

1475 Powell Street  
Suite 201  
Emeryville  
California 94608  
Phone  
510/652-4950  
Fax  
510/652-0588

August 9, 2010

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

SUBJECT: SOIL GAS INVESTIGATION WORK PLAN 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.

- Soil gas Investigation Work Plan dated August 9, 2010 (document 0453.W1A).

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/sjc  
0453.L1

RECEIVED

9:19 am, Aug 18, 2010

Alameda County  
Environmental Health

SEINTEG/03/09/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100

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

August 9, 2010  
Work Plan 0453.W1A

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

**SUBJECT: SOIL GAS INVESTIGATION WORK PLAN**  
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 work plan for soil gas investigation at the subject site. Soil gas samples will be collected at a total of five on-site locations, designated as SG1 through SG5, to evaluate the subsurface presence and extent of Trichloroethene (TCE) in soil gas, and for preliminary risk and hazard evaluation of potential vapor intrusion to indoor air. A Site Location Map is attached as Figure 1, and a Site Plan is attached as Figure 2.

All work will be performed under the direct supervision of a professional geologist. This work plan is prepared in accordance with guidelines set forth in the following documents.

- Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991,
- Department of Toxic Substances Control (DTSC) "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" dated January, 2005,
- DTSC "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" revised February 7, 2005,
- San Francisco Bay Regional Water Quality Control Board (SFRWQCB) "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" dated May 2008,
- DTSC "Vapor Intrusion Mitigation Advisory" revised May 8, 2009, and
- DTSC "Advisory - Active Soil Gas Investigations" dated March 3, 2010.

## BACKGROUND

San Leandro Bay is located approximately 6,300 feet to the west-southwest of the subject site. The surface topography gently slopes to the west-southwest in the vicinity of the subject site, and although shallow groundwater flow direction can be locally controlled by surface drainage and lithology, the regional groundwater flow direction in the vicinity of the subject site is to the west-southwest.

Basics Environmental, Inc. (Basics) of Oakland California completed a Phase I Environmental Site Assessment for the subject site dated February 29, 2008. Based on recommendations in the report for subsurface investigation at the site, Basics prepared a Limited Phase II Environmental Site Sampling Report dated May 7, 2008 that documented the drilling of six boreholes (SB1 through SB6) on April 24, 2008. The borehole locations are shown in Figure 2.

Soil was collected from each borehole at a depth of 4.5 feet below the ground surface (bgs) and groundwater was collected from each borehole for laboratory analysis. Two of the boreholes were drilled to a depth of 15 feet bgs, and four of the boreholes were drilled to a depth of 20 feet bgs. Groundwater was initially encountered in the boreholes at depths ranging from 14 to 16 feet bgs, and was subsequently measured in the boreholes at depths ranging from 4.3 to 7.6 feet bgs. The subsurface materials encountered in the boreholes consisted of clay to depths ranging from 12.5 to 14.0 feet bgs, beneath which clayey sand and silty sand was encountered. In two of the boreholes, sand and gravel were encountered between the depths of 18.5 and 20.0 feet bgs. No staining, discoloration, odor, detectable Photoionization Detector (PID) values, or other evidence of contamination were detected in any of the boreholes.

The soil sample results are summarized in Table 1, and the groundwater sample results are summarized in Table 2. Review of Table 1 shows that no organic compounds were detected in any of the soil samples with the exception of 4.2 milligrams per kilogram (mg/kg) of Total Petroleum Hydrocarbons as Bunker Oil (TPH-BO) in borehole SB5. Additionally, no metals were detected in any of the samples exceeding their respective May 2008 Table A San Francisco Bay Regional Water Quality Control Board (SFRWQCB) commercial/industrial Environmental Screening Level (ESL) values with the exception of arsenic and total chromium in all of the soil samples. Review of Table 2 shows that no organic compounds were detected in any of the groundwater samples with the exception of MTBE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE and 1,1-DCA. Review of Table 2 shows that the only compound detected exceeding May 2008 Table A SFRWQCB ESL values was TCE at locations SB3 and SB6 (at concentrations of 30 and 100 micrograms per liter (ug/L), respectively), and that none of the detected concentrations exceeded May 2008 SFRWQCB Table E1 ESL values for either residential or commercial land use for potential vapor intrusion concerns.

TCE was detected in groundwater at the subject site in boreholes SB1, SB2, SB3 and SB6, with the highest concentrations in the northernmost boreholes (SB3 and SB6), and the highest concentration detected on the upgradient side of the site at SB6, near the intersection of G Street and 84<sup>th</sup> Avenue. An on-line search of the DTSC database Envirostor, the State Water Resources Control Board (SWRCB) database GeoTracker, and the Alameda County Department of Environmental Health (ACDEH) website for potential TCE sources in the immediate vicinity of the subject site revealed a total of four sites within 500 feet of the subject site property line. The potential TCE sources are summarized in Table 3 and are shown in Figure 3. The property located immediately to the east of

the subject site has recently been developed by the Oakland Housing Authority as the Tassafargonga Village, and the precise former location of the former Continental Plating facility is unknown. The location of the former Continental Plating facility shown on Figure 3 is an approximation only.

Review of available documents for the former D. Merlino & Sons/former Alita Brand Macaroni site located at 968 and/or 976 81<sup>st</sup> Avenue and 1001 83<sup>rd</sup> Avenue (approximately 200 feet to the east-northeast of the subject site) identified on Envirostor a September 2008 Final Removal Action Workplan for the Tassafaronga Village in Oakland, California prepared by Fugro West, Inc. (Fugro). Selected figures and tables from the Fugro work plan, in addition to the cover of the document, are provided in Appendix A. In Appendix A Plate 9 shows all groundwater sample collection locations and associated TCE concentrations, and Plate 4 shows all soil gas sample locations. In Appendix A Tables 1B and 2B provide groundwater sample results, and Tables 1C and 2C provide soil gas sample results. The soil gas sample depths and procedures used for soil gas sample collection are not described in the 2008 Fugro work plan.

Review of Plate 9 in Appendix A shows that TCE was detected in groundwater at the Tassafaronga Village site located immediately to the east and upgradient of the subject site. The highest TCE groundwater concentrations were encountered at the east end of 84<sup>th</sup> Avenue where 220 and 160 ug/L TCE was detected at locations B-3 and B-12, respectively, with additional elevated concentrations encountered at downgradient locations B-7, B-6 and B-4. The groundwater concentrations at locations B-6 and B-4 were 110 and 120 ug/L, and are located immediately upgradient of location SB6 at the subject site where TCE was encountered in groundwater at a concentration of 100 ug/L. It is possible that the former Continental Plating facility could have been located further to the west than shown in Figure 3, and that the TCE detected in groundwater at upgradient locations B-3 and B-12 are related to activities at the former Continental Plating facility. Review of Plate 4 in Appendix A shows that each of soil gas samples SG-1 through SG-8 at the Tassafaronga Village site were collected at locations where groundwater samples were collected. Review of Table 1C in Appendix A shows that no TCE was detected in any of the soil gas samples.

Although review of the Envirostor database identified the former Elmhurst Anodizing facility at the north end of the subject site, no information was available regarding TCE in soil or groundwater at the site. Similarly, review of the GeoTracker database identified the presence of the former Continental Plating facility to the east-northeast of the subject site and the American Chrome facility to the east-southeast of the subject site, but no information was available regarding TCE in soil or groundwater at the sites.

### SCOPE OF WORK

P&D will perform the following tasks.

- Health and safety plan preparation and mark drilling locations with white paint.
- Soil gas sample collection.
- Arrange for soil gas sample analysis.
- Report preparation.

Each of these is discussed below in detail.

### Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan. Prior to the beginning of fieldwork, the drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location. Notification of the scheduled date of investigation will also be provided to the ACDEH.

### Soil Gas Sample Collection

Soil gas samples will be collected at a depth of 5 feet bgs at each of the proposed soil gas sample collection locations shown in Figure 2 (SG1 through SG5). All of the soil gas samples will be collected using temporary soil gas sampling wells. All of the temporary wells will be constructed by driving a hollow 1-inch diameter Geoprobe rod with an expendable tip to a depth of 5 feet bgs, dislodging the expendable tip, and then inserting a 7-foot length of 0.250-inch outside diameter (0.187-inch inside diameter) Teflon tube to the bottom of the hollow rod.

Prior to inserting the Teflon tubing the lowermost 6 inches of the Teflon tubing will be perforated at several locations by notching the sides of the tube with a clean razor blade. A #2/16 Lonestar sack sand will be added to the annular space between the hollow rod and the Teflon tube as the hollow rod is withdrawn from the ground until the lowermost 12 inches of the hole is filled with sand. Granular bentonite (with grains measuring approximately 2 to 3 millimeters in diameter) will be placed in the annular space above the sand to a height of 1 foot above the sand. The remaining annular space will be filled with hydrated bentonite slurry. A 6-liter Summa purge canister and 1-liter Summa sample canister will then be connected to the Teflon tubing using the configuration shown in Figure 4. At the time that the sampling manifold is assembled, the vacuum for the sample canister will be checked with a vacuum gauge and recorded.

The temporary well will then be undisturbed to allow soil gas equilibration for a minimum of 30 minutes prior to leak testing and purging for sample collection. Following the equilibration period and prior to purging the soil gas from the temporary soil gas sampling well, 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 (see Figure 4). No purge testing for purge volume determination will be done because samples will be collected into 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 200 milliliters per minute. Following completion of purging three purge volumes, the valve to the purge canister will be closed, a tracer gas (2-Propanol) will be placed in a dish adjacent to the purge canister, and a clear Rubbermaid bin will be placed over the top of the temporary well, the sampling manifold, and the 1-liter sample canister.

The vapor concentration of the 2-Propanol will be monitored with a PID until 2-Propanol vapor concentrations appear to have equilibrated. The Rubbermaid bin will then be temporarily and partially lifted long enough to open the sample canister valve and the bin will then be replaced over the sampling equipment and the 2-Propanol vapor concentrations will then be monitored

again with the PID. Once the vacuum for the sample canister valve has decreased to 5 inches of mercury, the Rubbermaid bin will be removed and the sample canister valve closed. The pressure gage on the inlet side of the flow controller (see Figure 4) will be monitored during sample collection to ensure that the vacuum applied to the temporary well does not exceed 100 inches of water.

One duplicate soil gas sample will be collected using a stainless steel sampling tee. 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 samples will then be stored in a box and promptly shipped to the laboratory for extraction and analysis. 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.

All drilling rods and associated drilling fittings for construction of the temporary soil gas wells will be cleaned with an Alconox solution wash followed by a clean water rinse. New Teflon tubing will be used at each sample collection location. Clean, unused vacuum gages and stainless steel sampling manifolds will be used at each sample collection location. A new stainless steel tee will be used in the sampling manifold for collection of the duplicate sample. Following soil gas sample collection the Teflon tubing will be pulled from each temporary soil gas sampling well and the temporary soil gas wells will be destroyed using a 1-inch diameter solid steel rod driven through the bentonite and sand to the total depth of the temporary soil gas sampling well. The solid steel rod will be removed, and the borehole will be filled with neat cement.

#### Arrange for Soil Gas Sample Analysis

The soil gas air samples will be analyzed at Air Toxics, Limited in Folsom, California. Analysis will be performed for MTBE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE, 1,1-DCA, and the tracer gas 2-Propanol using EPA Method TO-15.

#### Report Preparation

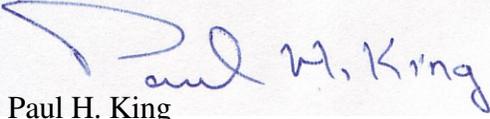
Following completion of soil gas sample collection, a report will be prepared. The report will document soil gas sample collection methods and sample results. The report will include a site plan showing sample collection locations, copies of field data sheets generated during sample collection, copies 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.

August 9, 2010  
Work Plan 0453.W1A

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:

Table 1 – Summary of Soil Sample Analytical Results – Organic and Inorganic Compounds

Table 2 – Summary of Groundwater Sample Analytical Results

Table 3 – Summary of Offsite Potential TCE Sources

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Site Vicinity Map

Figure 4 – Typical Soil Gas Sampling Manifold

Appendix A – Selected Information from Fugro West, Inc. September 2008 Final Removal Action Workplan, Tassafaronga Village, Oakland, California

PHK/ml  
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# **TABLES**

Summary of Soil Sample Analytical Results - Organic Compounds

Sample ID	Sample Depth	Sample Date	TPH-G	TPH-SS	TPH-D	TPH-BO	TPH-K	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs by EPA 8260
SB1-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
SB2-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
SB3-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
SB4-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
SB5-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0, a	4.2	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
SB6-4.5	4.5	4/24/2008	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	All ND
<i>ESL<sup>1</sup></i>			83	83	83	370	370	0.023	0.044	2.9	2.3	2.3	Various
<i>ESL<sup>2</sup></i>			83	83	83	2,500	2,500	0.023	0.044	2.9	3.3	2.3	Various
<b>NOTES:</b>													
TPH-G = Total Petroleum Hydrocarbons as Gasoline.													
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.													
TPH-D = Total Petroleum Hydrocarbons as Diesel.													
TPH-BO = Total Petroleum Hydrocarbons as Bunker oil.													
TPH-K = Total Petroleum Hydrocarbons as Kerosene.													
MTBE = Methyl-tert-Butyl Ether.													
VOCs = Volatile Organic Compounds.													
ND = Not Detected.													
a = Laboratory analytical note: oil range compounds.													
<i>ESL<sup>1</sup></i> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A – Shallow Soils, groundwater is a current or potential source of drinking water. Residential land use.													
<i>ESL<sup>2</sup></i> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A – Shallow Soils, groundwater is a current or potential source of drinking water. Commercial/Industrial Land Use.													
<b>Values in BOLD indicate concentrations that exceed the respective ESL value.</b>													
Results in milligrams per kilogram (mg/kg) unless otherwise indicated.													

TABLE 1

Summary of Soil Sample Analytical Results - Inorganic Compounds

Sample ID	Sample Depth	Sample Date	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
SB1-4.5	4.5	4/24/2008	0.50	<u>6.3</u>	240	0.86	ND<0.25	<b>79</b>	9.0	38	11	ND<0.05	ND<0.5	60	ND<0.5	ND<0.5	ND<0.5	<b>74</b>	83
SB2-4.5	4.5	4/24/2008	0.52	<u>12</u>	330	0.75	ND<0.25	<b>67</b>	32	33	12	ND<0.05	ND<0.5	68	ND<0.5	ND<0.5	ND<0.5	<b>70</b>	72
SB3-4.5	4.5	4/24/2008	ND<0.5	<u>5.4</u>	290	0.79	ND<0.25	<b>67</b>	7.8	34	10	ND<0.05	ND<0.5	49	ND<0.5	ND<0.5	ND<0.5	<b>60</b>	74
SB4-4.5	4.5	4/24/2008	ND<0.5	<u>6.0</u>	290	0.78	ND<0.25	<b>69</b>	10	34	9.9	ND<0.05	ND<0.5	58	ND<0.5	ND<0.5	ND<0.5	<b>63</b>	75
SB5-4.5	4.5	4/24/2008	ND<0.5	<u>4.5</u>	190	0.63	ND<0.25	<b>55</b>	5.9	25	7.6	ND<0.05	ND<0.5	43	ND<0.5	ND<0.5	ND<0.5	<b>57</b>	59
SB6-4.5	4.5	4/24/2008	ND<0.5	<u>3.6</u>	270	0.82	ND<0.25	<b>76</b>	7.0	38	9.4	ND<0.05	ND<0.5	55	ND<0.5	ND<0.5	ND<0.5	<b>67</b>	76
<i>ESL<sup>1</sup></i>			6.3	0.39	750	4.0	1.7	8.0	40	230	200	1.3	40	150	10	20	1.3	16	600
<i>ESL<sup>2</sup></i>			40	1.6	1,500	8.0	7.4	8.0	80	230	750	10	40	150	10	40	16	200	600
<b>NOTES:</b>																			
Sb = Antimony; As = Arsenic; Ba = Barium; Be = Beryllium; Cd = Cadmium; Cr = Chromium; Co = Cobalt; Cu = Copper; Pb = Lead; Hg = Mercury; Mo = Molybdenum; Ni = Nickel; Se = Selenium; Ag = Silver; Tl = Thallium; V = Vanadium;																			
Zn = Zinc																			
ND = Not Detected.																			
<i>ESL<sup>1</sup></i> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A – Shallow Soils, groundwater is a current or potential source of drinking water.																			
Residential land use.																			
<i>ESL<sup>2</sup></i> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A – Shallow Soils, groundwater is a current or potential source of drinking water.																			
Commercial/Industrial Land Use.																			
Cr = Used ESL values for hexavalent chromium.																			
<b>Values in BOLD indicate concentrations that exceed the respective <i>ESL<sup>1</sup></i> value.</b>																			
<u>Underlined values indicate concentrations that exceed the respective <i>ESL<sup>2</sup></i> value.</u>																			
Results in milligrams per kilogram (mg/kg) unless otherwise indicated.																			

Summary of Groundwater Sample Analytical Results

Sample ID	Sample Date	TPH-G	TPH-SS	TPH-D	TPH-BO	MTBE by EPA 8021B	Benzene by EPA 8021B	Toluene by EPA 8021B	Ethylbenzene by EPA 8021B	VOCs by EPA 8260
SB1-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, MTBE = 2.2, TCE = 1.1, cis-1,2-DCE = 1.3
SB2-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, MTBE = 2.9, TCE = 2.6, cis-1,2-DCE = 0.68
SB3-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, MTBE = 1.4, TCE = <b>30</b> , cis-1,2-DCE = 1.3
SB4-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, MTBE = 2.9,
SB5-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, MTBE = 1.4, 1,1,1-TCA = 1.0, 1,1-DCE = 1.4, 1,1-DCA = 0.68
SB6-W	4/24/2008	ND<50	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	ND<0.5	ND<0.5	All ND except, TCE = <b>100</b> , cis-1,2-DCE = 4.3
ESL <sup>1</sup>		100	100	100	100	5.0	1.0	40	30	MTBE = 5.0, TCE = 5.0, cis-1,2-DCE = 6.0, 1,1,1-TCA = 62, 1,1-DCE = 6.0, 1,1-DCA = 5.0
ESL <sup>2</sup>		10,000	10,000	10,000	None	24,000	540	380,000	170,000	MTBE = 24,000, TCE = 530, cis-1,2-DCE = 6,200, 1,1,1-TCA = 130,000, 1,1-DCE = 6,300, 1,1-DCA = 1,000
ESL <sup>3</sup>		29,000	29,000	29,000	None	80,000	1,800	530,000	170,000	MTBE = 80,000, TCE = 1,800, cis-1,2-DCE = 17,000, 1,1,1-TCA = 360,000, 1,1-DCE = 18,000, 1,1-DCA = 3,400
<b>NOTES:</b>										
TPH-G = Total Petroleum Hydrocarbons as Gasoline.										
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.										
TPH-D = Total Petroleum Hydrocarbons as Diesel.										
TPH-BO = Total Petroleum Hydrocarbons as Bunker oil.										
MTBE = Methyl-tert-Butyl Ether.										
VOCs = Volatile Organic Compounds.										
TCE = Trichloroethene.										
cis-1,2-DCE = cis-1,2-Dichloroethene.										
1,1,1-TCA = 1,1,1-Trichloroethane.										
1,1-DCE = 1,1-Dichloroethene.										
1,1-DCA = 1,1-Dichloroethane.										
ND = Not Detected.										
ESL <sup>1</sup> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A – Shallow Soils, groundwater is a current or potential source of drinking water.										
ESL <sup>2</sup> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table E1 – Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns. Residential Land Use.										
ESL <sup>3</sup> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table E1 – Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns. Commercial/Industrial Land Use.										
<b>Values in BOLD indicate concentrations that exceed the respective Table A ESL value.</b>										
Results in micrograms per liter (µg/L) unless otherwise indicated.										

TABLE 3  
Summary of Offsite Potential TCE Sources

SITE NAME	ADDRESS	DISTANCE & DIRECTION FROM SUBJECT SITE
FORMER D. MERLINO & SONS / FORMER ALITA BRAND MACARONI	968, 976 81ST AVENUE 1001 83RD AVENUE	200 FEET EAST-NOETHEAST
FORMER ELMHURST ANODIZING	910 81ST AVENUE	50 FEET NORTH-NORTHWEST
CONTINENTAL PLATING	995 85TH AVENUE	500 FEET EAST-NORTHEAST
AMERICAN CHROME	932 86TH AVENUE	440 FEET SOUTHEAST

# FIGURES

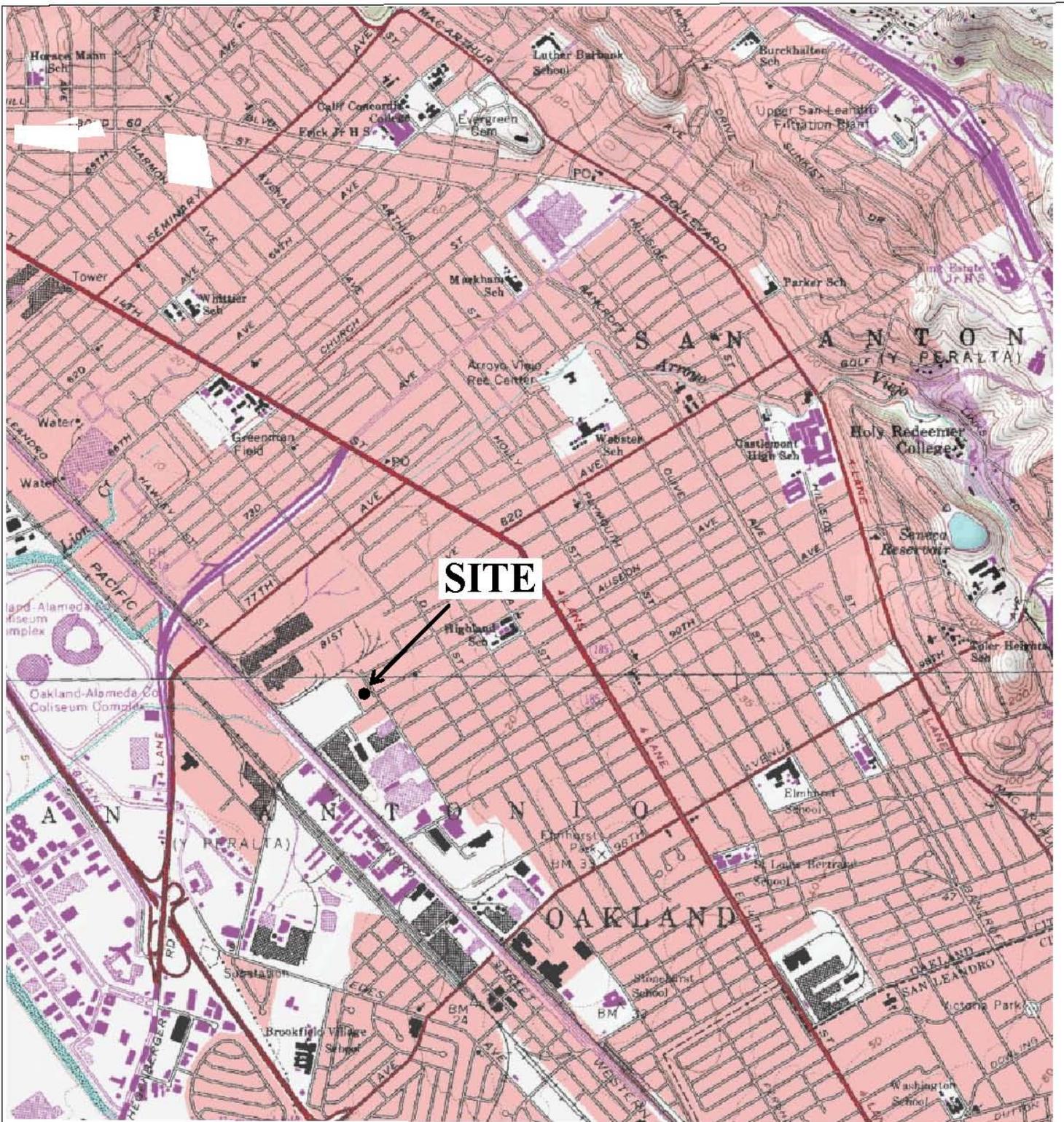
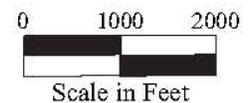


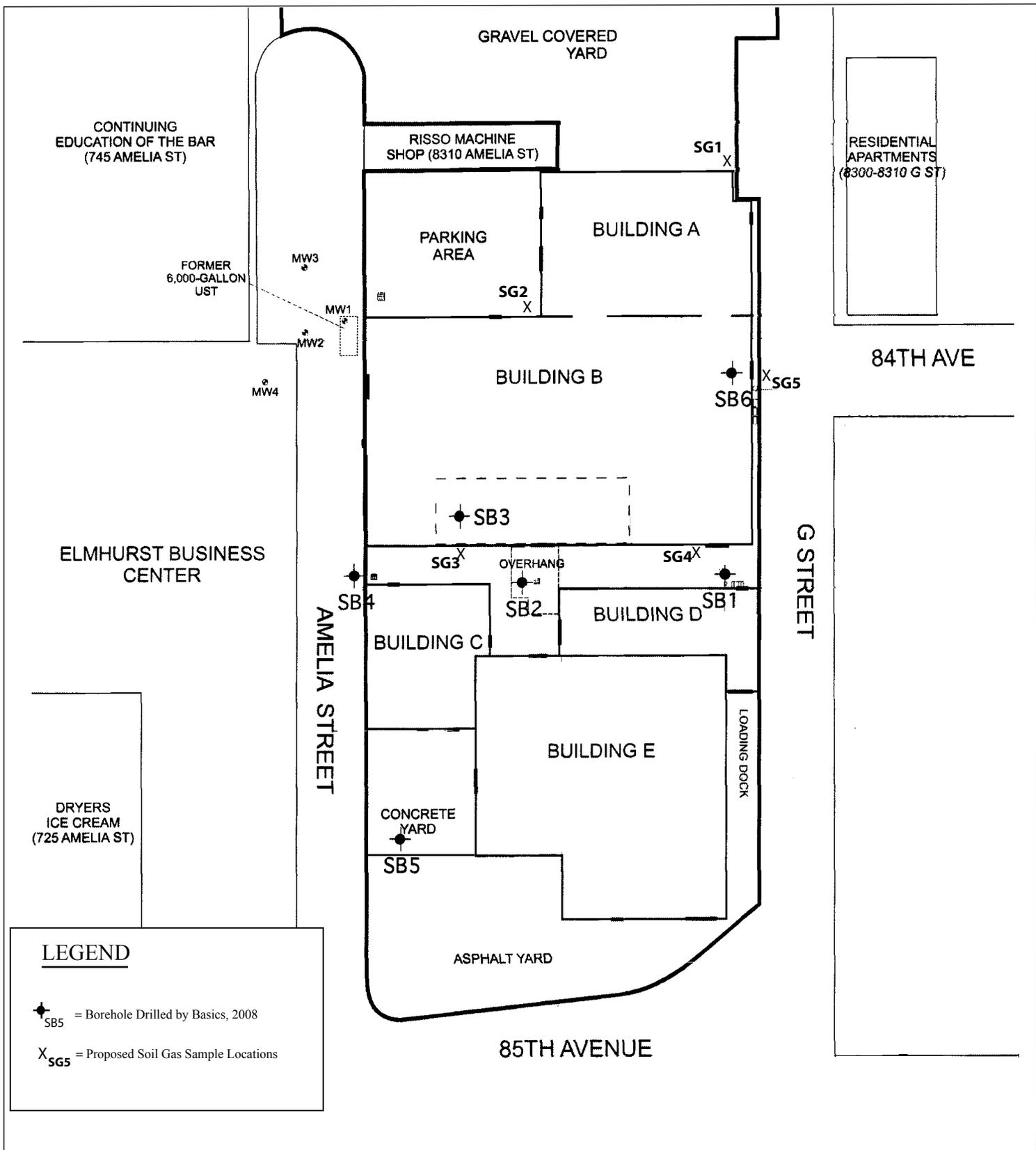
Figure 1  
 Site Location Map  
 8410 Amelia Street  
 Oakland, California



Base Map From:  
 US Geological Survey Oakland East,  
 California, and San Leandro, California  
 7.5-Minute Quadrangles  
 Photorevised 1980

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





**LEGEND**

◆<sub>SB5</sub> = Borehole Drilled by Basics, 2008

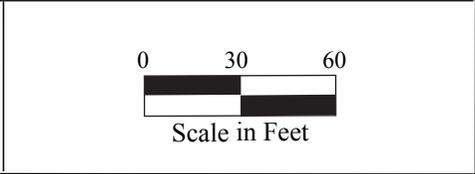
X<sub>SG5</sub> = Proposed Soil Gas Sample Locations

Figure 2  
 Site Plan Showing Proposed Sampling Locations  
 8410 Amelia Street  
 Oakland, California



Base Map From:  
 Basics Environmental, Inc. Limited Phase II  
 ESA, May 2008

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



# LEGEND

D.M. = Former D. Mertino & Sons / Former Alita Brand Macaroni  
968, 976 81st Avenue,  
1001 83rd Avenue

E.A. = Former Elmhurst Anodizing  
910 81st Avenue

C.P. = Suspected Former Continental Plating Location  
995 85th Avenue

★ = Subject Site  
8410 Amelia Street

A.C. = American Chrome  
932 86th Avenue



Figure 3  
Site Vicinity Map  
8410 Amelia Street  
Oakland, California



Base Map From:  
Google Earth October 2, 2009

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

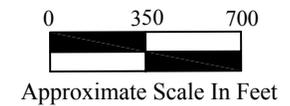




Figure 4  
Typical Soil Gas Sampling Manifold  
8410 Amelia Street  
Oakland, California

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

## **APPENDIX A**

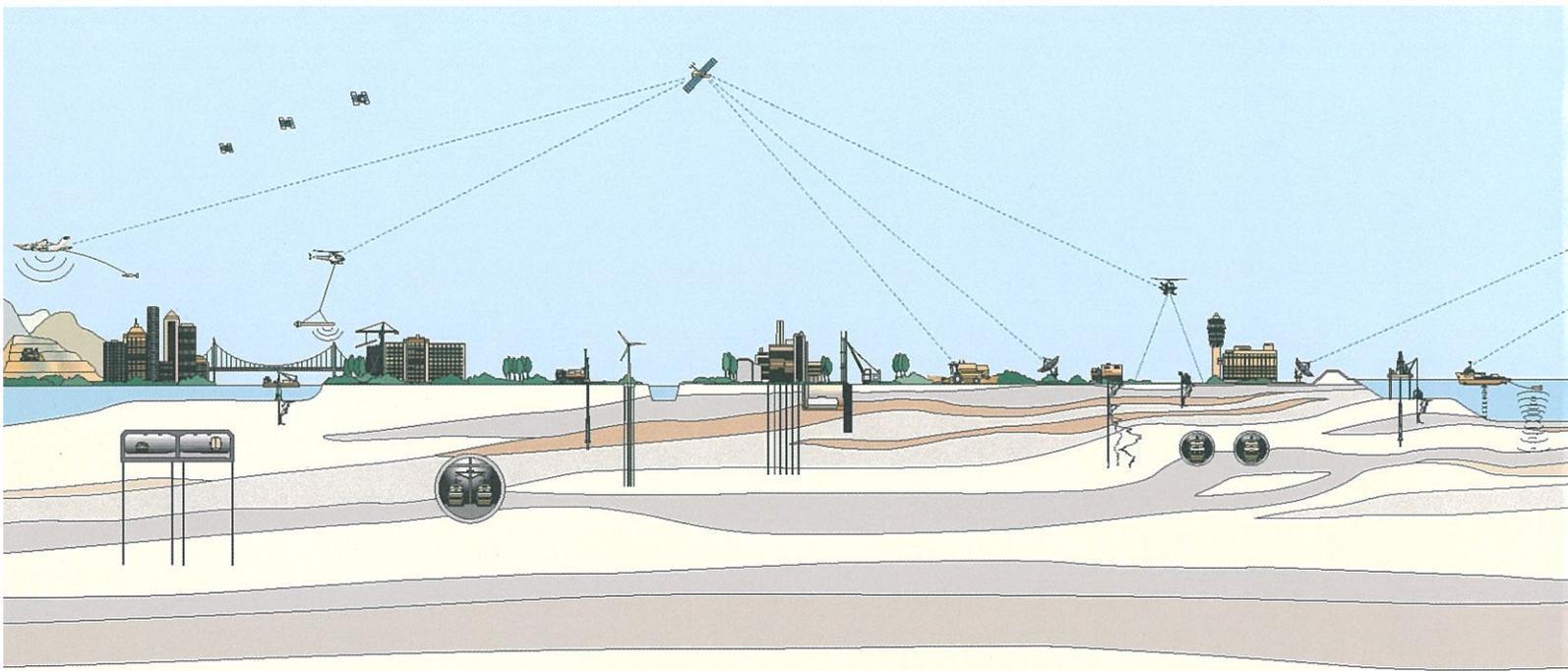
**Selected Information From  
Fugro West, Inc. September 2008  
Final Removal Action Workplan  
Tassafaronga Village  
Oakland, California**

**FINAL  
REMOVAL ACTION WORKPLAN  
TASSAFARONGA VILLAGE  
OAKLAND, CALIFORNIA**

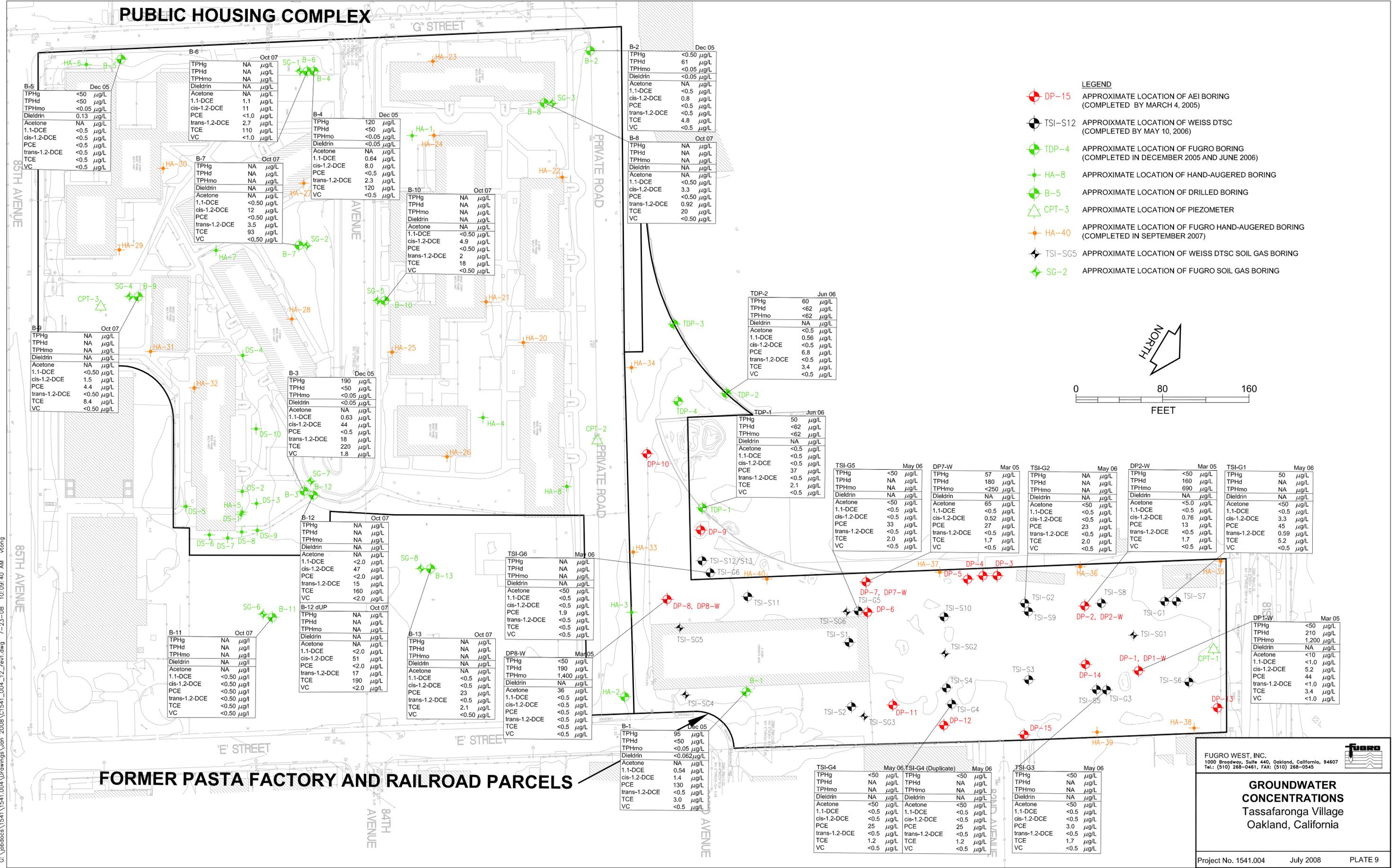
Prepared for:  
OAKLAND HOUSING AUTHORITY

September 2008

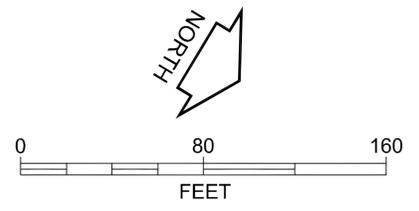
Prepared by:  
Fugro West, Inc.  
1000 Broadway, Suite 440  
Oakland, California 94607  
Fugro Project No. 1541.004



# PUBLIC HOUSING COMPLEX



- LEGEND**
- DP-15 APPROXIMATE LOCATION OF AEI BORING (COMPLETED BY MARCH 4, 2005)
  - TSI-S12 APPROXIMATE LOCATION OF WEISS DTSC (COMPLETED BY MAY 10, 2006)
  - TDP-4 APPROXIMATE LOCATION OF FUGRO BORING (COMPLETED IN DECEMBER 2005 AND JUNE 2006)
  - HA-8 APPROXIMATE LOCATION OF HAND-AUGERED BORING
  - B-5 APPROXIMATE LOCATION OF DRILLED BORING
  - CPT-3 APPROXIMATE LOCATION OF PIEZOMETER
  - HA-40 APPROXIMATE LOCATION OF FUGRO HAND-AUGERED BORING (COMPLETED IN SEPTEMBER 2007)
  - TSI-SG5 APPROXIMATE LOCATION OF WEISS DTSC SOIL GAS BORING
  - SG-2 APPROXIMATE LOCATION OF FUGRO SOIL GAS BORING



B-5 Dec 05

TPHg	<50	µg/L
TPHd	<50	µg/L
TPHmo	<0.05	µg/L
Dieldrin	0.13	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	<0.5	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	<0.5	µg/L
VC	<0.5	µg/L

B-6 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	1.1	µg/L
cis-1,2-DCE	11	µg/L
PCE	<1.0	µg/L
trans-1,2-DCE	2.7	µg/L
TCE	110	µg/L
VC	<1.0	µg/L

B-4 Dec 05

TPHg	120	µg/L
TPHd	<50	µg/L
TPHmo	<0.05	µg/L
Dieldrin	<0.05	µg/L
Acetone	NA	µg/L
1,1-DCE	0.64	µg/L
cis-1,2-DCE	8.0	µg/L
PCE	<0.5	µg/L
trans-1,2-DCE	2.3	µg/L
TCE	120	µg/L
VC	<0.5	µg/L

B-2 Dec 05

TPHg	<0.50	µg/L
TPHd	61	µg/L
TPHmo	<0.05	µg/L
Dieldrin	<0.05	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	0.8	µg/L
PCE	<0.5	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	4.8	µg/L
VC	<0.5	µg/L

B-8 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.50	µg/L
cis-1,2-DCE	3.3	µg/L
PCE	<0.50	µg/L
trans-1,2-DCE	0.92	µg/L
TCE	20	µg/L
VC	<0.50	µg/L

B-10 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.50	µg/L
cis-1,2-DCE	4.9	µg/L
PCE	<0.50	µg/L
trans-1,2-DCE	2	µg/L
TCE	18	µg/L
VC	<0.50	µg/L

TDP-2 Jun 06

TPHg	60	µg/L
TPHd	<62	µg/L
TPHmo	<62	µg/L
Dieldrin	NA	µg/L
Acetone	<0.5	µg/L
1,1-DCE	0.56	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	6.8	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	3.4	µg/L
VC	<0.5	µg/L

TDP-1 Jun 06

TPHg	50	µg/L
TPHd	<62	µg/L
TPHmo	<62	µg/L
Dieldrin	NA	µg/L
Acetone	<0.5	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	37	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	2.1	µg/L
VC	<0.5	µg/L

TSI-G5 May 06

TPHg	<50	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	33	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	2.0	µg/L
VC	<0.5	µg/L

DP7-W Mar 05

TPHg	57	µg/L
TPHd	180	µg/L
TPHmo	<250	µg/L
Dieldrin	NA	µg/L
Acetone	65	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	0.52	µg/L
PCE	27	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	1.7	µg/L
VC	<0.5	µg/L

TSI-G2 May 06

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	23	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	2.0	µg/L
VC	<0.5	µg/L

DP2-W Mar 05

TPHg	<50	µg/L
TPHd	160	µg/L
TPHmo	690	µg/L
Dieldrin	NA	µg/L
Acetone	<5.0	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	0.76	µg/L
PCE	13	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	1.7	µg/L
VC	<0.5	µg/L

TSI-G1 May 06

TPHg	50	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	45	µg/L
trans-1,2-DCE	0.59	µg/L
TCE	5.2	µg/L
VC	<0.5	µg/L

B-9 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.50	µg/L
cis-1,2-DCE	1.5	µg/L
PCE	4.4	µg/L
trans-1,2-DCE	<0.50	µg/L
TCE	8.4	µg/L
VC	<0.50	µg/L

B-7 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	<0.50	µg/L
cis-1,2-DCE	12	µg/L
PCE	<0.50	µg/L
trans-1,2-DCE	3.5	µg/L
TCE	93	µg/L
VC	<0.50	µg/L

B-3 Dec 05

TPHg	190	µg/L
TPHd	<50	µg/L
TPHmo	<0.05	µg/L
Dieldrin	<0.05	µg/L
Acetone	NA	µg/L
1,1-DCE	0.63	µg/L
cis-1,2-DCE	44	µg/L
PCE	<0.5	µg/L
trans-1,2-DCE	18	µg/L
TCE	220	µg/L
VC	1.8	µg/L

B-12 Oct 07

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	NA	µg/L
1,1-DCE	<2.0	µg/L
cis-1,2-DCE	47	µg/L
PCE	<2.0	µg/L
trans-1,2-DCE	15	µg/L
TCE	160	µg/L
VC	<2.0	µg/L

TSI-G6 Mar 06

TPHg	NA	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	1.9	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	<0.5	µg/L
VC	<0.5	µg/L

DP8-W Mar 05

TPHg	<50	µg/L
TPHd	190	µg/L
TPHmo	1,400	µg/L
Dieldrin	NA	µg/L
Acetone	36	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	23	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	2.1	µg/L
VC	<0.5	µg/L

B-1 Dec 05

TPHg	95	µg/L
TPHd	<50	µg/L
TPHmo	<0.05	µg/L
Dieldrin	<0.062	µg/L
Acetone	NA	µg/L
1,1-DCE	0.54	µg/L
cis-1,2-DCE	1.4	µg/L
PCE	130	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	3.0	µg/L
VC	<0.5	µg/L

TSI-G4 May 06

TPHg	<50	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	25	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	1.2	µg/L
VC	<0.5	µg/L

TSI-G4 (Duplicate) May 06

TPHg	<50	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	25	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	1.2	µg/L
VC	<0.5	µg/L

TSI-G3 May 06

TPHg	<50	µg/L
TPHd	NA	µg/L
TPHmo	NA	µg/L
Dieldrin	NA	µg/L
Acetone	<50	µg/L
1,1-DCE	<0.5	µg/L
cis-1,2-DCE	<0.5	µg/L
PCE	3.0	µg/L
trans-1,2-DCE	<0.5	µg/L
TCE	1.7	µg/L
VC	<0.5	µg/L

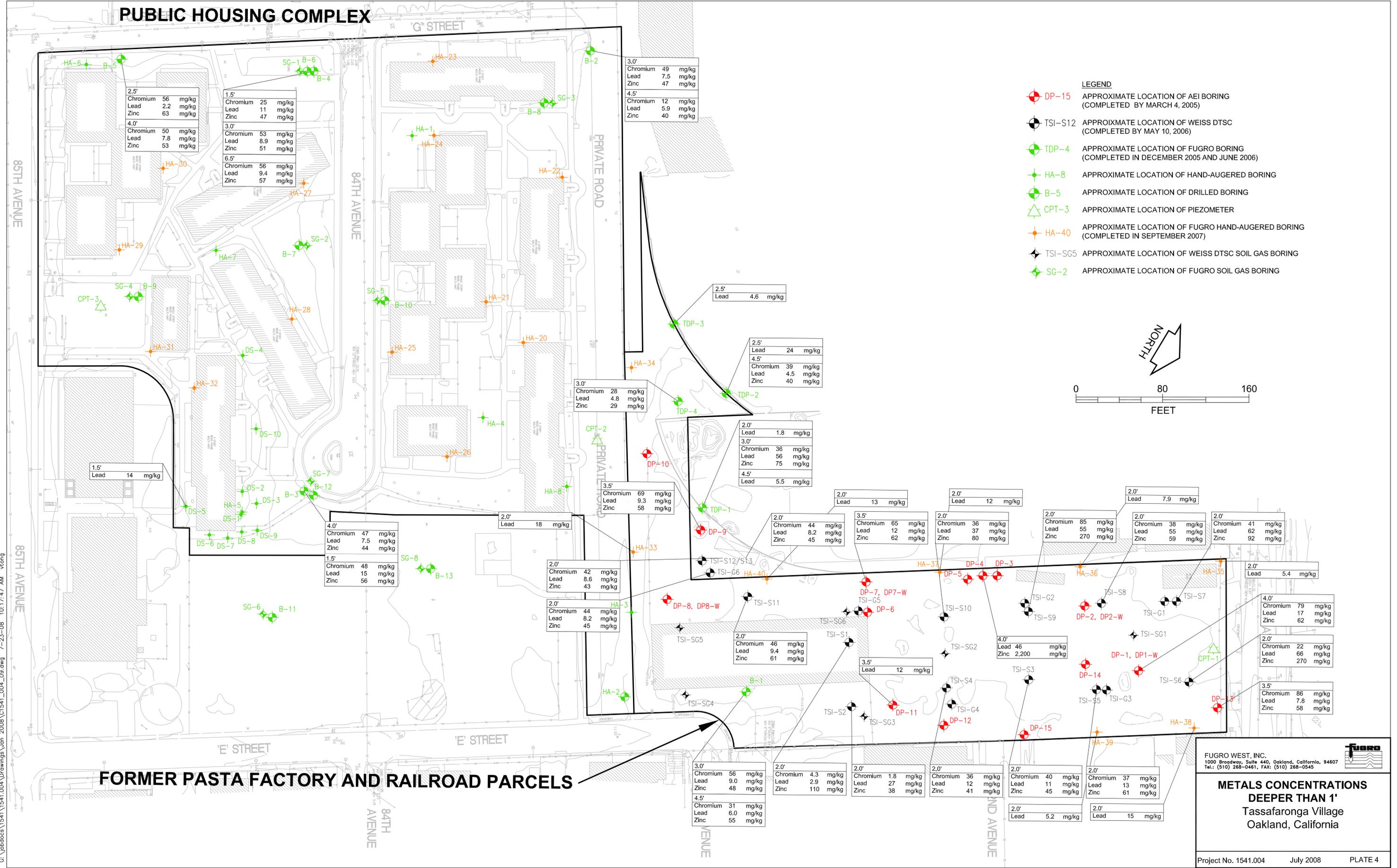
**FUGRO WEST, INC.**  
 1000 Broadway, Suite 440, Oakland, California, 94607  
 Tel.: (510) 268-0461, Fax: (510) 268-0545

**GROUNDWATER CONCENTRATIONS**  
 Tassafaronga Village  
 Oakland, California

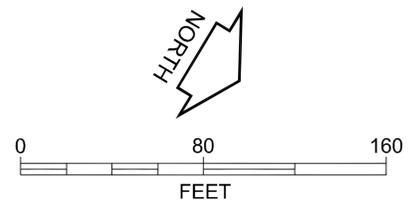
Project No. 1541.004 July 2008 PLATE 9

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# PUBLIC HOUSING COMPLEX



- LEGEND**
- DP-15 APPROXIMATE LOCATION OF AEI BORING (COMPLETED BY MARCH 4, 2005)
  - TSI-S12 APPROXIMATE LOCATION OF WEISS DTSC (COMPLETED BY MAY 10, 2006)
  - TDP-4 APPROXIMATE LOCATION OF FUGRO BORING (COMPLETED IN DECEMBER 2005 AND JUNE 2006)
  - + HA-8 APPROXIMATE LOCATION OF HAND-AUGERED BORING
  - B-5 APPROXIMATE LOCATION OF DRILLED BORING
  - △ CPT-3 APPROXIMATE LOCATION OF PIEZOMETER
  - + HA-40 APPROXIMATE LOCATION OF FUGRO HAND-AUGERED BORING (COMPLETED IN SEPTEMBER 2007)
  - ◆ TSI-SG5 APPROXIMATE LOCATION OF WEISS DTSC SOIL GAS BORING
  - ◆ SG-2 APPROXIMATE LOCATION OF FUGRO SOIL GAS BORING



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# FORMER PASTA FACTORY AND RAILROAD PARCELS

**FUGRO WEST, INC.**  
 1000 Broadway, Suite 440, Oakland, California, 94607  
 Tel.: (510) 268-0461, FAX: (510) 268-0545

**METALS CONCENTRATIONS  
 DEEPER THAN 1'  
 Tassafaronga Village  
 Oakland, California**

Project No. 1541.004 July 2008 PLATE 4

Table 1B  
Summary of Analytical Results - Grab Groundwater  
Tassafaronga Village Housing Development Project  
Oakland, California



Analyte	Regulatory Criteria			Tassafaronga Housing Complex												
	ESL (Table F-1b)	MCLs		B-2 <sup>2</sup>	B-3 <sup>2</sup>	B-4 <sup>2</sup>	B-5 <sup>2</sup>	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-12 (DUP)	B-13
				8-Dec-05	8-Dec-05	7-Dec-05	8-Dec-05	9-Oct-07								
<b>Hydrocarbons</b>														B-3	B-3	background
TVHg	ug/L	5,000	NE	<50	<b>190</b>	<b>120</b>	<50	--	--	--	--	--	--	--	--	--
TPHd	ug/L	2,500	NE	<b>61</b>	<50	<50	<50	--	--	--	--	--	--	--	--	--
TPHmo	ug/L	2,500	NE	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--	--
Benzene	ug/L	NA	1	<0.5	<0.5	<0.5	<0.5	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<0.50
Toluene	ug/L	NA	150	<0.5	<0.5	<0.5	<0.5	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<0.50
Ethylbenzene	ug/L	NA	300	<0.5	<0.5	<0.5	<0.5	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<0.50
Xylenes	ug/L	NA	1,800	<1.5	<1.5	<1.5	<1.5	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0
MTBE	ug/L	NA	13	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
<b>VOCs</b>		NA	varies	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>
Acetone	ug/L	NA	6,300	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene (1,1-DCE)	ug/L	NA	6	<0.5	<b>0.63</b>	<b>0.64</b>	<0.5	<b>1.1</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<0.50
cis-1,2-Dichloroethene (cis-1,2-DCE)	ug/L	NA	6	<b>0.8</b>	<b>44</b>	<b>8.0</b>	<0.5	<b>11</b>	<b>12</b>	<b>3.3</b>	<b>1.5</b>	<b>4.9</b>	<0.50	<b>47</b>	<b>51</b>	<0.50
Tetrachloroethene (PCE)	ug/L	NA	5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.50	<0.50	<b>4.4</b>	<0.50	<0.50	<2.0	<2.0	<b>23</b>
trans-1,2-Dichloroethene (trans-1,2-DCE)	ug/L	NA	10	<0.5	<b>18</b>	<b>2.3</b>	<0.5	<b>2.7</b>	<b>3.5</b>	<b>0.92</b>	<0.50	<b>2</b>	<0.50	<b>15</b>	<b>17</b>	<0.50
Trichloroethene (TCE)	ug/L	NA	5	<b>4.8</b>	<b>220</b>	<b>120</b>	<0.5	<b>110</b>	<b>93</b>	<b>20</b>	<b>8.4</b>	<b>18</b>	<0.50	<b>160</b>	<b>190</b>	<b>2.1</b>
Vinyl Chloride (VC)	ug/L	NA	0.5	<0.5	<b>1.8</b>	<0.5	<0.5	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<0.50
<b>Pesticides</b>				ND	ND	ND	ND <sup>4</sup>	--	--	--	--	--	--	--	--	--
Dieldrin	ug/L	NA	0.0022	<0.050	<0.050	<0.050	<b>0.13<sup>5</sup></b>	--	--	--	--	--	--	--	--	--
Lead	ug/L	NA	15	--	--	--	--	--	--	--	--	--	--	--	--	--
Asbestos	%	NA	NE	--	--	--	--	--	--	--	--	--	--	--	--	--

**Notes:**

TPH = Total Petroleum Hydrocarbons  
 TVHg = Total Volatile Hydrocarbons as gasoline  
 TPHd = Total Petroleum Hydrocarbons as diesel  
 Detected concentrations are shown in **Bold**  
 < = not detected at or above the listed analytical reporting limit  
 -- = Not Analyzed  
 ug/L = micrograms per liter  
 ND = Not Detected  
 NE = Not Established  
 NA= Not Applicable

<sup>1</sup> = samples collected by AEI Consultants  
<sup>2</sup> = samples collected by Fugro West, Inc.  
<sup>3</sup> = Samples collected by Weiss Associates  
<sup>4</sup> = Not Detected except for constituents listed below  
<sup>5</sup> = Sampled was not filtered prior to analyses  
<sup>6</sup> = Sampled was filtered prior to analyses  
 Table F-1b:Groundwater Screening Levels for groundwater that is not a drinking water source  
 ESL= Environmental Screening Levels Established by The Regional Water Quality Control Board and updated 2007  
 MCL =Maximum Contaminant Levels Established by the Environmental Protection Agency

**Table 2B**  
**Summary of Analytical Results - Grab Groundwater**  
**Tassafaronga Village Housing Development Project**  
**Oakland, California**



Analyte		Regulatory Criteria		Former Pasta Factory and Industrial Rail Spurs													
		ESL (Table F-1b)	MCLs	DP1-W <sup>1</sup>	DP2-W <sup>1</sup>	DP7-W <sup>1</sup>	DP8-W <sup>1</sup>	B-1 <sup>2</sup>	TSI-G1 <sup>3</sup>	TSI-G2 <sup>3</sup>	TSI-G3 <sup>3</sup>	TSI-G4 <sup>3</sup>	TSI-G4 <sup>3</sup> (dup)	TSI-G5 <sup>3</sup>	TSI-G6 <sup>3</sup>	TDP-1 <sup>2</sup>	TDP-2 <sup>2</sup>
				4-Mar-05	4-Mar-05	4-Mar-05	4-Mar-05	7-Dec-05	9-May-06	9-May-06	9-May-06	9-May-06	9-May-06	9-May-06	9-May-06	10-May-06	10-Jun-06
<b>Hydrocarbons</b>															offsite	offsite	
	TVHg ug/L	5,000	NE	<50	<50	<b>57</b>	<50	<b>95</b>	<b>50</b>	--	<50	<50	<50	<50	--	<b>50</b>	<b>60</b>
	TPHd ug/L	2,500	NE	<b>210</b>	<b>160</b>	<b>180</b>	<b>190</b>	<50	--	--	--	--	--	--	--	<62	<62
	TPHmo ug/L	2,500	NE	<b>1,200</b>	<b>690</b>	<250	<b>1,400</b>	<0.05	--	--	--	--	--	--	--	<62	<62
	Benzene ug/L	NA	1	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Toluene ug/L	NA	150	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Ethylbenzene ug/L	NA	300	<1.0	<0.5	<b>1.4</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Xylenes ug/L	NA	1,800	<1.0	<0.5	<b>11</b>	<0.5	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.5	<1.5
	MTBE ug/L	NA	13	<1.0	<b>1.0</b>	<b>0.68</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
<b>VOCs</b>		NA	varies	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>	ND <sup>4</sup>
	Acetone ug/L	NA	6,300	<10	<5.0	<b>65</b>	<b>36</b>	--	<50	<50	<50	<50	<50	<50	<50	<0.5	<0.5
	1,1-Dichloroethene (1,1-DCE) ug/L	NA	6	<1.0	<0.5	<0.5	<0.5	<b>0.54</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<b>0.56</b>
	cis-1,2-Dichloroethene (cis-1,2-DCE) ug/L	NA	6	<b>5.2</b>	<b>0.76</b>	<b>0.52</b>	<0.5	<b>1.4</b>	<b>3.3</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Tetrachloroethene (PCE) ug/L	NA	5	<b>44</b>	<b>13</b>	<b>27</b>	<0.5	<b>130</b>	<b>45</b>	<b>23</b>	<b>3.0</b>	<b>27</b>	<b>25</b>	<b>33</b>	<b>1.9</b>	<b>37</b>	<b>6.8</b>
	trans-1,2-Dichloroethene (trans-1,2-DCE) ug/L	NA	10	<1.0	<0.5	<0.5	<0.5	<0.5	<b>0.59</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Trichloroethene (TCE) ug/L	NA	5	<b>3.4</b>	<b>1.7</b>	<b>1.7</b>	<0.5	<b>3.0</b>	<b>5.2</b>	<b>2.0</b>	<b>1.7</b>	<b>1.2</b>	<b>1.2</b>	<b>2.0</b>	<0.5	<b>2.1</b>	<b>3.4</b>
	Vinyl Chloride (VC) ug/L	NA	0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Pesticides</b>				--	--	--	--	ND	--	--	--	--	--	--	--	--	--
	Dieldrin ug/L	NA	0.0022	--	--	--	--	<0.062	--	--	--	--	--	--	--	--	--
	Lead ug/L	NA	15	--	--	--	--	--	<b>2.7</b> <sup>6</sup>	<2.0	<2.0	<2.0	<2.0	<2.0	--	--	--
	Asbestos %	NA	NE	--	--	--	--	--	ND	--	--	--	--	--	--	--	--

**Notes:**

TPH = Total Petroleum Hydrocarbons  
 TVHg = Total Volatile Hydrocarbons as gasoline  
 TPHd = Total Petroleum Hydrocarbons as diesel  
 Detected concentrations are shown in **Bold**  
 < = not detected at or above the listed analytical reporting limit  
 -- = Not Analyzed  
 ug/L = micrograms per liter  
 ND = Not Detected  
 NE = Not Established  
 NA= Not Applicable

<sup>1</sup> = samples collected by AEI Consultants  
<sup>2</sup> = samples collected by Fugro West, Inc.  
<sup>3</sup> = Samples collected by Weiss Associates  
<sup>4</sup> = Not Detected except for constituents listed below  
<sup>5</sup> = Sampled was not filtered prior to analyses  
<sup>6</sup> = Sampled was filtered prior to analyses  
 Table F-1b:Groundwater Screening Levels for groundwater that is not a drinking water source  
 ESL= Environmental Screening Levels Established by The Regional Water Quality Control Board and updated 2007  
 MCL =Maximum Contaminant Levels Established by the Environmental Protection Agency

Table 1C  
Summary of Analytical Results - Soil Gas  
Tassafaronga Village Housing Development Project  
Oakland, California



Analyte	Regulatory Criteria		Tassafaronga Housing Complex																Quality Control		
	CHHSLs Table 2	ESLs Table E-2	SG-1		SG-2		SG-3		SG-4		SG-5		SG-6		SG-7		SG-8		SG-7 Duplicate	Trip Blank	
	Residential (ug/m <sup>3</sup> )	Residential (ug/m <sup>3</sup> )	5'		5'		5'		5'		5'		5'		5'		5'		5'	--	
Depth			8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07		8-Oct-07	8-Oct-07	
Date			ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ug/m3
Acetone	NE	660,000	<b>94</b>	<b>223.29</b>	<b>15</b>	<b>35.63</b>	<b>140</b>	<b>332.56</b>	<b>480</b>	<b>1,140.22</b>	<b>350</b>	<b>831.41</b>	<b>280</b>	<b>665.13</b>	<b>76</b>	<b>180.53</b>	<b>140</b>	<b>332.56</b>	<b>78</b>	<b>185.29</b>	< 23.75
Carbon Disulfide	NE	NE	< 10	< 31.14	< 10	< 31.14	< 10	< 31.14	< 41	< 127.68	< 10	< 31.14	< 12	< 37.37	< 10	< 31.14	< 11	< 34.26	< 10	< 31.14	< 31.14
Methylene Chloride	NE	5,200	<b>2.2</b>	<b>7.64</b>	< 2.0	< 6.95	<b>2.5</b>	<b>8.69</b>	< 8.3	< 28.83	<b>2.4</b>	<b>8.34</b>	< 2.4	< 8.34	<b>2.5</b>	<b>8.69</b>	<b>2.6</b>	<b>9.03</b>	<b>2.1</b>	<b>7.3</b>	< 6.95
Bromomethane	NE	1,000	<b>5.0</b>	<b>19.42</b>	< 4.0	< 15.53	<b>5.6</b>	<b>21.75</b>	< 17	< 66.02	<b>5.2</b>	<b>20.19</b>	<b>6.4</b>	<b>24.85</b>	< 4.0	< 15.53	<b>5.6</b>	<b>21.75</b>	<b>4.4</b>	<b>17.09</b>	< 15.53
cis-1,2-Dichloroethene	15,900	7,300	< 2.0	< 7.93	< 2.0	< 7.93	< 2.0	< 7.93	< 8.3	< 32.91	< 2.0	< 7.93	< 2.4	< 9.52	< 2.0	< 7.93	< 2.2	< 8.72	< 2.0	< 7.93	< 7.93
Chloromethane	NE	19,000	< 4.0	< 8.26	< 4.0	< 8.26	< 4.0	< 8.26	< 17	< 35.11	< 4.0	< 8.26	< 4.7	< 9.71	< 4.0	< 8.26	< 4.4	< 9.09	< 4.0	< 8.26	< 8.26
2-Butanone (Methyl Ethyl Ketone)	NE	1,000,000	< 10	< 29.49	< 10	< 29.49	<b>20</b>	<b>58.98</b>	< 41	< 120.9	<b>19</b>	<b>56.03</b>	<b>28</b>	<b>82.57</b>	<b>13</b>	<b>38.34</b>	<b>16</b>	<b>47.18</b>	<b>10</b>	<b>29.49</b>	< 29.49
Benzene	36.2	84	< 3.0	< 9.58	< 3.0	< 9.58	< 3.0	< 9.58	< 12	< 38.34	< 3.0	< 9.58	< 3.5	< 11.18	< 3.0	< 9.58	< 3.3	< 10.54	< 3.0	< 9.58	< 9.58
Toluene	135,000	63,000	<b>2.4</b>	<b>9.04</b>	< 2.0	< 7.54	<b>2.4</b>	<b>9.04</b>	< 8.3	< 31.28	<b>3.4</b>	<b>12.81</b>	<b>4.0</b>	<b>15.07</b>	<b>2.2</b>	<b>8.29</b>	<b>2.7</b>	<b>10.17</b>	<b>2.2</b>	<b>8.29</b>	< 7.54
Ethylbenzene	NE	210,000	< 2.0	< 8.68	< 2.0	< 8.68	< 2.0	< 8.68	< 8.3	< 36.04	< 2.0	< 8.68	< 2.4	< 10.42	< 2.0	< 8.68	< 2.2	< 9.55	< 2.0	< 8.68	< 8.68
m,p-xylene	317,000	NE	< 4.0	< 17.37	< 4.0	< 17.37	< 4.0	< 17.37	< 17	< 73.82	< 4.0	< 17.37	< 4.7	< 20.41	< 4.0	< 17.37	< 4.4	< 19.11	< 4.0	< 17.37	< 17.37
Total xylenes	NE	21,000	< 4.0	< 17.37	< 4.0	< 17.37	< 4.0	< 17.37	< 17	< 73.82	< 4.0	< 17.37	< 4.7	< 20.41	< 4.0	< 17.37	< 4.4	< 19.11	< 4.0	< 17.37	< 17.37
o-xylene	315,000	NE	< 2.0	< 8.68	< 2.0	< 8.68	< 2.0	< 8.68	< 8.3	< 36.04	< 2.0	< 8.68	< 2.4	< 10.42	< 2.0	< 8.68	< 2.2	< 9.55	< 2.0	< 8.68	< 8.68
Styrene	NE	190,000	< 2.0	< 8.52	< 2.0	< 8.52	< 2.0	< 8.52	< 8.3	< 35.35	< 2.0	< 8.52	< 2.4	< 10.22	< 2.0	< 8.52	< 2.2	< 9.37	< 2.0	< 8.52	< 8.52
Trichloroethene (TCE)	528	1,200	< 2.0	< 10.75	<b>9.6</b>	<b>51.59</b>	< 2.0	< 10.75	< 8.3	< 44.61	<b>4.2</b>	<b>22.57</b>	< 2.4	< 12.9	<b>5.0</b>	<b>26.87</b>	< 2.2	< 11.82	<b>8.1</b>	<b>43.53</b>	< 10.75
1,1,2-Trichloro-1,2,2-Trifluoroethane	NE	NE	< 2.0	< 15.33	< 2.0	< 15.33	< 2.0	< 15.33	< 8.3	< 63.61	< 2.0	< 15.33	< 2.4	< 18.39	< 2.0	< 15.33	< 2.2	< 16.86	< 2.0	< 15.33	< 15.33
1,1-Dichloroethane	NE	1,500	< 2.0	< 8.1	< 2.0	< 8.1	< 2.0	< 8.1	< 8.3	< 33.6	< 2.0	< 8.1	< 2.4	< 9.71	< 2.0	< 8.1	< 2.2	< 8.91	< 2.0	< 8.1	< 8.1
1,1-Dichloroethene	NE	49	< 2.0	< 7.93	< 2.0	< 7.93	< 2.0	< 7.93	< 8.3	< 32.91	< 2.0	< 7.93	< 2.4	< 9.52	< 2.0	< 7.93	< 2.2	< 8.72	< 2.0	< 7.93	< 7.93
Trichlorofluoromethane	NE	NE	< 2.0	NE	< 2.0	NE	< 2.0	NE	< 8.3	NE	< 2.0	NE	< 2.4	NE	< 2.0	NE	< 2.2	NE	< 2.0	NE	< 2.0
4-Methyl-2-pentanone	NE	NE	< 10	< 40.97	< 10	< 40.97	< 10	< 40.97	< 41	< 167.96	< 10	< 40.97	< 12	< 49.16	< 10	< 40.97	< 11	< 45.06	< 10	< 40.97	< 40.97
Other VOCs	varies	varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Leak Check Compound</b>																					
Isopropylalcohol (2-Propanol)	NE	NE	< 10	< 24.58	< 10	< 24.58	< 10	< 24.58	< 41	< 100.76	< 10	< 24.58	<b>15</b>	<b>36.87</b>	< 10	< 24.58	<b>13</b>	<b>31.95</b>	< 10	< 24.58	< 4.9

Analyte	Tassafaronga Housing Complex								Quality Control		Ambient Air*
	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-7 Duplicate	Trip Blank	
	5'	5'	5'	5'	5'	5'	5'	5'	5'	--	
Depth	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	8-Oct-07	
Date	%	%	%	%	%	%	%	%	%	%	
Oxygen	<b>19</b>	<b>20</b>	<b>19</b>	<b>21</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>20</b>	<b>20</b>	--	20.95
Carbon Dioxide	<b>0.19</b>	<b>1.4</b>	<b>1.9</b>	<b>0.31</b>	<b>2.5</b>	<b>2.5</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	--	0.03
Methane	<b>0.00052</b>	< 0.00038	< 0.00038	<b>0.00380</b>	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	--	0.00
Nitrogen	<b>1.9</b>	<b>82</b>	<b>82</b>	<b>81</b>	<b>81</b>	<b>82</b>	<b>83</b>	<b>82</b>	<b>83</b>	<b>100</b>	78.08

**Notes**  
 Detected Concentration shown in bold  
 NE = Not established  
 ND = Not detected above laboratory reporting limits

-- = Not Analyzed  
 NA = Not Applicable  
 \* Composition of dry unpolluted air by composition  
 Table E-2: Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns  
 CHHSLs = California Human Screening Levels (January 2005)  
 ESL = Environmental Screening Levels Established by the Regional Water Quality Control Board and updated in November 2007.

Table 2C  
Summary of Analytical Results - Soil Gas  
Tassafaronga Village Housing Development Project  
Oakland, California



Analyte	Regulatory Criteria		Former Pasta Factory and Industrial Railroad Spur												Quality Control	
	CHHSLs Table 2 Residential (ug/m <sup>3</sup> )	ESLs Table E-2 Residential (ug/m <sup>3</sup> )	TSI-SG1		TSI-SG2		TSI-SG3		TSI-SG4		TSI-SG5		TSI-SG6		TSI-SG7 <sup>1</sup>	
Depth			5'		5'		5'		5'		5'		5'		5'	
Date			8-May-06		8-May-06		8-May-06		8-May-06		8-May-06		8-May-06		8-May-06	
			ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3	ppbv	ug/m3
Acetone	NE	660,000	<b>530</b>	<b>1258.99</b>	<b>250</b>	<b>593.87</b>	<b>230</b>	<b>546.36</b>	<b>370</b>	<b>878.92</b>	<b>170</b>	<b>403.83</b>	<b>160</b>	<b>380.07</b>	<b>160</b>	<b>380.07</b>
Carbon Disulfide	NE	NE	<10	<31.14	<10	<31.14	<10	<31.14	<10	<31.14	<b>16</b>	<b>49.83</b>	<b>17</b>	<b>52.94</b>	<10	<31.14
Methylene Chloride	NE	5,200	<2.0	<6.95	<2.0	<6.95	<2.0	<6.95	<2.0	<6.95	<2.0	<6.95	<2.0	<6.95	<2.0	<6.95
Bromomethane	NE	1,000	<2.0	<7.77	<2.0	<7.77	<2.0	<7.77	<2.0	<7.77	<2.0	<7.77	<2.0	<7.77	<2.0	<7.77
cis-1,2-Dichloroethene	15,900	7,300	<2.0	<7.93	<2.0	<7.93	<2.0	<7.93	<b>9.3</b>	<b>36.87</b>	<2.0	<7.93	<2.0	<7.93	<2.0	<7.93
Chloromethane	NE	19,000	<b>5.0</b>	<b>10.33</b>	<4.0	<8.26	<4.0	<8.26	<4.0	<8.26	<4.0	<8.26	<4.0	<8.26	<4.0	<8.26
2-Butanone (Methyl Ethyl Ketone)	NE	1,000,000	<b>100</b>	<b>294.89</b>	<b>37</b>	<b>109.11</b>	<b>23</b>	<b>67.82</b>	<b>27</b>	<b>79.62</b>	<b>12</b>	<b>35.39</b>	<b>12</b>	<b>35.39</b>	<b>25</b>	<b>73.72</b>
Benzene	36.2	84	<b>35</b>	<b>111.81</b>	<b>31</b>	<b>99.04</b>	<b>13</b>	<b>41.53</b>	<b>7.2</b>	<b>23</b>	<b>3.8</b>	<b>12.14</b>	<b>7.4</b>	<b>23.64</b>	<b>7.4</b>	<b>23.64</b>
Toluene	135,000	63,000	<b>25</b>	<b>94.20</b>	<b>22</b>	<b>82.90</b>	<b>13</b>	<b>48.99</b>	<b>12</b>	<b>45.22</b>	<b>8.8</b>	<b>33.16</b>	<b>9.3</b>	<b>35.04</b>	<b>11</b>	<b>41.45</b>
Ethylbenzene	NE	210,000	<b>6.1</b>	<b>26.49</b>	<b>4.1</b>	<b>17.8</b>	<b>16</b>	<b>69.47</b>	<b>2.1</b>	<b>9.12</b>	<2.0	<8.68	<2.0	<8.68	<b>3.0</b>	<b>13.03</b>
m,p-xylene	317,000	NE	<b>12</b>	<b>52.11</b>	<b>12</b>	<b>52.11</b>	<b>43</b>	<b>186.72</b>	<b>6.2</b>	<b>26.92</b>	<b>5.0</b>	<b>21.71</b>	<b>5.3</b>	<b>23.01</b>	<b>11</b>	<b>47.77</b>
Total xylenes	NE	21,000	<b>17</b>	<b>73.82</b>	<b>17</b>	<b>73.82</b>	<b>62</b>	<b>269.22</b>	<b>8.3</b>	<b>36.04</b>	<b>5.0</b>	<b>21.71</b>	<b>7.4</b>	<b>32.13</b>	<b>16</b>	<b>69.48</b>
o-xylene	315,000	NE	<b>5.1</b>	<b>22.15</b>	<b>5.0</b>	<b>21.71</b>	<b>18</b>	<b>78.16</b>	<b>2.1</b>	<b>9.12</b>	<2.0	<8.68	<b>2</b>	<b>8.68</b>	<b>4.9</b>	<b>21.28</b>
styrene	NE	190,000	<b>2</b>	<b>8.52</b>	<2.0	<8.52	<2.0	<8.52	<2.0	<8.52	<2.0	<8.52	<2.0	<8.52	<2.0	<8.52
Trichloroethene (TCE)	528	1,200	<2.0	<10.75	<2.0	<10.75	<2.0	<10.75	<2.0	<10.75	<2.0	<10.75	<2.0	<10.75	<2.0	<10.75
1,1,2-Trichlor-1,2,2-Trifluoroethane	NE	NE	<b>25</b>	<b>191.61</b>	<b>43</b>	<b>329.56</b>	<b>4.4</b>	<b>33.72</b>	<b>2.5</b>	<b>19.16</b>	<2.0	<15.33	<b>4.8</b>	<b>36.79</b>	<b>3.6</b>	<b>27.59</b>
1,1-Dichloroethane	NE	1,500	<2.0	<8.1	<2.0	<8.1	<2.0	<8.1	<b>2.2</b>	<b>8.91</b>	<2.0	<8.1	<2.0	<8.1	<2.0	<8.1
1,1-Dichloroethene	NE	49	<2.0	<7.93	<2.0	<7.93	<2.0	<7.93	<b>3.3</b>	<b>13.09</b>	<2.0	<7.93	<2.0	<7.93	<2.0	<7.93
Trichlorofluoromethane	NE	NE	<b>120</b>	NE	<b>25</b>	NE	<2.0	NE	<b>3.1</b>	NE	<2.0	NE	<b>2.3</b>	NE	<b>2.0</b>	NE
4-Methyl-2-pentanone	NE	NE	<b>10</b>	<b>40.97</b>	<10	<40.97	<10	<40.97	<10	<40.97	<10	<40.97	<10	<40.97	<10	<40.97
Other VOCs	varies	varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>Leak Check Compound</b>																
Isopropylalcohol (2-Propanol)	NE	NE	<b>13</b>	<b>31.95</b>	<10	<24.58	<b>62</b>	<b>152.38</b>	<10	<24.58	<10	<24.58	<10	<24.58	<10	<24.58

Notes

Detected Concentration shown in bold  
NE = Not established  
ND = Not detected above laboratory reporting limits

-- = Not Analyzed  
NA = Not Applicable  
\* Composition of dry unpolluted air by composition  
Table E-2: Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns  
CHHSLs = California Human Screening Levels (January 2005)  
ESL = Environmental Screening Levels Established by the Regional Water Quality Control Board and updated in November 2007.