O. Sample Matrix: Solid | QC Matrix: Solid | WorkOrder: 1109186

EPA Method: SW6010B	Extraction: SW3050B	BatchID: 60836	Spiked Sample ID: 1109049-001A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	Spiked	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	mg/Kg	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Sodium	660	5000	98.5	99.7	1.07	1000	101	87.7	14.4	75 - 125	25	75 - 125	25
%SS:	126	500	108	109	1.15	500	101	100	1.19	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 60836 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109186-002A	09/08/11 9:45 AM	09/08/11	09/13/11 1:28 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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Analytical Report

P & D Environmental	Client Project ID: #0453; 8410 Amelia St, Oakland	Date Sampled: 09/21/11
		Date Received: 09/21/11
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Reported: 09/28/11
Oakland, CA 94610	Client P.O.:	Date Completed: 09/28/11

WorkOrder: 1109560

September 29, 2011

Dear Paul:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#0453; 8410 Amelia St, Oakland,**
2) A QC report for the above sample,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD

110960

PAGE 1 OF 1

P&D ENVIRONMENTAL, INC.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610
(510) 658-6916

PROJECT NUMBER: 0453

PROJECT NAME: 8410 Amelia St, Oakland, CA

SAMPLED BY: (PRINTED & SIGNATURE) Heera Dhawan

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G,D	EPA 8260 + oxys per E.P.	Total Lead by AA	PRESERVATIVE	REMARKS
X UST1	Sept21	1pm	H_2O	UST	3	X	X	X	HCl	Normal Turn Around

ICE/t 0°C
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB
PRESERVATION VOAS | O & G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE) Heera	DATE Sept21	TIME 2:40	RECEIVED BY: (SIGNATURE)	Total No. of Samples (This Shipment) 1 / Total No. of Containers (This Shipment) 3	LABORATORY: McCampbell Analytical, Inc
RELINQUISHED BY: (SIGNATURE)	DATE 9/21/11	TIME 1705	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT: Angela Rydelius	LABORATORY PHONE NUMBER: (877) 252-9262
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( ) YES (X) NO	

Results and billing to:
P&D Environmental, Inc.
lab@pdenviro.com

REMARKS: 1- HCL Amber L
2- HCL Voas

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1109560 **ClientCode: PDEO**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Paul King
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610
(510) 658-6916 FAX: 510-834-0152

Email: lab@pdenviro.com
cc:
PO:
ProjectNo: #0453; 8410 Amelia St, Oakland

Bill to:
Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT: **5 days**

Date Received: **09/21/2011**
Date Printed: **09/21/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1109560-001	UST1	Water	9/21/2011 13:00	☐	B	A	A									

Test Legend:

1	8260B+7OXY_W	2	G-MBTEX_W	3	PBAA_W	4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **P & D Environmental**

Date and Time Received: **9/21/2011 6:17:15 PM**

Project Name: **#0453; 8410 Amelia St, Oakland**

Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **1109560** Matrix: Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 6.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☑	No ☐	NA ☐
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

P & D Environmental	Client Project ID: #0453; 8410 Amelia St, Oakland	Date Sampled: 09/21/11
		Date Received: 09/21/11
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted: 09/26/11
Oakland, CA 94610	Client P.O.:	Date Analyzed: 09/26/11

Volatiles Organics + Oxygenates by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1109560

Lab ID	1109560-001B
Client ID	UST1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	1000	10	tert-Amyl methyl ether (TAME)	ND<500	1000	0.5
Benzene	15,000	1000	0.5	Bromobenzene	ND<500	1000	0.5
Bromochloromethane	ND<500	1000	0.5	Bromodichloromethane	ND<500	1000	0.5
Bromoform	ND<500	1000	0.5	Bromomethane	ND<500	1000	0.5
2-Butanone (MEK)	ND<2000	1000	2.0	t-Butyl alcohol (TBA)	ND<2000	1000	2.0
n-Butyl benzene	ND<500	1000	0.5	sec-Butyl benzene	ND<500	1000	0.5
tert-Butyl benzene	ND<500	1000	0.5	Carbon Disulfide	ND<500	1000	0.5
Carbon Tetrachloride	ND<500	1000	0.5	Chlorobenzene	ND<500	1000	0.5
Chloroethane	ND<500	1000	0.5	Chloroform	ND<500	1000	0.5
Chloromethane	ND<500	1000	0.5	2-Chlorotoluene	ND<500	1000	0.5
4-Chlorotoluene	ND<500	1000	0.5	Dibromochloromethane	ND<500	1000	0.5
1,2-Dibromo-3-chloropropane	ND<200	1000	0.2	1,2-Dibromoethane (EDB)	ND<500	1000	0.5
Dibromomethane	ND<500	1000	0.5	1,2-Dichlorobenzene	ND<500	1000	0.5
1,3-Dichlorobenzene	ND<500	1000	0.5	1,4-Dichlorobenzene	ND<500	1000	0.5
Dichlorodifluoromethane	ND<500	1000	0.5	1,1-Dichloroethane	ND<500	1000	0.5
1,2-Dichloroethane (1,2-DCA)	1200	1000	0.5	1,1-Dichloroethene	ND<500	1000	0.5
cis-1,2-Dichloroethene	ND<500	1000	0.5	trans-1,2-Dichloroethene	ND<500	1000	0.5
1,2-Dichloropropane	ND<500	1000	0.5	1,3-Dichloropropane	ND<500	1000	0.5
2,2-Dichloropropane	ND<500	1000	0.5	1,1-Dichloropropene	ND<500	1000	0.5
cis-1,3-Dichloropropene	ND<500	1000	0.5	trans-1,3-Dichloropropene	ND<500	1000	0.5
Diisopropyl ether (DIPE)	ND<500	1000	0.5	Ethanol	ND<50,000	1000	50
Ethylbenzene	650	1000	0.5	Ethyl tert-butyl ether (ETBE)	ND<500	1000	0.5
Freon 113	ND<10,000	1000	10	Hexachlorobutadiene	ND<500	1000	0.5
Hexachloroethane	ND<500	1000	0.5	2-Hexanone	ND<500	1000	0.5
Methanol	ND<500,000	1000	500	Isopropylbenzene	ND<500	1000	0.5
4-Isopropyl toluene	ND<500	1000	0.5	Methyl-t-butyl ether (MTBE)	ND<500	1000	0.5
Methylene chloride	ND<800	1000	0.5	4-Methyl-2-pentanone (MIBK)	ND<500	1000	0.5
Naphthalene	ND<500	1000	0.5	n-Propyl benzene	ND<500	1000	0.5
Styrene	ND<500	1000	0.5	1,1,1,2-Tetrachloroethane	ND<500	1000	0.5
1,1,2,2-Tetrachloroethane	ND<500	1000	0.5	Tetrachloroethene	ND<500	1000	0.5
Toluene	24,000	1000	0.5	1,2,3-Trichlorobenzene	ND<500	1000	0.5
1,2,4-Trichlorobenzene	ND<500	1000	0.5	1,1,1-Trichloroethane	ND<500	1000	0.5
1,1,2-Trichloroethane	ND<500	1000	0.5	Trichloroethene	ND<500	1000	0.5
Trichlorofluoromethane	ND<500	1000	0.5	1,2,3-Trichloropropane	ND<500	1000	0.5
1,2,4-Trimethylbenzene	2600	1000	0.5	1,3,5-Trimethylbenzene	620	1000	0.5
Vinyl Chloride	ND<500	1000	0.5	Xylenes, Total	4700	1000	0.5

Surrogate Recoveries (%)			
%SS1:	98	%SS2:	100
%SS3:	87		

Comments: b1

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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http://www.mccampbell.com / E-mail: main@mccampbell.com

P & D Environmental	Client Project ID: #0453; 8410 Amelia St, Oakland	Date Sampled: 09/21/11
55 Santa Clara, Ste.240		Date Received: 09/21/11
	Client Contact: Paul King	Date Extracted 09/23/11
Oakland, CA 94610	Client P.O.:	Date Analyzed 09/23/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Bm Work Order: 1109560

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	UST1	W	100,000	100	108	d1,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0453; 8410 Amelia St, Oakland	Date Sampled: 09/21/11
		Date Received: 09/21/11
	Client Contact: Paul King	Date Extracted: 09/21/11
	Client P.O.:	Date Analyzed: 09/28/11

Lead by Graphite Furnace Atomic Absorption*

Extraction method: E200.9 Analytical methods: E200.9 Work Order: 1109560

Lab ID	Client ID	Matrix	Extraction Type	Lead	DF	% SS	Comments
1109560-001A	UST1	W	TOTAL	1500	1	N/A	b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	5.0	µg/L
	S	TOTAL	NA	mg/Kg

*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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P & D Environmental	Client Project ID: #0453; 8410 Amelia St, Oakland	Date Sampled: 09/21/11
		Date Received: 09/21/11
55 Santa Clara, Ste.240	Client Contact: Paul King	Date Extracted 09/21/11
Oakland, CA 94610	Client P.O.:	Date Analyzed 09/24/11

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3510C Analytical methods: SW8015B Work Order: 1109560

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1109560-001A	UST1	W	35,000	20	119	e4,e2,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in ug/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 61260 | WorkOrder: 1109560

EPA Method: SW8260B | **Extraction: SW5030B** | **Spiked Sample ID: 1109509-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	92.3	88.9	3.71	90.8	90.7	0.116	70 - 130	30	70 - 130	30
Benzene	ND	10	105	101	3.23	107	108	0.870	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	105	107	1.94	105	104	0.901	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	104	102	1.96	103	102	0.870	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	106	104	1.50	104	104	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	106	104	2.02	107	108	0.598	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	110	108	1.98	104	104	0	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	113	109	3.53	113	114	0.427	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	106	103	2.97	106	106	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	116	113	2.76	111	112	0.748	70 - 130	30	70 - 130	30
Toluene	ND	10	99.5	97.8	1.79	99.4	99.9	0.500	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	107	105	2.18	111	110	0.927	70 - 130	30	70 - 130	30
%SS1:	108	25	103	101	1.18	103	103	0	70 - 130	30	70 - 130	30
%SS2:	107	25	98	97	0.596	96	97	0.986	70 - 130	30	70 - 130	30
%SS3:	106	2.5	88	86	2.63	89	91	1.76	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 61260 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109560-001B	09/21/11 1:00 PM	09/26/11	09/26/11 1:09 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 61266 | WorkOrder: 1109560

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1109517-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	101	90.1	11.5	92.1	91.4	0.675	70 - 130	20	70 - 130	20
MTBE	ND	10	119	121	1.39	117	122	4.17	70 - 130	20	70 - 130	20
Benzene	ND	10	103	103	0	103	104	0.363	70 - 130	20	70 - 130	20
Toluene	ND	10	92.2	92.9	0.792	91.8	93.2	1.54	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	94	92.6	1.54	93.4	93.8	0.384	70 - 130	20	70 - 130	20
Xylenes	ND	30	107	105	1.52	107	107	0	70 - 130	20	70 - 130	20
%SS:	99	10	97	98	0.263	97	97	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 61266 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109560-001A	09/21/11 1:00 PM	09/23/11	09/23/11 6:54 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QC SUMMARY REPORT FOR E200.9

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 61321 | WorkOrder: 1109560

EPA Method: E200.9 | **Extraction: E200.9** | **Spiked Sample ID: 1109447-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Lead	ND	10	110	108	2.30	112	111	0.540	70 - 130	30	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 61321 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109560-001A	09/21/11 1:00 PM	09/21/11	09/28/11 4:18 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 61294 | WorkOrder: 1109560

EPA Method: SW8015B | **Extraction: SW3510C** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	123	120	3.03	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	98	96	2.39	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 61294 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109560-001A	09/21/11 1:00 PM	09/21/11	09/24/11 7:48 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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