



A Report Prepared for:

EmeryBay Commercial Association  
100 Bush Street, 26th Floor  
San Francisco, California 94104  
Attention: Ms. Cathy Greenwold

**CONSTRUCTION IMPLEMENTATION AND  
SEMI-ANNUAL OPERATIONS REPORT  
FREE-PHASE HYDROCARBON PRODUCT REMEDIATION SYSTEM  
EMERYBAY COMMERCIAL ASSOCIATION  
CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

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## 1.0 INTRODUCTION

This report has been prepared by PES Environmental, Inc. (PES) on behalf of EmeryBay Commercial Association (EBCA) to present the installation and operational results of a hydrocarbon recovery system beneath the Bay Center Apartments parking garage in Emeryville, California (Plate 1). The scope of work was performed in accordance with details and procedures specified in the following documents:

- March 7, 2005 Free-Phase Hydrocarbon Product Remediation Plan, Bay Center Apartments, Christie Avenue and 64<sup>th</sup> Street, Emeryville, California (PES 2005a);
- September 20, 2005 *Request for Bid – Trench Installation, Bay Center Apartments, Christie Avenue and 64<sup>th</sup> Street, Emeryville, California* (PES, 2005b);
- January 9, 2006 Alameda County Environmental Health (ACEH) letter: *Toxics Case RO0002799, Garrett Freight Lines / Bay Center, 64<sup>th</sup> & LaCoste, Emeryville, CA 94608* (ACEH, 2006);
- February 3, 2006 *Proposed Scope of Work and Fee Estimate, Remedial System Construction, Bay Center Apartments, Christie Avenue and 64<sup>th</sup> Street, Emeryville, California* (PES, 2006a); and
- February 8, 2006 *Estimated Costs, Remedial System Operation – Calendar Year 2006, Bay Center Apartments, Christie Avenue and 64<sup>th</sup> Street, Emeryville, California* (PES, 2006b).

This report presents the results and findings from this remedial action work conducted between April 2006 and March 2007. The report includes: (1) a summary of the facility background information; (2) details and procedures of the light non-aqueous phase liquid (LNAPL) hydrocarbon recovery system installation; (3) operation and maintenance of the hydrocarbon recovery system for the period June 2006 to March 2007; (4) groundwater sampling results; and (5) conclusions and projected activities for the remainder of the 2007 calendar year. The ACEH approval letter, the City of Emeryville Building Division (CEBD) permit, PES Request for Bid Document, PES health and safety documentation, geophysical compaction results, laboratory analytical results, and waste manifesting are also provided as appendices to this report.

## 2.0 SITE BACKGROUND

The Site is located on historic San Francisco Bay tidal flats (Plate 1). As Emeryville expanded, the tidal flats were filled, predominantly with construction-type debris (e.g. soil, bricks, debris, etc.). Prior to the construction of Bay Center Apartments, the Site was occupied by two trucking businesses (Earth Metrics, 1986). The current layout of the Site is shown on Plate 2.

During the period of use as a trucking terminal, the subject property had underground storage tank (UST) fields in three areas. Tank Pit TC-1 contained four 12,000-gallon and two 10,000-gallon diesel tanks, and one 6,000-gallon gasoline tank. Tank Pit A and Tank Pit B each contained one 10,000-gallon diesel tank. The approximate locations of the UST areas are shown on Plate 2. The USTs were decommissioned and removed in about 1987 as part of the demolition and Site preparation for construction of the Bay Center Apartments (Earth Metrics, 1986).

Data presented in historical environmental and geotechnical investigation reports, as well as PES' recent investigation findings, indicate that LNAPL is present at the Site in an area between Tank Pit TC-1 and recovery well RW-1 (PES, 2004a). A summary of the findings of the historical investigations is found in PES' memorandum dated April 5, 2004. Historic and current product level measurements and recovery quantities are summarized in Table 1.

Historical information shows that an LNAPL groundwater pump and treat (P&T) system was operated at the Site from July 1990 through March 1991. The system was installed and operated by Groundwater Technology, Inc. (PES, 2004a). During this period, approximately 1,000,000 gallons of groundwater was extracted from recovery well RW-1. The extracted water was treated and discharged under permit to the sanitary sewer system. The P&T system recovered approximately 100 gallons of LNAPL from RW-1 during its operation. According to information obtained from the available P&T system Operation and Maintenance (O&M) reports, the majority of the groundwater was extracted during the period from July to November 1990, at which time corrosion and other mechanical problems caused the system to fail. Apparently LNAPL recovery was continued at RW-1 until March 1991. After March 1991, product recovery was discontinued and the P&T system was removed. In addition to the mechanical problems with the pump, the lack of significant quantities of LNAPL recovery using this system may have contributed to the decision to discontinue product recovery system operation.

Beginning in April 2004, groundwater gauging and manual LNAPL recovery efforts from one recovery well (RW-1; Plate 2) were re-established at the Site by PES. Approximately 48 gallons of LNAPL were recovered from recovery well RW-1 (PES, 2004b). In an effort to accelerate the removal of product from the subsurface, PES initiated design efforts for construction of a LNAPL hydrocarbon remediation system.

### **3.0 LNAPL REMEDIATION SYSTEM CONSTRUCTION ACTIVITIES**

The LNAPL remediation system construction activities included: (1) permitting and planning activities; (2) the excavation of three LNAPL recovery trenches; (3) the installation of three LNAPL collection sumps within each LNAPL recovery trench; and (4) health and safety monitoring. The LNAPL remediation system construction was completed between April 18 through May 2, 2006.

The locations of the LNAPL recovery trenches and monitoring wells are shown on Plates 2 and 3. Construction details of recovery trenches and sumps are provided on Plate 4. The details and procedures for the LNAPL remediation system construction activities are described in the following sections.

### **3.1 Planning and Permitting Activities**

Prior to initiating excavation activities at the Site, the following activities were performed:

- As-built construction drawing were reviewed to assess for the presence of subsurface utilities, structural footings, and structural building designs at each of the proposed LNAPL recovery trench locations;
- Structural and geotechnical Site conditions were evaluated to determine the feasibility of installing the LNAPL remediation system. A structural engineering evaluation letter from Tipping-Mar & Associates, and a geotechnical evaluation from Miller Pacific Engineering Group are provided in Appendix A;
- Workplan approval was obtained from the ACEH, and plan check approval was obtained from the City of Emeryville Building Division (CEBD). The approval letter and plan check are provided in Appendix B and C, respectively;
- Hydrocarbon product was sampled to determine relative viscosity, and the suitability of several recovery systems were evaluated;
- A passive product recovery skimmer was tested at the Site, and design plans for construction bids were developed;
- Construction and equipment bids were reviewed, and site access and scheduling was coordinated with subcontractors and site contacts. The design plans for the construction bids are provided in Appendix A;
- Permission from the City of Emeryville Fire Department was obtained to temporarily store 20-cubic yard bins in the alley east of the parking garage;
- A Site-Specific Health and Safety Plan and Intrusive Earthwork Guidance Plan were prepared (Appendix D);
- Underground Service Alert (USA) was notified of the LNAPL recovery trench locations 48 hours prior to the excavation activities; and
- A focused electromagnetic survey was performed by Foresite, Inc. of Pleasant Hill, California to locate potential subsurface utilities.

### **3.2 Recovery Trench Excavation Procedures**

PES contracted with Cornerstone Environmental Contractors, Inc (Cornerstone) to construct the remediation system at the Site. The system consists of three recovery trenches with collection sumps spaced uniformly within each trench. The trenches are backfilled with high porosity, high permeability gravel to promote LNAPL migration from the surrounding native soils to collection sumps installed within the trench backfill. The remediation system is suitable for manual LNAPL recovery from the sumps as well as more aggressive (i.e., mechanical, automated) forms of LNAPL recovery if subsequently needed. The location and orientation of the trenches were based on historic measurements of LNAPL thickness measured in the following monitoring wells: MW-13 (5.8 feet to 8.4 feet); MW-10 (0.1 feet to 1.5 feet); MW-8 (2.4 feet to 2.9 feet); MW-14 (zero feet to 0.2 feet); and MW-15 (zero feet to 0.3 feet). The depths of the trenches were limited to a maximum of 12 to 13 feet bgs due to the 8.5-foot ceiling clearance within the parking garage. The project layout is shown on Plate 3 and design details are shown on Plate 4.

Three recovery trenches (Trench-A, Trench-B, and Trench-C) were installed northeast and east of the existing product recovery well (RW-1). The trenches were installed by Cornerstone between April 18 and May 2, 2006. PES was present to observe and document the work. Prior to excavation, the existing 6-inch thick concrete slab at each trench location was saw cut. Penhall Company completed saw-cutting activities on April 17, 2006. Concrete debris from the saw-cutting was managed as uncontaminated construction debris and stored in bins prior to offsite disposal, and cooling water used during cutting activities was contained.

Excavation activities began on April 18, 2006. A Bobcat compact excavator with a 24-inch wide bucket was used for excavation activities. Excavated soil was routinely scanned with a photoionization detector (PID) for health and safety purposes. During excavation activities, a vapor suppressant spray designed to suppress odors was available; however, it was not necessary because only minimal odors were generated. Two industrial fans were operated to promote ventilation, and a portable Lower Explosive Limit/Oxygen meter (LEL/O<sub>2</sub>) was used to monitor for explosive vapor concentrations. Vapor Monitoring Logs are provided in Appendix E. Excavated soil was transported via a Bobcat compact loader to lined-storage bins located in the alley east of the parking garage. At the end of each workday, the storage bins were covered and secured, and the trench areas were covered with plywood and encircled with 7-foot high steel fencing.

### **3.3 Observations During Trench Excavations**

The following sections describe detailed excavation activities for each of the three LNAPL recovery trenches.



### 3.3.1 Recovery Trench-A

Excavation of Trench-A began on April 18, 2006. The saw-cut excavation area for Trench-A was 30 feet long and 28 inches wide. At approximately 4 feet below ground surface (bgs), a buried concrete slab was encountered in the eastern and central portions of the trench. A breaker attachment for the Bobcat excavator was utilized to pulverize and remove the buried slab. After removal of the concrete debris, steel reinforcing bar (rebar) with a diameter up to 1.5 inches remained in the eastern portion of the excavation. This rebar rendered the easternmost 6 feet of Trench-A unworkable, and this portion of the trench was not excavated below 4 feet bgs. Free-phase hydrocarbon product was encountered at depths as shallow as 6 feet bgs. The hydrocarbon product was predominantly located within the middle to western portion of the trench. Buried debris including wood, bricks, cable, and abandoned electrical wiring were encountered throughout Trench-A. Groundwater was encountered between 8.5 and 9 feet bgs. The total depth of Trench-A ranged between 11 feet bgs and 12 feet bgs, and the excavated bottom of the trench was 24 feet in length.

### 3.3.2 Recovery Trench-B

Excavation of Trench-B began on April 19, 2006. The saw-cut excavation area for Trench-B was 30 feet long and 28 inches wide. An intact concrete slab was encountered at 4 feet bgs. The slab was approximately 10 inches thick and extended from the western end of the trench, 18 feet to the east. The concrete was successfully removed with the breaker attachment for the Bobcat excavator. Between 4 and 7 feet bgs, several 2-inch and 4-inch PVC pipes were encountered in the eastern end of Trench-B. An inspector with Pacific Gas and Electric (PG&E) visited the site and it was determined that the pipes did not contain active utilities. Buried debris, including brick fragments, was encountered throughout Trench-B, and a ½-inch thick steel plate was encountered at 8 feet bgs in the eastern end of the trench. This steel plate rendered the easternmost 3 feet of Trench-B unworkable, and this portion of the trench was not excavated below 8 feet bgs. Groundwater was encountered at approximately 9 to 10 feet bgs. A hydrocarbon sheen was present at the water table in the eastern half of the trench. The total depth of Trench-B ranged between 12 and 12.5 feet bgs, and the excavated bottom of the trench was 28 feet in length.

### 3.3.3 Recovery Trench-C

Excavation of Trench-C began on April 24, 2006. The excavation area for Trench-C was 25 feet long and 28 inches wide. A 6-inch thick buried concrete slab, spanning the entire length of the trench, was encountered at 2.5 feet bgs and an 8-inch thick piece of concrete was encountered at 11 feet bgs in the eastern end of the trench. The concrete was successfully removed with the a Breaker attachment for the Bobcat excavator. Between 3 and 6 feet bgs, debris including metal, bricks, and wood beams (up to 12 feet in length) were encountered. Groundwater was encountered between 10 and 12 feet bgs. Hydrocarbon-stained soil was removed from the trench at approximately 8 feet bgs and a hydrocarbon sheen was present at

the water table. The total depth of Trench-C ranged between 12.5 feet and 13 feet bgs, and the excavated bottom of the trench was 25 feet in length.

### **3.4 Product Collection Sumps**

After each product recovery trench was excavated to its total depth, three collection sumps were installed in the open trench (Plate 4). The sumps were constructed using 10-inch diameter Schedule 40 polyvinyl chloride (PVC) casing. Blank casing was used from approximately 0.5 feet bgs to between 6 and 8 feet bgs. Slotted 0.060-inch PVC casing was used from between 6 and 8 feet bgs to 6 inches from the total depth of the trench. The bottom 6 inches of each sump consists of a PVC silt trap/bottom sump cap. The opening at the top of each sump is covered with a PVC slip cap. The collection sumps are uniformly spaced within the trenches. Due to the obstructions encountered in the trenches (i.e. concrete slab, steel plate, abandoned utilities; see Section 3.3), some of the sumps could not be placed as close to the ends of the trenches as desired. The actual locations of the collection sumps within the trenches are shown on Plate 3.

### **3.5 Backfilling**

After the sumps were constructed, the trenches were backfilled with high porosity, high permeability gravel (½-inch crushed drain rock). The gravel is designed to promote LNAPL migration from the surrounding native soils to the collection sumps. Each trench was backfilled around the sumps to 1-foot above the top of the screened interval with the drain rock. The drain rock backfill was placed in lifts not exceeding 18-inches and compacted with a wheel attachment to the Bobcat excavator. Geotextile fabric was placed over the top of the gravel.

The remaining trench void above the geotextile fabric was backfilled to the base of the existing concrete with Caltrans Class II aggregate base rock. The aggregate base rock was placed in lifts not exceeding 8-inches and compacted with a compaction wheel attachment to the Bobcat excavator followed by vibratory compaction equipment. The uppermost 24-inches of the aggregate base rock was compacted to at least 95 percent relative compaction, in accordance with ASTM D-1557. Smith-Emery Company (Smith-Emery) was contracted to perform compaction tests on backfilled lifts of the aggregate base rock. Compaction testing took place on April 25 and April 26, 2006. All the tests met or exceeded the 95% compaction requirement. Results are provided in Appendix F.

### **3.6 Surface Completion**

Each installed sump was completed at the surface with a flush-mounted, traffic-rated, 18-inch by 18-inch steel vault, set in a poured concrete base (Plate 4). Prior to vault installation and concrete pouring, 10-millimeter plastic sheeting was placed over the compacted aggregate base rock and secured to the collection sumps with PVC tape (Plate 5; Photo 1). Vaults were then placed around the sumps, suspended with “Unistrut” steel bars so that they were flush with the

existing concrete surface (Plate 5; Photo 2). L-shaped, 24-inch by 12-inch number 5 rebar were doweled 6 inches into the existing concrete and secured with epoxy (Plate 6; Photo 1). Rebar was installed along the length of each trench with an approximate spacing of 16 inches between each dowel. Additionally, two lengthwise rebar dowels were placed along the edges of each trench and secured to the L-shaped dowels with wire. The structural layout for the rebar installation was approved by Smith-Emery prior to installation. On April 27 and May 1, 2006 a Smith-Emery inspector was onsite to oversee rebar installation. On May 1, 2006 a City of Emeryville building inspector was onsite to approve the rebar installation prior to concrete pouring. On May 2, 2006, concrete was poured into the areas around each vault, as well as the upper 6 inches of remaining open trench between the vaults for each of the three trenches. The final concrete surface was smoothed to match the surrounding concrete floor (Plate 6; Photo 2). Finally, the seams around the edge of each trench and the edges of the individual vaults were sealed with polyurethane elastomeric sealant.

### **3.7 Workplan Deviations**

Deviations from the construction specifications included the following:

- To mitigate the potential for vapor migration, 10-millimeter plastic sheeting was placed over the compacted aggregate base rock and secured to the collection sumps with PVC tape in order to prevent vapor intrusion into the vaults. The seams around the edge of each trench and the edges of the individual vaults were sealed with polyurethane elastomeric sealant;
- The full length of the excavation in Trench-A and Trench-B could not be attained due to obstructions within the subsurface; and
- To provide the repaired concrete with additional structural support, number 5 rebar was doweled into the existing concrete slab and secured with epoxy.

No other deviations occurred during excavation and installation activities.

## **4.0 SUMMARY OF REMEDIATION SYSTEM OPERATION AND SITE ACTIVITIES**

This section presents a summary of the remediation system operational data, groundwater monitoring results, and the management of construction-derived wastes.

### **4.1 LNAPL Remediation System Operations**

#### **4.1.1 Passive Skimming**

Passive skimmers, manufactured by QED Environmental Systems, were placed within each of the three LNAPL collection sumps of Trench-A in May 2006. Between June 2006 and March 2007, 18 inspection events were performed by PES. During the monitoring events,

groundwater and product elevation data from the monitoring wells proximal to the recovery trenches were collected, and accumulated product within the passive skimmers was removed. Trench-B and Trench-C were monitored for recoverable amounts of product, which would necessitate the installation of additional passive skimmers into their respective product collection sumps. Product thickness measurements, depth to groundwater, and product recovery information are provided in Table 1. Results of the passive skimming activities are provided in Section 4.1.4.

#### **4.1.2 Active Pumping**

An FAP Plus™ LNAPL Pump System was used to actively pump product from Trench A on the following dates: June 23, 2006, July 13 and 17, 2006. The pump uses compressed air and operates by alternately inflating and deflating the annular space between the inner bladder and the outer hose to create a suction and bring product to the surface and discharged to a collection drum.

A Geotech Peristaltic Series II Geopump™ was used on August 23, 2006 and September 4, 2006 to remove product from the following monitoring wells: MW-10, MW-8, MW-13, MW-14, and MW-15. Results of the active pumping activities are provided in Section 4.1.4.

#### **4.1.3 Groundwater Table Depression**

A total of 1,600 gallons of groundwater was removed from the LNAPL collection sumps of LNAPL recovery Trench-C on June 8, 2006. This work was performed in an attempt to lower the groundwater elevation within the vicinity and induce product flow into the recovery trench. Results are provided in Section 4.1.4.

#### **4.1.4 Results of System Operation**

Between June 2006 and March 2007, approximately 30 gallons of product was removed using the passive skimmers, and an additional approximately 25 gallons of product was removed by active pumping. Depressing the groundwater in Trench-C did not initiate the movement of recoverable product into the collection sumps. Following the operation of the remediation system and LNAPL removal from the monitoring wells and collection sumps, product thicknesses have significantly declined in the monitoring wells in the vicinity of the remediation system trenches. Thicknesses observed in monitoring wells MW-13, and MW-10, have declined 62% and 82%, respectively, from their respective maximum observed thickness. Additionally, product has not been observed in monitoring wells MW-8, MW-14 and MW-15 during the past four inspection events (December 2006 through March 2007). These declines may partially be attributed to the decline in groundwater levels during the dry season (March through October 2006). As groundwater levels decline, free product can remain trapped inside the soil pore spaces. Groundwater levels rose approximately 1-foot during the winter months (November 2006 through March 2007), but this has been a relatively dry season.

Groundwater level rises may help to release the product from the soil and provide an opportunity for increased product recovery in the remediation system.

#### **4.2 Groundwater Monitoring**

In December 2006, the existing 18 monitoring wells (MW-3 through MW-18, MW-E, and RW-1) were sampled to evaluate for dissolved hydrocarbon-related contaminant concentrations in groundwater. The groundwater samples were analyzed for: (1) total petroleum hydrocarbons (TPH) quantified as gasoline, diesel, and motor oil; (2) benzene, toluene, ethylbenzene, and total xylenes (BTEX); and (3) methyl tertiary-butyl ether (MTBE). Results of this groundwater sampling event are provided in Table 2, and the laboratory analytical reports are provided in Appendix G.

A comparison of historic groundwater data from March 2004 (Table 2) and the December 2006 analytical results indicate that dissolved phase concentrations have remained stable or declined. The dissolved phase plume does not appear to be spreading at the Site.

#### **4.3 Management of Investigation Derived Wastes**

Three of the six soil bins were removed from the site on May 12, 2006 by Den Beste Transportation (DBT) and transported to Keller Canyon Sanitary Landfill of Pittsburg, California for disposal as a non-hazardous waste. The remaining three soil bins were removed from the site on May 22, 2006 by DBT and transported to Chemical Waste Management of Kettleman City, California for disposal as a non-RCRA hazardous waste due to elevated concentrations of soluble lead. Approximately 1,600 gallons of purged groundwater were removed from the site on June 8, 2006 by Phillips Services West and transported to Evergreen Oil, Inc. of Newark, California for disposal as a non-hazardous. One 55-gallon drum of purged groundwater and one 55-gallon drum of recovered product is currently being characterized for disposal. Laboratory analytical reports for waste characterization samples collected from the water and soil are provided in Appendix F, and waste disposal manifests are provided in Appendix G.

### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

The removal of product and observed declines in product thickness indicate that progress has been made towards source removal and demonstrating that the site is moving towards closure.

Primary findings from the remediation system installation and its operations to-date include the following:

- Product thicknesses have significantly declined in the monitoring wells in the vicinity of the remediation system trenches;

- Trench-A has exhibited the greatest potential for product removal, while Trench-C did not appear to be influenced by the withdrawal of groundwater; and
- Analytical groundwater results indicate that dissolved phase concentrations have remained stable or declined, and that the dissolved phase plume does not appear to be migrating offsite.

Based on the results of the above-described activities, the following additional activities are proposed:

- Continue removing free-phase product from the LNAPL recovery sumps every three to four weeks, with a focused effort on Trench-A;
- Continue monitoring product thicknesses in the monitoring wells, and remove product as necessary;
- Performance of a monitoring well-head survey to accurately assess groundwater flow direction;
- Performance of an additional groundwater monitoring event in June 2007, which would include the collection of groundwater samples from the existing 18 monitoring wells (MW-3 through MW-18, MW-E, and RW-1), and the same analytical program described in Section 4.2; and
- Following receipt of laboratory analytical data from the June 2007 groundwater monitoring event, a Semi-Annual Operations Report will be prepared, which will include any recommendations for the additional work activities.

## **6.0 REFERENCES**

- Alameda County Environmental Health. 2006. Letter: Toxics Case RO0002799, Garrett Freight Lines / Bay Center, 64th & LaCoste, Emeryville, CA 94608. January 9.
- Earth Metrics Inc., 1986. Soils and Groundwater Contamination Characterization of Bay Center Site in Emeryville, California. August 20.
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PES Environmental, Inc. 2005a. Free-Phase Hydrocarbon Product Remediation Plan, Bay Center Apartments, Christie Avenue and 64th Street, Emeryville, California. March 7.

PES Environmental, Inc. 2005b. Request for Bid – Trench Installation, Bay Center Apartments, Christie Avenue and 64th Street, Emeryville, California. September 20.

PES Environmental, Inc. 2006a. Proposed Scope of Work and Fee Estimate, Remedial System Construction, Bay Center Apartments, Christie Avenue and 64th Street, Emeryville, California. February 3.

PES Environmental, Inc. 2006b. Estimated Costs, Remedial System Operation – Calendar Year 2006, Bay Center Apartments, Christie Avenue and 64th Street, Emeryville, California. February 8.

**TABLES**



**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
MW-7	08/11/06	--	10.24	--	
MW-7	11/01/06	--	10.59	--	
MW-7	01/15/07	--	10.57	--	
MW-7	03/01/07	--	10.24	--	
MW-8	04/05/04	8.15	10.75	2.6	1
MW-8	05/20/04	8.31	10.72	2.41	
MW-8	08/20/04	8.03	10.91	2.88	
MW-8	09/22/04	8.01	10.61	2.6	
MW-8	05/19/05	7.55	10.27	2.72	
MW-8	06/08/06	8.46	11.09	2.63	
MW-8	08/11/06	9.11	10.50	1.39	
MW-8	08/23/06	9.26	10.51	1.25	0.8
MW-8	09/04/06	9.21	10.41	1.2	
MW-8	09/10/06	9.33	9.40	0.07	
MW-8	09/24/06	9.38	10.17	0.79	
MW-8	11/01/06	9.46	9.60	0.14	
MW-8	11/29/06	9.57	9.79	0.22	
MW-8	12/21/06	--	9.31	--	
MW-8	01/15/07	--	9.51	--	
MW-8	02/05/07	--	9.51	--	
MW-8	03/01/07	--	9.14	--	
MW-10	04/05/04	8.45	9.95	1.5	1
MW-10	05/20/04	7.62	8.65	1.03	
MW-10	08/20/04	8.45	8.70	0.25	
MW-10	09/22/04	8.39	8.61	0.22	
MW-10	05/19/05	8.17	8.27	0.1	
MW-10	05/12/06	8.00	8.25	0.25	
MW-10	06/08/06	8.92	10.41	1.49	
MW-10	08/11/06	8.97	10.04	1.07	
MW-10	08/23/06	9.02	10.21	1.19	0.8
MW-10	09/04/06	9.01	10.19	1.18	0.8
MW-10	09/10/06	9.04	10.24	1.2	
MW-10	09/24/06	9.01	10.19	1.18	
MW-10	11/01/06	9.20	10.00	0.8	
MW-10	11/29/06	9.21	10.22	1.01	
MW-10	12/21/06	8.86	9.30	0.44	
MW-10	01/15/07	9.08	10.14	1.06	
MW-10	02/05/07	9.10	10.15	1.05	
MW-10	03/01/07	8.84	9.40	0.56	

**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
MW-11	5/20/2004	--	10.33	--	
MW-11	8/20/2004	--	10.18	--	
MW-11	9/22/2004	--	10.15	--	
MW-11	5/19/2005	--	10.17	--	
MW-11	11/1/2006	--	10.33	--	
MW-11	3/1/2007	--	10.24	--	
MW-12	5/20/2004	--	8.71	--	
MW-12	8/20/2004	--	8.6	--	
MW-12	9/22/2004	--	8.52	--	
MW-12	5/19/2005	--	8.25	--	
MW-12	8/11/2006	--	9.15	--	
MW-12	11/1/2006	--	9.37	--	
MW-12	3/1/2007	--	8.92	--	
MW-13	05/20/04	8.50	NM	>8.0	
MW-13	08/20/04	8.20	16.17	7.97	
MW-13	09/22/04	8.05	16.42	8.37	
MW-13	05/12/05	7.83	14.40	6.57	
MW-13	05/19/05	8.12	14.00	5.88	
MW-13	06/08/06	9.11	10.29	1.18	
MW-13	08/11/06	10.36	11.14	0.78	
MW-13	08/23/06	9.32	11.29	1.97	1
MW-13	09/04/06	9.69	9.74	0.05	0.2
MW-13	09/10/06	9.73	9.75	0.02	
MW-13	09/24/06	9.72	10.07	0.35	
MW-13	11/01/06	9.78	9.81	0.03	
MW-13	11/29/06	9.76	10.63	0.87	
MW-13	12/21/06	9.44	9.81	0.37	
MW-13	01/15/07	9.71	10.73	1.02	
MW-13	02/05/07	9.60	10.89	1.29	
MW-13	03/01/07	9.25	10.80	1.55	
MW-14	05/20/04	--	8.41	--	
MW-14	08/20/04	--	8.26	--	
MW-14	09/22/04	8.19	8.21	0.02	
MW-14	05/19/05	7.93	8.12	0.19	
MW-14	08/11/06	5.79	6.31	0.52	
MW-14	08/23/06	8.32	9.37	1.05	0.2
MW-14	09/04/06	8.90	9.05	0.15	0.3
MW-14	09/10/06	8.79	9.02	0.23	
MW-14	09/24/06	9.03	9.12	0.09	
MW-14	11/01/06	9.11	9.11	sheen	

**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
MW-14	11/29/06	9.09	9.10	0.01	
MW-14	12/21/06	--	8.70	--	
MW-14	01/15/07	--	8.96	--	
MW-14	02/05/07	--	8.97	--	
MW-14	03/01/07	--	8.72	--	
MW-15	05/20/04	--	8.45	--	
MW-15	08/20/04	--	8.25	--	
MW-15	09/22/04	8.19	8.18	--	
MW-15	05/19/05	7.85	8.11	0.26	
MW-15	08/11/06	9.20	9.49	0.29	
MW-15	08/23/06	9.26	9.58	0.32	0.2
MW-15	09/04/06	9.28	9.29	0.01	
MW-15	09/10/06	9.29	9.36	0.07	
MW-15	09/24/06	9.41	9.48	0.07	
MW-15	11/01/06	9.40	9.41	0.01	
MW-15	11/29/06	9.53	9.55	0.02	
MW-15	12/21/06	--	9.15	--	
MW-15	01/15/07	--	9.41	--	
MW-15	02/05/07	--	9.36	--	
MW-15	03/01/07	--	9.25	--	
MW-16	5/20/2004	--	9.12	--	
MW-16	8/20/2004	--	8.98	--	
MW-16	9/22/2004	--	8.86	--	
MW-16	5/19/2005	--	8.61	--	
MW-16	8/11/2006	--	9.25	--	
MW-E	4/5/2004	--	9.95	--	
MW-E	5/20/2004	--	10.25	--	
MW-E	9/22/2004	--	10.03	--	
MW-E	5/19/2005	--	9.8	--	
MW-E	11/1/2006	--	10.22	--	
RW-1	04/05/04	9.25	10.12	0.87	2
RW-1	04/12/04	9.16	9.65	0.49	0.9
RW-1	04/14/04	9.22	9.71	0.49	1.75
RW-1	04/16/04	9.20	10.00	0.8	1.5
RW-1	04/16/04	9.28	9.89	0.61	
RW-1	04/21/04	9.26	9.84	0.58	5
RW-1	04/21/04	9.48	9.78	0.3	
RW-1	04/21/04	9.40	9.80	0.4	
RW-1	04/21/04	9.38	9.81	0.43	
RW-1	04/23/04	9.32	9.97	0.65	3.5

**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
RW-1	04/23/04	9.60	9.90	0.3	
RW-1	04/26/04	9.28	9.57	0.29	4
RW-1	04/26/04	9.28	9.40	0.12	
RW-1	04/28/04	9.28	9.57	0.29	0.4
RW-1	04/28/04	9.28	9.40	0.12	
RW-1	04/30/04	9.31	9.63	0.32	0.7
RW-1	04/30/04	9.43	9.52	0.09	
RW-1	05/03/04	9.30	9.45	0.15	4
RW-1	05/05/04	9.28	9.43	0.15	
RW-1	05/05/04	9.33	9.34	0.01	2.5
RW-1	05/07/04	9.75	9.97	0.22	2
RW-1	05/10/04	9.31	9.43	0.12	3.5
RW-1	05/10/04	9.38	9.39	0.01	
RW-1	05/14/04	9.31	9.52	0.21	4
RW-1	05/14/04	9.80	9.81	0.01	
RW-1	05/17/04	9.34	9.65	0.31	2.5
RW-1	05/17/04	9.47	9.50	0.03	
RW-1	05/20/04	9.37	9.43	0.06	2
RW-1	05/20/04	9.39	9.39	sheen	
RW-1	05/24/04	9.38	9.48	0.1	1.5
RW-1	05/28/04	9.50	9.60	0.1	0.5
RW-1	08/20/04	9.42	9.60	0.18	
RW-1	09/22/04	9.50	9.60	0.1	0.32
RW-1	09/30/04	9.35	9.48	0.13	0.42
RW-1	10/07/04	9.48	9.65	0.17	0.69
RW-1	10/15/04	9.45	9.65	0.2	1.5
RW-1	10/19/04	9.33	9.40	0.07	0.42
RW-1	11/01/06	9.11	9.15	0.04	
T-A-East	04/24/06	9.31	9.42	0.11	
T-A-East	06/08/06	8.50	8.67	0.17	3.3
T-A-East	06/08/06	8.50	8.67	0.17	0.8
T-A-East	06/15/06	8.78	8.84	0.06	
T-A-East	06/16/06	8.69	8.75	0.06	
T-A-East	06/23/06	8.65	8.80	0.15	4.8
T-A-East	06/30/06	8.64	8.81	0.17	
T-A-East	07/12/06	8.58	8.64	0.06	
T-A-East	07/13/06	8.57	8.62	0.05	2.1
T-A-East	07/17/06	8.53	8.57	0.04	1.5
T-A-East	07/18/06	8.54	8.59	0.05	
T-A-East	08/11/06	9.52	9.54	0.02	

**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
T-A-East	08/23/06	8.56	8.60	0.04	0.2
T-A-East	09/04/06	8.57	8.61	0.04	0.2
T-A-East	09/10/06	8.61	8.65	0.04	0.2
T-A-East	09/24/06	8.68	8.72	0.04	0.2
T-A-East	11/01/06	8.75	8.78	0.03	0.2
T-A-East	12/21/06	8.72	8.75	0.03	0.2
T-A-East	01/15/07	8.63	8.66	0.03	0.2
T-A-East	02/05/07	8.63	8.66	0.03	0.2
T-A-East	03/01/07	8.31	8.36	0.05	0.2
T-A-Middle	04/24/06	9.01	9.13	0.12	
T-A-Middle	06/08/06	8.41	8.58	0.17	3.1
T-A-Middle	06/08/06	8.41	8.58	0.17	0.8
T-A-Middle	06/15/06	8.70	8.75	0.05	0.2
T-A-Middle	06/16/06	8.61	8.65	0.04	0.1
T-A-Middle	06/23/06	8.59	8.78	0.19	5
T-A-Middle	06/30/06	8.58	8.72	0.14	
T-A-Middle	07/12/06	8.53	8.62	0.09	
T-A-Middle	07/13/06	8.52	8.58	0.06	3
T-A-Middle	07/17/06	8.47	8.51	0.04	2
T-A-Middle	07/18/06	8.47	8.51	0.04	
T-A-Middle	08/11/06	9.46	9.48	0.02	
T-A-Middle	08/23/06	8.51	8.54	0.03	0.2
T-A-Middle	09/04/06	8.53	8.56	0.03	
T-A-Middle	09/10/06	8.56	8.59	0.03	
T-A-Middle	09/24/06	8.64	8.68	0.04	
T-A-Middle	11/01/06	8.70	8.73	0.03	
T-A-Middle	01/15/07	8.57	8.60	0.03	
T-A-Middle	03/01/07	8.26	8.31	0.05	
T-A-West	04/24/06	8.77	8.88	0.11	3.3
T-A-West	06/08/06	8.40	8.54	0.14	0.8
T-A-West	06/08/06	8.41	8.53	0.12	0.5
T-A-West	06/08/06	8.40	8.55	0.15	0.5
T-A-West	06/08/06	8.40	8.51	0.11	0.5
T-A-West	06/08/06	8.41	8.53	0.12	0.5
T-A-West	06/08/06	8.41	8.52	0.11	0.5
T-A-West	06/08/06	8.42	8.52	0.1	0.5
T-A-West	06/08/06	8.41	8.52	0.11	0.5
T-A-West	06/08/06	8.40	8.54	0.14	0.5
T-A-West	06/15/06	8.69	8.74	0.05	0.2
T-A-West	06/16/06	8.61	8.65	0.04	0.2

**Table 1  
Summary of Product Measurement and Recovery Data  
Bay Center Apartments Phase I  
Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
T-A-West	06/23/06	8.57	8.71	0.14	5
T-A-West	06/30/06	8.53	8.67	0.14	0.1
T-A-West	07/12/06	8.51	8.61	0.1	0.1
T-A-West	07/13/06	8.49	8.54	0.05	3
T-A-West	07/17/06	8.42	8.48	0.06	2
T-A-West	07/18/06	8.46	8.49	0.03	0.2
T-A-West	08/11/06	9.43	9.45	0.02	0.2
T-A-West	08/23/06	8.49	8.52	0.03	0.2
T-A-West	09/04/06	8.48	8.52	0.04	0.2
T-A-West	09/10/06	8.52	8.55	0.03	0.2
T-A-West	09/24/06	8.61	8.65	0.04	0.2
T-A-West	01/15/07	8.64	8.66	0.02	
T-A-West	03/01/07	8.24	8.28	0.04	
T-B-East	04/24/06	--	8.50	--	
T-B-East	06/08/06	--	8.56	--	
T-B-East	06/15/06	--	8.84	--	
T-B-East	07/17/06	--	8.58	--	
T-B-East	08/11/06	--	9.58	--	
T-B-East	11/01/06	--	8.84	--	
T-B-East	01/15/07	--	8.67	--	
T-B-East	03/01/07	--	8.38	--	
T-B-Middle	04/24/06	--	8.70	--	
T-B-Middle	06/08/06	--	8.52	--	
T-B-Middle	06/15/06	--	8.81	--	
T-B-Middle	07/17/06	--	8.52	--	
T-B-Middle	08/11/06	--	9.53	--	
T-B-Middle	11/01/06	--	8.81	--	
T-B-Middle	01/15/07	--	8.64	--	
T-B-Middle	03/01/07	--	8.34	--	
T-B-West	04/24/06	--	8.43	--	
T-B-West	06/08/06	--	8.47	--	
T-B-West	06/15/06	--	8.75	--	
T-B-West	07/17/06	--	8.42	--	
T-B-West	08/11/06	--	9.48	--	
T-B-West	11/01/06	--	8.72	--	
T-B-West	01/15/07	--	8.57	--	
T-B-West	03/01/07	--	8.24	--	
T-C-East	06/08/06	--	8.67	--	
T-C-East	06/15/06	--	9.02	--	
T-C-East	07/17/06	--	8.97	--	

**Table 1**  
**Summary of Product Measurement and Recovery Data**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Location ID	Date	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Volume of Product Recovered (gal)
T-C-East	08/11/06	--	8.64	--	
T-C-East	11/01/06	--	9.01	--	
T-C-East	01/15/07	--	9.06	--	
T-C-East	03/01/07	--	8.95	--	
T-C-Middle	06/08/06	--	8.64	--	
T-C-Middle	06/15/06	--	9.07	--	
T-C-Middle	07/17/06	--	9.00	--	
T-C-Middle	08/11/06	--	8.94	--	
T-C-Middle	11/01/06	--	9.10	--	
T-C-Middle	01/15/07	--	9.10	--	
T-C-Middle	03/01/07	--	8.99	--	
T-C-West	06/08/06	--	8.64	--	
T-C-West	06/15/06	--	8.77	--	
T-C-West	07/17/06	--	8.74	--	
T-C-West	08/11/06	--	8.89	--	
T-C-West	11/01/06	--	9.25	--	
T-C-West	01/15/07	--	8.80	--	
T-C-West	03/01/07	--	8.68	--	
<b>Estimated Total Product Recovered Prior to Trench Installation</b>					47.6
<b>Estimated Total Product Recovered Following Trench Installation</b>					51.1

**Notes:**

NM = Not measured

T-A, T-B, T-C = Trench-A, Trench-B, Trench-C

East, Middle, West = Relative location of product collection sumps within their respective trench

-- = Not observed

**Table 2**  
**Summary of Laboratory Analytical Results for Groundwater Samples**  
**March 2004 and December 2006**  
**Bay Center Apartments Phase I**  
**Emeryville, California**

Sample ID	Date	LNAPL Thickness (ft)	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L	MTBE µg/L	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L
MW-3	3/16/2004	Sheen	<0.50	<0.50	1.5	<1.0	9.7	440	3,400	3,900
MW-3	12/07/2006	Sheen	<0.50	<0.50	<0.50	<0.50	2.0	280	350	230
MW-4	12/07/2006	--	<0.50	<0.50	<0.50	<0.50	<1.0	50	<50	<200
MW-5	12/07/2006	--	0.60	<0.50	<0.50	<0.50	<1.0	<25	330	<200
MW-6	12/07/2006	--	1.1	<0.50	<0.50	<0.50	<1.0	43	200	<200
MW-7	3/16/2004	--	240	100	14	56	<2.5	490	1,600	1,900
MW-7	12/08/2006	--	<0.50	<0.50	<0.50	<0.50	<1.0	<25	420	470
MW-8	3/16/2004	--	19,000	720	2,400	3,300	<50	51,000	140,000	56,000
MW-8	12/08/2006	0.14	13,000	<100	640	500	<200	29,000	2,400	<380
MW-9	3/16/2004	--	4.7	0.68	<0.50	<1.0	<0.50	95	1,300	1,500
MW-9	12/08/2006	--	2.8	<0.50	<0.50	<0.50	<1.0	92	<50	<200
MW-10	3/16/2004	--	4,000	77	200	120	<50	14,000	840,000	<100,000
MW-10	12/08/2006	0.91	4,600	42	90	52	<50	12,000	19,000	<4,000
MW-11	12/08/2006	--	26	4.5	1.8	5.4	<1.0	920	<50	<200
MW-12	12/08/2006	--	9,100	51	<50	110	<100	19,000	<50	<200
MW-13	12/08/2006	0.90	18,000	470	2,400	3,500	<400	87,000	12,000	2,100
MW-14	12/08/2006	0.02	3,700	240	230	260	<50	8,300	<50	<200
MW-15	12/08/2006	0.10	3,700	<25	60	57	<50	9,200	<50	<200
MW-16	12/08/2006	--	11	1.4	<0.50	<0.50	<1.0	190	<50	<200
MW-17	12/08/2006	0.18	3,400	1,100	480	860	<50	14,000	<50	<200
MW-18	12/08/2006	--	22	6.2	3.2	6.2	<2.0	120	<50	<200
MW-E	3/16/2004	--	340	6.1	2.2	7.7	<1.0	810	470	<500
MW-E	12/07/2006	--	910	<10	10	<10	<20	1,900	280	<200
RW-1	12/08/2006	--	100	1.3	2.0	1.6	<1.0	640	<50	<200

**Notes:**

Shaded values are from the March 2004 sampling event.

<1.0 - Not detected at or above the respective laboratory reporting limit.

LNAPL - Light non-aqueous phase liquid

ft -feet

TPH-g,d,mo - Total petroleum hydrocarbons quantified as gasoline, diesel, or motor oil

MTBE - Methyl tert-butyl ether

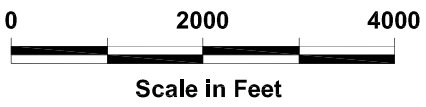
ug/L - Micrograms per liter



## **ILLUSTRATIONS**



**PROJECT  
SITE**

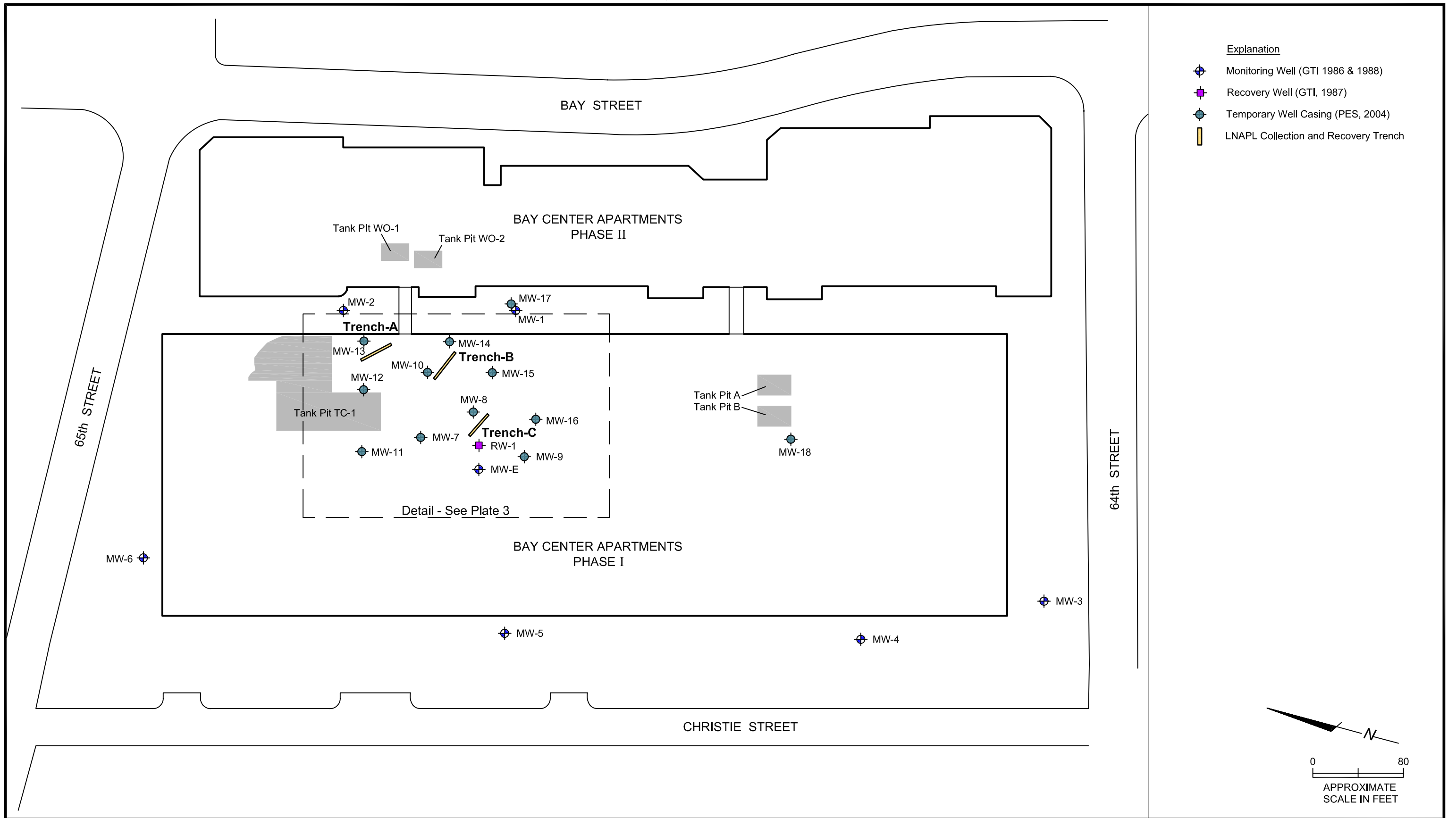


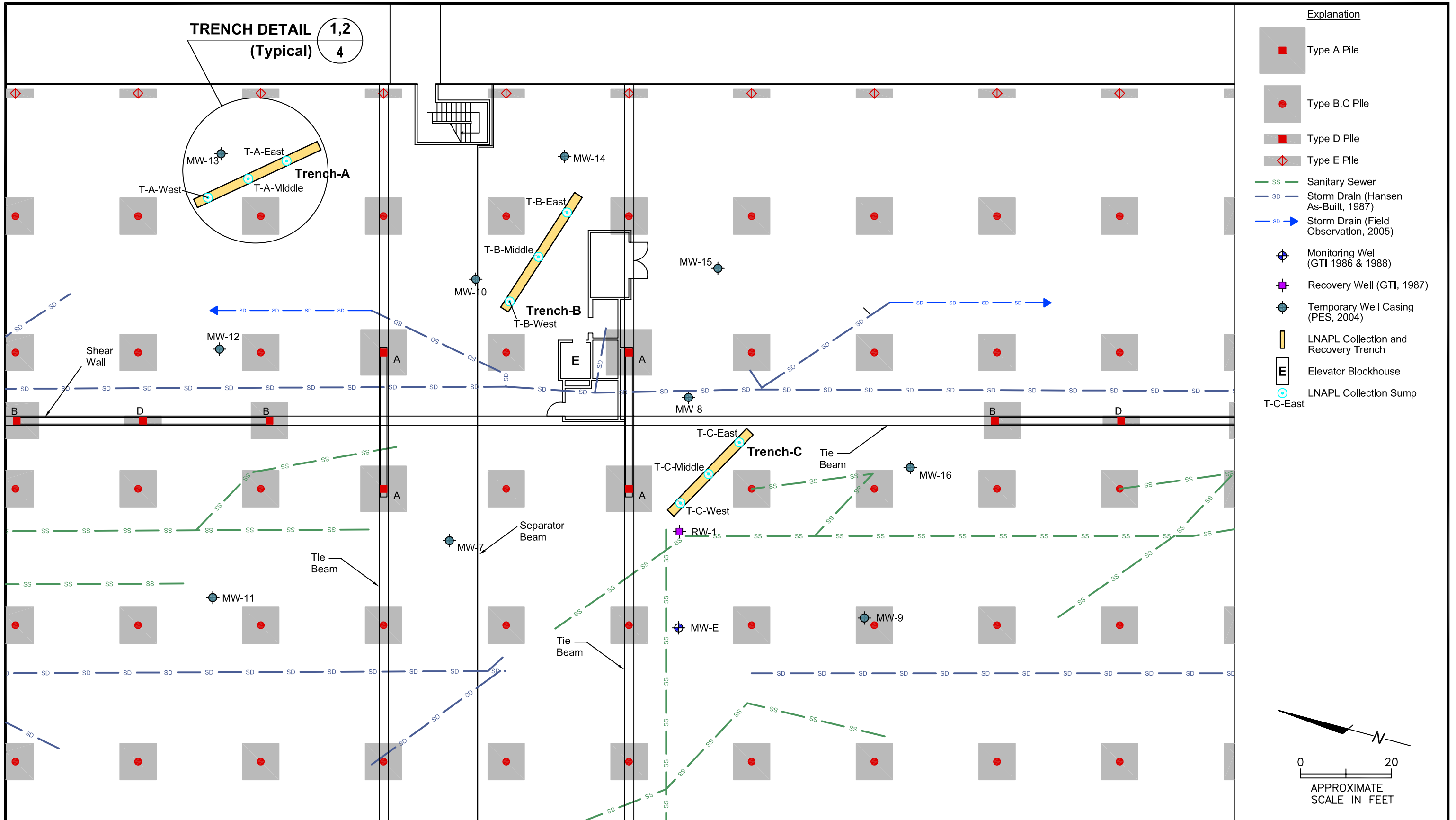
U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle. Map version 1997; current as of 1993

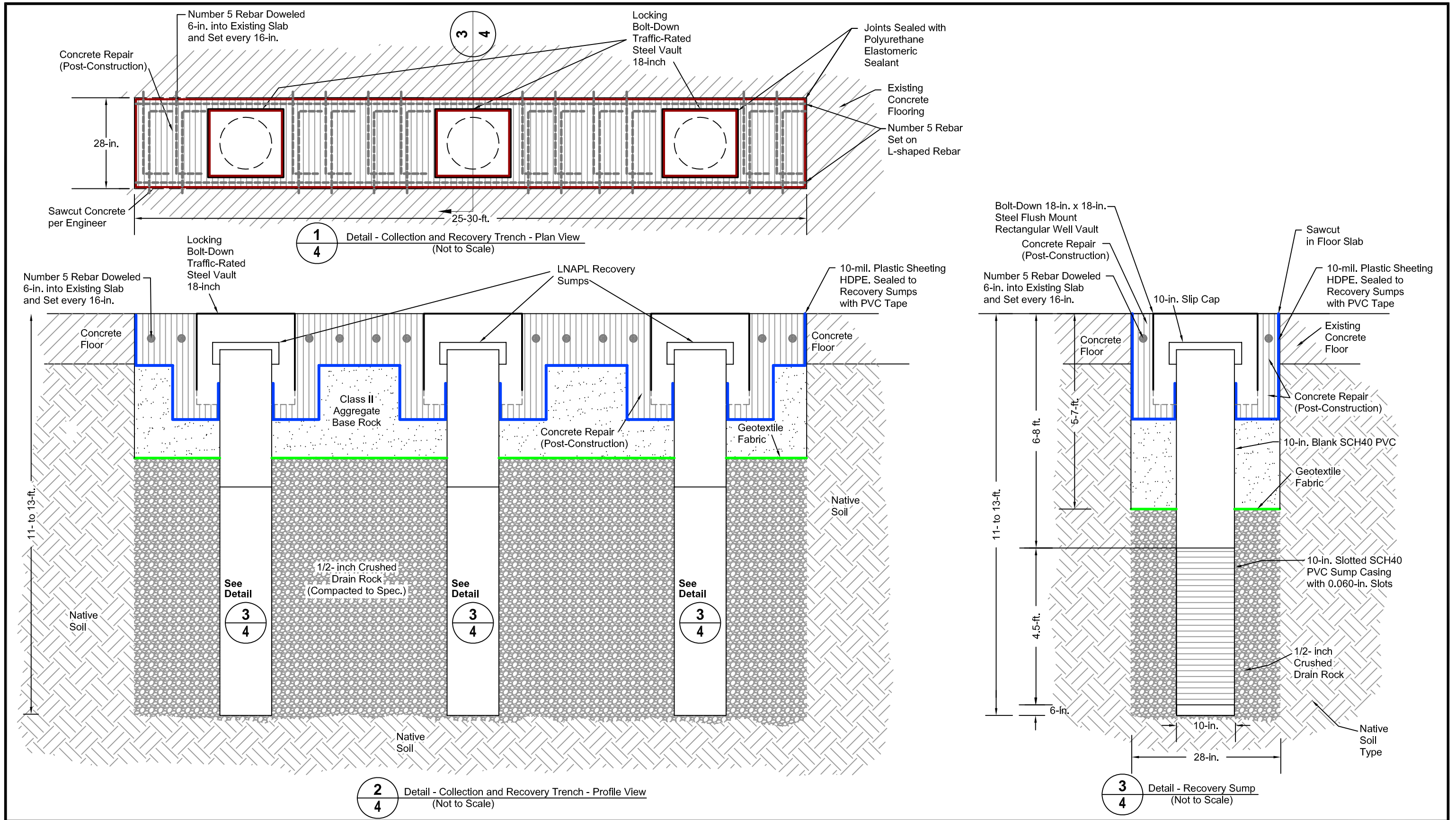


**Site Location Map**  
Construction Implementation and Operations Report  
Bay Center Apartments  
Emeryville, California

PLATE  
**1**







**APPENDIX A**

**REQUEST FOR BID**



September 20, 2005

**241.055.01.005**

Mr. Andy Cost  
MARCOR Remediation, Inc.  
6644 Sierra Lane  
Dublin, CA 94568

**REQUEST FOR BID  
TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

Dear Mr. Cost:

On behalf of EmeryBay Commercial Association (EBCA) and Bay Center Apartments Owners, LLC (Owners), PES Environmental, Inc. (PES) has prepared this letter to request a bid from your firm to construct a remediation system at the Bay Center Apartments (Site) in Emeryville, California. The Site is bounded by 64th Street to the south, 65th Street to the north, Christie Avenue to the west and a neighboring apartment building to the east. The remediation system will consist of installing three product recovery trenches with collection sumps, backfilling, and site restoration, as further described in this Request for Bid (RFB) and attached project documents. This letter presents a site description, a scope of work, and a bid form. Construction specifications are included as attachments.

For this project, PES is the Owners' environmental consultant, the Project Engineer/Geologist, and the Owners' agent for administering the remediation contract. The proposed trench areas are located within a limited access, open-air parking garage.

**SITE DESCRIPTION**

The Site location is shown on Plate 1 and is located on historic San Francisco Bay tidal flats. As Emeryville expanded, the tidal flats were filled, predominantly with construction-type debris (e.g. soil, bricks, debris, etc.). Prior to the construction of Bay Center Apartments, the Site was occupied by two trucking businesses (Earth Metrics, 1986). During the period of use as a trucking terminal, the Site contained underground storage tank (UST) fields in three areas. Tank Pit TC-1 contained four 12,000-gallon and two 10,000-gallon diesel tanks, and one



September 20, 2005

**241.055.01.005**

Mr. Randy Fowler  
Cornerstone Environmental Contractors, Inc.  
3527 Mt. Diablo Blvd., Suite 290  
Lafayette, CA 94549

**REQUEST FOR BID  
TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

Dear Mr. Fowler:

On behalf of EmeryBay Commercial Association (EBCA) and Bay Center Apartments Owners, LLC (Owners), PES Environmental, Inc. (PES) has prepared this letter to request a bid from your firm to construct a remediation system at the Bay Center Apartments (Site) in Emeryville, California. The Site is bounded by 64th Street to the south, 65th Street to the north, Christie Avenue to the west and a neighboring apartment building to the east. The remediation system will consist of installing three product recovery trenches with collection sumps, backfilling, and site restoration, as further described in this Request for Bid (RFB) and attached project documents. This letter presents a site description, a scope of work, and a bid form. Construction specifications are included as attachments.

For this project, PES is the Owners' environmental consultant, the Project Engineer/Geologist, and the Owners' agent for administering the remediation contract. The proposed trench areas are located within a limited access, open-air parking garage.

**SITE DESCRIPTION**

The Site location is shown on Plate 1 and is located on historic San Francisco Bay tidal flats. As Emeryville expanded, the tidal flats were filled, predominantly with construction-type debris (e.g. soil, bricks, debris, etc.). Prior to the construction of Bay Center Apartments, the Site was occupied by two trucking businesses (Earth Metrics, 1986). During the period of use as a trucking terminal, the Site contained underground storage tank (UST) fields in three areas. Tank Pit TC-1 contained four 12,000-gallon and two 10,000-gallon diesel tanks, and one





September 20, 2005

**241.055.01.005**

Mr. Bill Belk  
DECON Environmental Services, Inc.  
23490 Connecticut Street  
Hayward, CA 94945

**REQUEST FOR BID  
TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

Dear Mr. Belk:

On behalf of EmeryBay Commercial Association (EBCA) and Bay Center Apartments Owners, LLC (Owners), PES Environmental, Inc. (PES) has prepared this letter to request a bid from your firm to construct a remediation system at the Bay Center Apartments (Site) in Emeryville, California. The Site is bounded by 64th Street to the south, 65th Street to the north, Christie Avenue to the west and a neighboring apartment building to the east. The remediation system will consist of installing three product recovery trenches with collection sumps, backfilling, and site restoration, as further described in this Request for Bid (RFB) and attached project documents. This letter presents a site description, a scope of work, and a bid form. Construction specifications are included as attachments.

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September 20, 2005

**241.055.01.005**

Mr. Pete Timmerman  
Pacific States Environmental Contractors, Inc.  
11555 Dublin Blvd.  
Pleasanton, CA 94568

**REQUEST FOR BID  
TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

Dear Mr. Timmerman:

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September 20, 2005

**241.055.01.005**

Mr. John Poulson  
John's Excavating  
1128 Halyard Drive  
Santa Rosa, CA 95401

**REQUEST FOR BID  
TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

Dear Mr. Poulson:

On behalf of EmeryBay Commercial Association (EBCA) and Bay Center Apartments Owners, LLC (Owners), PES Environmental, Inc. (PES) has prepared this letter to request a bid from your firm to construct a remediation system at the Bay Center Apartments (Site) in Emeryville, California. The Site is bounded by 64th Street to the south, 65th Street to the north, Christie Avenue to the west and a neighboring apartment building to the east. The remediation system will consist of installing three product recovery trenches with collection sumps, backfilling, and site restoration, as further described in this Request for Bid (RFB) and attached project documents. This letter presents a site description, a scope of work, and a bid form. Construction specifications are included as attachments.

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**Mr. Andy Cost**  
**September 20, 2005**  
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6,000-gallon gasoline tank. Tank Pit A and Tank Pit B each contained one 10,000-gallon diesel tank and one large UST field. The approximate locations of the UST fields are shown on Plate 2. The USTs were decommissioned and removed circa 1987 as part of the demolition and Site preparation for construction of Bay Center Apartments (Earth Metrics, 1986).

Soil and groundwater are impacted with light, non-aqueous phase liquid (LNAPL) as a result of former trucking terminal operations. Free product has been measured in monitoring wells ranging in thickness from 0.02 feet (MW-14 and MW-15) to 8.37 feet (MW-13). Access to the trenching area is limited to an opening approximately 13 feet wide by 12 feet high (to be assessed during Contractor's site inspection).

## **SCOPE OF WORK**

Technical specifications for the construction work are included in Attachment A. The Contractor's work will include the following tasks:

- Obtain all required permits [including City of Emeryville (City)] and notify Underground Service Alert prior to start of work as required. PES will submit these plans and specifications to the City for a plan check as well as pay any plan check fees. The selected Contractor will be responsible for all other aspects of City permitting, which may include payment of the final building permit fee, providing supplemental information (including insurance/bonding to meet City requirements), picking up the permit, arranging for Site inspections, and obtaining final sign-off after work completion.
- Contractor shall prepare a Site-specific health and safety plan for the project. Contractor shall provide fans or venting system to reduce odors, dissipate flammable hydrocarbon and methane vapors, and minimize worker exposure. In addition, Contractor shall implement other measures (e.g., use of a vapor suppressant and/or dry ice during excavation activities, etc.) during excavation and trench installation activities to mitigate fire/explosion hazards associated with the presence of flammable chemicals.
- Three LNAPL collection and recovery trenches (Trenches A, B, and C) will be installed and are anticipated to be approximately 30 feet long and 24 inches wide, with an approximate depth of 11 to 14 feet below ground surface (bgs) (Plates 3 and 4). Actual construction depth will be determined in the field based upon field conditions and access considerations; however, the minimum depth of the trench is expected to be 11 feet bgs. Depth to groundwater is approximately 8 feet bgs.

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- Saw-cut approximately 190 linear feet to the base of the existing 6-inch thick concrete slab. All sawcutting activities will be managed to contain and recover cooling water used during cutting activities. Remove a total area of concrete that covers approximately 180 square feet and is approximately 6 inches thick. Concrete debris from the sawcutting will be managed as uncontaminated construction debris. Stockpile concrete outside of the building in the staging area to be designated by the Owners. Concrete shall be stored in bins or in stockpiles, and shall be disposed off-Site as soon as possible.
- Up to approximately 100 in-place cubic yards of hydrocarbon-affected soil will be removed during excavation of the three LNAPL collection and recovery trenches (Plate 3). The actual vertical depth of soil to be removed will be determined in the field by the Project Engineer/Geologist based on the water table elevations.
- Structural and geotechnical engineers prepared recommendations for excavation procedures that are protective of the building structure. Temporary shoring may be required to maintain the sidewalls of the trench during construction. Any raveling of cohesionless material that results in a void under the concrete slab will need to be backfilled with controlled density fill (CDF) to restore support.
- Temporary de-watering will likely be required for excavations below the groundwater level. The groundwater infiltration rate is expected to range from low to moderate.
- Contractor will utilize appropriate drying agents, as necessary, to ensure that soils excavated below the water table are not transported with a separate liquid phase.
- Each of the three recovery trenches will contain three uniformly spaced collection sumps. The sumps will be constructed of 0.060-inch slotted 10-inch diameter Schedule 40 polyvinyl chloride (PVC) casing from the total depth of the trench to approximately 6 feet bgs (Plate 4). From 6 feet bgs to approximately 0.5 foot bgs, blank casing (i.e., no perforations) will be used. The sumps will be set and centered in the open trench.
- The trenches will be backfilled with high porosity, high permeability gravel to promote LNAPL migration from the surrounding native soils to collection sumps installed within the trench backfill. The trench will be backfilled around the sumps to 1 foot above the top of the screened interval with ½-inch crushed drain rock. Geotextile fabric will be placed over the top of the gravel. The remaining trench void above the geotextile fabric will be backfilled to the base of the existing concrete with Caltrans Class II aggregate base rock. The planned drain rock backfill will be placed in layers not exceeding 18-inches and compacted with

**Mr. Andy Cost**  
**September 20, 2005**  
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vibratory compaction equipment. The planned aggregate base rock will be placed in layers not exceeding 8-inches and compacted with vibratory compaction equipment. The uppermost 24-inches of the trench backfill (aggregate base rock) will be compacted to at least 95 percent relative compaction, in accordance with ASTM D-1557.

- Each installed sump will be completed at the surface with a flush-mounted, traffic-rated, locking steel vault, set in concrete (Plate 4). Each vault will be set in a poured concrete base. The sump casing in each vault will be trimmed to allow a minimum of 12 inches of clearance between the top of casing and the vault lid.
- The open trench between vaults will be backfilled with concrete to match the existing surface. The concrete between the vaults will require reinforcement steel bars to reduce future differential settlement along the contact with the original surface.
- Project Engineer/Geologist will monitor the soil removed from the excavation using a photoionization/flame-ionization combo detector (PID/FID Combo). If PID/FID indications suggest that shallow soils are not impacted with hydrocarbons, the Project Engineer/Geologist may request that these soils be stockpiled and transported separately, to the extent practicable.
- Excavation spoils will be contained (i.e., bins, or lined/covered stockpiles) and temporarily stored on the Site pending offsite disposal. The excavation work will be managed to prevent liquid from wet excavation spoils from migrating beyond the immediate work area.
- Storage for the soil bins will be determined by the Owners and the Project Engineer/Geologist. It is anticipated that the active bin storage location will be in the alley to the east of the parking garage. The Contractor shall provide the necessary number of soil bins to complete the project. All soil bins shall be lined with plastic sheeting and have locking covered lids. The wheels of the bins shall be placed on suitable plywood to prevent damage to the pavement surface. The soil bin should be filled so that it can be easily moved to another location without specialized equipment (i.e., a Rocket-launcher truck, which is typically used to load fully loaded bins, may not be usable in the area where the soil bin can be stored).
- During construction of the collection and recovery trenches, access to the entire work area shall be restricted with fencing and/or caution tape. At the end of each workday, the trench area will be secured with traffic-rated steel plates and fencing.

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September 20, 2005  
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- If possible and if needed to reduce adverse construction effects to residents and other users of Bay Center, the construction of the trench will be undertaken in segments, with excavation, sump installation and completion executed on a section by section basis.
- Transport and dispose or recycle stockpiled concrete and soil at an appropriately-licensed disposal or recycling facility, based on the results of waste characterization and profiling activities and with Project Engineer/Geologist's approval. The Contractor is to supply a base rate for disposal of up to 150 tons of soil as Class 2 non-hazardous material and identify the proposed disposal or recycling facility. In the event that the soil is classified otherwise, the Contractor is to supply a base rate for disposal of up to 150 tons of soil as California hazardous or RCRA hazardous waste and identify the proposed disposal or recycling facility.
- Provide all the necessary imported material, concrete, equipment, and any other supplies and labor necessary to complete the work.
- Area of work (parking garage, soil transportation routes and concrete/soil stockpiling area) will be cleaned and restored by Contractor to the satisfaction of Owners and Project Engineer/Geologist following completion of project.
- PES has retained a private utility locator to identify underground utilities, including existing sanitary sewer and storm drain lines, in and around the three areas of excavation. The Contractor shall prevent damage to utilities during the excavation activities (Plate 3). A minimum of 3-foot distance must be maintained between the trenches and utilities.

PES will collect and analyze samples of stockpiled soil, concrete, and extracted groundwater for waste management and disposal purposes. Soil and concrete will be characterized and disposed or recycled in accordance with the results of the characterization. The Contractor will be responsible for managing the excavated soil on the Site, including stockpiling, and arranging for waste hauling and disposal.

The Contractor will also be responsible for providing all equipment needed for groundwater and decontamination water management, including pumps, hoses and a 10,000-gallon temporary storage tank (including tank delivery, cleaning, sludge removal/disposal, and tank pick-up). The Contractor must stipulate the fee to remove up to 5,000 gallons of groundwater from the tank for offsite disposal and identify the proposed disposal or recycling facility for various waste classifications. The cost provided must include a unit rate for transportation of up to 5,000 gallons of groundwater and as well as the unit cost per gallon for disposal of the water.

**Mr. Andy Cost**  
**September 20, 2005**  
**Page 6**

All site construction work will be coordinated through the Project Engineer/Geologist, not interfere with existing tenant usage, and comply with requirements of the Owners.

## **CHANGE ORDERS**

During construction, there may be situations where out-of-scope equipment and/or tasks will be required. The contractor will not, at any time, purchase any additional equipment or supplies or begin any out-of-scope task without first obtaining the approval of the on-Site Engineer/Geologist. In some instances, where the cost of a change is greater than \$2,000, approval from both the on-Site Engineer/Geologist and the property Owners are expected to be required. In this case, the on-Site Engineer/Geologist and the contractor will contact the Owners to discuss the change request. The terms and conditions for change orders will be provided in the contract to be awarded for the project. Additional information regarding change orders is provided in Attachment D.

## **BID INSTRUCTIONS**

Upon review of the information provided in this bid package, Owners and PES request a bid from your firm to complete the scope of work. Please provide the following information with your bid:

- A complete bid form (a blank form is provided as Attachment C);
- Copies of Certificates of Insurance (refer to insurance requirements in Attachment D);
- Copy of Contractor's License;
- Proof of Workers Compensation coverage;
- List of proposed Contractor personnel, including dedicated job superintendent;
- Specification for any additional equipment or substitutions not listed in this document or the attachments; and
- Your standard schedule of charges for labor, equipment, and supplies.

Please note that there may be minor modifications to the statement of work and contracting documents based on internal review by Owners. Any such modifications will be transmitted to Contractor at site inspection (see below).



Mr. Andy Cost  
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## CONTRACT

A contract to be utilized for this work is included as Attachment D. Any requests for contract modifications must be submitted with the bid.

## SCHEDULE

All bidders have been notified of the issuance of this bid request via telephone call from Mr. Gorman on September 16, 2005. The contractor's pre-bid site inspection meeting is on September 28, 2005 at 11:30 a.m. Attendance is mandatory. PES requests that your bid be prepared and submitted by 4 PM on October 7, 2005. It is anticipated that construction will begin during the latter part of October 2005.

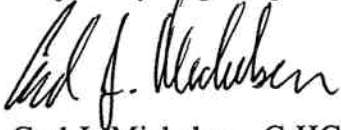
We appreciate your prompt response to this request. Feel free to call either of the undersigned if you have any questions or comments.

Very truly yours,

**PES ENVIRONMENTAL, INC.**



Peter D. Gorman  
Project Hydrogeologist



Carl J. Michelsen, C.HG.  
Principal Geochemist

**Mr. Andy Cost**  
**September 20, 2005**  
**Page 8**

Attachments: Plates 1 – 4  
Attachment A – Technical Specifications  
Attachment B – Structural Engineering Evaluation Letter from Tipping-Mar &  
Associates, and Geotechnical Evaluation from Miller Pacific  
Engineering Group  
Attachment C – Bid Form  
Attachment D – Service Agreement

cc: Ms. Cathy Greenwold  
Mr. Dan McNevin

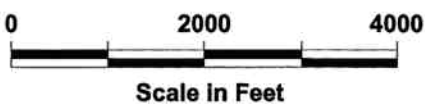
#### **REFERENCES**

Earth Metrics Inc., 1986. *Soils and Groundwater Contamination Characterization of Bay Center Site in Emeryville, California.* August 20.

**PLATES**



**PROJECT SITE**

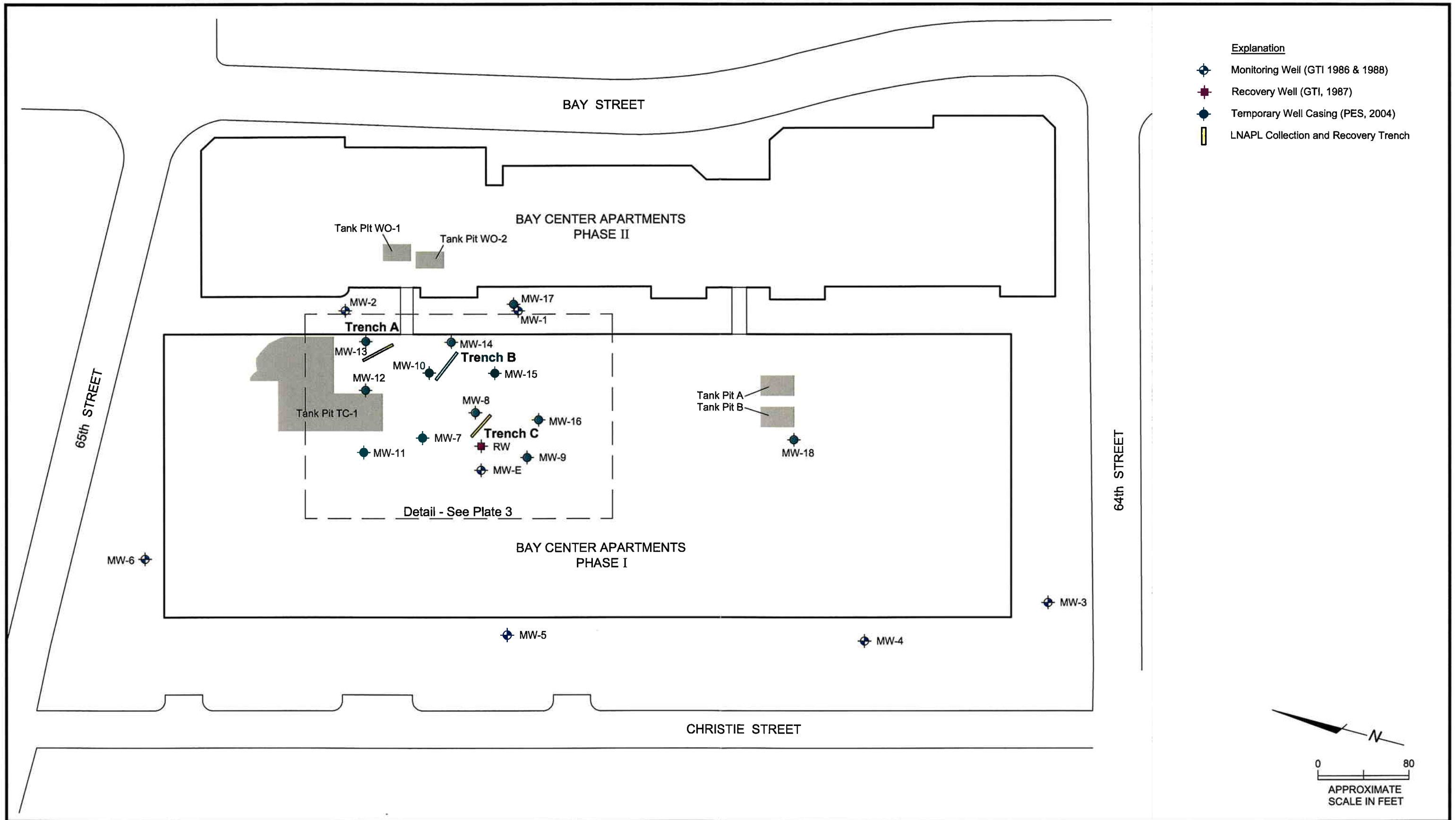


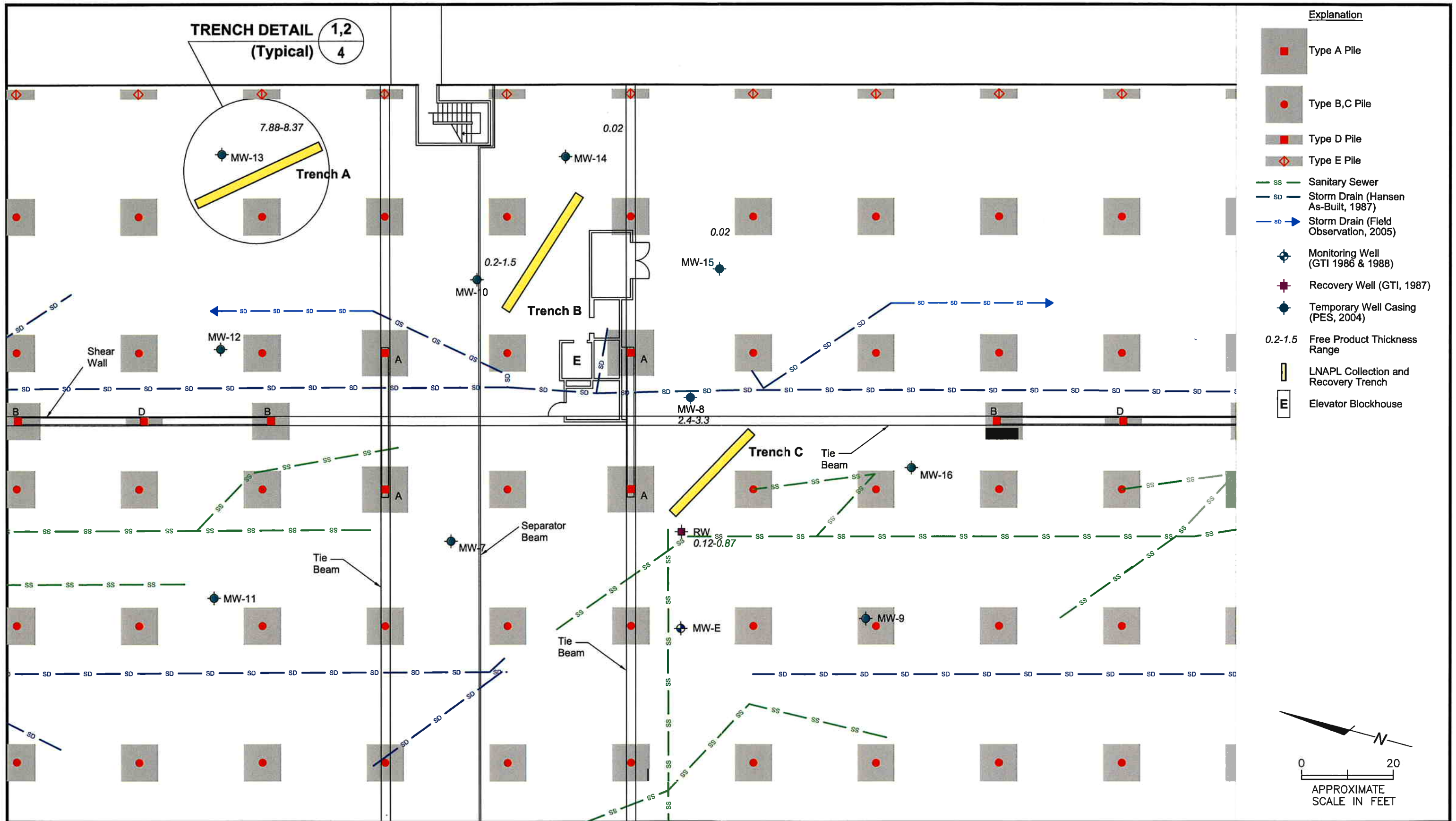
U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle. Map version 1997; current as of 1993



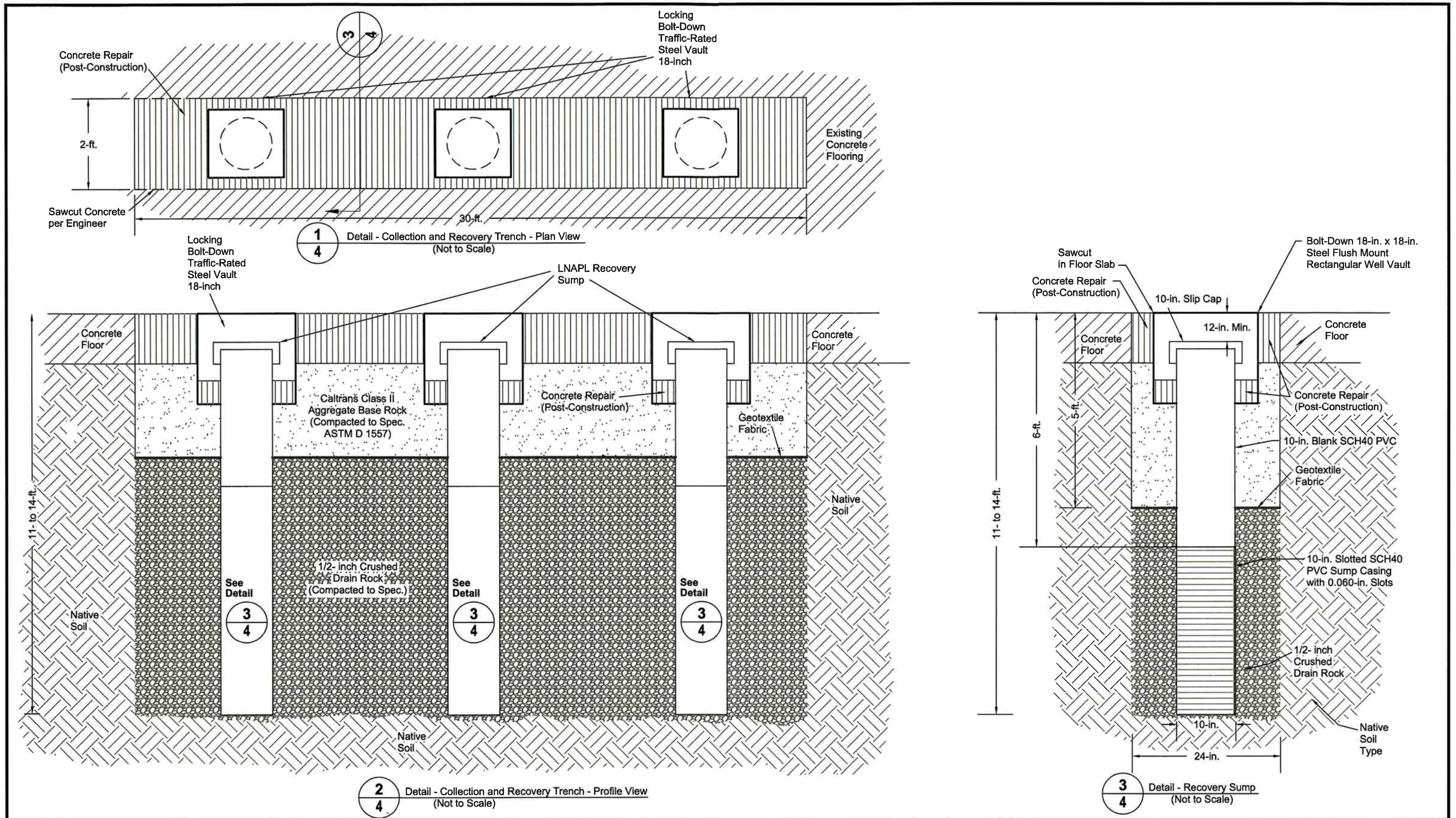
**Site Location Map**  
Remediation Plan  
Bay Center Apartments  
Emeryville, California

PLATE  
**1**





- Explanation**
- Type A Pile
  - Type B,C Pile
  - Type D Pile
  - Type E Pile
  - Sanitary Sewer
  - Storm Drain (Hansen As-Built, 1987)
  - Storm Drain (Field Observation, 2005)
  - Monitoring Well (GTI 1986 & 1988)
  - Recovery Well (GTI, 1987)
  - Temporary Well Casing (PES, 2004)
  - 0.2-1.5 Free Product Thickness Range
  - LNAPL Collection and Recovery Trench
  - Elevator Blockhouse



**ATTACHMENT A**

**TECHNICAL SPECIFICATIONS**



**PROJECT TABLE OF CONTENTS**

**DIVISION 01      GENERAL REQUIREMENTS**

- 01000    GENERAL REQUIREMENTS**
- 01100    SAFETY PROVISIONS**
- 01300    SUBMITTALS**
- 01400    QUALITY CONTROL**

**DIVISION 02      SITE WORK**

- 02200    SITE PREPARATION AND EARTHWORK**
- 02225    EXCAVATION, BACKFILLING, AND COMPACTING FOR UTILITIES**
- 02226    ONSITE HANDLING AND STORAGE OF EXCAVATED MATERIAL**

**DIVISION 03      CONCRETE**

- 03300    CAST-IN-PLACE CONCRETE**

— End of Project Table of Contents —

**DIVISION 01**  
**GENERAL REQUIREMENTS**

## SECTION 01000

### GENERAL REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SCOPE

The work to be performed under this contract consists of all necessary labor, equipment, and materials in accordance with the *Request for Bid* (RFB) letter dated September 20, 2005 prepared by PES Environmental, Inc., for the Bay Center Apartments at Christie Avenue between 64<sup>th</sup> and 65<sup>th</sup> Streets in Emeryville, California, and in accordance with the required drawings, these specifications, and the contract clauses. The work includes the following:

1. Acquisition of applicable permits and notification of Underground Service Alert prior to start of work, as required;
2. Removal of concrete overlying trenching area;
3. Excavation of up to approximately 100 cubic yards (in-place) of soil containing hydrocarbons from three collection and recovery trenches;
4. Segregation and containerization of soil in bins on the Site;
5. Installation of PVC collection sumps;
6. Importation, placement, and compaction of fill materials in excavations;
7. Placement of vault boxes above the collection sumps;
8. Replacement of concrete surfaces;
9. Transportation and disposal of concrete and excavated soil to an appropriately licensed disposal or recycling facility upon approval of Owner and Project Engineer/Geologist; and
10. Cleaning and restoration of work areas.

A more detailed description of the work required is included in the RFB letter; the scope of work provided in the RFB letter is a part of the work specifications.

##### 1.1.1 Definitions

Owner: EmeryBay Commercial Association (EBCA).

Construction Manager: PES Environmental, Inc. will provide the construction management for administering this contract.

Contractor: An individual, firm, or corporation having a direct contract with Owner, for the performance of the work at the Site.

Contract Documents: The contract including all Change Orders, Drawings, Specifications, and Addenda.

Project Engineer/Geologist: PES Environmental, Inc. (PES) prepared the design for this project and will provide the engineering services required for this contract.

Facility: The Facility is located at Christie Avenue between 64<sup>th</sup> and 65<sup>th</sup> Streets in Emeryville, California. Also referred to in the Contract Documents as the Project Site.

Inspection and Testing: All material and equipment used in the construction of the Project will be subject to adequate inspection and testing in accordance with generally accepted standards.

Shop Drawings: All drawings, diagrams, illustrations, brochures, schedules, and other data that are prepared by Contractor, a Subcontractor, manufacturer, supplier, or distributor, which illustrate how specific portions of the work will be fabricated or installed.

Work: All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated in the Project.

## **1.2 DRAWINGS AND SPECIFICATIONS**

Three sets of drawings and specifications will be furnished to Contractor. Other reference publications will not be furnished.

The intent of the drawings and specifications is that Contractor will furnish labor, materials, tools, equipment, and transportation necessary for the proper execution of the work in accordance with the contract documents and incidental work necessary to complete the project in an acceptable manner, ready for use, occupancy, or operation by Owner.

Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in the drawings or specifications will be immediately reported to Project Engineer/Geologist.

## **1.3 HOURS OF WORK**

Normal hours for work will be from 7 a.m. to 7 p.m., Monday through Friday, unless constrained by City of Emeryville permits. Contractor, subcontractors, and their employees will not remain on the site beyond the approved hours of work unless otherwise scheduled and approved by Project Engineer/Geologist.

## **1.4 OCCUPANCY OF PREMISES**

Before work is started, the Contractor will arrange with the Engineer a sequence of work, means of access, space for material and equipment storage, and use of approaches, corridors and stairways. Contractor to use best efforts not to interfere with customers, tenants and other invitees of the center. Contractor to keep driveway unobstructed during site work. Owner and Project Engineer/Geologist reserve the right for substitution of Contractor's personnel.

## **1.5 RIGHT TO REJECT BIDS**

Owner and Project Engineer/Geologist reserve the right to waive any irregularities and to reject any and all bids.

## **1.6 GOVERNING LAWS AND REGULATIONS**

Contractor shall meet the contractor licensing requirements of the State of California for the work required and shall comply with other applicable legal requirements governing the practice of contracting. Contractor shall comply with applicable Federal, State and local environmental laws and industry standards and practices.

## **1.7 SITE EXAMINATION AND LOCAL CONDITIONS**

Contractor shall carefully examine the Bid Documents and the existing conditions for anticipated extras relative to conditions determined during examination of the project Site. In signing the Bid Form, Contractor asserts that Contractor has not only examined the Bid Documents but has also examined the project Site.

## **1.8 GENERAL CONDITIONS**

Contractor agrees to:

- A. Hold the bid open and not withdraw it for a period of 60 calendar days after the scheduled closing time for receiving bids.
- B. Enter into and execute a contract, if awarded on the basis of its bid.
- C. Perform the work in accordance with the Contract Documents.
- D. Complete the work within the Contract Time stipulated in this Bid Form.

## **PART 2 PRODUCTS**

### **2.1 NEW MATERIALS**

Equipment and materials, if required due to changed conditions, incorporated into the work by Contractor will be new, first-class, and delivered to the facility, except as otherwise specified.

### **2.2 SHIPMENTS**

Shipments will be addressed to Contractor who will be responsible for their receipt, unloading, handling, and storage at the Site.

## **PART 3 EXECUTION**

### **3.1 PROTECTION OF EXISTING SYSTEMS**

Existing utilities will be identified and protected from damage. Utilities not previously identified to Contractor, which he encounters in the field, will be reported to Project Engineer/Geologist immediately. Contractor will also record these on the "As-Built" drawings.

### **3.2 UTILITY OUTAGES AND CONNECTIONS**

Required periods of utility outages and connections during execution of the work, which affect existing systems, will be arranged at the convenience of the Owner. Work will be scheduled to hold outages to a minimum.

### **3.3 INSPECTION AND TESTING**

Materials and equipment used in the construction of the project will be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in these specifications.

If the laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction required any work to specifically be inspected, tested, or approved by someone other than Contractor, Contractor will give Project Engineer/Geologist timely notice of readiness. Contractor will then furnish Project Engineer/Geologist the required certificates of inspection, testing, or approval.

Project Engineer/Geologist and his representatives will, at all times, have access to the work. In addition, authorized representatives and agents of any participating Federal or State agency will be permitted to inspect all work, materials, and other relevant data and records. Contractor will provide proper facilities for such access and observation of the work, and also for any inspection or testing thereof.

### **3.4 SUBSTITUTIONS**

Whenever a material, article, or piece of equipment is identified on the drawings or specifications by reference to brand name or catalogue number, it will be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality, and function will be considered. Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of Project Engineer/Geologist, such material, article, or piece of equipment is of equal substance and function to that specified, Project Engineer/Geologist may approve its substitution and use by Contractor.

### **3.5 PERMITS**

Permits and licenses necessary for the prosecution of the work will be secured and paid for by Contractor unless otherwise stated. Contractor will give notices and comply with laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified.

### **3.6 PROGRESS CONTROLS**

#### **3.6.1 Project Meetings**

Contractor will attend a pre-construction conference, scheduled by Project Engineer/Geologist. Onsite work will not commence prior to the conference, unless otherwise requested for and approved by Project Engineer/Geologist. Discussion will include introductions, project orientation, quality control, safety, administration, and temporary utilities and facilities.

Contractor will participate in progress meetings, as scheduled by Project Engineer/Geologist. Discussion may include: submittals, progress, material delivery, potential delays, interfaces, problems, quality control, and safety.

Contractor will promptly report to Project Engineer/Geologist construction problems or design deficiencies encountered.

#### **3.6.2 Construction Schedule**

The Contractor will prepare the Construction Schedule for submittal to the Project Engineer/Geologist. The schedule will be drawn or plotted, showing activity numbers and descriptions, start and finish dates.

The construction schedule will include significant design, submittal, fabrication, procurement and work activities; plus any constraints, outside of this contract that may impact work on the contract.

The schedule will be an accurate representation of the manner in which the Contractor will be performing the work. If circumstances indicate that progress is three days or more behind the contract completion, the Contractor will notify the Engineer and revise the schedule and work plan, to eliminate or minimize delays to contract completion.

### **3.7 PROJECT CLOSEOUT**

Prior to the Contract Completion Date, Contractor shall accomplish the following:

#### **3.7.1 Restoration and Final Cleaning**

Existing work cut, drilled, altered, or removed by Contractor will be reinstalled or repaired to match the surrounding work. Work remaining in place, damaged, or defaced during construction will be restored to preconstruction conditions.

### **3.7.2 Final Acceptance**

Upon notification by Contractor that the work is complete, Project Engineer/Geologist will conduct a pre-final inspection, noting any discrepancies, uncompleted work, etc. on a "punchlist," which will be provided to Contractor. If necessary, revision to the punchlist may be made before the final inspection. When Contractor has completed the items on the punchlist, Project Engineer/Geologist will conduct the final inspection. If acceptable, a notice of acceptance will be issued to Contractor.

Neither notice of acceptance nor final payment will constitute waiver of any guarantee or warranty under the contract.

— End of Section —



## SECTION 01100

### SAFETY PROVISIONS

#### PART 1 GENERAL

##### 1.1 SCOPE

The provisions of this section apply to work conducted at the property located at Christie Avenue between 64<sup>th</sup> and 65<sup>th</sup> Streets in Emeryville, California, under this contract, including subcontract work.

##### 1.2 REFERENCES

Contractor is required to conform to applicable local, state, and national government regulations, including, but not limited to the references noted below.

- National Fire Protection Association (NFPA) NFPA 30 Flammable and Combustible Liquids;
- Occupational Safety and Health Administration (OSHA), Title 29 Code of Federal (CFR) 1910.120. Regulations applicable to hazardous waste site operations (HAZWOPER);
- Title 8 California Code of Regulations (CCR) GISO 5192 Hazardous Materials Storage Ordinance, and Title 8 CCR 1532.1;
- Title 22, CCR Sections 66261.2 and 66261.3;
- Bay Area Air Quality Management District (BAAQMD): Organic Compounds, Regulation 8, Organic Compounds, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks; and
- City of Emeryville ordinances.

##### 1.3 SUBMITTALS

Contractor is required to submit the following, in accordance with the provisions noted in Part 2, below. For descriptions of submittals, see Section 01300.

- SD-10, Job Site Safety Plan

##### 1.4 GENERAL RESPONSIBILITIES

###### 1.4.1 General

Contractor is responsible for taking adequate safety and health measures to ensure a safe, healthy environment for his employees, those of his subcontractors, and for other workers in his area of operations, as well as for bystanders and visitors.

#### **1.4.2 Visitor Control**

Contractor will comply with procedures prescribed in SD-10 (Job Site Safety Plan) for control and safety of visitors to the Site.

#### **1.4.3 Communication**

Contractor will familiarize his employees and subcontractors with safety requirements, will enforce them, and will advise Project Engineer/Geologist of any special safety restrictions that he has established.

#### **1.4.4 Superintendent by Contractor**

Contractor, or a superintendent appointed by him, will give his personnel onsite access to the Job Site Safety Plan while any work is in progress.

#### **1.4.5 Training**

All workers shall have completed 40-hour HAZWOPER OSHA training, in accordance with Title 29 Code of Federal Regulations (29 CFR), Section 1910.120. Contractor must submit training documentation to PES prior to work initiation.

### **1.5 FIRST AID FACILITIES**

Contractor shall provide first aid facilities in accordance with the Job Site Safety Plan. Contractor shall also post emergency phone numbers at the Project Site.

## **PART 2 SPECIFIC REQUIREMENTS**

### **2.1 SAFETY PLAN**

Contractor shall submit a Job Site Safety Plan at the pre-construction conference, which meets the requirements of the Occupational Safety and Health Administration, 29 CFR 1910.120. The Safety Plan will include, at a minimum, the following:

- Safety program objectives;
- Responsibilities of Contractor's key personnel;
- Rules for safe practices, complying with references above;

- Safety meetings, inspections, and reports to be conducted or made;
- Location/telephone numbers of emergency services & location of their posting on the Project Site;
- Accident reporting procedures;
- Procedures for securing work areas & protecting personnel in the event of an accident, emergency or disaster; and
- Any and all other requirements to comply with 29 CFR 1910.120.

## **2.2 SAFETY CLEARANCE PERMITS**

A specific, written permit granted by Project Engineer/Geologist is required before conducting operations involving any of the following dangerous operations. Contractor will ensure that no such work is conducted prior to obtaining the permit, and that all provisions of the permit are met. Contact Project Engineer/Geologist at least 24 hours in advance to obtain the required permit. The granting of a permit in no way relieves Contractor of responsibility for any injury or damage that might result from his operation. The granting of these permits may be contingent upon restricted areas or hours of operation or special safety requirements; Contractor will comply with these requirements at no additional cost.

**OPEN FLAME HEATING DEVICES or OPEN FIRES.** Use of these devices requires a permit. In no case will burning of trash, brush, or wood be permitted.

**ELECTRICAL WORK.** Work on electrical circuits or equipment of greater than 480 volts requires a permit.

**WELDING, FLAME CUTTING, AND MELTING.** These operations, when performed in an existing or occupied facility require a permit.

## **2.3 REPORTS AND RECORDS**

### **2.3.1 Tailgate Safety Meeting Reports**

Contractor shall conduct daily tailgate safety meetings with all its onsite employees and subcontractors. Contractor will document the daily tailgate safety meetings.

### **2.3.2 Accident Reports**

Contractor will immediately make an oral report to Project Engineer/Geologist of any accident that results in one of the following: fatality, disabling or lost-time injury, injury requiring medical treatment, property contamination, or property loss of \$1,000 or more. A written

report shall be submitted to Project Engineer/Geologist within five days of each incident. The report will include investigative findings and proposed or completed corrective actions.

## **PART 3 EXECUTION**

### **3.1 GENERAL SAFETY RULES**

Contractor is required to follow the following safety rules in addition to the requirements of OSHA and other laws and regulations.

### **3.2 FIRE PREVENTION AND PROTECTION**

Contractor will provide, maintain in good working order, and keep available on the site at least two fire extinguishers.

Flammable liquids will be stored and handled in accordance with the Flammable and Combustible Liquids Code, NFPA 30.

Open fires will not be permitted.

Smoking will not be permitted in dangerous areas, such as: exclusion zone, contaminant zone, fuel storage, and posted "No Smoking" areas.

### **3.3 EXCAVATION**

Prior to excavation, Contractor shall locate underground utilities in the area and will mark these locations on the ground surface. The elevations and exact locations of utilities are not known; therefore, Contractor will exercise caution in the performance of excavation work to avoid damaging existing utilities.

When work is being done in excavations or trenches deeper than four feet, ladders or other safe means of egress will be located in the trench, so as to require no more than 25 feet of lateral travel for employees; and at least one Contractor employee will stand by aboveground, ready to give assistance in an emergency.

Open trenches and excavations will be barricaded during non-work hours.

### **3.4 CONFINED SPACE WORK**

Confined spaces are those which have extremely limited provision for entry and exit, are not designed for continuous occupancy, have poor natural ventilation, or contain or may contain hazardous atmosphere as defined by 29 CFR 1910.146.

No work will be conducted in a confined space.

### **3.5 FACILITY CLOSURE OR OBSTRUCTION**

Contractor will take steps to ensure that any closure or obstruction of streets, walks or other facilities is adequately barricaded, that warning signs and signals are provided, and that the closure or obstruction is of the minimum practical duration.

### **3.6 ELECTRICAL SAFETY**

There is electrical power on the site; however, Contractor shall not rely on having access to on the site power.

Portable electric tools will be protected with standard three-prong grounding plugs or be double-insulated, and will be unplugged when not in use.

Ground fault interrupters will be used on temporary electrical lines and cables, including extension cords. Temporary wiring and cables will be routed to prevent tripping hazards.

When permanently removing equipment or circuits, the wiring, conduit, and boxes will be removed back to the source, unless otherwise specified. The main panel will also be identified to the effect that the circuit is no longer in use.

### **3.7 WELDING, FLAME CUTTING, AND MELTING**

During flame cutting and welding, Contractor will take care and provide protection to prevent splatter from damaging facilities or causing fire. When these operations are performed above or below ground level, at least one Contractor employee will stand by at the ground, with fire fighting equipment, ready to give assistance in an emergency.

Contractor will provide shields, fire blankets, and other protection devices to protect persons and property adjacent to the area of work.

### **3.8 ASBESTOS**

#### **3.8.1 New Materials**

Unless otherwise specified, no asbestos-containing materials are to be used by Contractor.

#### **3.8.2 Encountering Asbestos**

Except as specified, no asbestos-containing material is expected to be encountered on the site. If Contractor encounters such, he will immediately inform Project Engineer/Geologist. Unless otherwise instructed, Contractor will not break, burn, or tear materials containing asbestos. If Project Engineer/Geologist determines it necessary, he will arrange for removal, disposal, and/or isolation of the material by properly trained and certified personnel.

— End of Section —

**SECTION 01300**

**SUBMITTALS**

**PART 1 GENERAL**

**1.1 SCOPE**

This Section applies to work done under this contract. It describes the format and procedure for contract submittals. Submittal documents (SD) are: drawings, diagrams, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials which are to be furnished by Contractor. Submittals explain in detail the manner in which Contractor will conduct specific portions of the work of the contract.

**1.2 REFERENCES (Not Applicable)**

**1.3 SUBMITTALS**

The following are descriptions of submittals that may be required.

**SD-01, Data**

Submittals that provide calculations, descriptions, or other documentation regarding the work.

**SD-02, Drawings**

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, detail of fabrications, layout of particular elements, connections, and other relational aspects of the work.

**SD-03, Instructions**

Preprinted material describing installation of a product, system, or material, including special notices and material safety data sheets, if any concerning impedances, hazards, and safety precautions.

**SD-04, Schedules**

Tabular list of data or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

**SD-05, Reports**

Reports of inspections and laboratory tests, including analysis and interpretation of test results. Each report will be properly identified. Test methods used and compliance with recognized test standards will be described.

**SD-06, Certificates**

Statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system or material meets specified requirements. The statements must be dated after the award of this contract, name the project, and list the specific requirements that it is intended to address.

**SD-07, Samples**

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

**SD-08, Records**

Documentation to ensure compliance with an administrative requirement or to establish an administrative mechanism.

**SD-9, Operation and Maintenance Manuals**

Data intended to be incorporated in an operations and maintenance manual.

**SD-10, Work Plan and Site Safety Plan**

**Work Plan:** Procedures defining the Contract's provisions for construction activity, including equipment techniques used and protection controls.

**Site Safety Plan:** Procedures defining the Contractor's provisions for accident prevention and health protection; of his workers, subcontractors, and government workers; and describing actions taken in case of accident. Plan must be in compliance with 29 CFR 1910.120.

**PART 2 PRODUCTS (Not Applicable)**

**PART 3 EXECUTION (Not Applicable)**

— End of Section —

**SECTION 01400**  
**QUALITY CONTROL**

**PART 1 GENERAL**

**1.1 SUMMARY**

The requirements of this Section apply to work done under this contract. Work will be accomplished in accordance with professionally recognized standards for building construction.

**1.2 SUBMITTALS**

Submit the following in accordance with Section 01300, "Submittals":

SD-05, Reports

SD-06, Certificates

**PART 2 PRODUCTS**

**2.1 GENERAL**

Materials and equipment to be provided under this contract will be new, first-class, standard catalogue products of manufacturers regularly engaged in the manufacture of these products. Where two or more units of the same equipment class are furnished, the equipment will be from the same manufacturer and will be interchangeable.

**2.2 TRANSPORTATION, HANDLING AND STORAGE**

The manufacturer will package material requiring protection in sturdy containers. Protection will include vapor sealants for products sensitive to moisture or exposure. Material handling equipment will be selected with the express purpose of minimal damage to existing work and new material.

The Contractor will store supplies, material, and equipment so as to properly protect and preserve these items.

**PART 3 EXECUTION**

**3.1 GENERAL**

Quality Control, including inspections and tests required by these specifications, will be Project Engineer/Geologist's and Contractor's responsibility.



Contractor will maintain normal quality control practices during field construction and will be responsible for field inspection and tests required by these specifications, unless noted otherwise.

Project Engineer/Geologist's inspection will in no way replace Contractor inspection or otherwise relieve Contractor of his responsibility to furnish an acceptable end item. Project Engineer/Geologist's inspection will not be used by Contractor as evidence of effective inspection by himself or subcontractors.

### **3.2 CONTRACTOR QUALITY CONTROL**

The Contractor will maintain an approved quality control system. This will include the following:

#### **3.2.1 Purchase Control and Receiving Inspection**

A system documenting procurement to drawings, specifications and approved submittals; certified testing by suppliers; and inspection by the Contractor to procurement records and contract requirements.

#### **3.2.2 Non-Conformance Control**

A system documenting the handling, recording, identification, disposition, and reporting of non-conforming components and materials. The Engineer will be notified for each item found to be not in conformance with requirements--irrespective of the disposition of the non-conforming article.

#### **3.2.3 Qualification of Procedures**

A means for identifying, conducting, testing, and recording the qualification of test and work procedures (including welding).

#### **3.2.4 Drawing and Change Control**

A means for insuring that affected persons and organizations receive changes in a timely manner, and that only the latest version of drawings and specifications is used.

### **3.3 HOLD POINT OF INSPECTION/TESTS**

#### **3.3.1 Inspections**

The following are required hold points for inspections to be made by the Engineer and Contractor.

### **3.3.1 Inspections**

The following are required hold points for inspections to be made by the Engineer and Contractor.

**FORMWORK/REBAR.** Performed after formwork/rebar are in place and ready, but before concrete is mixed.

**CONCRETE SLAB OR UNDERFLOOR.** Performed after conduits, piping, utilities & equipment are in place, but before concrete is mixed or subfloor is installed.

**UNDERGROUND UTILITIES.** Performed after piping/conduit is in place & bedded, but before it is covered.

**SURFACE PREPARATION.** Performed after preparation for painting has been made, but before setup for painting.

### **3.3.2 Tests**

The following items are required hold points for tests to be made by Contractor and witnessed by Project Engineer/Geologist. Notice will be given to Project Engineer/Geologist before each of these tests.

**COMPACTION TESTING.** Required of all backfilled excavations before placement of concrete covering.

## **3.5 REPORTING**

Reports on tests conducted by Contractor will be submitted to Project Engineer/Geologist within one working day of the test's completion, regardless of whether or not the article passed the test.

## **3.5 CORRECTIVE ACTION**

Contractor will promptly correct assignable conditions that have resulted or could result in the submission to Project Engineer/Geologist of supplies and services that do not conform to:

The quality assurance provisions of the item specification.

Inspections and tests required by the contract.

Other inspections and tests required to substantiate conformance.

— End of Section —

**DIVISION 02**

**SITE WORK**

## SECTION 02200

### SITE PREPARATION AND EARTHWORK

#### PART 1 GENERAL

##### 1.1 SUMMARY

This section covers site preparation and earthwork, including excavation and backfill for structures and utilities and definitions of soils materials used under other sections of this specification. The actual installation of site utility lines/systems is covered in other sections.

##### 1.2 REFERENCES

The following publications form a part of these specifications to the extent indicated by their references.

#### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 1557	1978 Standard Test Method for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-In. (457-mm) Drop
ASTM D 2922	1981 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	1988 Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

##### 1.3 SUBMITTALS

Submit the following in accordance with Section -01300, "Submittals":

#### SD-05, Reports

Test reports of soil materials including compaction tests prior to use and/or after test.

#### SD-06, Certificates

Certificates of compliance for manufactured materials.

#### SD-07, Samples

Samples of soil materials prior to intended use.

## 1.4 QUALITY CONTROL

### 1.4.1 Testing Service

Soil testing service will be provided by Contractor. Contractor will submit test reports of materials proposed for use in the project, including in-situ materials, and of field tests. Testing service will include soil survey for satisfactory soil materials; sampling and testing soil materials proposed for use in the work, and field-testing for quality control during construction. Test reports will include data, raw and evaluated, from all tests, and will be submitted to Project Engineer/Geologist.

### 1.4.2 Testing Requirements

<u>MATERIAL</u>	<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>NUMBER OF TESTS</u>
Fill & Backfill in-place	Density	ASTM D 1557	One test per trench excavation for each layer of lift.

### 1.4.3 Evaluation of Test Results

Soil materials will be considered satisfactory for use if they meet the classification requirements for a particular use and are free of organic matter, trash, any stones greater than 3" in dimension, and any other deleterious substances.

## 1.5 DEFINITIONS

Subgrade: The top surface of a backfill or fill or the uppermost surface of an excavation, graded to conform to the required subgrade elevation and compacted.

Spoil: Soil material, below the level of topsoil, removed from excavations on the Project Site.

Clean Soil: Uncontaminated soil which is free of clay clods, rock, and gravel larger than 3" in any dimension; which is free of debris, waste, and other deleterious substances.

Uncontaminated Soil: Soil that is not "contaminated" with petroleum products, chlorinated solvents, or other substances (e.g., semi-volatile organic compounds, metals, pesticides or herbicides, as defined by applicable local, state, and federal regulations.

Satisfactory Soil: Clean soil, meeting the requirements in Paragraph 2.1, for the proposed use.

Degree of compaction: Expressed as a percentage of the maximum density obtained by the test procedure in ASTM D 1557, Methods B or D.

Unsatisfactory Soil: Soil that does not conform to the definition of satisfactory soil material.

**1.6 PROTECTION OR REMOVAL OF UTILITY LINES**

Existing utility lines that are to be retained or the locations of which have been ascertained from utility drawings as well as utility lines encountered during excavation will be protected from damage during excavation and backfilling. Contractor will provide sketches of existing conditions if there are variances, as well as any modifications. When utility lines are to be removed within the area of operations, Contractor will give notice per Section 01000.

**PART 2 PRODUCTS**

**2.1 SOIL MATERIALS**

Soil materials will be clean before use or re-use. Unless otherwise directed by Project Engineer/Geologist, Contractor will not reuse spoil material.

<u>MATERIAL DESIGNATION</u>	<u>MAXIMUM PARTICLE SIZE</u>	<u>UNIFIED SOIL CLASSIFICATION</u>
SELECT, IMPORTED FILL MATERIAL	3"	SW, SW-SM, SW-SC, SM, SC, GW-GM, GW-GC, GM, CG
SUB-BASE	1-1/2"	SW, SW-SM, SW-SC, GW, GW-GM, GW-GC
CLASS II AGGREGATE BASE	1-1/2"	GW-GM, GW-GC
SAND, BEDDING MATERIAL	#4	SP
GRAVEL, FILTER MATERIAL, DRAIN ROCK	1-1/2"	GP (less than 5% passing #4)

## 2.2 USE OF SOIL MATERIALS

Soil materials will be used as specified below:

<u>AREA CLASSIFICATION</u>	<u>SOIL MATERIALS</u>	<u>PERCENT COMPACTION</u>	
		<u>COHESIVE</u>	<u>NON-COHESIVE</u>
Fill & backfill, unless otherwise specified	Clean, select imported fill material	90%	90%
Within 24" below structures and ground surface; below level of sub-base/base course	Sub-base	95%	95%

## PART 3 EXECUTION

### 3.1 GENERAL

Before earthwork is started, Contractor shall locate underground utilities. Utilities to be left in place will be protected from damage.

Excavated soil will be piled in an orderly manner, shaped to drain, and sufficiently distant from excavations to prevent overloading, slides, and cave-ins (24" minimum).

Trenches and excavations will be protected to prevent surface water from flowing into them and prevent flooding of the Project Site and surrounding area.

### 3.2 EXCAVATION

#### 3.2.1 Dewatering

Groundwater in the area of work is likely contaminated with hydrocarbons. Groundwater will be encountered during excavation. The groundwater must be contained in a Contractor-provided containment vessel for subsequent treatment and disposal. In either case, Contractor will keep detailed records, by date, of the quantity of groundwater removed.

Water will be permitted to accumulate in excavations that will be backfilled the same working day. Prior to gravel backfill placement, soils that may have sloughed into the bottom of the excavation must be removed. Provide a dewatering system to convey water to a storage tank

located in an approved area. Leak test conveyance hoses prior to use. Conveyance of extracted groundwater to storage tank shall not interfere with tenant activities.

### **3.2.2 Removal of Unsatisfactory Soil Materials**

Excavate unsatisfactory soil materials that extend below the required elevations, to the depth directed by Project Engineer/Geologist.

### **3.2.3 Trench Excavation**

Side slopes of the trenches will be as nearly vertical as practicable. Grade bottoms of the trenches accurately, at an elevation to allow for filter material. Except as specified for wet or otherwise unstable material, backfill overdepths with materials specified for backfilling the lower portion of trenches.

### **3.2.4 Unauthorized Excavation**

Unauthorized excavation is removal of materials beyond indicated subgrade elevations or side dimensions specified without specific direction and will be replaced and unauthorized excavated material properly disposed of as specified at no additional cost to Owner.

## **3.3 FILLING, BACKFILLING, AND COMPACTION**

### **3.3.1 Preparation for Backfill**

Backfill excavations as promptly as the work permits but not until completion of the following:

Inspection, testing, and approval of underground utilities, if present; and

Removal of trash and debris.

### **3.3.2 Preparation for Fill**

Remove debris, unsatisfactory soil materials, obstructions, and deleterious materials prior to the placement of fills. Scarify, condition, and compact existing ground surface to the required depth, and percentage of maximum density.



### **3.3.3 Placement and Compaction**

Place backfill and fill materials in layers not more than 18 inches in loose depth. Backfill or fill material will not be placed on surfaces that are muddy or otherwise deemed unsuitable per soil testing service retained by Contractor.

### **3.4 GRADING**

Areas within the limits of grading, including adjacent transition areas, will be uniformly graded. The finished surface will be smooth within the specified tolerances, compacted, and with uniform levels or slopes.

Areas adjacent to the structure will be hand-graded to drain away from the structure and to prevent ponding of water after rains.

The finished surface will be not more than 0.10 foot above or below the indicated subgrade elevations; except below walks, where the limits are 0.0 foot above and 0.1 foot below.

The surface will be smooth and even, free of voids, when tested with a 10-foot straightedge, the finished surface will show no deviation in excess of 0.1 foot.

### **3.5 MAINTENANCE**

Protect newly graded areas from traffic and erosion and maintain them free of trash and debris.

Where disturbed by subsequent construction operations or adverse weather, the surface will be scarified, reshaped, and compacted as specified to the required density prior to further construction.

### **3.6 DISPOSAL OF EXCESS AND WASTE MATERIAL**

Excess satisfactory soil materials will either be hauled off the site for disposal or transported to designated areas on the site as directed by Project Engineer/Geologist.

Contaminated soil will be stored in bins and transported to areas designated by Owner and Project Engineer/Geologist.

Owner and Project Engineer/Geologist will be responsible for compliance with federal, state, and local laws and regulations pertaining to the control of environmental pollution in the disposal of waste materials.

— End of Section —

**SECTION 02225**

**EXCAVATION, BACKFILLING, AND COMPACTING**

**PART 1 GENERAL**

**1.1 REFERENCES**

The publications listed below form a part of this section to the extent referenced:

**AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION  
OFFICIALS (AASHTO)**

AASHTO M 145 (1990) Recommended Practice for the Classification of  
Soils and Soil-Aggregate Mixtures for Highway  
Construction Purposes

AASHTO T 180 (1986) Moisture-Density Relations of Soils Using a 10-lb  
(4.54 kg) Rammer and an 18-In. (457 mm) Drop

AASHTO T 2 (1990) Standard Methods of Sampling of Aggregates

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

ASTM C 136 (1984; Rev A) Standard Method for Sieve Analysis of  
Fine and Coarse Aggregates

ASTM D 1556 (1990) Standard Test Method for Density of Soil in Place  
by the Sand-Cone Method

ASTM D 2321 (1989) Standard Practice for Underground Installation of  
Thermoplastic Pipe for Sewers and Other Gravity-Flow  
Applications

ASTM D 2657 (1990) Standard Practice for Heat-Joining Polyolefin Pipe  
and Fittings

ASTM D 2922 (1990) Standard Test Method for Density of Soil and Soil-  
Aggregate in Place by Nuclear Methods (Shallow Depth)

ASTM D 3740 (1988) Standard Practice for Evaluation of Agencies  
Engaged in the Testing and/or Inspection of Soil and Rock  
as Used In Engineering Design and Construction

## 1.2 QUALITY ASSURANCE

A certified soil-testing service will be provided by Contractor. Testing will include soil survey for satisfactory soil materials, sampling and testing soil materials proposed for use in the work.

Testing agencies will conform to the requirements of ASTM D 3740.

## PART 2 PRODUCTS

### 2.1 STRUCTURAL MATERIALS

Materials, if any, used for shoring and bracing, such as sheet piling, uprights, stringers, and crossbraces, will be in good serviceable condition. Any timber used will be sound and free from large or loose knots.

### 2.2 BACKFILL MATERIAL

Backfill material will consist of high porosity/permeability gravel, sand, or other satisfactory soil materials. Backfill may consist of controlled density fill (CDF) at direction of Project Engineer/Geologist. CDF shall be a mixture of Portland cement, fly ash, fine aggregates, water and air entraining admixtures proportioned to provide a nonsegregating, self-consolidating, free-flowing, and excavatable material that will result in a hardened, dense, non-settling fill. The CDF shall conform to the following requirements:

1. Portland Cement: ASTM C150, Types I or II.
2. Aggregate: Sand with or without fine gravel, maximum size 1-inch. Aggregate shall be free of foreign material or organics and shall have less than 10 percent finer than the No. 200 sieve.
3. Water: Potable.
4. Fly Ash: Class F ASTM C618, unless otherwise approved by Project Engineer.

CDF shall be proportioned to be a flowable, low-shrink slurry with an unconfined compressive strength of 50 to 100 pounds per square inch (psi) at 28 days. The maximum density shall be 130 pounds per cubic foot. CDF will contain an accelerator admixture that will cause the CDF to set quickly, allowing adjacent excavation in 24 hours.

Contractor and its supplier shall determine the materials and proportions used to meet the requirements of these Specifications. Contractor shall make daily checks of the aggregate gradation and adjust the mix design as required to meet these Specifications. The CDF mix shall be modified as necessary to meet the flowability, pumpability, and set time requirements for each individual pour.

At least 7 days before placing CDF, Contractor shall submit to Project Engineer a mix design for the CDF to be used. No CDF shall be placed until Project Engineer has approved the mix design. CDF mix proportions shall be determined in general accordance with ACI 301.

CDF batching, mixing, and placing shall be a continuous operation as is practicable and may be started if weather conditions are favorable, when the air temperature is 38° F and rising. At the time of placement, CDF must have a temperature of at least 40° F. Mixing and placing shall stop when the air temperature drops below 38° F.

Excavations to be filled with CDF shall be contained at either end of the excavation by bulkheads, as necessary. CDF shall be discharged from a mixer by any means acceptable to Project Engineer into the area to be filled. CDF shall be brought up uniformly to the elevations indicated.

**2.2.1 Proposed Soil Materials**

Soil materials proposed for use in the work will be tested. The materials will be approved by Project Engineer/Geologist prior to start of work, as follows:

<u>MATERIAL</u>	<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>NUMBER OF TESTS</u>
Satisfactory soil materials	Sampling	AASHTO T 2	One for each source of material to determine conformance to definition of satisfactory soil materials; additional tests whenever there is any apparent change
	Sieve analysis of fine and coarse aggregate	ASTM C 136	
	Moisture-density relations of soil	AASHTO T 180, Method B or D	

**2.2.2 Satisfactory Materials**

Satisfactory soil materials - AASHTO M 145 Soil Classification Groups A-1, A-2-4, A-2-5, and A-3.

**2.2.3 Unsatisfactory Materials**

Unsatisfactory soil materials - AASHTO M 145 Soil Classification Groups A-2, A-2-7, A-4, A-5, A-6, and A-7, highly organic soils, and soil materials of any classification that have a moisture content at the time of compaction beyond the range of 1 percentage point below and 3 percentage points above the optimum moisture content of the soil material as determined by moisture-density relations test.

**PART 3 EXECUTION**

### **3.1 GENERAL REQUIREMENTS**

Before starting earthwork, the location of underground utilities will be carefully verified by hand methods. Utilities to be left in place will be protected from damage.

Excavation, filling, backfilling, and grading will be to subgrade elevations specified.

Excavated materials suitable for backfill will be piled in an orderly manner sufficiently distant from excavations to prevent overloading, slides, and cave-ins.

Excavations will be done in ways that will prevent surface water and subsurface water from flowing into excavations and will also prevent flooding of the Project Site and surrounding areas.

### **3.2 PROTECTION OF PERSONS AND PROPERTY**

Excavations will be barricaded and posted with warning signs for the safety of persons. Warning lights will be provided during hours of darkness.

Structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations will be protected against damage including settlement, lateral movement, undermining, and washout.

Topsoil removal operations will be conducted to ensure safety of persons and to prevent damage to existing structures and utilities, construction in progress, trees and vegetation to remain standing, and other property.

### **3.3 WATER REMOVAL**

Water will be permitted to accumulate in excavations that are backfilled the same working day. Soil that may have sloughed into the excavations must be removed prior to fill placement. Dewatering systems will be provided by Contractor to convey water away from excavations so that softening of foundation bottoms, footing undercutting, and soil changes detrimental to subgrade stability and foundation will not occur. Dewatering systems and methods of disposal will be approved by Project Engineer/Geologist.

Water removal from excavations will be conveyed in Contractor-provided non-leaking, pre-tested hoses to Contractor-provided storage tank.

### **3.4 EXCAVATION MONITORING**

Project Engineer/Geologist will monitor excavated soils. The monitoring will be performed with a PID/FID combination detector to determine if the soils are clean material or may contain chemicals.

### 3.5 BACKFILLING AND COMPACTION

Excavations at depths greater than 7 feet bgs must be backfilled on the same working day.

#### 3.5.1 Backfill Material

The planned drain rock backfill will be placed in layers not exceeding 18-inches and compacted with vibratory compaction equipment. The planned aggregate baserock backfill will be placed in layers not exceeding 8-inches and compacted with vibratory compaction equipment. The uppermost 24-inches of the trench backfill (sand layer) will be compacted to at least 95 percent relative compaction, in accordance with ASTM D-1557. No backfill material may be placed until Project Engineer/Geologist has approved the material.

### 3.6 FIELD QUALITY CONTROL

Field density tests will be performed by methods in sufficient number to ensure that the specified density of soil backfill is obtained.

Soil materials will be tested during construction as follows:

<u>MATERIAL</u>	<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>MATERIAL TESTED AND NUMBER OF TESTS</u>
Soil material-in-place after compaction	Density of soil-in-place	ASTM D 1556, Sand Cone Method or ASTM D 2922, Nuclear Method	One test every trench excavation for each layer or lift

### 3.7 RESTORATION OF SURFACES

Areas within the limits of earthwork under this section, including adjacent transition areas, will be uniformly graded. The finished surface will be smooth within the specified tolerances, compacted, and with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.

#### Pavements:

The surface of areas under pavements will be shaped to line, grade, and cross section, and the finished surface will be not more than 1/2-inch above or below the specified finish elevations.

### 3.8 DISPOSAL OF EXCESS AND WASTE MATERIALS

Excess excavated satisfactory materials will be transported to, and disposed in, areas designated by Owner and Project Engineer/Geologist.

Waste material, including excavated unsatisfactory materials, trash, and debris, will be transported to, in designated storage areas, and treated and/or disposed of as specified in Section 02226.

— End of Section —

## SECTION 02226

### ONSITE HANDLING AND STORAGE OF EXCAVATED MATERIAL

#### PART 1 GENERAL

##### 1.1 SUMMARY

Work of this section includes:

Covered onsite soil storage bins.

Lined onsite stockpile area(s) for storage of material containing chemicals.

Unlined onsite stockpile area(s) for storage of clean excavated material and imported construction materials.

Onsite handling procedures for materials.

Monitoring, sampling, and testing of materials.

#### PART 2 PRODUCTS

##### 2.1 STORAGE BINS

Contractor will provide lined, covered, locking storage bins located on the site for placement of excavated soil. Contractor is responsible for moving bins to the onsite storage areas and bringing in empty bins as required to allow uninterrupted work activities.

##### 2.2 POLYETHYLENE LINERS

Contractor will provide reinforced polyethylene liners and covers for the stockpile areas of material containing chemicals. A determination will be made by Project Engineer/Geologist regarding what stockpiled materials will require polyethylene liners and covers. The location of the stockpile areas will be designated by Owner and Project Engineer/Geologist after consultation.

Reinforced polyethylene liners shall have a minimum thickness of 30 mils (0.75 mm).

Reinforced polyethylene covers shall have a minimum thickness of 10 mils.



## **PART 3 EXECUTION**

### **3.1 AREA SUBGRADE PREPARATION**

Surface areas to be lined should be smooth, and free of rocks, stones, sticks, roots, sharp objects, or debris of any kind. The surface should provide a firm, unyielding foundation for the membrane with no sudden, sharp, or abrupt changes or breaks in grade. No standing water or excessive moisture will be allowed.

### **3.2 LINER COVER PREPARATION**

The liner will be prepared by a method approved by Project Engineer/Geologist.

### **3.3 WORKMANSHIP**

Stockpile areas for clean excavated material and imported construction materials are preferably areas surfaced with asphalt. These areas may be lined at the determination of Project Engineer/Geologist.

Stockpile areas of material and aeration area(s) containing chemicals will conform to the specifications below:

- a. The reinforced polyethylene liners shall cover the entire stockpile area(s). The edges of the liners will be adequately seamed such that no free liquid or solid material can escape from the seam. The outside edges of each area shall be wrapped over sandbags, railroad ties, or equivalent to create a berm.
- b. Earth ramps or equivalent may be constructed to provide vehicle access into the bermed area. Contractor will take extreme care when vehicles are on the liner such that the liner is not damaged.
- c. Contractor will provide barricades or temporary fence to prevent unauthorized access.
- d. Material suspected of containing chemicals will be transported and stored in this area(s).
- e. The material to be stockpiled will be stored within the edge of the containment berms. The stockpile height should not exceed 6 feet in height, unless approved by Project Engineer/Geologist.
- f. Material to be treated will be transported to the designated area with the use of a dump truck or equivalent.

### **3.4 STOCKPILE AREA MONITORING**

Project Engineer/Geologist will monitor stockpile area with an OVM to determine if the soils are clean or may contain chemicals using the field head space method described in Section 02225.

Provide for a minimum of daily inspection, using an OVM, for air monitoring of the stockpile areas.

Provide for daily visual inspection to avoid dust problems.

### **3.5 STOCKPILE AREA SAMPLING AND TESTING**

Stockpiled material will be sampled by Project Engineer/Geologist from random locations at approximately 2 to 3 feet within the soil pile at a rate required by the selected disposal or recycling facility.

— End of Section —

**DIVISION 03**

**CONCRETE**

**SECTION 03300**

**CAST-IN-PLACE CONCRETE**

**PART 1 GENERAL**

**1.1 REFERENCES**

The publications listed below form a part of this section to the extent referenced:

**AMERICAN CONCRETE INSTITUTE (ACI)**

- |         |  |
|---------|--|
| ACI 315 | (1980) Details and Detailing of Concrete Reinforcement             |
| ACI 318 | (1989; 318R-89) Building Code Requirements for Reinforced Concrete |

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

- |            |  |
|------------|--|
| ASTM A 185 | (1990a) Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement     |
| ASTM A 615 | (1990) Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement  |
| ASTM C 143 | (1990) Standard Test Method for Slump of Hydraulic Cement Concrete                                 |
| ASTM C 260 | (1986) Standard Specification for Air-Entraining Admixtures for Concrete                           |
| ASTM C 309 | (1989) Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete            |
| ASTM C 39  | (1986) Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens             |
| ASTM C 405 | (1982; R 1987) Standard Practice for Estimating Consistency of Wet-Mixed Thermal Insulating Cement |
| ASTM C 494 | (1986) Standard Specification for Chemical Admixtures for Concrete                                 |

ASTM C 618	(1989a) Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 94	(1990) Standard Specification for Ready-Mixed Concrete  CORPS OF ENGINEERS (COE)
COE 204	(1977; Notice 24) Concrete (For Building Construction)
COE CRD-C 572	(1974) Polyvinylchloride Waterstops

## **1.2 GENERAL**

All work will be in accordance with ACI 318.

## **PART 2 PRODUCTS**

### **2.1 READY-MIX CONCRETE**

Concrete will be ready-mix concrete and will conform to ASTM C 94, minimum compressive strength 3000 psi at 28 days. Slump will be between 3 and 5 inches.

Air-entraining admixtures will conform to ASTM C 260.

Water-reducing admixtures, retarding admixtures, accelerating admixtures, water-reducing and accelerating admixtures, and water-reducing and retarding admixtures will conform to ASTM C 494.

Fly ash or other pozzolans used as admixtures will conform to ASTM C 618, Class C, F with 4 percent maximum loss on ignition and 20 percent maximum cement replacement by weight.

### **2.2 FORMS**

Forms will be of wood, steel, or other approved material and will conform to ACI 318.

Form release will conform to Corps of Engineers COE 204.

### **2.3 CHEMICAL FLOOR HARDENER**

Hardener will be a colorless aqueous solution containing a blend of magnesium fluorosilicate and zinc fluorosilicate combined with a wetting agent. Solution will contain not less than 2 pounds of

fluorosilicates per gallon. An approved proprietary chemical hardener may be used provided hardener is delivered ready for use in manufacturer's original containers.

Contractor will apply a chemical resistant coating such as Carboline 187 or equivalent concrete coating, to the surface of the treatment pad as per manufacturer's recommendations.

## **2.4 CURING COMPOUND**

Curing compound will conform to ASTM C 309.

## **PART 3 EXECUTION**

### **3.1 FORM WORK**

Form work will be in accordance with ACI 318.

#### **3.1.1 Preparation of Form Surfaces**

Forms will be true to line and grade, mortar-tight, and sufficiently rigid to prevent objectionable deformation under load. Form surfaces for permanently exposed faces will be smooth, free from irregularities, dents, sags, or holes. Exposed joints and exposed edges will be chamfered. Internal ties will be not less than 2 inches from concrete surfaces permanently exposed to view or exposed to water on the finished structure.

#### **3.1.2 Form Coating**

Forms for exposed surfaces will be coated with a nonstaining form release coating that will be applied shortly before concrete is placed. Forms for unexposed surfaces may be wetted in lieu of coating immediately before the placing of concrete, except that in freezing weather form release coating will be used.

#### **3.1.3 Removal of Forms**

Forms will be removed carefully to prevent damage to the concrete.

### **3.2 EMBEDDED ITEMS**

Before placing concrete, care will be taken to determine that all embedded items are firmly and securely fastened in place. Embedded items will be free of oil and other foreign matter such as loose coatings of rust, paint and scale. Embedding of wood in concrete will be permitted only when specifically authorized or directed.

### **3.3 CONCRETE CONVEYING**

Concrete will be conveyed from mixers to forms as rapidly as practical by methods that will prevent segregation or loss of ingredients.

### **3.4 CONCRETE PLACING**

#### **3.4.1 General Placing Requirements**

Concrete will be placed in accordance with ACI 318.

Concrete will be worked into the corners and angles of the forms and around reinforcement and embedded items without permitting the materials to segregate. Concrete will be placed within 90 minutes after it has been mixed. It will be placed on clean, damp surfaces free from water, ice, frost, mud, debris, or objectionable coatings. Concrete will be consolidated with the aid of mechanical vibrating equipment supplemented by handspading and tamping. Vibrating equipment will be of the internal type.

#### **3.4.2 Lifts in Concrete**

Concrete will be deposited in horizontal layers not to exceed 24 inches in thickness. The placement will be carried on at a rate that will prevent the formation of cold joints. Slabs will be placed in one lift.

### **3.5 FINISHING**

Defective concrete, voids left by the removal of tie rods, and ridges and local building on concrete surfaces permanently exposed to view or exposed to water on the finished structure will be repaired immediately after the removal of forms. Voids left by the removal of the tie rods will be reamed and completely filled with dry-patching mortar. Defective concrete will be repaired by cutting out the unsatisfactory material and placing new concrete secured with keys, dovetail, or anchors. Excessive rubbing of formed surfaces will not be permitted. Unformed surfaces of concrete exposed in the completed work will have a wood float finish without additional mortar and will be true to indicated elevations. Other surfaces will be brought to specified elevations and left true and regular.

### **3.6 CURING AND PROTECTION**

A trowel finish will be applied to slab surfaces that are to be exposed to view or covered with resilient flooring, paint, or other finish coating systems.

Final troweling will be started when a ringing sound is produced as trowel is moved over the surface. The surface will be consolidated by hand troweling operation. Finished surfaces will be free of trowel marks, uniform in texture and appearance, and plane to a tolerance not

exceeding ¼ inch in 10 feet when tested with a 10-foot straightedge placed on the surface in any direction. Surface defects of sufficient magnitude to show through floor covering will be removed by grinding.

### **3.7 CURING AND PROTECTION**

Concrete will be cured in accordance with ASTM C 405.

Curing will be accomplished by moist curing, by moisture-retaining cover curing, by membrane curing, or by combinations thereof.

Moist curing will be accomplished by keeping surface of concrete wet or by covering with absorptive cover saturated with water and kept wet.

Moisture-retaining cover curing will be accomplished by covering concrete surfaces with moisture-retaining cover for curing concrete.

Membrane curing will be accomplished by applying specified membrane-forming curing compound to damp concrete surfaces as soon as moisture film has disappeared.

Due to the subsequent application of a chemical resistant coating, such as Carboline 187 or equivalent, on the concrete slab, the curing of the concrete will be done in conformance with the recommendations of the concrete coating manufacturer.

### **3.8 FIELD TESTING**

Testing will conform to ASTM C 39. Quality control during construction will be done by Contractor and Project Engineer/Geologist. Testing will be performed at the rate of one set of three cylinders per placement.

Specimens will be tested for compressive strength at 7 days and at 28 days. Slump will be in accordance with ASTM C 143.

— End of Section —



**ATTACHMENT B**

**STRUCTURAL ENGINEERING EVALUATION LETTER FROM TIPPING-MAR &  
ASSOCIATES, AND GEOTECHNICAL EVALUATION FROM MILLER PACIFIC  
ENGINEERING GROUP**

504 Redwood Blvd.

Suite 220

Novato, California 94947

T 415 / 382-3444

F 415 / 382-3450

May 25, 2005  
File: 639-02altr

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato CA 94947-7021

Attn: Mr. Peter Gorman

Re: Geotechnical Evaluation  
Bay Center Apartments  
Emeryville, California

Introduction,

This letter summarizes our geotechnical review, evaluation and recommendations for the planned three LNAPL Collection Recovery Trenches at Bay Center Apartments in Emeryville, California. The purpose of our services is to review the provided documents<sup>123</sup> and identify geotechnical issues that may impact the project.

Based on our review of the exploratory borings from the soil report, subsurface conditions at the trenches are expected to be predominately medium stiff sandy clay. Within the sandy clay, there appears to be localized zones of loose clayey gravel, soft clays and possible old construction debris. The existing structure is supported on a deep reinforced concrete pile foundation system. The building columns are founded on a pile cap supported by 3 to 4 piles. Existing storm drains and sanitary sewer lines are present in the vicinity of the planned trenches. Based on our experience with similar projects, we have the following geotechnical recommendations.

- The expected soil conditions (medium stiff sandy clay) can likely be excavated with conventional equipment such as a backhoe or excavator. The clayey soil should maintain temporary (24-hours) stability without extensive shoring. If loose cohesionless soils are encountered and the sidewall stability cannot be maintained, the excavated material will be immediately backfilled and trench shoring will then be used.
- In order to maintain dry working conditions, temporary de-watering will likely be required for excavations below the groundwater level. Considering the permeability of the subsurface soils, the groundwater infiltration rate is expected to range from low to moderate.
- Construction personnel should not be allowed in the trench excavations without shoring. The Federal Occupational Safety and Health Administration (OSHA) has promulgated

<sup>1</sup> Hansen, Murakami, Eshima, Inc., "Bay Center Apartments, Bay Center Associates, Emeryville, California," Sheets S1-S4, S14, S15, S31, S32, M7, GA2-GA5, E1-E4, C3 and P2, dated June 19, 1987.

<sup>2</sup> Geomatrix, "Geotechnical Study, Bay Center Apartments, Emeryville, California," Project 1217A dated February 12, 1987.

<sup>3</sup> PES Environmental, Inc., "Free-Phase, Hydrocarbon Product Remediation Plan, Bay Center Apartments Phase 1, Christie Avenue and 64<sup>th</sup> Street, Emeryville, California," 241.055.01.005, March 2, 2005.


May 25, 2005

rules for Excavations, 29 CFR Part 1926, October 31, 1989. OSHA dictates allowable slope configurations and minimum shoring requirements based on categorized soil types. In conformance with OSHA's categorization, the soils at the project site are "Type C" soil. The contractor may elect to use a variety of shoring configurations, but his operations must conform to Federal and State OSHA regulations. Additionally, it should be made clear that the safety of excavations, slopes, construction operations, and personnel are the sole responsibility of the Contractor.

- To avoid conflicts with the foundation pile caps that support the interior columns, the trenches should be positioned at least 6 feet from most of the interior columns and 7 feet from interior Columns 19C and 19D. A continuous 2 foot wide grade beam supports the perimeter of the structure. Therefore, trenches should be at least 2 feet away from the building perimeter.
- Existing storm drain and sanitary sewer line in the vicinity of the trenches are roughly 5 to 7 feet below existing grade. Although details are not shown in the documents provided, the pipe bedding and possibly trench backfill for these utilities may be cohesionless material. To avoid raveling of the cohesionless material into the new excavations, we recommend at least a 3-foot separation between the new trenches and existing utility trenches.
- Any raveling of cohesionless material that results in a loss of support or void under the concrete slab will need to be backfilled with controlled density fill (CDF) to restore support.
- To minimize the potential for future settlement, the planned gravel backfill should be placed in layers not exceeding 18-inches and compacted with vibratory compaction equipment. We understand that controlled density fill (CDF) will be used to backfill the upper 18 inches of the trench. We recommend separation fabric between the gravel and CDF to minimize intrusion of the CDF into the gravel backfill.

Please call with any questions regarding our geotechnical recommendation or if we can be of further assistance.

Very truly yours,  
MILLER PACIFIC ENGINEERING GROUP



Scott Stephens  
Geotechnical Engineer No. 2398  
(Expires 6/30/05)

3 copies submitted

May 24, 2005

PES Environmental, Inc  
1682 Novato Blvd., Suite 100  
Novato, CA 94947

Attn: Peter Gorman

Re: Bay Center Apartments, Phase I, Slab Cuts  
Christie Ave  
Emeryville, CA  
TMA Job No. 2005,051.00

Dear Peter,

As requested, we have reviewed the proposed locations of the LNAPL Collection Recovery Trenches to be dug in the parking garage of the referenced apartment complex, and are providing sketches showing the recommended repairs to the existing slab on grade.

The locations of the trenches are shown on a drawing provided by your office entitled Site Plan-Detail, Plate 3, dated May 5, 2005. We understand there will be three trenches, each about 2' wide by about 35' long by about 14' deep, which will be dug with a back hoe.

The referenced apartment complex consists of four stories of wood frame construction located above a two story Type I parking garage. The garage is supported on driven pre-cast concrete piles tied together by concrete pile caps and a concrete slab on grade. The lateral system consists of multiple concrete shear walls supported on driven pre-cast concrete piles tied together with 24" square collector beams that were poured integrally with the slab on grade. The original drawings indicate the concrete slab on grade is 6" thick and reinforced with #4 bars spaced at 16" on center each way at mid-depth of the slab.

Of primary importance in locating the trenches is to ensure they do not cut through any of the pile caps or collector beams. A review of the proposed trench locations indicate that the locations do not interfere with the pile caps and collector beam, and therefore are acceptable from a structural engineering standpoint. One should also confirm the location of any utilities and sewer lines which run below the slab. It should also be noted that much of the site was previously used as a parking lot and that the existing slab on grade was poured directly on top of the asphalt paving.

Included for your use, are two sketches describing the repair of the existing slab on grade after completion of the trenching work.

Bay Center Apartments, Phase I, Slab Cuts  
Christie Ave  
Emeryville, CA

May 24, 2005  
page 2 of 2

Please call if you have any questions.

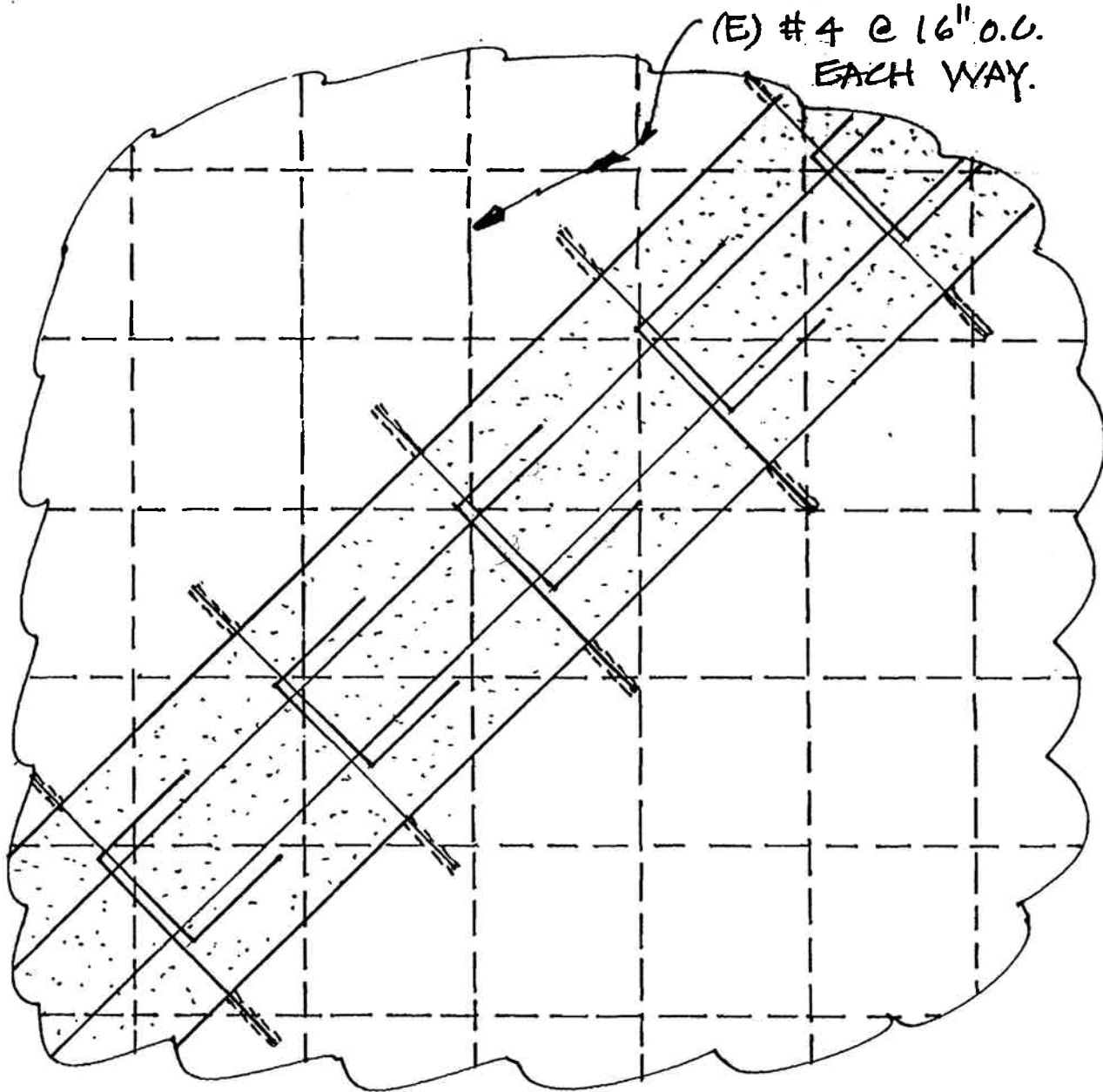
Sincerely,

Tipping Mar + associates

A handwritten signature in black ink that reads "Steven B. Tipping". The signature is written in a cursive style with a large, prominent "S" at the beginning.

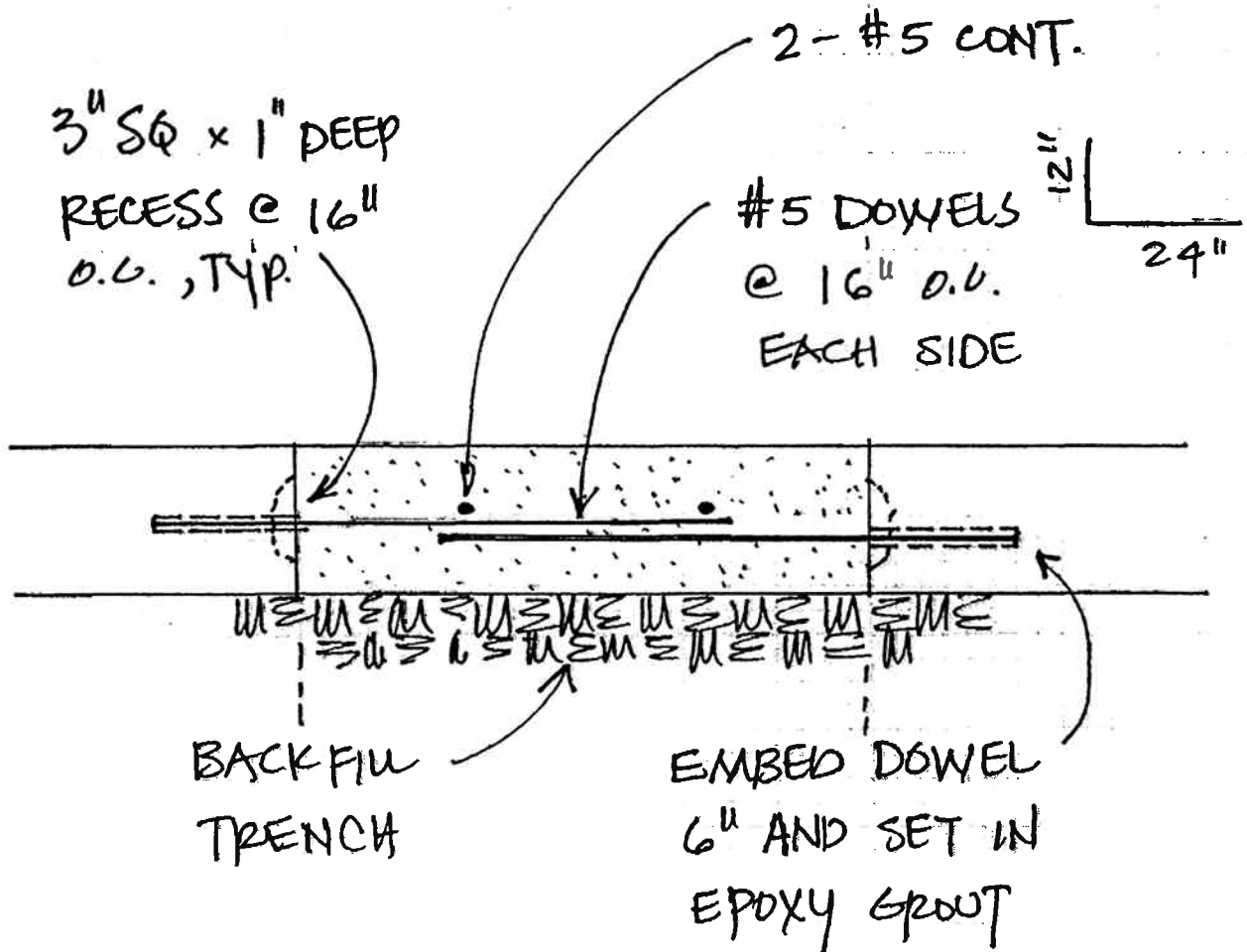
Steven B. Tipping SE  
President

2005-05-24 Letter.doc



PLAN VIEW OF SLAB SHOWING REBAR

$3/4" = 1'-0"$



SECTION @ SLAB INFILL

1/2" = 1'-0"

**ATTACHMENT C**

**BID FORM**



**ATTACHMENT C**

**BID FORM**

**TRENCH INSTALLATION  
EMERYBAY COMMERCIAL ASSOCIATION  
65TH AND CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

**FIXED COST TASKS:**

- |   |          |
|---|----------|
| 1. Obtain permits   | \$ _____ |
| 2. Job Site Safety Plan preparation and implementation  | _____    |
| 3. Mobilization/demobilization  | _____    |
| 4. Secured fencing, and bins for soil and concrete onsite storage   | _____    |
| 5. Sawcut, remove, and temporarily store in bins concrete slab debris (est. 180 ft <sup>2</sup> , est. 90 ft <sup>3</sup> ) | _____    |
| 6. Conventionally excavate up to 100 in-place yds <sup>3</sup> of soil (< 15 ft. deep)                                      | _____    |
| 7. Install three sumps in each of the three trenches with vaults  | _____    |
| 8. Backfill trench with gravel, geotextile and sand (with compaction test)  | _____    |
| 9. Concrete replacement (6 inches thick; 180 square feet)   | _____    |
| 10. Secured fencing and trench plates for excavation area   | _____    |
| 11. Contain in bins, transport, and dispose of up to 150 tons of soil as Class 2 non-hazardous waste                        | _____    |
| 12. Transport and dispose of est. 3.3 yds <sup>3</sup> (est. 7.5 tons) of concrete slab debris as non-hazardous waste       | _____    |
| 13. Excavation dewatering (10,000-gallon storage tank, hoses, and pumps)  | _____    |

**Total Fixed Cost (Class 2 non-hazardous waste):** \$ \_\_\_\_\_

**ALTERNATE COSTS (FOR ALTERNATIVE WASTE DISPOSAL METHOD)**

**Line Item 12:**

Contain in bins, transport, and dispose of up to 150 tons of soil as non-RCRA California hazardous waste (indicate facility: \_\_\_\_\_) \_\_\_\_\_

Contain in bins, transport, and dispose of up to 150 tons of soil as RCRA hazardous waste (indicate facility: \_\_\_\_\_) \_\_\_\_\_

**TIME-AND-MATERIALS AND UNIT COST TASKS**

Additional work, as needed per Project Engineer/Geologist direction (provide labor, equipment, materials and rate schedule on separate sheet)

**Unit Cost Tasks**

**Unit Cost (include labor, equip. & materials)**

Saw-cut, remove, dispose, and replace 6-inch thick concrete \$ \_\_\_\_\_/ft<sup>2</sup>

Excavate soil via conventional excavation techniques (include stockpiling) \$ \_\_\_\_\_/in-place cubic yard

Install PVC sump with traffic rated vault box \$ \_\_\_\_\_/sump

Backfill placement and compaction \$ \_\_\_\_\_/in-place cubic yard

**Other Requested Unit Costs**

**Unit Cost (include labor, equip. & materials)**

Hazardous (non-RCRA California Hazardous Waste) soil transportation and disposal (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Hazardous (RCRA Hazardous Waste) soil transportation and disposal (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Non-hazardous (Class 2) soil transportation and disposal (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Hazardous (non-RCRA California Hazardous Waste) concrete transportation and disposal (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Non-hazardous concrete transportation and disposal (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Non-hazardous concrete transportation and recycling (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/ton

Loading of concrete \$ \_\_\_\_/ton

**Groundwater Transport and Disposal Costs**

**Unit Cost (include labor, equip. & materials)**

Transport and disposal of groundwater to non-hazardous disposal facility (transportation of up to 5,000 gallons and per-gallon disposal cost) (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/truck plus \$ \_\_\_\_/gallon

Transport and disposal of groundwater to California hazardous disposal facility (transportation of up to 5,000 gallons and per-gallon disposal cost) (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/truck plus \$ \_\_\_\_/gallon

Transport and disposal of groundwater to RCRA hazardous waste disposal facility (transportation of up to 5,000 gallons and per-gallon disposal cost) (indicate facility: \_\_\_\_\_) \$ \_\_\_\_/truck plus \$ \_\_\_\_/gallon

**ATTACHMENT D**

**SERVICE AGREEMENT**

## SERVICE AGREEMENT

---

This **AGREEMENT**, between (insert contractor business name) ("Contractor") and PES Environmental, Inc., hereinafter referred to as "PES", is effective as of this (insert contract day) of (insert contract month), 2005. Contractor agrees to perform the Work set forth in this Agreement ("Services") for a fee as described herein, in accordance with the terms and conditions of this Agreement.

This **AGREEMENT**, consists of the following documents which are incorporated herein by reference:

- Attachment "A", Work to be Performed;
- Attachment "B", Compensation;
- Attachment "C", Insurance Requirements;
- General Conditions;
- Supplementary Conditions, if any;
- Typical Work Plan; and
- Other documents specifically listed below, or incorporated by reference in the listed documents.

This **PROJECT** is generally described as the Request for Bid, Trench Installation, Emery Bay Commercial Association and is more particularly described in the documents contained and incorporated into this Agreement.

The **PROJECT SITE** is located at Bay Center Apartments, Christie Avenue at 64<sup>th</sup> Street, Emeryville, California.

The **PROJECT ENGINEER** or **ENGINEER** is PES Environmental, Inc. ("PES"). The Engineer shall act as Owner's Agent and representative for purposes of administering this Agreement with Contractor.

This Agreement, including attachments incorporated herein by reference, represents the entire Agreement and understanding between the parties, and any negotiations, proposals or oral agreements are intended to be integrated herein and to be superseded by this Agreement. This Agreement may not be modified or altered, except by an Agreement in writing and signed by authorized representatives of both parties hereto, which specifically refers to this Agreement.

PES Environmental, Inc.

(insert contractor business name)

William F. Frizzell, P.E.

By \_\_\_\_\_

By \_\_\_\_\_

Principal Engineer / President

Title \_\_\_\_\_

Title \_\_\_\_\_

Signature \_\_\_\_\_

Signature \_\_\_\_\_

September 16, 2005

Date \_\_\_\_\_

Date \_\_\_\_\_

## **SERVICE AGREEMENT - ATTACHMENT A: WORK TO BE PERFORMED**

---

### **1. SERVICES:**

Contractor's Work will be as follows:

Completion of work described in:

## **SERVICE AGREEMENT - ATTACHMENT B: COMPENSATION**

---

### **1. CONTRACT PRICE**

Services will be provided by Contractor for a price in accordance with (insert contract bid document name) dated (insert bid document date) (copy attached) with Fixed Price Items totaling \$(insert fixed-price items subtotal), Unit Rate Items totaling \$(insert unit rate subtotal), and time-and-materials items not to exceed \$(insert time-and-materials estimate subtotal). The total contract price shall not exceed \$(insert total contract price).

### **2. INVOICES**

Contractor shall submit to Owner, with identical copy to Engineer, monthly progress billings for services performed. Reimbursable expenses, if any, shall be accompanied by copies of invoices, canceled checks, or other proof of payment. If requested by Owner or Engineer, Contractor's invoice shall be accompanied by a conditional waiver of any lien rights of Contractor and/or subcontractors.

### **3. PAYMENT**

Owner, unless disputed in good faith by Owner or Engineer, shall pay amounts invoiced by Contractor, within 90 days of receipt by Owner.

### **4. AUDIT**

Contractor shall make its books and records available to Owner or Engineer and provide such accounting data as is required to support Contractor's invoice.

### **5. FINAL PAYMENT**

Prior to receiving final payment, Contractor shall provide Owner and Engineer with valid releases of any lien claims of Contractor and any subcontractors, materialmen or suppliers. The making of final payment under this Agreement shall not operate as a release or waiver of any claims which Owner or Engineer may have against Contractor arising from Contractor's breach of any provision of this agreement, breach of warranty or any action in indemnity or tort.

## **SUBCONTRACTOR AGREEMENT - ATTACHMENT C: INSURANCE REQUIREMENTS**

### **1. INSURANCE**

Contractor shall, as a condition precedent to payment and at no additional cost, provide the insurances set forth in this section.

#### **1.1 Workers Compensation and Employer's Liability**

- Coverage A - Workers Compensation as required by law.
- Coverage B - Employer Liability of \$500,000 per accident and disease.

#### **1.2 General Liability**

Contractor shall maintain broad form comprehensive general liability insurance with a minimum combined single limit of \$2,000,000 per occurrence from inception of work through to three years after substantial completion. Such insurance shall include the following coverages:

- Premises - Operations Liability
- Independent Contractors Liability
- Completed Operations
- Blanket Broad Form Contractual Liability
- Personal Injury Liability
- Broad Form Property Damage Liability
- Blanket X, C and U coverage where applicable

#### **1.3 Automotive**

Comprehensive Automobile Liability Insurance covering all owned, hired or non-owned vehicles with a Combined Single Limit for Bodily Injury and Property Damage in the amount of \$1,000,000 per occurrence.

#### **1.4 Contractors Pollution Liability**

Contractor shall maintain construction pollution liability insurance with a minimum limit of \$2,000,000 per claim from inception of work through to three years after substantial completion.

#### **1.5 Additional Insured**

The following entities:

PES Environmental, Inc.

and the officers, directors, and employees of all of these entities shall be named as additional insureds to the General Liability policy required in section 1.2 and the Contractors Pollution Liability policy required in Section 1.4, as applicable. The additional insured endorsement shall provide that it is primary insurance to any and all insurance maintained by any additional insured.

#### **1.6 Insurance Certificates**

Prior to commencing work, and annually on the renewal date of any of the insurance required, Contractor shall provide Owner and Engineer with a certificate or certificates evidencing the insurances required by this Agreement. Such certificates shall provide that the coverages described shall not be canceled or terminated except with thirty (30) days written notice to Owner and Engineer. No payment shall be due Contractor for any work performed, or material delivered or installed, during a period or periods in which the insurance coverages required by this Agreement were not in effect.



## GENERAL CONDITIONS

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### 1. DEFINITIONS

**1.1 Change Directive:** A written or verbal directive, issued by Engineer, modifying the scope of work to be performed and the time of performance.

**1.2 Change Order:** A written Agreement between Owner and Contractor, executed after the inception date of this Agreement, which modifies the Scope of Work, the Contract Price, the Contract Time, or all of them.

**1.3 Contract Documents:** Plans, specifications, and Agreements between Owner and Contractor, including addenda, amendments, Change Directives, and Change Orders.

**1.4 Contract Time:** The time between issuance of the Notice to Proceed and Substantial Completion of the Work.

**1.5 Day(s):** All time in this Agreement is computed on the basis of calendar days, unless otherwise specifically noted.

**1.6 Execute, Issue, Order or Direct:** Whenever used in this Agreement refers to actions or directives of Engineer acting always as the agent for the Owner.

**1.7 Governmental Agencies:** All federal, state and local agencies having jurisdiction over the Project.

**1.8 Hazardous Materials:** Hazardous Materials - The term Hazardous Materials shall mean any toxic substances, chemicals, pollutants or other materials, in whatever form or state, including, but not limited to smoke, vapors, soot, fumes, acids, alkalis, minerals, toxic chemicals, liquids, gasses or any other material, irritant, contaminant or pollutant, that is known or suspected to adversely affect the health and safety of humans or of animal or plant organisms, or which are known or suspected to impair the environment in any way whatsoever and shall include, but not be limited to, those substances defined, designated or listed in Section 4004 of the Solid Waste Disposal Act (42 USC § 6903); Section 9601(14) of the Comprehensive Environmental Response, Compensation and Liability Act (42 USC § 9601(14)); as listed or designated under Sections 1317 and 1321(b)(2)(a) of the Title 33 (33 USC §§ 1317 and 1321(b)(2)(a) or as defined, designated or listed under any other federal, state or local law, regulation or ordinance concerning hazardous wastes, toxic substances or pollution.

**1.9 Laws and Regulations:** Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

**1.10 Notice to Proceed:** A written notice from Owner or Engineer to Contractor authorizing it to proceed pursuant to this Agreement.

**1.11 Request for Proposal (RFP):** A written request issued by Engineer, on Owner's behalf, for an offer to perform the Work described in the RFP.

**1.12 Substantial Completion:** The date upon which all tasks comprising the Contractor's Work (as described in the attached documents, including Attachment B of the Request for Bid letter) have been completed to Project Engineer's satisfaction.

**1.13 Work:** The labor, materials, equipment and services required to complete the work described in the Contract Documents (also referred to herein as Services).

### 2. CONTRACTOR'S RESPONSIBILITIES

#### 2.1 Licenses

Prior to submitting its bid, Contractor shall have obtained all necessary licenses and permits required for performing the Work.

## **GENERAL CONDITIONS**

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### **2.2 Supervision and Superintendence**

Contractor shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, and procedures of construction. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Project Site and shall have authority to act on behalf of Contractor. All communications to the superintendent shall be as binding as if given to Contractor.

### **2.3 Subcontractors**

Contractor shall be fully responsible for all acts and omissions of the Subcontractors, Suppliers, Transporters and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between Owner and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner to pay or to see to the payment of any monies due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, Transporters and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor. Contractor shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with Engineer through Contractor.

All Work performed for Contractor by a Subcontractor, Supplier, or Transporter will be pursuant to an appropriate Agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner.

### **2.4 Transportation of Hazardous Materials**

All Transporters of Hazardous Materials engaged by Contractor shall be reputable, experienced and fully licensed for the transportation of such Hazardous Materials. Contractor shall require, by contract with such Transporters, that they comply with all federal, state and local statutes, codes, ordinances and regulations regarding the transport of such Hazardous Materials. Hazardous Materials transferred pursuant, or incident to this Agreement, shall be transferred to storage, treatment or disposal facilities duly licensed to receive such Hazardous Materials. If required by the Contract Documents, the Hazardous Materials shall be transported only to the facilities specified in the Contract Documents.

All Hazardous Materials transported shall be in appropriate closed containers or otherwise protected from inadvertent loss, spillage, emission or illegal discharge or disposal during transportation, including loading and unloading. Containers shall be labeled in accordance with any and all federal, state and local statutes, codes, ordinances and regulations regarding the transport of such Hazardous Materials and shall clearly designate their contents.

Contractor shall require, by contract, that all Transporters of Hazardous Materials maintain insurance coverage for personal injury, bodily injury, property damage and environmental impairment arising from any loss, spillage, emission or illegal discharge or disposal of Hazardous Materials during transportation, including loading and unloading. Contractor shall further require that Owner and Engineer be named additional insureds on such policies, and that Certificates of Insurance indicating the existence and extent of coverage be provided to Owner and Engineer prior to any transport of Hazardous Materials.

## **3. SITE CONDITIONS**

### **3.1 Site Inspection**

Prior to entering into this Agreement, Contractor shall inspect the Project Site to determine the conditions under which the Work is to be performed. Failure by Contractor to inspect the Project Site shall waive any claim Contractor may have arising from site conditions that could have been observed or detected by Contractor had it performed a Site Inspection.

## **GENERAL CONDITIONS**

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### **3.2 Reliance on Data**

Contractor's reliance on data developed or acquired by Owner or Engineer for the purpose of site characterization, risk assessment, remedial feasibility studies, remedial design, and preparation of the Contract Documents is limited as follows:

- Contractor may assume that physical measurements were accurate as of the date and time the measurements were taken;
- Contractor may not assume that the measurements fully or completely characterize the conditions to be encountered during performance of the Work;
- Contractor may not rely upon any conclusions, descriptions or characterizations set forth in any studies or reports as they were not prepared for, nor intended to be used by, Contractor.

### **3.3 Differing Site Conditions**

Contractor shall provide Engineer, within three working days, with notice of conditions which differ materially from those shown or indicated in the Contract Documents or which are unusual in nature, and differ materially from those ordinarily encountered in work similar to that being performed under this Agreement. Within five working days after providing Engineer with notice of Differing Site Conditions, Contractor shall prepare a proposed change order indicating any increases or decreases in Contract Price or Contract Time caused by the differing site condition. Engineer shall review the proposed change order, and if not in agreement with Contractor, may proceed in accordance with Paragraph 8, "Changes".

## **4. PRE-CONSTRUCTION CONFERENCE**

Prior to commencing Work, Contractor shall attend a pre-construction conference to discuss the nature of the Work to be performed. Contractor shall be represented by the superintendent who will be in responsible charge and will personally direct Contractor's work.

## **5. SCHEDULING**

### **5.1 Work Schedule**

The Project Engineer shall prepare a Project Schedule, which shall generally indicate the order and time frame in which it is expected that Contractor's work will be performed. Within two (2) days after receipt, Contractor shall advise the Engineer of any difficulties it may have in performing its work within the order and time frame allotted. Contractor understands that the date of commencement of its work may be dependent upon work performed by others and that Owner and Engineer do not warrant or guarantee that the work will be performed on the dates, or in the exact sequence set forth in the Project Schedule.

### **5.2 Submittal Schedule**

Within five (5) days of receiving a Notice to Proceed from Engineer, Contractor shall provide to Engineer copies of safety training certificates for project staff, certificates of insurance, and any other relevant submittals, including a Job Site Safety Plan as required under Section 6.

### **5.3 Coordination between Contractors**

Contractor understands that it may be required to share the Project Site with other contractors and to perform its work in logical sequence to the work performed by such contractors. Contractor shall meet with the other contractors to coordinate their use of the project site and the sequencing of the work.

## **6. SAFETY**

Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

- all persons on the Work site or who may be affected by the Work;
- all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

## **GENERAL CONDITIONS**

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Contractor shall comply with all applicable Laws and Regulations applicable to safety of persons or property or to protect them from damage, injury or loss; and shall erect, install and maintain all necessary safeguards for such safety and protection and shall provide its employees and the employees of its subcontractors with all necessary protective clothing, masks or other safety equipment necessary for their safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.

Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed.

In addition to the aforementioned safety requirements, Contractor shall prepare and implement a Job Site Safety Plan for Contractor's personnel and its subcontractors in accordance with HAZWOPER regulations contained in Title 29, Code of Federal Regulations (29 CFR) Section 1920.120. Contractor shall be solely responsible for preparing and implementing the Job Site Safety Plan for its personnel and its subcontractors' personnel working at the Project Site. Contractor shall provide a copy of the Job Site Safety Plan to Engineer in accordance with Section 5.2.

### **6.1 Safety Training**

Contractor shall provide its employees and any employees of its Subcontractors who will be working on a Hazardous Material site, or who may come in contact with Hazardous Materials, with adequate training to protect such employees from exposure to Hazardous Materials. Contractor shall provide with Proof of Completion of such course by each such employee certifying that the training course conforms to the requirements of 29 CFR 1920.120 et seq. and the requirements of any similar Federal or state-mandated safety program.

### **6.2 Medical Screening**

If required by the Special Conditions, or by any federal, state or local statute, regulation or ordinance, Contractor shall arrange for, and shall keep records of medical examinations of employees working on a Hazardous Material site, or who may come in contact with Hazardous Materials. Such examinations shall be conducted prior to the employee commencing work on this Project, after the employee has completed all of his or her work on the Project, and at such times as may be reasonably necessary during the project to monitor for exposure to Hazardous Materials.

Contractor shall have available at the Project Site such medical equipment and trained personnel to immediately respond and treat persons exposed to Hazardous Materials.

### **6.3 Safety Representative**

Contractor shall designate a qualified and experienced safety representative at the Project Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

### **6.4 Hazard Communication Programs**

Contractor shall be responsible for obtaining, maintaining and coordinating any exchange of Material Safety Data Sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in accordance with Laws or Regulations.

### **6.5 Emergencies**

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Owner or Engineer, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Engineer and Owner prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Engineer or Owner determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Change Order will be issued to document the consequences of such action.

## **7. OBSERVATIONS AND TESTING**

In its sole discretion, Engineer may require that Contractor submit the Work, or any portion thereof, to observation and testing in addition to that required by the Contract Documents, including requiring that Work be uncovered for observation or testing. Should the work observed, tested or uncovered be found not to meet the Contract Documents, Contractor shall pay the costs of observation, testing and/or uncovering of the work in addition to remedying any deficiency or replacing the work. If the work observed, tested or uncovered conforms to the Contract Documents, then the costs of observation, testing and/or uncovering of the work shall be paid by Owner.

## GENERAL CONDITIONS

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### 8. CHANGES

Engineer, in its sole discretion, may order changes in the Work and Services to be performed by Contractor including, but not limited to, additional work, changes in work scope, changes in schedule and time of completion and changes in deliverables or form of deliverables. All changes will be by written Change Order. Except as otherwise specifically stated in the Change Order, all work or services to be performed under the Change Order shall be conformance with the terms and conditions of this Agreement.

If Contractor and Engineer cannot agree upon the terms of the Change Order, Engineer can withdraw the Change Order request, or may issue a Change Directive ordering that the work and services be performed for the increased or decreased time and compensation as estimated by Engineer. The difference between Engineer's estimates and the terms of Contractor's offer to perform the work and services shall be deemed a dispute to be resolved under Paragraph 13, "Dispute Resolution". During the resolution of the dispute, Owner shall pay all amounts due under the Change Directive, and Contractor shall perform all work required by the Change Directive.

### 9. DELAYS

#### 9.1 Delays Due to Abnormal Weather Conditions

Contractor should consider foreseeable weather conditions in preparation of his Construction Schedule. No extension in the Project Completion Date due to weather conditions is permitted unless such weather conditions were abnormal for the time period in which the impacted work was performed, and the delay to such work affected the critical path for Contractor's work, as a whole. Weather conditions are "abnormal" if they are more severe than  $\pm$  one standard deviation from the last twenty, or if twenty years data is not available, the last ten years of recorded weather data at the nearest officially recorded weather station. The extension of the Project Completion Date is the sole remedy for delays due to abnormal weather conditions.

Within seven (7) days after the initial occurrence of delays due to abnormal weather, Contractor shall request, in writing, an extension of the Project Completion Date. The request shall include the number of days requested, provide an analysis of the impact of the weather delays on the critical path of Contractor's work, and shall include the ten year or twenty-year weather records of the nearest official weather recording station for the month or months in which the delay occurred.

#### 9.2 Delays Due to Causes Outside the Control of Contractor

Delays due to acts, errors, or omissions of persons or entities other than Contractor, its subcontractors and suppliers or other persons under Contractor's control, and which could not be anticipated by Contractor, justify an extension in the Project Completion Date, provided that such delays affect the critical path of Contractor's work, as a whole. Within seven days after the initial occurrence of delays outside the control of Contractor, Contractor shall submit a written request for extension of the Project Completion Date. The request shall include the number of days requested, a description of the occurrence which resulted in the delay, and an analysis of the impact of the occurrence on the critical path of Contractor's work.

### 10. INDEMNIFICATION

To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the following entities:

EmeryBay Commercial Association

PES Environmental, Inc., and

PES' Project consultants

and the officers, directors, and employees of any of them, from and against any and all claims, damage, or liability arising from, or related to, Contractor's performance of any of the obligations of this Agreement, including, but not limited to, any claims for bodily injury, sickness, disease or death of any employee of Contractor or its Subcontractors.

## **GENERAL CONDITIONS**

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### **11. WARRANTIES**

Contractor warrants for a period of two years from Substantial Completion, that its work, the work of its Subcontractors, and any and all materials, equipment or supplies supplied by it or its Subcontractors and which forms a part of the completed Work shall be free from defects and fit for its intended purposes. Prior to final payment, Contractor shall provide Engineer with any warranties or guarantees provided by equipment manufacturers or other suppliers.

### **12. TERMINATION AND SUSPENSION**

#### **12.1 Termination for Convenience**

Owner, for its convenience, may in its sole discretion terminate the Agreement in whole or in part at any time by written notice to Contractor, which shall state the extent and effective date of such termination. On the effective date thereof, Contractor shall (a) stop all Work and place no further orders or subcontracts, (b) terminate work orders and subcontracts outstanding, (c) take any necessary action to protect property in its possession in which Owner has or may acquire an interest, and (d) take any other action which Engineer may direct. Owner shall reimburse Contractor for those costs necessarily incurred by Contractor because of the termination, provided, however, that the total amount to be paid to Contractor shall not exceed the total contract price.

#### **12.2 Termination for Cause**

If Engineer, in its sole discretion, determines that Contractor is failing to perform properly the Work or maintain the schedule in accordance with the conditions or provisions of this Agreement, Engineer shall require Contractor to remedy such default within three (3) days after receipt of written notice of default from Engineer, time being of the essence. If Contractor fails to cure the default conditions, or provide satisfactory evidence to Engineer that such default will be corrected, Owner may at its option, terminate this Agreement. Owner shall have the right to complete the Work by whatever method Owner, in its sole discretion, deems expedient, including employing another Contractor to re-perform or complete the Work. The expense of so completing the Work shall be deducted from any amounts due Contractor. If such expense exceeds the sum which otherwise would have been payable under this Agreement, the Contractor shall be liable for, and upon notice from Owner shall promptly pay Owner the amount of the excess. The obligations of the parties to indemnify established under this Agreement shall survive expiration of termination of this Agreement.

No waiver of the breach of any of the terms or provisions of this Agreement shall be, or be construed to be, a waiver of any preceding or succeeding breach of the same or any other provision hereof.

#### **12.3 Suspension**

Owner, for its convenience, may in its sole discretion suspend the Work in whole or in part at any time by written notice to Contractor, which shall state the extent and effective date of such suspension. On the effective date thereof, Contractor shall (a) stop all work and place no further orders or subcontracts, (b) suspend work orders and subcontracts outstanding, (c) take any necessary action to protect property in its possession in which Owner has or may acquire an interest, and (d) take any other action which Engineer may direct. Owner shall reimburse Contractor for those costs necessarily incurred by Contractor because of the suspension, provided, however, that the total amount to be paid to Contractor shall not exceed the total contract price. Within ninety (90) days of the notice of suspension, Owner may require Contractor to resume services under this Agreement, save that the Contract Price shall be adjusted to compensate Contractor for costs incurred in suspending and resuming services, and the Contract Time shall be extended by the length of suspension.

### **13. DISPUTE RESOLUTION**

#### **13.1 Exhaustion of Remedies Required**

No action may be filed unless the procedures set forth in this section have been fully complied with and all dispute resolution procedures exhausted. In the event that any action is initiated prior to exhaustion of these dispute resolution procedures, any court of competent jurisdiction shall issue an order staying or dismissing such action until all dispute resolution procedures have been complied with.

#### **13.2 Scope of Clause**

The dispute resolution procedures of this section shall apply to any and all disputes between Owner and Contractor which arise from, or in any way are related to this Agreement, including, but not limited to the interpretation of this Agreement, the enforcement of its terms, any acts, errors or omissions of Contractor in the performance of this

## **GENERAL CONDITIONS**

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Agreement or any dispute between Contractor and Owner concerning the amounts owed Contractor for performance of services.

### **13.3 Notice of Dispute**

Within ten (10) days of occurrence of any incident, action, or failure to act upon which a claim is based, the party seeking relief shall serve the other party with a written notice specifying the nature of the relief sought, the amount of relief sought, a description of the reason relief should be granted, and a citation of the appropriate portions of this Agreement that authorize the relief requested.

### **13.4 Meet and Confer**

Within ten (10) days of receipt of the Notice of Dispute, the parties shall meet and confer in a good faith attempt to resolve the dispute. Participants in the meet and confer must include the Chief Executive Officer(s) of each firm. Attorneys representing the parties may not be present at this meeting.

If an Agreement is reached resolving the dispute, the parties shall immediately execute an addendum to this Agreement setting forth the terms of their Agreement.

### **13.5 Facilitated Mediation**

If no Agreement is reached, or if the Agreement does not resolve all of the issues encompassed by the Notice of Dispute, either party may request facilitated mediation. A written Request for Mediation shall be served upon the other party within ten (10) days after the Meet and Confer meeting.

Within thirty (30) days of the service of the Request for Mediation, unless the parties agree in writing to extend such time, the parties shall participate in a mediation facilitated by an independent third party. Principals of each party with authority to resolve the dispute shall attend the mediation and may be represented or assisted by legal counsel. The costs of mediation shall be borne equally. In the event that third parties participate in the mediation, the costs shall be borne on a per capita basis.

Within ten (10) days after the service of the Request for Mediation, the parties shall confer to select an independent mediator. If the parties cannot agree on a mediator, then the parties shall request that the American Arbitration Association, at its office closest to the Project Site, provide the parties with a list of construction mediators utilized by that organization. If the claimed amount of the dispute exceeds \$250,000, the mediation panel shall be chosen from the American Arbitration Association's Large and Complex Construction Case panel. Within seven days after mailing of the list, each party may strike mediators, in writing, in accordance with the following formula.

$$\text{Challenges} = (\text{Mediators} - 1) / \text{Parties}$$

Where Mediators is the number of mediators on the list and Parties is the number of parties to the mediation, the number of mediators which may be stricken by a party shall be rounded down to the nearest whole number.

Once the American Arbitration Association has received the list of mediators to be stricken, it shall appoint a mediator from those mediators remaining on the list.

If an Agreement is reached resolving the dispute, the mediation shall be transformed into a binding arbitration and the mediator appointed as arbitrator for the purpose of issuing an arbitration award setting forth the Agreement of the parties. The arbitration award shall be binding upon the parties and enforceable in any court of competent jurisdiction. Each party shall bear its own costs and attorneys' fees arising out of the mediation.

### **13.6 Non-admissibility and Confidentiality**

The Meet and Confer and the Facilitated Mediation are conducted under the provisions of California Evidence Code section 1152 and 1152.5 or any similar statute or rule providing that evidence may not be introduced at any later proceeding of any communication, statement, document provided, expert opinion, expert report or offer to compromise unless such was made, provided or disclosed outside of, and not in connection with, the Meet and Confer or Facilitated Mediation. Under no circumstances may the mediator, or any documents created or maintained by the mediation, be subpoenaed, nor shall the mediator testify in any subsequent proceedings.

All communications, statements, documents provided, expert opinions, expert reports or offers to compromise are confidential and may not be disclosed without the written consent of the party making the statement or offering the information.

# GENERAL CONDITIONS

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## 13.7 Cross-claims

If a party contends that all or part of a claim described in the Notice of Dispute is offset by a cross-claim, or if a party contends that it has a claim which arises out of the same facts upon which the Notice of Dispute is based, the party must, within seven (7) days after receipt of the Notice of Dispute, provide a written Notice of Cross-claim setting forth the same information as required in a Notice of Dispute. The cross-claim shall be resolved in the Meet and Confer or the Facilitated Mediation in the same manner as the claim described in the Notice of Dispute.

Any Agreement reached in the Meet and Confer or the Facilitated Mediation shall bar the later assertion in any action, arbitration or other proceeding of any cross-claim which was required to be asserted by this section unless the parties' written resolution Agreement explicitly reserves such cross-claim.

## **14. MISCELLANEOUS**

### 14.1 Assignment

This Agreement may not be assigned without the express written Agreement of the parties. Nothing in this paragraph shall prohibit Contractor retaining Subcontractors to perform parts of the work, nor the assignment of accounts receivable for financing purposes.

### 14.2 Patent Fees and Royalties

Contractor warrants that none of the plans, specifications, materials, ideas or other deliverables supplied by it under this Agreement infringe upon any patent or copyright. Further, Contractor agrees to defend, indemnify, and hold harmless Owner and Engineer, their officers, directors, shareholders, subsidiaries and parent organizations, and each of them, from and against any and all claims, damages, injunctions, equitable proceedings or liability arising from, or alleged to have arisen from, any infringement of patent or copyright with regard to any plans, specifications, materials, ideas or other deliverables supplied by Contractor under this Agreement.

### 14.3 Remedies Cumulative

The remedies granted in this Agreement are cumulative to any other remedies available at law.

### 14.4 Attorneys' Fees

If any action or arbitration or other proceeding is commenced to enforce any of the terms of this Agreement, the performance thereof, or of any other judgment embodying any of its provisions, the prevailing party shall be awarded reasonable attorneys' fees, costs and expenses in addition to any other relief granted.

### 14.5 Notices

All notices required under this Agreement may be delivered by hand, or may be sent, first class mail, return receipt requested, at the addresses listed below. The address of a party may be changed by notice sent or delivered in accordance with this section.

To Owner:

EmeryBay Commercial Association  
100 Bush Street, 26th Floor  
San Francisco, California 94104

With copy to Engineer:

PES Environmental, Inc.  
Attention: Carl Michelsen  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947

To Contractor:

XXXXXXXX

Attention: XXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX



## **GENERAL CONDITIONS**

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### **14.6 Controlling Law**

This Agreement shall be subject to, interpreted and enforced according to the laws of the State of California. If any part of this Agreement shall be held illegal, unenforceable, void or voidable by any court of competent jurisdiction, each of the remainder of the provisions shall nevertheless remain in full force and effect as a separate contract and shall in no way be affected, impaired or invalidated.

### **14.7 Entire Agreement**

This Agreement, including attachments incorporated herein by reference, represents the entire Agreement and understanding between the parties, and any negotiations, proposals or oral Agreements are intended to be integrated herein and to be superseded by this Agreement.

This Agreement may not be modified or altered, except by an Agreement in writing and signed by authorized representatives of both parties hereto, which specifically refers to this Agreement.

**END OF GENERAL CONDITIONS**

**APPENDIX B**

**ALAMEDA COUNTY ENVIRONMENTAL HEALTH SERVICES  
APPROVAL LETTER**



January 9, 2006

Ms. Cathy Greenwold  
EmeryBay Commercial Association  
100 Bush St., 26<sup>th</sup> Floor  
San Francisco, CA 94104

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

Dear Ms. Greenwold:

Subject: Toxics Case RO0002799, Garrett Freight Lines / Bay Center, 64th & LaCoste, Emeryville, CA 94608

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the subject site and met with PES Environmental to discuss their *March 7, 2005 Free-Phase Hydrocarbon Product Remediation Plan EmeryBay Commercial Association Christie Avenue and 64<sup>th</sup> Street Emeryville, California* work plan. It appears that both the San Francisco Regional Water Quality Control Board (SFRWQCB) and our office have had oversight of this site in the past and currently our office has been delegated sole oversight. At one time there were twelve (12) underground storage tanks on the property known as Garrett Freight Lines, which was bordered by LaCoste, Bay, 64<sup>th</sup> and 65<sup>th</sup> Streets in Emeryville. The tanks were removed, contamination was observed, some groundwater remediation occurred, as did several subsurface investigations, which involved monitoring well and temporary boring installations. Ultimately, the Bay Center Apartments, Phase I and Phase II and office buildings were built on the site. The status of the environmental investigation appears to be still in question at this time. Minimally, free petroleum product is known to exist near the former tank pit beneath Bay Center Apartments Phase I. The referenced PES remediation plan intention is to address this issue. The proposal, which is modified from the March 7, 2005 plan, proposes the installation of three (3) product collection and recovery trenches each with three sumps for free product removal. Initially, free product will be removed manually, but the extraction system will be capable of being modified to accommodate automated aggressive free product removal, as needed. Our office approves the remediation plan and considers this work as interim remedial action.

We believe that after this remediation has started, you should address what is required to progress this site towards case closure. A first step towards this would be preparing a site summary that documents the history of work, which has occurred and then meeting for discussion. Please contact our office to set up such a meeting.

#### ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program

ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at [barney.chan@acgov.org](mailto:barney.chan@acgov.org).

#### PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

Ms. Cathy Greenwold  
January 9, 2006  
Page 3 of 3

If you have any questions, please call me at (510) 567-6765.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: files, D. Drogos

✓ Mr. Carl Michelsen, PES Environmental, Inc., 1682 Novato Blvd., Suite 100,  
Novato, CA 94947-7021

1\_9\_06 R02799

**APPENDIX C**

**CITY OF EMERYVILLE BUILDING DIVISION APPROVAL**

John Vails  
925 580 4899

**BUILDING DEPARTMENT**

CITY OF EMERYVILLE

Date: 4-11-06 Lot No. \_\_\_\_\_

BUILDING PERMIT NO. 0512-503 BP

Address 64d Shellwound St. - Ewen Bay Apts

Work install (3) product collection & recovery  
troughs within parking garage

Owner TMG Partners

Cornerstone Environmental Contractors, Inc  
Builder or Contractor

By Curtis Smith City Inspector

DO NOT CONCEAL ANY WORK UNTIL INSPECTED  
AND APPROVED BY THE BUILDING INSPECTOR.

	DATE	INSP.
Piers & Setbacks		
Forms		
Foundation		
Slab		
Sub-Floor		
Ground Plumbing		OK
Ground Electrical		
Sub-Floor Insulation		
Shear Nailing		
Sewer		
Water		106
Roof Sheathing		
Rough Electrical		
Rough Plumbing		
Rough Mechanical		
Frame		
Exterior Lathe		
Insulation		
Drywall		
Gas Test		
Final Electrical		
Final Plumbing	6/27/06	HRV
Final Building	6/27/06	HRV
Fire Sprinkler		
Fire (Other)		
PARTIAL ON TRENCH A OK	4/15/06	HRV
PARTIAL ON A&B OK	4/20/06	HRV
THIRD PLACEMENT OK	4/25/06	C. Smith
READY TO POUR AFTER REBAR INSPECTION	4/27/06	HRV
REBAR OK TO POUR	5/1/06	HRV

FOR INSPECTIONS CALL (510) 596-4315  
24 HRS. PRIOR TO INSPECTION

FOR FIRE INSPECTION CALL (510) 596-3759

EMERYVILLE BUILDING PERMIT

CITY OF EMERYVILLE, 1333 PARK AVENUE, EMERYVILLE, CA 94608 (510) 596-4310 FAX (510) 658-8095

SITE ADDRESS: 6401 Shellmound St  
Emergy Bay Commercial Assoc.  
 Property Owner: c/o TMG Partners  
 Address: 100 Bush St., 26th Floor  
 City, State, Zip: San Francisco, CA 94104  
 Phone: 415-772-5900 Fax: 415-772-5911  
 Engineer Architect: PES Environmental, Inc.  
 Address: 1682 Novato Blvd., Suite 100  
 City, State, Zip: Novato, CA 94947  
 Phone: 415-899-1600 Fax: 415-899-1601

Contractor: Concrete Environmental Contractors, Inc.  
 Address: 3527 Mt. Diablo Blvd., Suite 290  
 City, State, Zip: Lafayette, CA 94549  
 Phone: 925-299-9225 Fax: 925-299-9418

LICENSED CONTRACTOR'S DECLARATION  
 I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT I AM LICENSED UNDER PROVISIONS OF CHAPTER 9 (COMMENCED WITH SECTION 7000) DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE, AND MY LICENSE IS IN FULL FORCE AND EFFECT.  
 LICENSE CLASS: A NAZ LICENSE NO: 722253  
 EXP: 5-31-06 SIGNATURE: [Signature]

OWNER BUILDER DECLARATION:  
 I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT I AM EXEMPT FROM THE CONTRACTOR'S LICENSE LAW FOR THE FOLLOWING REASON (SEC. 7031.5, BUSINESS AND PROFESSIONS CODE): ANY CITY OR COUNTY WHICH REQUIRES A PERMIT TO CONTRACT, ALTER, IMPROVE, DEMOLISH, OR REPAIR ANY STRUCTURE, MAKE TO ITS INFLUENCE, ALSO REQUIRES THE APPLICANT FOR SUCH PERMIT TO FILE A WRITTEN STATEMENT THAT HE OR SHE IS LICENSED PURSUANT TO THE PROVISIONS OF THE CONTRACTOR'S LICENSE LAW (CHAPTER 9 (COMMENCED WITH SEC. 7000) OF DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE) OR THAT HE IS EXEMPT THEREFROM AND THE BASIS FOR THE ALLEGED EXEMPTION. ANY VIOLATION OF SECTION 7031.5 BY ANY APPLICANT FOR A PERMIT SUBJECTS THE APPLICANT TO A CIVIL PENALTY OF NOT MORE THAN FIVE THOUSAND DOLLARS (\$5000).  
 I, AS OWNER OF THE PROPERTY, OR MY EMPLOYEE WITH WHOM AS THEIR SOLE COMPENSATION, WILL DO THE WORK, AND THE STRUCTURE IS NOT INTENDED OR OFFERED FOR SALE (SEC. 7044, BUSINESS AND PROFESSIONS CODE). THE CONTRACTOR'S LICENSE LAW DOES NOT APPLY TO AN OWNER OF PROPERTY WHO BUILDS OR IMPROVES THEREON, AN WHO DOES SUCH WORK HIMSELF OR THROUGH HIS OWN EMPLOYEE, PROVIDED THAT SUCH IMPROVEMENTS ARE NOT INTENDED OR OFFERED FOR SALE. IF, HOWEVER, THE BUILDING OR IMPROVEMENT IS SOLD WITHIN ONE YEAR OF COMPLETION, THE OWNER-BUILDER WILL HAVE THE BURDEN OF PROVING THAT HE DID NOT BUILD OR IMPROVE FOR THE PURPOSE OF SALE.  
 I, AS OWNER OF THE PROPERTY, AM EXCLUSIVELY CONTRACTING WITH LICENSED CONTRACTORS TO CONSTRUCT THE PROJECT. (SEC. 7044, BUSINESS AND PROFESSIONS CODE). THE CONTRACTOR'S LICENSE LAW DOES NOT APPLY TO AN OWNER OF PROPERTY WHO BUILDS OR IMPROVES THEREON, AND WHO CONTRACTS FOR EACH PROJECT WITH A CONTRACTOR(S) LICENSED PURSUANT TO THE CONTRACTOR'S LICENSE LAW.  
 I AM EXEMPT UNDER SEC. \_\_\_\_\_ B & P. C. FOR THE REASON \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ EXP: \_\_\_\_\_

WORKERS COMPENSATION DECLARATION:  
 I HEREBY AFFIRM UNDER PENALTY OF PERJURY ONE OF THE FOLLOWING DECLARATIONS:  
 I HAVE AND WILL MAINTAIN A CERTIFICATE OF CONSENT TO SELF-INSURE FOR WORKERS' COMPENSATION, AS PROVIDED FOR BY SECTION 3700 OF THE LABOR CODE, FOR THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED.  
 I HAVE AND WILL MAINTAIN WORKERS' COMPENSATION INSURANCE AS REQUIRED BY SECTION 3700 OF THE LABOR CODE, FOR THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED. MY WORKERS' COMPENSATION INSURANCE CARRIER AND POLICY NUMBER ARE:  
 CARRIER: State Fund POLICY NUMBER: 1443607-2006  
 (THIS SECTION NEED NOT BE COMPLETED IF THE PERMIT IS FOR ONE THOUSAND DOLLARS (\$100) OR LESS.  
 I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKERS' COMPENSATION LAWS OF CALIFORNIA, AND AGREE THAT IF I SHOULD BECOME SUBJECT TO THE WORKERS' COMPENSATION PROVISIONS OF THE LABOR CODE, I SHALL FORTHEWITH COMPLY WITH THOSE PROVISIONS.  
 DATE: \_\_\_\_\_ APPLICANT: \_\_\_\_\_

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3704 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

CONSTRUCTION LENDING AGENCY:  
 I HEREBY AFFIRM, UNDER PENALTY OF PERJURY THAT THERE IS A CONSTRUCTION LENDING AGENCY FOR THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED (SEC 3907, CIV. C.)  
 LENDER'S NAME: \_\_\_\_\_  
 LENDER'S ADDRESS: \_\_\_\_\_

I CERTIFY THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE INFORMATION IS CORRECT. I AGREE TO COMPLY WITH ALL CITY AND COUNTY ORDINANCES AND STATE LAWS RELATING TO BUILDING CONSTRUCTION, AND HEREBY AUTHORIZES REPRESENTATIVES OF THIS COUNTY TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION PURPOSES.  
 SIGNATURE OF APPLICANT OR AGENT: [Signature] DATE: 12/8/05  
Alan Anselmo 415-899-1600  
Pete Grimm ed 267

PERMIT NUMBER: 0512-503 BP  
 Application Received By: [Signature] Date: 12-8-05  
 Application issued By: [Signature] Date: 4/11/06

DESCRIBE ALL PROPOSED WORK. If this is a tenant improvement include name and address of the tenant:

Installation of Three Product Collection and Recovery Traches within Parking Garage of the Bay Center Apartments - Emergy Bay Apts.  
\$74,223.00

VALUATION OF PROPOSED WORK (Include all labor and materials, all lighting, heating, ventilation, plumbing, electrical, fire sprinklers, elevator equipment, wall finishes, and casework therein and thereon.)

DOCUMENTS SUBMITTED (Circle all that Apply):  
 DRAWINGS  
 STRUCTURAL CALCULATIONS  
 ENERGY CALCULATIONS  
 PRODUCT INFORMATION SPECIFICATIONS  
 OTHER

THIS PERMIT SHALL COVER (Circle all that apply):  
 BUILDING  
 PLUMBING  
 ELECTRICAL  
 MECHANICAL  
 SIGN  
 GRADING  
 INSULATION  
 POOL/SPA  
 FIRE  
 OTHER: \_\_\_\_\_

DO NOT WRITE BELOW THIS LINE

APPROVALS:  
 Planning: [Signature] Date: 2-10-06  
 Fire Department: [Signature] Date: [Signature]  
 Public Works: [Signature] Date: 11-06  
 Building: [Signature] Date: 4/9/06  
 Health Dept: \_\_\_\_\_ Date: \_\_\_\_\_

LIMITATIONS OR CONDITIONS:  
 \_\_\_\_\_  
 \_\_\_\_\_

FEES:  
 Building: # 681.67  
 Plan Check: # 413.09  
 Energy Plan Check: \_\_\_\_\_  
 Plumbing: # 122.70  
 Electrical: \_\_\_\_\_  
 Mechanical: \_\_\_\_\_  
 Grading: \_\_\_\_\_  
 Strong Motion Instrumentation: # 15.91  
 Microfiche: # 6.82  
 Sewer Connection: \_\_\_\_\_  
 Traffic Impact: \_\_\_\_\_  
 Extra Inspection: \_\_\_\_\_  
 Fire: # 201.50  
 Other: General # 571.12  
 TOTAL: # 1,402.39 Paid 4/11/06



**CITY OF EMERYVILLE  
BUILDING DIVISION PAYMENT FORM**

DATE: 12.8.09

TO: **FINANCE DEPARTMENT**

FROM: **BUILDING DEPARTMENT**

PAYMENT FOR: Plm check # 443.09

Valuation # 74,223

TOTAL AMOUNT: \$443.09

FROM: \_\_\_\_\_

ADDRESS &/OR PERMIT NO.: 640 Shellwood St. # 0912-503

THE FOLLOWING DOCUMENTS WERE SUBMITTED FOR PLAN REVIEW  
(Check all that apply & number of sets submitted):

DRAWINGS: 3

T-24 ENERGY CALCS: \_\_\_\_\_

STRUCTURAL CALCS: \_\_\_\_\_

MANUFACTURE'S CUT SHEETS: \_\_\_\_\_

OTHER: \_\_\_\_\_

BUILDING DEPARTMENT APPROVAL: Curtis Burt



City of Emeryville

TREASURER'S OFFICE, CITY OF EMERYVILLE

# CASH RECEIPT

RECEIVED IN FULL  
PLAN #0912-003

0912-003 #1015821 LRR RD

CUSTOMER: PDS ENVIRONMENTAL, INC  
\$443.00

TOTAL DUES			\$443.00
CASH PAID	\$0.00	CHECK PAID (CHECK NO)	\$443.00 27621
		TENDERED	\$443.00
			\$0.00

DATE: 8.12/08/05 TIME: 15:11:11

FROM: \_\_\_\_\_

ADDRESS &/OR PERMIT NO.: 640 Shellmound St. #0912-003

THE FOLLOWING DOCUMENTS WERE SUBMITTED FOR PLAN REVIEW  
(Check all that apply & number of sets submitted):

DRAWINGS: 3

T-24 ENERGY CALCS: \_\_\_\_\_

STRUCTURAL CALCS: \_\_\_\_\_

MANUFACTURE'S CUT SHEETS: \_\_\_\_\_

OTHER: \_\_\_\_\_

BUILDING DEPARTMENT APPROVAL: Curtis Burt

White - Building Division

Yellow - Payor

Pink - Finance



City of Emeryville

TREASURER'S OFFICE, CITY OF EMERYVILLE

# CASH RECEIPT

*06-105*

51940

RECEIVED BY: EHB

CUSTOMER: CORNERSTONE ENVIRONMENTAL

BUILDING PERMIT

\$681.67

PLUMBING PERMIT

\$122.70

STRONG MOTION FEES

\$15.59

MICROFILM-BUILDING DEPT

\$6.82

FIRE INSPECTION

\$204.50

GENERAL PLAN MAINTENANCE

\$371.11

MISC RECEIPTS

2ND QTR 2006 BUS LIC

\$74.22

TOTAL DUE

\$1,476.61

CASH PAID

CHECK PAID CHECK NO

TENDERED

CHANGE

\$ .00

\$1,476.61 3343

\$1,476.61

\$ .00

DATE + 04/11/06 TIME - 09:32:20

**APPENDIX D**

**HEALTH AND SAFETY PLAN AND INTRUSIVE EARTHWORK GUIDANCE PLAN**



**HEALTH AND SAFETY PLAN  
EMERYBAY COMMERCIAL ASSOCIATION  
BAY CENTER APARTMENTS  
CHRISTIE AVENUE BETWEEN 64<sup>TH</sup> STREET AND 65<sup>TH</sup> STREET  
EMERYVILLE, CALIFORNIA**

**APRIL 17, 2006**

By:

A handwritten signature in blue ink, appearing to read 'P. D. Gorman', written over a horizontal line.

Peter D. Gorman  
Site Safety Officer

A handwritten signature in blue ink, appearing to read 'Carl J. Michelsen', written over a horizontal line.

Carl J. Michelsen, C.H.G.  
Project Manager

**241.055.01.006**

## **INTRODUCTION**

This Health and Safety Plan (HSP) has been prepared by PES Environmental, Inc. (PES) and describes the minimum health and safety requirements for planned field activities at the Bay Center Apartments located at Christie Avenue, between 64<sup>th</sup> Street and 65<sup>th</sup> Street, Emeryville, California (the site). Planned field activities consist of: (1) Saw-cutting the 6-inch thick concrete slab; (2) excavating hydrocarbon-affected soil; (3) placing PVC collection sumps in the excavated area and backfilling; (4) replacing the 6-inch thick concrete slab; (5) waste characterization sampling; (6) installing passive skimmers in the collection sumps; and (7) removing product from the passive skimmers.

In addition to the procedures and requirements described in this HSP, all onsite PES personnel shall follow applicable procedures and requirements specified in the PES Field Manual for Soil and Groundwater Investigations and by Federal, State, and local authorities. As specified in Title 29 CFR 1910.120, this HSP has been prepared to address the basic requirements of the overall safety and health program, with attention to those characteristics of site-specific activities. Any modifications made to this HSP because of encountered field conditions must be approved by the site-safety officer (SSO) and/or project manager (PM).

A copy of this HSP will be available at the site during all work activities.

## **KEY PERSONNEL AND RESPONSIBILITIES**

### **Key Personnel and Qualifications**

The PES Project Manager (PM) is Carl Michelsen. The SSO is Peter Gorman, or a designated alternate engineer, geologist, or environmental specialist. The project field staff have completed 40 hours of comprehensive health and safety training, which meets the requirements of Title 29 CFR 1910.120 and an 8-hour supervisory course in health and safety management, including training in site safety planning, emergency planning, and drilling safety. The PES corporate Health and Safety Officer (HSO) is Nick Pogoncheff. Documentation for all training completed by PES personnel is available from the HSO on request.

### **Responsibilities**

The PM is responsible for the preparation and review of this HSP for accuracy and incorporating new information or guidelines, which aid the SSO in further definition and control of the potential health and safety hazards associated with the project. The PM and SSO are responsible for assuring that adequate training and safety briefing(s) for the project are provided to the project team. The PM or SSO will provide a copy of this HSP to each member of the project field team. The HSO is responsible for coordinating the PES corporate health and safety program. The SSO's responsibilities also include:

- Following the HSP;
- Reporting to the PM any unsafe conditions or practices;
- Reporting to the PM all facts pertaining to incidents which result in injury or exposure to toxic materials; and
- Reporting to the PM all equipment malfunctions or deficiencies.

The SSO has onsite responsibility for ensuring that all PES team members comply with the HSP. Immediately prior to initiating field activities, the SSO will conduct a tailgate briefing session for PES personnel and subcontractors to discuss PES' HSP and the procedures contained herein. Subcontractors will be responsible for complying with the minimum requirements specified in this HSP. It is the SSO's responsibility to inform field personnel of chemical and physical hazards as he or she becomes aware of them. The SSO has the authority to monitor and correct health and safety problems as noticed onsite. Additional SSO responsibilities include:

- Providing site safety briefings for PES team members;
- Updating equipment or procedures to be used based on new information gathered during the site investigation;
- Inspecting all personal protective equipment (PPE) for PES team members prior to onsite use;
- Making sure a first aid kit is available in work areas and that it is fully stocked;
- Assisting the PM in documenting compliance with the HSP by completing the standard PES forms;
- Assisting in and evaluating the effectiveness of decontamination procedures for personnel, protective equipment, sampling equipment and containers;
- Enforcing the "buddy" system as appropriate for site activities;
- Supplying phone numbers, location and route to the nearest medical facility, and arranging for emergency transportation if necessary;
- Stopping operations that threaten the health and safety of the field team;
- Entering the exclusion area in emergencies after notifying emergency services; and
- Observing PES field team members for signs of exposure, stress, or other conditions related to preexisting physical conditions or site work activities.

## **EMERGENCY PROCEDURES**

A first aid kit will be available at the site for minor injuries. If an injury is sustained that is not minor, site personnel should: (1) contact off site medical help (see below); and (2) contact the PES PM manager or any available PES Principal.

If offsite medical or other emergency assistance is required, the following telephone numbers can be used:

**Emeryville Fire Department:** 911

**Emeryville Police Department:** 911

**Hospital:** Alta Bates Medical Center  
2450 Ashby Avenue  
Berkeley, CA  
(510) 204-4444

### **Route to Hospital (also shown on attached map):**

From the alleyway on 65th Street, turn **RIGHT** on **65th STREET** – go 0.5 mi;  
Turn **LEFT** on **SAN PABLO AVE** – go 0.3 mi;  
Turn **RIGHT** on **ASHBY AVE (CA-13)** – go 1.6 mi;  
Arrive at 2450 ASHBY AVE, BERKELEY, **Hospital is on the RIGHT.**

### **Hazardous Materials Response:**

National Response Center - (800) 424-8802  
California Office of Emergency Response - (800) 852-7550

### **Project Contacts:**

PES Project Manager: Carl Michelsen (415) 899-1600  
PES Site Safety Officer: Peter Gorman (415) 899-1600  
PES Corporate HSO: Nick Pogoncheff (415) 899-1600

## **HAZARD EVALUATION**

The potential hazards to personnel working at the site have been identified as chemical exposure, and the physical hazards of working with excavation equipment. Each potential hazard relative to the potential for exposure is described below.



## Chemical Hazards

Based on available historical information the following table of chemicals may be anticipated in samples where work activities are planned. Pertinent properties of these substances are as follows:

### **Benzene\***

LEL/UEL = 1.2/7.8 percent

NIOSH REL\*/OSHA PEL/IDLH = 0.1ppm TWA/1 ppm TWA/500 ppm

Hazard Properties = ignitable, toxic, volatile, carcinogen

Exposure Routes = inhalation, skin absorption and contact, ingestion

Target Organs = Respiratory system, skin, blood, central nervous system, bone marrow, eyes

Acute exposure symptoms = Irritated eyes, skin, nose and respiratory system; giddiness; headache, nausea, staggered gait; fatigue, anorexia, lassitude; dermatitis; bone marrow depression

- \* NIOSH recommends as part of its carcinogen policy that the “most protective respirators be worn for benzene at any detectable concentration.

### **Toluene**

LEL/UEL = 1.1/7.1 percent

TLV (TWA)/IDLH = 100/500 ppm

Hazard Properties = ignitable, toxic, volatile

Exposure Routes = Inhalation, skin absorption and contact, ingestion

Target Organs = Central nervous system; eyes; liver; kidneys

Acute exposure symptoms = Fatigue, weakness, confusion; euphoria, dizziness, headache; dilated pupils; insomnia; tears, dermatitis; liver, kidney damage

### **Ethylbenzene**

LEL/UEL = 1.4/14 percent

TLV (TWA)/IDLH = 100/800 ppm

Exposure Routes = inhalation, skin and eye contact, ingestion

Target Organs = Eyes, upper respiratory system, skin, central nervous system

exposure symptoms = Irritated eyes, skin, and mucous membranes; headache; dermatitis; sleepiness; narcosis; coma

### **Xylenes**

LEL/UEL = 1.0/7.0 percent

TLV (TWA)/IDLH = 100/1,000 ppm

Hazard Properties = ignitable, toxic, volatile

Exposure Routes = inhalation, skin absorption and contact, ingestion

Target Organs = Central nervous system, eyes; blood; liver, kidneys, Gastro-intestinal tract

Acute exposure symptoms = Dizziness, excitement, drowsiness, incoherence, staggering gait; irritated eyes, nose and throat; anorexia; nausea, vomiting, abdominal pain; dermatitis

### **Gasoline**

LEL/UEL = 1.4/7.6 percent

TLV (TWA)/IDLH = 300/900 ppm

Hazard Properties = ignitable, toxic, volatile

Exposure Routes = inhalation, skin absorption, and ingestion

Target Organs = Respiratory system, skin, gastrointestinal tract, eyes

Acute exposure symptoms = Dermatitis; mildly toxic by inhalation; cough; hallucinations; eye irritation

### **Diesel Fuel (Fuel Oil)**

LEL/UEL = 0.6-1.3/6-7.5 percent

TLV (TWA)/IDLH = none established

Hazard Properties = ignitable, toxic

Exposure Routes = inhalation, skin absorption, and ingestion

Target Organs = Respiratory system, skin, gastrointestinal tract

Acute exposure symptoms = Dermatitis; mildly toxic by ingestion

### **Methane**

LEL/UEL = 5/15 percent

TLV(TWA)/IDLH = NA

Hazard Properties = explosive, simple asphyxiant

Exposure Routes = Inhalation

Target Organs = NA

Acute exposure symptoms = Unconsciousness

### **Physical Hazards**

Onsite physical hazards include:

- Mechanical hazards will exist related to operating saw-cutting, excavation, and transportation equipment;
- Traffic hazards from vehicles in parking lot;
- Tripping or falling hazards may exist around excavation equipment; and
- Noise hazards may exist from operating or working near heavy equipment.

## HAZARD MITIGATION

### Chemical Hazards

The chemical hazards listed above will be mitigated by a combination of onsite air monitoring and having onsite personnel wear the appropriate PPE, as needed. The presence of volatile organic compounds (VOCs) in ambient air will be monitored using a portable photo-ionization detector, with the exception of benzene. The PID will be calibrated following instructions provided by the manufacturer. Benzene will be monitored using appropriate colorimetric tubes. Initial meter readings will be made prior to sampling in order to establish background concentrations. Drilling and sampling operations will commence and the following level of protection will be adhered to:

**Level D**     Respiratory Protection - not required, available if necessary  
                   Dermal Protection - Tyvek/Saranex coveralls, steel-toed boots and  
                   disposable latex and vinyl gloves  
                   Other Equipment - hard hat, eye and ear protection

If measured concentrations of VOCs in ambient air exceed 0.5 ppm above background, personnel will be required to utilize half-face respirators with organic filters (Level C), in addition to the PPE required for Level D. Also, in the event that measured concentrations of VOCs in ambient air exceed 0.5 ppm, colorimetric tubes for benzene will be used. If any detectable concentration of benzene exists in the breathing space, field activities will be temporarily halted at that location, and engineering controls will be enacted. If greater than 5 ppm of other VOCs exist, or if explosively level is exceeds 10% of LEL, field activities will also be temporarily halted and engineering controls enacted. Engineering controls include the use of fans to dissipate ignitable vapors and noxious fumes. In addition, the use of a vapor suppressant and/or dry ice during excavation activities will be utilized during excavation and trench installation activities to mitigate fire/explosion hazards associated with the presence of flammable chemicals.

Finally, PES will be prepared to halt operations or control emissions, if any, if it appears that any nuisance emissions are evident.

Decontamination procedures for onsite personnel during Level D conditions consist of being required to wash their hands with soap and potable water after performing any onsite activities and prior to ingestion of food or liquids. If Level C conditions become necessary to implement, decontamination will follow OSHA regulations.

## **Physical Hazards**

The potential mechanical hazards associated with heavy equipment will be avoided by maintaining adequate clearance around operating equipment. While working at the site, the field personnel must be aware of equipment movement, general traffic and facility operations.

Potential electrical hazards can be avoided by: locating buried utilities in areas where subsurface work is performed, making sure all equipment is properly grounded, keeping equipment a safe distance away from overhead lines, using ground-fault circuit breakers, taking appropriate action in the event a storm approaches (e.g., take shelter in building or vehicle; stay away from drill rig, isolated trees and any water; stay low to ground).

All personnel must be aware of potential trip or fall hazards and shall exert due caution when walking in all work areas.

All personnel will be required to wear eye and ear protection, a hardhat, and steel-toed boots when working.

## **AIR MONITORING AND ACTION LEVELS**

In accordance with 29 CFR 1910.120 (h), air monitoring will be used to identify and quantify airborne levels of hazardous substances and health hazards to determine the appropriate level of employee protection needed onsite.

For this project, air monitoring program will consist of a portable PID able to detect concentrations of airborne VOCs in parts per million (ppm), and a LEL/O<sub>2</sub> Meter. The potential presence of benzene will be monitored using appropriate colorimetric tubes.

The PID and LEL/O<sub>2</sub> Meter will be calibrated, used, and maintained in accordance with the manufacturer's specifications. Air monitoring will be conducted as follows:

- Prior to commencement of work activities in each specific area and at a frequency to adequately monitor change(s) in ambient and/or subsurface conditions, and subsequently, a minimum of two times to document ambient VOC levels in each active exclusion zone;
- Intermittently as field work proceeds, and at a frequency commensurate with all field tasks to adequately protect workers from potential chemical exposures;
- Immediately, if noticeable odors occur during field activities;
- When work begins at a different location of the site;
- When a different type of operation is initiated; and

- When required by the SSO.

PID and colorimetric tube concentrations inside the active exclusion zones are as follows:

- Less than or equal to background (absence of benzene): Level D;
- Greater than background (presence of benzene) and less than 5 ppm above background: Level C; and
- Greater than 5 ppm: Field activities will be immediately halted, and engineering controls (e.g. fans) will enacted.

These action levels in the exclusion zone were selected based on the protection factor (PF) afforded by an appropriate APR and the fact that VOCs have been detected in media of soil gas and/or soil and groundwater at the site. In general, the PF for appropriately selected APRs is 10. This means that an appropriate respirator could be worn in many cases up to 10 times the Threshold Limit Value (TLV) for a particular compound. Since the lowest TLV for most non-carcinogenic compounds is 1 ppm, an APR could be worn when ambient levels of VOCs are 10 ppm or less [permissible ambient level = PF x TLV = 10 x 1 ppm = 10 ppm]. In general, the PF applied by PES for use of appropriate APRs under Level C conditions has been selected to be an upper limit of 5 ppm (i.e. to represent 50% of the permissible ambient level for a compound where the TLV is 1 ppm or higher).

LEL/O<sub>2</sub> Meter concentrations inside the active exclusion zones are based on 10% of the lowest concentration that is explosive. Xylenes have an LEL of 1.0%; therefore, if the LEL/O<sub>2</sub> readings exceed 0.1%, engineering controls (e.g. fans, vapor suppressant, and dry ice) shall be utilized.

## **SITE CONTROL MEASURES**

The PES project geologist or engineer will be in charge of onsite activities and will be responsible for site control. The active work area will be defined by cones, or other suitable methods.

Communication between field team members will consist of verbal communications.

## **WORK PRACTICES**

Safe work practices to be employed during the entire progress of field activities are as follows:

- Set up, assemble and check out all equipment for integrity and proper function prior to starting work activities.

- Do not use faulty or suspect equipment.
- Use only new and intact protective clothing. Change the suit, gloves, or other protective clothing if torn.
- Do not use hands to wipe sweat away from face. Use a clean towel or paper towels.

Additional standard safe work practices are listed in the PES Injury and Illness Prevention Program, a copy of which is located at the PES corporate office.

## **TRAINING AND MEDICAL MONITORING**

All PES employees have fulfilled the applicable training and medical monitoring requirements described in 40 CFR 1910.120. All subcontractors to PES shall provide evidence of having met the same requirements prior to performing onsite work. Also, immediately prior to initiating field activities, a tailgate training session shall be held to discuss this HSP and the procedures contained herein.

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# ACKNOWLEDGMENT

The undersigned hereby acknowledge receipt of training concerning the potential hazards and required procedures for the field activities described above.

<u>Name</u>	<u>Signature</u>	<u>Company</u>	<u>Date</u>
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## ROUTE TO HOSPITAL

Alta Bates Medical Center  
2450 Ashby Avenue  
Berkeley, CA  
(510) 204-4444

Beginning in the alleyway on 65th Street between Christie Ave. and Shellmound Ave,  
Turn RIGHT on 65th STREET – go 0.5 mi;  
Turn LEFT on SAN PABLO AVE – go 0.3 mi;  
Turn RIGHT on ASHBY AVE (CA-13) – go 1.6 mi;  
Arrive at 2450 ASHBY AVE, BERKELEY, Hospital is on the RIGHT. .





A Report Prepared for:

EmeryBay Commercial Association  
100 Bush Street, 26th Floor  
San Francisco, California 94104  
Attention: Ms. Cathy Greenwold

**INTRUSIVE EARTHWORK GUIDANCE PLAN  
BAY CENTER OFFICES AND APARTMENTS  
CHRISTIE AVENUE AND 64<sup>TH</sup> STREET  
EMERYVILLE, CALIFORNIA**

**JUNE 24, 2005**

A handwritten signature in blue ink, appearing to read 'Kris McCormick', is written over a horizontal line.

Kris McCormick  
Senior Environmental Scientist  
PES Environmental, Inc.

A handwritten signature in black ink, appearing to read 'Richard S. Krentz', is written over a horizontal line.

Richard S. Krentz, CIH  
Sterling & Associates

**241.053.01.001**

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## **1.0 GENERAL**

### **1.1 Introduction**

This Intrusive Earthwork Guidance Plan (plan), including additional soil management procedures, was prepared by PES Environmental, Inc. (PES) and Sterling & Associates (Sterling) to manage intrusive earthwork prior to performance of subsurface activities that may occur at an indefinite future date at the Bay Center Offices and Apartments (site) within Emery Bay Plaza. The site is bounded by 64<sup>th</sup> Street to the south, 65<sup>th</sup> Street to the north, La Coste Street to the west and Shellmound Street to the east in Emeryville, California. The Site includes three office buildings, a paved parking lot, a parking structure, a two-story parking structure set below a four-story apartment complex, and landscaped areas.

This guidance document is not intended to be utilized as a site Health and Safety Plan. A separate Safety Plan was prepared in September 1987 for the site by Earth Metrics, Inc. for a prior specific work scope (Earth Metrics, 1987). For future regulated intrusive earthwork (refer to Section 2.0), the Contractor shall develop its own Site Health and Safety Plan for any work not expressly covered in the 1987 Safety Plan for Bay Center Offices and Apartments.

This document has been developed to provide: 1) a description of regulated activities to which this plan applies; 2) an overview of subsurface conditions at the site; 3) procedures to be followed prior to commencement of regulated activities; 4) guidance for Contractor development of Health and Safety Plan; and 5) soil management procedures so that potentially hazardous materials, if encountered, are handled, managed and disposed in accordance with applicable regulatory requirements.

### **1.2 Background Information**

The Site is located on historic San Francisco Bay tidal flats. As Emeryville expanded, the tidal flats were filled, predominantly with construction-type debris (e.g. soil, bricks, debris, etc.). Subsurface soil at the Site consists mostly of fill with silt, sand and gravel and fragments of brick, glass, and metal to approximately 16 feet below ground surface (bgs). Native silts and clays exist beneath this depth.

Prior to the construction of Bay Center Offices and Apartments, the Site was occupied by two trucking businesses (Earth Metrics, 1986). All existing structures were demolished before the Site was re-developed. Environmental and geotechnical investigations dating back to approximately 1986 are available for the Site. A listing of prior environmental documents for the site is provided in Appendix A.

During the period of use as a trucking terminal, the subject property had underground storage tank (UST) fields in three areas. Tank Pit TC-1 contained four 12,000-gallon and two 10,000-gallon diesel tanks, and one 6,000-gallon gasoline tank. Tank Pit A and Tank Pit B each contained one 10,000-gallon diesel tank. The USTs were decommissioned and removed

in about 1987 as part of the demolition and Site preparation for construction of Bay Center Apartments (Earth Metrics, 1986).

Soil sampling at the Site reported petroleum hydrocarbons in the soil from the area of the former USTs as well as a small area near a former truck terminal. Metals (including lead and zinc), pesticides (including DDT), and polychlorinated biphenyls (PCBs) were also reported in soils in various areas of the property. Excavated soils were bioremediated or aerated and used as fill on the project and/or nearby parcels (HLA, 1991).

In addition, lead levels in soil are known to range from 50 parts per million (ppm) to over 10,000 ppm at the Site. Reportedly, lead contamination does not occur at the surface in the parking lots or landscaped areas, but is confined to the areas beneath the parking garage, Christie Street, building slab, parking lots, and landscaping areas (Earth Metrics, 1987).

During previous monitoring at the Site, groundwater was generally encountered at 8 to 12 feet bgs. Groundwater in the area of the larger UST tank pit in the northeast portion of the parcel east of Christie Avenue was reported to contain separate phase and dissolved petroleum hydrocarbon, including benzene, toluene, and ethylbenzene. Groundwater also contained polynuclear aromatics, pesticides, and PCBs (GTI, 1987). A groundwater treatment system with an extraction well was installed and since has been removed (GTI, 1989).

Data presented in historical environmental and geotechnical investigation reports, as well as PES' recent investigation findings, indicate that light, non-aqueous phase liquid (LNAPL) is present at the Site in an area between Tank Pit TC-1 and recovery well RW-1 (PES, 2004b). A summary of the findings of the historical investigations is found in PES' memorandum dated April 5, 2004 (PES, 2004a). LNAPL thicknesses of up to 0.87 feet have been measured in monitoring well RW-1 as recently as April 2004. Manual LNAPL recovery efforts at RW-1 have reduced the average LNAPL thicknesses measured in RW-1 by approximately 75 percent since that time. Beginning in April 2004, groundwater gauging and manual LNAPL recovery efforts from one recovery well (RW-1; Plate 2) were reestablished at the Site (PES, 2004b). PES has prepared a remediation system work plan to address LNAPL at the request of the EmeryBay Commercial Association (EBCA). The remediation system work plan details the proposed work needed to install a LNAPL remediation system to recover LNAPL that is present in subsurface soils beneath the northern portion of the Site (PES, 2005).

Methane venting systems have been installed in elevator shafts of the three office buildings at the Site to remove methane that might be generated from residual subsurface organic materials. A passive ventilation system has been installed in the ground on the eastern section of the Site adjacent to Shellmound Street. Methane gas monitors have been installed in certain locations on the east side of the property (LFR, 2004).

## 2.0 REGULATED ACTIVITIES

This plan has been developed to provide procedures to follow to protect the public and workers involved in potential subgrade construction, maintenance, repair, inspection or other activity involving subgrade work (“regulated activities”). Regulated activities are described below.

### 2.1 Regulated Activities

The following subgrade activities constitute regulated work under this plan.

- **Subsurface Construction or Repair** – any activity occurring beneath the grade level of existing pavement, concrete or Christie Street grade;
- **Deep Landscaping Work** – any activity related to landscaping that extends lower than 18 inches beneath existing grade;
- **Utility Line Work** – any subterranean inspection, excavation, or repair of electrical, telephone, water, sanitary sewer or storm drains occurring within or outside of existing vaults;
- **Sub-Slab Work** – any work performed beneath the slab of the Site, including Bay Center offices, apartments, or parking garage, or any work which requires breaching the existing slabs;
- **Environmental Investigations** – any subsurface air, soil or groundwater sampling activities, groundwater monitoring well installation or destruction activities or other activities which may expose workers or the public to subsurface media; or
- **Other** – other subgrade activities not expressly listed above.

## 3.0 REGULATED ACTIVITIES REQUIREMENTS

Prior to commencement of any regulated activities, the following tasks must be completed:

- All contractors and subcontractors of either the owner, tenants, or another party causing regulated activities at the Site, shall read this plan and sign the Agreement and Acknowledgment Statement (Appendix B) to certify that they have read, understood and agreed to abide by its provisions;
- Review applicable environmental documents and investigations pertaining to the Site. Documents are maintained in the onsite management office;
- Location of subsurface utilities will be verified with Underground Safety Alert (USA) or a private contractor; and

- The personnel or subcontractor performing such work will be required to develop a health and safety plan in accordance with the hazardous material regulations found in the California Occupational Safety and Health Administration (CAL-OSHA), Title 8 of the California Code of Regulations (CCR), Section 5192 (Hazardous Waste Operations and Emergency Response (HAZWOPER)).

Compliance with this plan is required of all personnel, subcontractors, etc. associated with the regulated activities mentioned above.

#### **4.0 GUIDANCE FOR CONTRACTOR DEVELOPMENT OF HEALTH AND SAFETY PLAN**

All contractors and subcontractors will act in accordance with applicable federal, State, regional, and local regulations during all phases of the project. Applicable regulations include but are not limited to CAL-OSHA, 8 CCR 5192.

The Contractor's Health and Safety Plan should include, but not be limited to, the following components.

##### **4.1 Introduction**

The main purpose of the introduction is to describe the Site, the specific area of the Site that the Contractor's Health and Safety Plan will encompass, and its applicability to operations.

##### **4.2 Key Personnel**

This section should include names, descriptions of responsibilities, and ways of contact for key personnel involved with the project.

##### **4.3 Hazard Assessment**

Hazard assessment is a methodology used to identify inherent or potential hazards which may be encountered in the work environment associated with accomplishing a project. The hazard assessment should include the identification of an operation or a job to be assessed, a break down of the project, identification of the hazards associated with each task, and determination of the necessary controls for the hazards.

##### **4.4 Safety Training**

The environmental conditions of the Site shall be disclosed to all construction workers and subcontractors who will be engaged in earthwork activities including soil excavation, dewatering, and other subsurface activities where contact with potentially contaminated soil and/or groundwater is possible. It is the individual contractor/subcontractor's responsibility to

provide additional site-specific construction safety training. For construction activities, additional safety meetings must be held at least once every 10 working days and may include a discussion of site work plans, personal protective equipment, site rules, site hazards, trenching/shoring, and the requirements of the Contractor's Health and Safety Plan.

#### **4.5 Personal Protective Equipment**

Modified Level D is the minimum acceptable level for this site. The Contractor should make the appropriate personal protective equipment selection based on the specific project and site hazards.

#### **4.6 Medical Monitoring Program**

All construction personnel engaged in regulated subsurface work will be required to be medically qualified prior to donning a respirator should respiratory protection become necessary. If site conditions vary drastically from those anticipated in the plan, other medical surveillance procedures may become necessary, as required.

#### **4.7 Air Monitoring**

To the extent feasible, the presence of airborne contaminants will be evaluated through the use of sampling equipment. Information gathered will be used to ensure the adequacy of the levels of protection being employed at the site, and may be used as the basis for upgrading or downgrading levels of Personal Protection, at the discretion of the Contractor's Health & Safety representative and/or Manager.

The following air sampling equipment may be utilized for site monitoring by the Contractor's Health & Safety Representative:

- Photo-Ionization Detector (PID) – organic vapors (alternatively, a FID may also be utilized for this purpose); and
- LEL/O<sub>2</sub> Meter.

The PID and/or FID will serve as the primary instrument for personal exposure monitoring for organic vapors. The instrument will need to be utilized to characterize potential employee exposure and the need for equipment upgrades/downgrades.

During initial excavation activities monitoring should be conducted for explosive atmospheres using an LEL/O<sub>2</sub> monitor. In addition to the petroleum hydrocarbons, fill materials of the site could present methane or other flammable vapor issue.

Monitoring will be conducted to evaluate the potential for exposure to site personnel during initial operations. Continuous monitoring should be performed during operations that have not



been characterized. After initial site screening, monitoring shall be conducted periodically and when site conditions might be altered (i.e. weather, drilling, new area of excavation, etc.).

Results of monitoring information shall be recorded including time, date, location, operations, and any other conditions that may contribute to potential airborne organic vapors and lead. All maintenance and calibration information shall be maintained on-site. The monitoring equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with the plan and/or project file.

#### **4.8 Site Control**

The site control program is used to control movement of people and equipment in order to minimize worker exposure to hazardous substances. Site work zones, site communication procedures, safe work practices, and a site map should be included.

#### **4.9 Dust Control**

Concentrations of lead and petroleum hydrocarbon constituents in the soil indicate that dust control measures will be, at a minimum, consistent with standard construction practices. These will include, but are not limited to, the following:

- Watering of active soil construction areas to prevent visible dust plumes from migrating outside of the site limits;
- Misting or spraying while loading transportation vehicles;
- Minimizing drop heights while loading transportation vehicles; and
- Using tarpaulins or other effective covers for trucks carrying soils that travel on public roads.

Subsurface activities shall immediately cease should airborne dust become visible, and will not recommence until the area is adequately moistened such that no visible dust will be generated. If visible dust is continually being generated, additional measures (e.g., dust monitoring) may be required.

#### **4.10 Decontamination**

All personnel and/or equipment leaving a potentially contaminated area are subject to decontamination procedures. If applicable, general decontamination procedures for personnel and equipment are outlined below.

#### **4.10.1 Personal Decontamination**

All personnel leaving areas where existing soil (below existing AC, concrete and associated base rock) has been exposed must follow decontamination procedures as outlined in the Contractor's Health and Safety Plan.

#### **4.10.2 Equipment Decontamination**

Equipment utilized in the areas of exposed soil (instruments, samples, tools, backhoes, other construction equipment) will be decontaminated prior to leaving the earthwork areas as outlined in the Contractor's Health and Safety Plan.

All contaminated articles and waste decontamination materials shall be containerized, labeled, and disposed of properly.

#### **4.11 Soil Management**

For projects where waste soil will be produced, a soil management plan shall be included. The soil management objectives are designed to: (1) reduce the potential for exposure of construction workers at the site, neighboring workers and/or pedestrians, and future users of the site to soil potentially containing chemical residuals; and (2) ensure that soil that is removed from the site is disposed at an appropriately-permitted disposal facility. All soil management and handling activities shall be conducted in accordance with applicable federal, state and local regulations.

##### **4.11.1 Management of Excavated Soil**

Soil excavated during construction activities shall be evaluated in the field using sensory and monitoring equipment for evidence of chemical contamination (i.e. staining, odors, discoloration, elevated VOC readings, etc.).

##### **4.11.2 Management of Apparently Clean Soil**

If field evaluation activities do not suggest the presence of contamination, the soil shall be stockpiled and may be reused onsite as backfill at the excavation site. If an overage of "clean" soil remains at the end of the project requiring removal from the site, appropriate soil characterization for waste disposal purposes shall be conducted.

##### **4.11.3 Management of Suspect Soil**

Excavated soil exhibiting characteristics suggesting potential contamination shall be stockpiled onsite within a designated fenced enclosure. The soil shall be placed on and covered with plastic sheeting. Characterization samples shall be collected. Pending results of the stockpile

characterization, appropriate handling and management alternatives shall be evaluated (i.e. reuse onsite or offsite as fill material or disposal at an appropriately permitted facility).

#### **4.11.4 Excess and Suspect Soil Stockpile Sampling and Analysis**

Excavated soil suspected to contain chemical residuals and/or requiring off hauling (regardless of the potential for contamination), shall be sampled to evaluate appropriate handling and management alternatives. Soil sampling shall be conducted on a minimum frequency of one discrete sample per approximately 50 cubic yards of soil or a higher frequency if otherwise required to comply with applicable regulations.

The chemical analyses to be conducted shall be determined on the basis of the destination of the material (i.e., landfill, offsite backfill area, etc.) and/or the suspected contaminant(s) (based on field evaluation techniques and/or historic sampling data relevant to the specific portion of the site from which the material was excavated).

#### **4.11.5 Management of Groundwater**

For projects where groundwater may be encountered, the groundwater shall be managed. If groundwater is encountered and requires pumping from excavations, the groundwater should be pumped into appropriate containers and samples should be obtained for analysis to determine waste classification and disposal/recycling options. The chemical analyses to be conducted shall be determined on the basis of the suspected contaminant.

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**APPENDIX A**

**ENVIRONMENTAL DOCUMENT LIST**

**APPENDIX A**

**ENVIRONMENTAL DOCUMENT LIST**

Air Systems, Inc., 1986. *Letter to Devcon re: Bay Center Elevator Pit Methane Exhaust Systems (with attachments)*. December 18.

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**APPENDIX B**

**AGREEMENT AND ACKNOWLEDGMENT STATEMENT**

**APPENDIX B**

**AGREEMENT AND ACKNOWLEDGMENT STATEMENT**

Bay Center Offices and Apartments  
Christie Avenue and 64<sup>th</sup> Street  
Emeryville, California

Intrusive Earthwork Guidance Plan Agreement

All project personnel and subcontractors are required to sign the following agreement prior to conducting work at the site.

- 1. I have read and fully understand the plan and my individual responsibilities.
- 2. I agree to abide by the provisions of the plan.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

(Add additional sheets if necessary)

**APPENDIX E**

**VAPOR MONITORING FORMS**



PROJECT: Bay Center Trenches  
 JOB NO.: 241.055.01.006  
 PROJECT MANAGER: CSM  
 RECORDED BY: PDG

# VAPOR MONITORING LOG

TIME	IONIZATION DETECTOR READING		EXPLOSIMETER READING		RADIATION MONITOR READING	LOCATION	PURPOSE	SIGNATURE
			%LEL	%OXYGEN				
0730	0.0	ppm	0	20.9	-	Background Ambient Air		PG
0810	0.0		0	20.9	-	Trench A - 1ft bgs		PG
0845	0		0	21.0	-	-4		PG
0920	0		0	21.1	-	-6		PG
0950			0	21.1	-	-6		PG
						Trench B - 2		PG
4/20/06								
1000	0.0	ppm	0	21.1	-	Breathing space, trench B		MB
1015	0.0	ppm	0	21.0	-	"		MB
1030	3.4	ppm	0	21.1	-	"		MB
1045	1.2	ppm	0	21.1	-	"		MB
1100	0.0	ppm	0	21.1	-	"		MB
1115	1.2	ppm	0	21.1	-	"		MB
1200	0.2	ppm	0	21.2	-	"		MB
1236	0.6	ppm	0	21.2	-	"		MB
4/24/06								
1040	0.0	ppm	0	21.0	-	Breathing space, trench B		MB
1130	4.3	ppm	0	21.1	-	"		MB
1150	0.0	"	0	21.1	-	"		MB
1245	10.4	"	0	21.1	-	"		MB
1330	6.8	"	0	21.1	-	"		MB
1400	0.8	"	0	21.1	-	"		MB
1500	0.0	"	0	21.1	-	"		MB





# Vapor Monitoring Log WATER LEVEL DATA FORM

PROJECT: Bay Center Trench  
JOB NO.: 241.055.01.006  
FIELD PERSONNEL: MB  
RECORDED BY: MB  
DATUM:  MEAN SEA LEVEL  
 OTHER - DESCRIBE

MEASURING INSTRUMENT:  
 STEEL TAPE  OTHER-TYPE \_\_\_\_\_  
 ELECTRIC SOUNDER  INSTRUMENT SERIAL NO. \_\_\_\_\_

Time  
0930  
0950  
1000  
1010  
1020  
1030  
1045  
1100  
1120  
1140  
1200  
1230  
4/25/06  
0830  
0930  
1000  
1030  
1110  
1300  
1345  
1530  
1820  
4/26/06  
0930

PID	PID TIME	REFERENCE ELEVATION	DEPTH TO WATER (feet)			WATER LEVEL ELEVATION (feet)	COMMENTS
			1st	2nd	3rd		
		LEL %	LEL %	Benzen			
		Breathing space	in trench	Dragnet			
0.0	2.3	0	0	0			
12.0	14.2	0	0	0			
7.7	17.0	0	0	0			
30.7	21.0 (up close to soil)	0	0	0			
0.5	84.7 (close to soil)	0	0	0			
19.2	12.0	0	0	0			
24.6							
52.7		0	0	0			
14.8		0	0	0			
76.2		0	0	0			
54.3		0	0	0			
15.5		0	0	0			
4/25/06							
0.0	0.0	0	0	0	21.0	oxygen	
0.0	0.0	0	0	0	21.0		
0.0	0.0	0	0	0	21.0		
0.0	0.0	0	0	0	21.0		
NA	12.4	0	0	0	21.0		
0.0	0.0	0	0	NA	21.0	Hits in trenches that are backfilled to 4.5 ft by at least are almost definitely due to exhaust from gas powered wacker and are not related to product in deeper soils.	
2.3	2.3	0	0	NA	21.0		
17.6	17.6	0	0	NA	21.0		
2.4	7.3	0	0	NA	21.1		
NA	70.6	0	0	NA	21.9		



Summary of Air Monitoring Activities

~~DAILY FIELD REPORT~~

Compiled from Daily Field Reports and Air Monitoring Logs.

PROJECT: Bay Center Trenches  
JOB NO.: 241.055.01.006  
PROJECT MANAGER: CJM  
RECORDED BY: MB

TIME	DESCRIPTION, COMMENTS, NOTES, ETC.
4/18/06	PID not working. Work for the day includes excavation of shallow portions (<6' bgs) of Trenches A+B. Not expected to be working in heavily contaminated zone so vapors should not be bad.
0930	@ 6ft bgs in trench-A a cable is found and pulled out (30 ft long). The hole left by the cable acts as conduit and free product enters the trench. At 10:15 it is noted that product <del>vapor</del> odors were detected up to 100' away from trench. Fans were in use and a vapor suppressant was used to control odors/vapors. No PID readings were taken.
11/4/06 1010	while digging in deeper portion of Trench-A free product was encountered and odors were fairly <del>to</del> strong in work area. Fans and vapor suppressant were in use. PID of soil = 210 ppm, PID of work area = 30.7 ppm, PID <del>in</del> in Alley near bin #3 = 4.5 ppm, " near bin #5 = 0.0, " near bin #8 = 0.0 ppm. odors were present but not strong in Alley immediately adjacent to work area. In rest of alley odors were not present.
1100	PID in work area = 52.7 ppm, PID in Alley near bin #3 = 2.2 ppm, PID in Alley near bin #5 = 0.0 ppm. Above note on odors in Alley still applies.
1200	PID in work area = 54.3, PID in Alley near bin #3 = 2.6 " near bin #5 = 0.2 ppm - Checked for Benzene throughout day. No indications of Benzene in air. - LEL% (methane) never detected above 0%.

ATTACHMENTS:  NO  YES

DESCRIPTION:

SIGNATURE



Summary of Air Monitoring Activities (Cont.)

# DAILY FIELD REPORT

PROJECT: Bay Center Trencher  
JOB NO.: 241.055-01.006  
PROJECT MANAGER: CJM  
RECORDED BY: MB

4/20/06

TIME	DESCRIPTION, COMMENTS, NOTES, ETC.
0945	Begin digging in deeper portion of Trench B. Some free product is encountered but odors in work area are minor.
1030	PID of work area = 3.4 ppm (fans, vapor suppressant in use). Air quality in the Alley is good. PID near bin #3 = 0.0, #5 = 0.0, #8 = 0.0
1115	Odors in work area still minor. PID in work area = 1.2 ppm. PID in alley near bin #3 = 0.0 ppm, #5 = 0.1 ppm
1200	Very minor odors in work area - No odors 50 ft away. No odors in Alley. PID in work area = 0.2, PID in Alley near bin #'s 3 + 5 = 0.0 ppm.
4/24/06 1030	Digging in shallow portion of Trench - C. No strong odors are detected. PID in breathing space near trench = C = 0.0 ppm. PID in Alley near bins 4 + 5 = 0.0 ppm. Air quality in Alley is good. No odors detected.
1140	Digging at approx 8 ft bgs in Trench - C. Soil being removed causes a reading of 60.0 ppm when meter is held up directly to soil. Noticeable odor in breathing space. PID reading in breathing space is 4.3 ppm. Odors are detectable up to 100 ft away from Trench - C. Implement vapor suppressant and 2 fans. Very slight odor at times in the Alley.

ATTACHMENTS:  NO  YES

DESCRIPTION:

SIGNATURE



Summary of Air Monitoring Activities  
**DAILY FIELD REPORT** (cont.)

PROJECT: Bay Center Trenches  
JOB NO.: 244.055.01.006  
PROJECT MANAGER: CJM  
RECORDED BY: MB

4/24/06  
(cont.)

TIME	DESCRIPTION, COMMENTS, NOTES, ETC.
	PID near bins 4+5 in Alley = 0.8 ppm.
	PID near bin 1 in Alley = 0.2 ppm.
	PID near bin 8 = 0.0 ppm.
1250	Fairly strong hydrocarbon odor in breathing space around Trench-C while digging @ 9-ft bgs. Vapor suppressant and fan in use. PID in breathing space = 10.4 ppm. Take Draeger tube reading for Benzene in breathing space = 0.0. PID 100-ft away from Trench-C = 0.4 ppm.
	PID in Alley near bins 4+5 = 1.2 ppm. Slight hydrocarbon odor in Alley at times.
1330	Encounter groundwater with some free-product at 10.5 ft bgs. Mild odor in breathing space. PID in breathing space = 6.8 ppm. No odors @ 7100 ft from trench-C. No noticeable odors in Alley. PID near bin # 5 = 0.0 ppm.
1530	Dug down to a total depth of 12.5 ft in most of Trench now. Most odors from digging through highly product-affected soils have dissipated now. PID in breathing space = 0.6. PID 100 ft away from Trench-C = 0.0. PID near bins 4+5 in Alley = 0.0 ppm, near bin #1 = 0.0, near bin #8 = 0.0.
4/25/06	Backfilling Trenches A, B, C with drain rock. Compacting towards end of day. Workers working in <del>trenches</del> trenches once backfilled to 5-ft bgs. No digging today.

ATTACHMENTS:  NO  YES

DESCRIPTION:

SIGNATURE



Summary of Air Monitoring Activities (cont.)

# DAILY FIELD REPORT

PROJECT: Bay Center Trenches

JOB NO.: 241.055.01.006

PROJECT MANAGER: CSM

RECORDED BY: MB

4/25/06  
(cont.)

TIME	DESCRIPTION, COMMENTS, NOTES, ETC.
1000	Trench-C is backfilled to 4.5 ft by with drain rock. Several PID readings over the last couple of hours from in the trench and from the breathing space around the trench were 0.0 ppm.
1110	After Trench-B is backfilled to 4.5 ft by with drain rock, workers get in trench to put down geotextile fabric. After putting in an 8-inch lift of aggregate base workers are compacting base in trench w/ a gas powered "whacker". PID in Trench-B reads 12.4 ppm (due to exhaust from whacker) 10-ft from the Trench there are no odors and the PID reads 0.0 ppm.
1200	Air monitoring Around bins in Alley. - All bins are closed tightly. - Ambient air around all bins and above bins gives readings of 0.0 ppm on PID. (>1.0 ft from bins) - When PID is placed inside bins (i.e. small openings between lid and bin) gives readings from 4.2 - 40.4 ppm for bins 1, 2, 3, 5, 7, 8, 9 - Noticeable hydrocarbon odor within 6-inches of opening between lid and bin for bin #4. When PID is placed in this opening it reads 178.0 ppm. Ambient air immediately above and around bin #4 produces readings of 0.0 ppm (>1 ft from bin)

ATTACHMENTS:  NO  YES

DESCRIPTION:

SIGNATURE



Summary of Air Monitoring Activities (cont.)

# DAILY FIELD REPORT

PROJECT: Bay Center Trenches  
JOB NO.: ~~241.055.01.006~~  
PROJECT MANAGER: CJM  
RECORDED BY: MB

-125/06  
(cont.)  
  
-126/06

TIME	DESCRIPTION, COMMENTS, NOTES, ETC.
	- Bin #6 produces hydrocarbon odor within a 6 inches of small openings. PID in opening reads 84.5 ppm. Ambient air above and around bin (>1 ft from bin) = 0.0 ppm.
0930	Air quality in garage is fair. There is a fair amount of dust in the air from moving around base rock with the bobcat. PID in Trench-A while "whacker" is in use = 90.6 ppm. PID within 50-ft of Trench-A = 0.2 ppm. PID in rest of garage (>100 ft from Trench-A) = 0.0 Air quality in the Alley is good: No fumes, minor amount of dust in the air. PID in front of bin #1 = 0.0 ppm PID 5" above bin #2 (open) = 1.0 ppm, PID 3 ft above bin #3 (open) = 0.0 ppm. PID in front of bin #5 = 0.0 ppm.
1135	Air quality in garage is good. Minor amount of dust in air. No fumes or odors unless one is within 5 feet of Trench with "whacker" in use. PID in Trench-B being worked = 21.4 ppm PID 10 ft from Trench-B = 0.3 ppm. Air quality in Alley is very good, PID in front of bin #2 = 0.0 ppm, PID 3 ft above bin #4 (open): 2.7 ppm, PID directly above bin #6 (open, filled with wet material, a few small puddles w/ water) = 3.2 ppm. PID in front of and above bins #8+9 = 0.0 ppm.

ATTACHMENTS:  NO  YES

DESCRIPTION:

SIGNATURE

**APPENDIX F**

**COMPACTION TESTING REPORT AND FIELD NOTES**



# SMITH-EMERY LABORATORIES

The Full Service Independent Testing Laboratory, Established 1904

## FIELD DAILY REPORT

Job No. : 63157 Report No. : \_\_\_\_\_ Date: 4-26-06 SECo Representative: E. Trethewey

PROJECT I.D. : 11000 Christie Ave, Emeryville

The following services were provided this date: 4-26-06 Trench Backfill

Compaction  
Equipment Working: (1) Bobcat loader, (1) Upright Rammer Compactor  
(1) Water Pull Tank

Description of Work: Ray Love w/ Cornerstone Environmental requested site visit to test compaction on trench backfill, lower garage level, trenches #1, #2, and #3. Base rock AB-II from Stearn's Rock Quarry, water added as needed, observed backfill 6-8" lifts, and compaction. See Table 1 Pg 2 for test locations & test results. Base rock backfill meets the required 90% R.C below the top 2' ft, and 95% within the top 2' ft. Reported test results to contractor tomorrow on-site. Nuclear density tests 12 random locations.

- Work was conducted in accordance with project requirements.
- Work was NOT conducted in accordance with project requirements.

781 East Washington Boulevard  
Los Angeles, California 90021  
(213) 745-5333  
(213) 746-0744 FAX

1195 N. Tustin Ave.  
Anaheim, CA, 92807  
(714) 238-6133  
(714) 238-6144 FAX



# TABLE I ~ SOILS TESTING

PROJECT I.D. 6400 Christie, Emeryville PROJECT NO. 63157 OFFICE REPORT NO. \_\_\_\_\_

**LOCATION KEY**

BF - Backfill	SD - Storm Drain
BP - Building Pad	SW - Sewerline
ELC - Electrical	TR - Trench
EXC - Excavation	WL - Wall
FTG - Footing	WTL - Waterline

Note:  
 Trench #1 = A  
 " #2 = B  
 " #3 = C

**ELEVATION KEY**

SG - Subgrade	FSG - Finish Subgrade
FG - Finish Grade	FAB - Finish Agg. Base
AB - Aggregate Base	BTM - Bottom

**METHOD KEY**

SC - Sandcone
NG - Nuclear Gage
DT - Drive Tube

DATE	TEST NO.	LOCATION	ELEV. FT	% MOIST.	DRY DENSITY	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
4/26	1	Trench #2 Center to NW End	-3"	11.1	133.4	#1	95	90	ERT	NG
"	2	" #1 Center	"	12.0	134.7	"	96	"	"	"
"	3	" #3 NW End	"	10.3	137.0	"	98	"	"	"
"	4	" #2 SE End to TR	-2'3"	11.8	139.0	"	99	"	"	"
"	5	" #1 SE End	-2'1"	11.1	135.3	"	96	"	"	"
"	6	" #2 NW "	-1'8"	10.5	140.2	"	100	95	"	"
"	7	" #1 NW "	1'1"	12.8	136.1	"	98	"	"	"
"	8	" #2 SE "	FAB -4"	12.6	136.7	"	97	"	"	"
"	9	" #1 SE "	FAB -8"	11.7	139.1	"	99	"	"	"
"	10	" #3 SE "	-2"	9.0	133.7	"	95	90	"	"
"	11	" " NW "	1'4"	10.0	135.2	"	96	95	"	"
"	12	" " SE "	FAB -8"	9.0	135.0	"	96	"	"	"

LABORATORY STANDARD: \_\_\_\_\_

SOIL TYPE	% OPTIMUM MOISTURE	MAXIMUM DRY DENSITY, PCF
#1 Steven's Creek (inj. AB-II)	7.0	140.5
Reference # 63040		



# TABLE I ~ SOILS TESTING

PROJECT I.D. 6400 Christie Ave, PROJECT NO. 63157 OFFICE REPORT NO. \_\_\_\_\_

LOCATION KEY	
BF -Backfill	SD -Storm Drain
BP -Building Pad	SW -Sewerline
ELC -Electrical	TR -Trench
EXC -Excavation	WL -Wall
FTG -Footing	WTL -Waterline

ELEVATION KEY	
SG - Subgrade	FSG - Finish Subgrade
FG - Finish Grade	FAB - Finish Agg. Base
AB - Aggregate Base	BTM - Bottom

METHOD KEY
SC - Sandcone
NG - Nuclear Gage
DT - Drive Tube

DATE	TEST NO.	LOCATION	ELEV.	% MOIST.	DRY DENSITY	SOIL TYPE	% REL. COMPACTION		TECH	METHOD
							FIELD	SPECIFIED		
4/25	1	Trench #2 Center	-40	112	136.3	#1	97	90	ERT	N/G

LABORATORY STANDARD: \_\_\_\_\_

SOIL TYPE	% OPTIMUM MOISTURE	MAXIMUM DRY DENSITY, PCF
#1 sample to Lab. Max Density		
Ston's Grack #1 AB-II	7.0	110.5
Reference #63040		





SMITH-EMERY COMPANY An Independent Commercial Testing Laboratory Established 1904  
 781 East Washington Blvd., Los Angeles, CA 90021 \*(213) 749-3411 \*fax (213) 746-7228  
 Hunters Point Shipyard Building 114, San Francisco, CA 94124 \*(415) 330-3000 \*fax (415) 330-3030



PROJECT NAME: _____	DATA SHEET FOR: <b>EPOXY INSTALLATIONS</b>
PROJECT ADDRESS: <u>6400 Christie, Emeryville</u>	
PROJECT NO.: <u>63157</u> TEST DATE: <u>4-27-6</u>	
JOB NO.: _____ TEST TIME: <u>4pm - 5 p.m.</u>	

TESTING LOCATION WITHIN STRUCTURE	DESCRIPTION OF ANCHOR: TYPE, MAKE, MODEL, DIAM., LENGTH, ETC.	PROPOSED USE OF ANCHOR	HOLE DIAMETER (in.)	EMBEDMENT DEPTH (in.)	PER DETAIL NUMBER	TOTAL OF EMBEDDS PLACED	EPOXY SYSTEM & ICBO NO.
slab infill trench A & B	#5's rebar	reinforcement	3/4"	6"	Sheet - 2 of 2 Job Specs	52 of 72	Simpson set 22 ICC-ES-ER 5279

REMARKS: SEE REVERSE FOR ADDITIONAL SPACE  
 - Tipping -- MAR 3 Associates spec book  
 note - to be ~~done~~ completed, trench "B" not completed

INSPECTORS (S)  
*John K*

**APPENDIX G**

**LABORATORY ANALYTICAL REPORT FOR GROUNDWATER  
SAMPLING AND WASTE CHARACTERIZATION**

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Date Received: 10/7/2005 11:15:50 AM  
Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

EPA 3580 EPA 8015 MOD. (Extractable)								TPH-Extractable	
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	290000		500	1200	mg/Kg	10/13/2005	DO051013	10/18/2005	DO051013
Hydrocarbons C8-C32. Not a Diesel pattern; possibly higher boiling gasoline compounds.									
TPH as Motor Oil	ND		500	5000	mg/Kg	10/13/2005	DO051013	10/18/2005	DO051013

Analyzed by: EricKum

Reviewed by: dba

Detection Limit = Detection Limit for Reporting.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

10/24/2005 12:24:48 PM - ECuniff

# Entech Analytical Labs, Inc.

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3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Carl Michelsen  
PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947

Certificate Number: 45706  
Issued: 10/24/2005

Project ID: 241.055.01.005  
Project Name: Emerybay

Order / Lab Number: 45706

## Certificate of Analysis-Revision

Note: This is a revised report of the original issued on 10/24/05. The dilution factors and detection limits were revised in the EPA method 8260B results.

On October 07, 2005, sample was received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Oil	TPH-Extractable EPA 8260B	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Erin Cunniffe  
Laboratory Operations Manager

# Entech Analytical Labs, Inc.

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Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

EPA 8260B									EPA 8260B
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,1-Trichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,2,2-Tetrachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,2-Trichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,3-Trichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,3-Trichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,4-Trichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,4-Trimethylbenzene	47000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dibromo-3-Chloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dibromoethane (EDB)	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3,5-Trimethylbenzene	30000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,4-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,4-Dioxane	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2,2-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Butanone (MEK)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Chloroethyl-vinyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Chlorotoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Hexanone	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
4-Chlorotoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
4-Methyl-2-Pentanone(MIBK)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acetone	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acetonitrile	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acrolein	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acrylonitrile	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Benzene	27000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Benzyl Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromochloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromodichloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromoform	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromomethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Carbon Disulfide	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Carbon Tetrachloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloroform	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

10/24/2005 2:17:20 PM - ECunniffe

# Entech Analytical Labs, Inc.

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Date Received: 10/7/2005 11:15:50 AM  
Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

EPA 8260B									EPA 8260B
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
cis-1,3-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
cis-1,4-Dichloro-2-butene	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dibromochloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dibromomethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dichlorodifluoromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Diisopropyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Ethyl Benzene	31000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Freon 113	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Hexachlorobutadiene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Iodomethane	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Isopropanol	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Isopropylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Methyl-t-butyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Methylene Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
n-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
n-Propylbenzene	8600		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Naphthalene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
p-Isopropyltoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Pentachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
sec-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Styrene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Amyl Methyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butanol (TBA)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butyl Ethyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Tetrachloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Tetrahydrofuran	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Toluene	4800		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,2-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,3-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,4-Dichloro-2-butene	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Trichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Trichlorofluoromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Vinyl Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Xylenes, Total	59000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	70.3	70 - 125
Dibromofluoromethane	70.8	70 - 125
Toluene-d8	82.1	70 - 125

Analyzed by: Mfelix  
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

10/24/2005 2:17:20 PM - ECuniffc



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Date Received: 10/7/2005 11:15:50 AM

Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001

Sample ID: MW-13 Product

Matrix: Oil

Sample Date: 10/7/2005 6:05 AM

GC-MS								TPH as Gasoline - GCMS	
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1400000	E	100	25000	mg/Kg	N/A	N/A	10/21/2005	PMS051019

Analyzed by: Mfelix

Reviewed by: dba

E = Estimated value; exceeds the calibration.

# Entech Analytical Labs, Inc.

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3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Oil - EPA 8015 MOD. (Extractable) - TPH-Extractable

QC/Prep Batch ID: DO051013

Validated by: dba - 10/18/05

QC/Prep Date: 10/13/2005

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	2.5	mg/Kg
TPH as Motor Oil	ND	1	10	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	108	41 - 137

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Validated by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

Parameter	Result	DF	PQLR	Units
1,1,1,2-Tetrachloroethane	ND	50	250	µg/Kg
1,1,1-Trichloroethane	ND	50	250	µg/Kg
1,1,2,2-Tetrachloroethane	ND	50	250	µg/Kg
1,1,2-Trichloroethane	ND	50	250	µg/Kg
1,1-Dichloroethane	ND	50	250	µg/Kg
1,1-Dichloroethene	ND	50	250	µg/Kg
1,1-Dichloropropene	ND	50	250	µg/Kg
1,2,3-Trichlorobenzene	ND	50	250	µg/Kg
1,2,3-Trichloropropane	ND	50	250	µg/Kg
1,2,4-Trichlorobenzene	ND	50	250	µg/Kg
1,2,4-Trimethylbenzene	ND	50	250	µg/Kg
1,2-Dibromo-3-Chloropropane	ND	50	250	µg/Kg
1,2-Dibromoethane (EDB)	ND	50	250	µg/Kg
1,2-Dichlorobenzene	ND	50	250	µg/Kg
1,2-Dichloroethane	ND	50	250	µg/Kg
1,2-Dichloropropane	ND	50	250	µg/Kg
1,3,5-Trimethylbenzene	ND	50	250	µg/Kg
1,3-Dichlorobenzene	ND	50	250	µg/Kg
1,3-Dichloropropane	ND	50	250	µg/Kg
1,4-Dichlorobenzene	ND	50	250	µg/Kg
1,4-Dioxane	ND	50	10000	µg/Kg
2,2-Dichloropropane	ND	50	250	µg/Kg
2-Butanone (MEK)	ND	50	2000	µg/Kg
2-Chloroethyl-vinyl Ether	ND	50	250	µg/Kg
2-Chlorotoluene	ND	50	250	µg/Kg
2-Hexanone	ND	50	2000	µg/Kg
4-Chlorotoluene	ND	50	250	µg/Kg
4-Methyl-2-Pentanone(MIBK)	ND	50	2000	µg/Kg
Acetone	ND	50	5000	µg/kg
Acetonitrile	ND	50	2000	µg/kg
Acrolein	ND	50	250	µg/kg
Acrylonitrile	ND	50	250	µg/Kg
Benzene	ND	50	250	µg/Kg
Benzyl Chloride	ND	50	250	µg/Kg
Bromobenzene	ND	50	250	µg/Kg
Bromochloromethane	ND	50	250	µg/Kg
Bromodichloromethane	ND	50	250	µg/Kg
Bromoform	ND	50	250	µg/Kg
Bromomethane	ND	50	250	µg/Kg
Carbon Disulfide	ND	50	250	µg/Kg
Carbon Tetrachloride	ND	50	250	µg/Kg
Chlorobenzene	ND	50	250	µg/Kg
Chloroethane	ND	50	250	µg/Kg
Chloroform	ND	50	250	µg/Kg
Chloromethane	ND	50	250	µg/Kg
cis-1,2-Dichloroethene	ND	50	250	µg/Kg
cis-1,3-Dichloropropene	ND	50	250	µg/Kg
Cyclohexanone	ND	50	2000	µg/Kg

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Validated by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

Parameter	Result	DF	PQLR	Units
Dibromochloromethane	ND	50	250	µg/Kg
Dibromomethane	ND	50	250	µg/Kg
Dichlorodifluoromethane	ND	50	250	µg/Kg
Diisopropyl Ether	ND	50	250	µg/Kg
Ethyl Benzene	ND	50	250	µg/Kg
Freon 113	ND	50	250	µg/Kg
Hexachlorobutadiene	ND	50	250	µg/Kg
Iodomethane	ND	50	2000	µg/Kg
Isopropanol	ND	50	5000	µg/Kg
Isopropylbenzene	ND	50	250	µg/Kg
Methylene Chloride	ND	50	1200	µg/Kg
Methyl-t-butyl Ether	ND	50	250	µg/Kg
Naphthalene	ND	50	250	µg/Kg
n-Butylbenzene	ND	50	250	µg/Kg
n-Propylbenzene	ND	50	250	µg/Kg
Pentachloroethane	ND	50	250	µg/Kg
p-Isopropyltoluene	ND	50	250	µg/Kg
sec-Butylbenzene	ND	50	250	µg/Kg
Styrene	ND	50	250	µg/Kg
tert-Amyl Methyl Ether	ND	50	250	µg/Kg
tert-Butanol (TBA)	ND	50	2000	µg/Kg
tert-Butyl Ethyl Ether	ND	50	250	µg/Kg
tert-Butylbenzene	ND	50	250	µg/Kg
Tetrachloroethene	ND	50	250	µg/Kg
Tetrahydrofuran	ND	50	2000	µg/Kg
Toluene	ND	50	250	µg/Kg
trans-1,2-Dichloroethene	ND	50	250	µg/Kg
trans-1,3-Dichloropropene	ND	50	250	µg/Kg
trans-1,4-Dichloro-2-butene	ND	50	2000	µg/Kg
Trichloroethene	ND	50	250	µg/Kg
Trichlorofluoromethane	ND	50	250	µg/Kg
Vinyl Chloride	ND	50	250	µg/Kg
Xylenes, Total	ND	50	500	µg/Kg

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	80.4	70 - 125
Dibromofluoromethane	70.3	70 - 125
Toluene-d8	74.7	70 - 125

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Reviewed by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<5.0	2000	1540	µg/Kg	77.0	70 - 135
Benzene	<5.0	2000	1950	µg/Kg	97.5	70 - 135
Chlorobenzene	<5.0	2000	2350	µg/Kg	118	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1470	µg/Kg	73.5	70 - 135
Toluene	<5.0	2000	2170	µg/Kg	108	70 - 135
Trichloroethene	<5.0	2000	2430	µg/Kg	122	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	93	70 - 125
Dibromofluoromethane	83	70 - 125
Toluene-d8	81.4	70 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<5.0	2000	1570	µg/Kg	78.5	1.9	30.0	70 - 135
Benzene	<5.0	2000	1930	µg/Kg	96.5	1.0	30.0	70 - 135
Chlorobenzene	<5.0	2000	2160	µg/Kg	108	8.4	30.0	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1510	µg/Kg	75.5	2.7	30.0	70 - 135
Toluene	<5.0	2000	2010	µg/Kg	100	7.7	30.0	70 - 135
Trichloroethene	<5.0	2000	2480	µg/Kg	124	2.0	30.0	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	89	70 - 125
Dibromofluoromethane	71.7	70 - 125
Toluene-d8	77.6	70 - 125



## CHAIN OF CUSTODY RECORD

Entech Lab # 45706

LABORATORY: Entech  
 JOB NUMBER: 241.055.01.005  
 NAME / LOCATION: Emery bay  
 PROJECT MANAGER: Carl Michelsen

SAMPLERS: P. Gorman  
 RECORDER: P. Gorman

DATE				SAMPLE NUMBER / DESIGNATION
YR	MO	DY	TIME	
05	10	07	0605	MW-13-Product

MATRIX					# of Containers & Preservatives					DEPTH IN FEET
Vapor	Water	Soil	Sediment	Product	Unpres.	EnCore	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	
				X		1				

ANALYSIS REQUESTED	
EPA 5035/8010	
EPA 5035/8021	
EPA 5035/8260B-1	X
TPHg by 5035/8015M	
TPHd by 8015M	
TPHmo by 8015M	
EPA 8270C	
MNA Parameters (see notes)	
MTBE	X
8015M (TPHd/m)	X
	45706-001

**NOTES**  
 Turn Around Time: Standard 10 day TAT  
Re'd. (1) 40 mL VOA @ 21°C  
Sample is product - VIA Client  
Sample ID's match COC. DLT  
10-27-05  
10/100

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE <u>10/21/05</u>	TIME <u>1040</u>
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)
METHOD OF SHIPMENT:			

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

**Carl Michelsen**  
**PES Environmental, Inc.**  
**1682 Novato Boulevard, Suite 100**  
**Novato, CA 94947**

**Certificate Number: 45706**  
**Issued: 10/24/2005**

**Project ID: 241.055.01.005**  
**Project Name: Emerybay**

**Order / Lab Number: 45706**

## Certificate of Analysis-Revision

Note: This is a revised report of the original issued on 10/24/05. The dilution factors and detection limits were revised in the EPA method 8260B results.

On October 07, 2005, sample was received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Oil	TPH-Extractable EPA 8260B	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Erin Cunniffe  
Laboratory Operations Manager

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Date Received: 10/7/2005 11:15:50 AM  
Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

EPA 3580 Parameter	EPA 8015 MOD. (Extractable)		D/P-F	Detection Limit	Units	Prep Date	Prep Batch	TPH-Extractable	
	Result	Qual						Analysis Date	QC Batch
TPH as Diesel	290000		500	1200	mg/Kg	10/13/2005	DO051013	10/18/2005	DO051013
Hydrocarbons C8-C32. Not a Diesel pattern; possibly higher boiling gasoline compounds.									
TPH as Motor Oil	ND		500	5000	mg/Kg	10/13/2005	DO051013	10/18/2005	DO051013

Analyzed by: EricKum

Reviewed by: dba



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Date Received: 10/7/2005 11:15:50 AM  
Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001      Sample ID: MW-13 Product      Matrix: Oil      Sample Date: 10/7/2005      6:05 AM

EPA 8260B									EPA 8260B
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
1,1,1,2-Tetrachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,1-Trichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,2,2-Tetrachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1,2-Trichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,1-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,3-Trichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,3-Trichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,4-Trichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2,4-Trimethylbenzene	47000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dibromo-3-Chloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dibromoethane (EDB)	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,2-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3,5-Trimethylbenzene	30000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,3-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,4-Dichlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
1,4-Dioxane	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2,2-Dichloropropane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Butanone (MEK)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Chloroethyl-vinyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Chlorotoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
2-Hexanone	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
4-Chlorotoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
4-Methyl-2-Pentanone(MIBK)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acetone	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acetonitrile	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acrolein	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Acrylonitrile	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Benzene	27000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Benzyl Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromochloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromodichloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromoform	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Bromomethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Carbon Disulfide	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Carbon Tetrachloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chlorobenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloroform	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Chloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

10/24/2005 2:17:20 PM - ECunniffe

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Date Received: 10/7/2005 11:15:50 AM

Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

EPA 8260B									EPA 8260B
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
cis-1,2-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
cis-1,3-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
cis-1,4-Dichloro-2-butene	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dibromochloromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dibromomethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Dichlorodifluoromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Diisopropyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Ethyl Benzene	31000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Freon 113	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Hexachlorobutadiene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Iodomethane	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Isopropanol	ND		100	50000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Isopropylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Methyl-t-butyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Methylene Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
n-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
n-Propylbenzene	8600		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Naphthalene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
p-Isopropyltoluene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Pentachloroethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
sec-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Styrene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Amyl Methyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butanol (TBA)	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butyl Ethyl Ether	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
tert-Butylbenzene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Tetrachloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Tetrahydrofuran	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Toluene	4800		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,2-Dichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,3-Dichloropropene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
trans-1,4-Dichloro-2-butene	ND		100	20000	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Trichloroethene	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Trichlorofluoromethane	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Vinyl Chloride	ND		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019
Xylenes, Total	59000		100	2500	mg/Kg	10/19/2005	PMS051019	10/21/2005	PMS051019

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	70.3	70 - 125
Dibromofluoromethane	70.8	70 - 125
Toluene-d8	82.1	70 - 125

Analyzed by: Mfelix

Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

10/24/2005 2:17:20 PM - ECumiff6

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Date Received: 10/7/2005 11:15:50 AM  
Project ID: 241.055.01.005

Project Name: Emerybay

## Certificate of Analysis - Data Report

Sample Collected by: Client

Lab #: 45706-001    Sample ID: MW-13 Product    Matrix: Oil    Sample Date: 10/7/2005 6:05 AM

GC-MS								TPH as Gasoline - GCMS	
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1400000	E	100	25000	mg/Kg	N/A	N/A	10/21/2005	PMS051019

Analyzed by: Mfelix

Reviewed by: dba

E = Estimated value; exceeds the calibration.

# Entech Analytical Labs, Inc.

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3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Oil - EPA 8015 MOD. (Extractable) - TPH-Extractable

QC/Prep Batch ID: DO051013

Validated by: dba - 10/18/05

QC/Prep Date: 10/13/2005

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	2.5	mg/Kg
TPH as Motor Oil	ND	1	10	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	108	41 - 137

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Method Blank - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Validated by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

Parameter	Result	DF	PQLR	Units
1,1,1,2-Tetrachloroethane	ND	50	250	µg/Kg
1,1,1-Trichloroethane	ND	50	250	µg/Kg
1,1,2,2-Tetrachloroethane	ND	50	250	µg/Kg
1,1,2-Trichloroethane	ND	50	250	µg/Kg
1,1-Dichloroethane	ND	50	250	µg/Kg
1,1-Dichloroethene	ND	50	250	µg/Kg
1,1-Dichloropropene	ND	50	250	µg/Kg
1,2,3-Trichlorobenzene	ND	50	250	µg/Kg
1,2,3-Trichloropropane	ND	50	250	µg/Kg
1,2,4-Trichlorobenzene	ND	50	250	µg/Kg
1,2,4-Trimethylbenzene	ND	50	250	µg/Kg
1,2-Dibromo-3-Chloropropane	ND	50	250	µg/Kg
1,2-Dibromoethane (EDB)	ND	50	250	µg/Kg
1,2-Dichlorobenzene	ND	50	250	µg/Kg
1,2-Dichloroethane	ND	50	250	µg/Kg
1,2-Dichloropropane	ND	50	250	µg/Kg
1,3,5-Trimethylbenzene	ND	50	250	µg/Kg
1,3-Dichlorobenzene	ND	50	250	µg/Kg
1,3-Dichloropropane	ND	50	250	µg/Kg
1,4-Dichlorobenzene	ND	50	250	µg/Kg
1,4-Dioxane	ND	50	10000	µg/Kg
2,2-Dichloropropane	ND	50	250	µg/Kg
2-Butanone (MEK)	ND	50	2000	µg/Kg
2-Chloroethyl-vinyl Ether	ND	50	250	µg/Kg
2-Chlorotoluene	ND	50	250	µg/Kg
2-Hexanone	ND	50	2000	µg/Kg
4-Chlorotoluene	ND	50	250	µg/Kg
4-Methyl-2-Pentanone(MIBK)	ND	50	2000	µg/Kg
Acetone	ND	50	5000	µg/kg
Acetonitrile	ND	50	2000	µg/kg
Acrolein	ND	50	250	µg/kg
Acrylonitrile	ND	50	250	µg/Kg
Benzene	ND	50	250	µg/Kg
Benzyl Chloride	ND	50	250	µg/Kg
Bromobenzene	ND	50	250	µg/Kg
Bromochloromethane	ND	50	250	µg/Kg
Bromodichloromethane	ND	50	250	µg/Kg
Bromoform	ND	50	250	µg/Kg
Bromomethane	ND	50	250	µg/Kg
Carbon Disulfide	ND	50	250	µg/Kg
Carbon Tetrachloride	ND	50	250	µg/Kg
Chlorobenzene	ND	50	250	µg/Kg
Chloroethane	ND	50	250	µg/Kg
Chloroform	ND	50	250	µg/Kg
Chloromethane	ND	50	250	µg/Kg
cis-1,2-Dichloroethene	ND	50	250	µg/Kg
cis-1,3-Dichloropropene	ND	50	250	µg/Kg
Cyclohexanone	ND	50	2000	µg/Kg

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Validated by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

Parameter	Result	DF	PQLR	Units
Dibromochloromethane	ND	50	250	µg/Kg
Dibromomethane	ND	50	250	µg/Kg
Dichlorodifluoromethane	ND	50	250	µg/Kg
Diisopropyl Ether	ND	50	250	µg/Kg
Ethyl Benzene	ND	50	250	µg/Kg
Freon 113	ND	50	250	µg/Kg
Hexachlorobutadiene	ND	50	250	µg/Kg
Iodomethane	ND	50	2000	µg/Kg
Isopropanol	ND	50	5000	µg/Kg
Isopropylbenzene	ND	50	250	µg/Kg
Methylene Chloride	ND	50	1200	µg/Kg
Methyl-t-butyl Ether	ND	50	250	µg/Kg
Naphthalene	ND	50	250	µg/Kg
n-Butylbenzene	ND	50	250	µg/Kg
n-Propylbenzene	ND	50	250	µg/Kg
Pentachloroethane	ND	50	250	µg/Kg
p-Isopropyltoluene	ND	50	250	µg/Kg
sec-Butylbenzene	ND	50	250	µg/Kg
Styrene	ND	50	250	µg/Kg
tert-Amyl Methyl Ether	ND	50	250	µg/Kg
tert-Butanol (TBA)	ND	50	2000	µg/Kg
tert-Butyl Ethyl Ether	ND	50	250	µg/Kg
tert-Butylbenzene	ND	50	250	µg/Kg
Tetrachloroethene	ND	50	250	µg/Kg
Tetrahydrofuran	ND	50	2000	µg/Kg
Toluene	ND	50	250	µg/Kg
trans-1,2-Dichloroethene	ND	50	250	µg/Kg
trans-1,3-Dichloropropene	ND	50	250	µg/Kg
trans-1,4-Dichloro-2-butene	ND	50	2000	µg/Kg
Trichloroethene	ND	50	250	µg/Kg
Trichlorofluoromethane	ND	50	250	µg/Kg
Vinyl Chloride	ND	50	250	µg/Kg
Xylenes, Total	ND	50	500	µg/Kg

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	80.4	70 - 125
Dibromofluoromethane	70.3	70 - 125
Toluene-d8	74.7	70 - 125

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Solid - EPA 8260B - EPA 8260B

QC/Prep Batch ID: PMS051019

Reviewed by: MaiChiTu - 10/21/05

QC/Prep Date: 10/19/2005

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<5.0	2000	1540	µg/Kg	77.0	70 - 135
Benzene	<5.0	2000	1950	µg/Kg	97.5	70 - 135
Chlorobenzene	<5.0	2000	2350	µg/Kg	118	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1470	µg/Kg	73.5	70 - 135
Toluene	<5.0	2000	2170	µg/Kg	108	70 - 135
Trichloroethene	<5.0	2000	2430	µg/Kg	122	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	93	70 - 125
Dibromofluoromethane	83	70 - 125
Toluene-d8	81.4	70 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<5.0	2000	1570	µg/Kg	78.5	1.9	30.0	70 - 135
Benzene	<5.0	2000	1930	µg/Kg	96.5	1.0	30.0	70 - 135
Chlorobenzene	<5.0	2000	2160	µg/Kg	108	8.4	30.0	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1510	µg/Kg	75.5	2.7	30.0	70 - 135
Toluene	<5.0	2000	2010	µg/Kg	100	7.7	30.0	70 - 135
Trichloroethene	<5.0	2000	2480	µg/Kg	124	2.0	30.0	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	89	70 - 125
Dibromofluoromethane	71.7	70 - 125
Toluene-d8	77.6	70 - 125



# CHAIN OF CUSTODY RECORD

LABORATORY: Entech  
JOB NUMBER: 241.055.01.005  
NAME / LOCATION: Emerg bay  
PROJECT MANAGER: Carl Michelsen

SAMPLERS: P. Gorman  
Entech Lab # 45706  
RECORDER: P. Gorman

DATE				SAMPLE NUMBER / DESIGNATION
YR	MO	DY	TIME	
05	10	07	0605	MW-13-Product

MATRIX					# of Containers & Preservatives					DEPTH IN FEET
Vapor	Water	Soil	Sedim't	Product	Unpres.	EnCore	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	
				X	1					

ANALYSIS REQUESTED											
EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B 1	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	MTBE	8015M (TPHA/m)		
	X							XX			45706-001

**NOTES**

Turn Around Time: Standard 10 day TAT

BC'd (1) 40 mL VOA @ 21°C  
VIA Client

Sample is product.

Sample ID'S match COC. DLT  
10-11-05  
@ 1100

CHAIN OF CUSTODY RECORD					
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		DATE	TIME	
<u>P. Gorman</u>	<u>[Signature]</u>		<u>10/10/05</u>	<u>1040</u>	
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		DATE	TIME	
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)		DATE	TIME	
DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)		DATE TIME
METHOD OF SHIPMENT:					



# **Entech Analytical Labs, Inc.**

**3334 Victor Court , Santa Clara, CA 95054**

**Phone: (408) 588-0200**

**Fax: (408) 588-0201**

**Carl Michelsen**

**PES Environmental, Inc.**

**1682 Novato Boulevard, Suite 100**

**Novato, CA 94947**

**Lab Certificate Number: 49062**

**Issued: 04/24/2006**

**Project Number: 241.055.01.006**

**Project Name: Bay Center Trenches**

## **Certificate of Analysis - Final Report**

On April 20, 2006, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Solid	EPA 8260B Mercury - EPA 7471B Metals by ICP EPA 6010B TPH-Extractable by EPA 8015M TPH-Purgeable by GC/MS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).

If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy

Laboratory Director

# Entech Analytical Labs, Inc.

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/20/2006  
Sample Collected by: Client

Lab #: 49062-001    Sample ID: Comp-T-A    Matrix: Solid    Sample Date: 4/19/2006    3:00 PM

### EPA 3050B - Metals by ICP EPA 6010B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Antimony	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Arsenic	3.2		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Barium	74		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Beryllium	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Cadmium	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Chromium	37		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Cobalt	6.6		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Copper	24		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Lead	90		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Molybdenum	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Nickel	33		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Selenium	ND		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Silver	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Thallium	ND		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Vanadium	26		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Zinc	100		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421

Analyzed by: Hdinh  
Reviewed by: equeja

### Mercury - EPA 7471B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Mercury	0.095		1.0	0.050	mg/Kg	4/21/2006	SHG060421	4/21/2006	SHG060421

Analyzed by: RWipfler  
Reviewed by: dqueja

### EPA 3545 - TPH-Extractable by EPA 8015M

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel C8-C36	3600		50	120	mg/Kg	4/21/2006	SD060421A	4/21/2006	SD060421A
TPH as Motor Oil	ND		50	500	mg/Kg	4/21/2006	SD060421A	4/21/2006	SD060421A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	87.5	41 - 137

Analyzed by: JHsiang  
Reviewed by: ECunniffe

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

4/24/2006 2:37:20 PM - dba

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/20/2006

Sample Collected by: Client

Lab #: 49062-001    Sample ID: Comp-T-A    Matrix: Solid    Sample Date: 4/19/2006    3:00 PM

### EPA 5035A - EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	4300		500	2500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Toluene	3900		500	2500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Ethyl Benzene	7600		500	2500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Xylenes, Total	19000		500	5000	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	60 - 130
Dibromofluoromethane	103	60 - 130
Toluene-d8	103	60 - 130

Analyzed by: EricKum

Reviewed by: MFelix

### EPA 5035A - TPH-Purgeable by GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	640000		500	50000	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	107	60 - 130
Dibromofluoromethane	88.2	60 - 130
Toluene-d8	121	60 - 130

Analyzed by: EricKum

Reviewed by: MFelix

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

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1682 Novato Boulevard, Suite 100  
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Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/20/2006  
Sample Collected by: Client

Lab #: 49062-002    Sample ID: Comp-T-B    Matrix: Solid    Sample Date: 4/19/2006    1:15 PM

### EPA 3050B - Metals by ICP EPA 6010B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Antimony	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Arsenic	2.9		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Barium	110		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Beryllium	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Cadmium	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Chromium	33		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Cobalt	6.2		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Copper	29		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Lead	55		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Molybdenum	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Nickel	34		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Selenium	ND		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Silver	ND		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Thallium	ND		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Vanadium	27		1.0	1.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421
Zinc	130		1.0	2.0	mg/Kg	4/21/2006	SM060421	4/21/2006	SM060421

Analyzed by: HDinh

Reviewed by: equeja

### Mercury - EPA 7471B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Mercury	ND		1.0	0.050	mg/Kg	4/21/2006	SHG060421	4/21/2006	SHG060421

Analyzed by: RWipler

Reviewed by: dqueja

### EPA 3545 - TPH-Extractable by EPA 8015M

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel C8-C36	100		2.0	5.0	mg/Kg	4/21/2006	SD060421A	4/21/2006	SD060421A
TPH as Motor Oil	ND		2.0	20	mg/Kg	4/21/2006	SD060421A	4/21/2006	SD060421A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.9	41 - 137

Analyzed by: JHsiang

Reviewed by: ECunniffe

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

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Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/20/2006

Sample Collected by: Client

Lab # : 49062-002    Sample ID: Comp-T-B    Matrix: Solid    Sample Date: 4/19/2006    1:15 PM

### EPA 5035A - EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	760		100	500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Toluene	ND		100	500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Ethyl Benzene	1600		100	500	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P
Xylenes, Total	2000		100	1000	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.5	60 - 130
Dibromofluoromethane	83.7	60 - 130
Toluene-d8	96.0	60 - 130

Analyzed by: EricKum

Reviewed by: MFelix

### EPA 5035A - TPH-Purgeable by GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	140000		100	10000	µg/Kg	4/21/2006	PM060421P	4/21/2006	PM060421P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	60 - 130
Dibromofluoromethane	77.5	60 - 130
Toluene-d8	113	60 - 130

Analyzed by: EricKum

Reviewed by: MFelix

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

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# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

## Method Blank - Solid - EPA 8260B

QC/Prep Batch ID: PM060421P

Validated by: MFelix - 04/24/06

QC/Prep Date: 4/21/2006

Parameter	Result	DF	PQLR	Units
Benzene	ND	50	250	µg/Kg
Ethyl Benzene	ND	50	250	µg/Kg
Toluene	ND	50	250	µg/Kg
Xylenes, Total	ND	50	500	µg/Kg

### Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	97.1	60 - 130
Dibromofluoromethane	85.6	60 - 130
Toluene-d8	97.5	60 - 130

## Method Blank - Solid - TPH-Purgeable by GC/MS

QC/Prep Batch ID: PM060421P

Validated by: MFelix - 04/24/06

QC/Prep Date: 4/21/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	50	5000	µg/Kg

### Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	103	60 - 130
Dibromofluoromethane	73.2	60 - 130
Toluene-d8	114	60 - 130

# Entech Analytical Labs, Inc.

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3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - TPH-Extractable by EPA 8015M

QC/Prep Batch ID: SD060421A

Validated by: ECunniffe - 04/21/06

QC/Prep Date: 4/21/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	2.5	mg/Kg
TPH as Motor Oil	ND	1	10	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	117	41 - 137

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - EPA 8260B

QC Batch ID: PM060421P

Reviewed by: MFelix - 04/24/06

QC/Prep Date: 4/21/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<5.0	2000	2550	µg/Kg	128	70 - 135
Benzene	<5.0	2000	2540	µg/Kg	127	70 - 135
Chlorobenzene	<5.0	2000	2510	µg/Kg	126	70 - 135
Toluene	<5.0	2000	2410	µg/Kg	120	70 - 135
Trichloroethene	<5.0	2000	2460	µg/Kg	123	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	107.0	60 - 130
Dibromofluoromethane	99.2	60 - 130
Toluene-d8	104.0	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<5.0	2000	2310	µg/Kg	116	9.9	30.0	70 - 135
Benzene	<5.0	2000	2400	µg/Kg	120	5.7	30.0	70 - 135
Chlorobenzene	<5.0	2000	2370	µg/Kg	118	5.7	30.0	70 - 135
Toluene	<5.0	2000	2340	µg/Kg	117	2.9	30.0	70 - 135
Trichloroethene	<5.0	2000	2360	µg/Kg	118	4.1	30.0	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.4	60 - 130
Dibromofluoromethane	94.5	60 - 130
Toluene-d8	99.4	60 - 130



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - TPH-Extractable by EPA 8015M

QC Batch ID: SD060421A

Reviewed by: ECunniffe - 04/21/06

QC/Prep Date: 4/21/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<2.5	50	45.9	mg/Kg	91.8	45 - 140
TPH as Motor Oil	<10	50	40.8	mg/Kg	81.6	45 - 140
Surrogate	% Recovery	Control Limits				
o-Terphenyl	120.0	41 - 137				

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<2.5	50	44.4	mg/Kg	88.8	3.3	30.0	45 - 140
TPH as Motor Oil	<10	50	41.0	mg/Kg	82.0	0.49	30.0	45 - 140
Surrogate	% Recovery	Control Limits						
o-Terphenyl	112.0	41 - 137						

# Entech Analytical Labs, Inc.

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3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - Mercury - EPA 7471B

QC Batch ID: SHG060421

Reviewed by: dqueja - 04/21/06

QC/Prep Date: 4/21/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Mercury	<0.050	0.20	0.189	mg/Kg	94.5	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Mercury	<0.050	0.20	0.192	mg/Kg	96.0	1.6	30.0	75 - 125

# Entech Analytical Labs, Inc.

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Phone: (408) 588-0200

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LCS / LCSD - Solid - Metals by ICP EPA 6010B

QC Batch ID: SM060421

Reviewed by: equeja - 04/21/06

QC/Prep Date: 4/21/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Antimony	<1.0	50	46.4	mg/Kg	92.9	75 - 125
Arsenic	<1.0	50	47.7	mg/Kg	95.5	75 - 125
Barium	<1.0	50	46.5	mg/Kg	93.0	75 - 125
Beryllium	<1.0	50	45.4	mg/Kg	90.9	75 - 125
Cadmium	<1.0	50	44.1	mg/Kg	88.3	75 - 125
Chromium	<1.0	50	49.2	mg/Kg	98.5	75 - 125
Cobalt	<1.0	50	49.7	mg/Kg	99.5	75 - 125
Copper	<1.0	50	48.2	mg/Kg	96.4	75 - 125
Lead	<1.0	50	49.4	mg/Kg	98.9	75 - 125
Molybdenum	<1.0	50	48.3	mg/Kg	96.6	75 - 125
Nickel	<1.0	50	47.1	mg/Kg	94.3	75 - 125
Selenium	<2.0	50	44.2	mg/Kg	88.4	75 - 125
Silver	<1.0	50	48.5	mg/Kg	96.9	75 - 125
Thallium	<2.0	50	42.1	mg/Kg	84.1	75 - 125
Vanadium	<1.0	50	48.6	mg/Kg	97.3	75 - 125
Zinc	<2.0	50	48.1	mg/Kg	96.3	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Antimony	<1.0	50	46.8	mg/Kg	93.5	0.69	25.0	75 - 125
Arsenic	<1.0	50	49.0	mg/Kg	98.1	2.7	25.0	75 - 125
Barium	<1.0	50	47.7	mg/Kg	95.4	2.5	25.0	75 - 125
Beryllium	<1.0	50	46.6	mg/Kg	93.1	2.5	25.0	75 - 125
Cadmium	<1.0	50	43.4	mg/Kg	86.7	1.8	25.0	75 - 125
Chromium	<1.0	50	48.4	mg/Kg	96.9	1.6	25.0	75 - 125
Cobalt	<1.0	50	48.7	mg/Kg	97.4	2.1	25.0	75 - 125
Copper	<1.0	50	47.3	mg/Kg	94.6	1.9	25.0	75 - 125
Lead	<1.0	50	50.0	mg/Kg	100	1.1	25.0	75 - 125
Molybdenum	<1.0	50	49.1	mg/Kg	98.2	1.6	25.0	75 - 125
Nickel	<1.0	50	47.9	mg/Kg	95.8	1.6	25.0	75 - 125
Selenium	<2.0	50	43.7	mg/Kg	87.5	1.1	25.0	75 - 125
Silver	<1.0	50	47.8	mg/Kg	95.5	1.5	25.0	75 - 125
Thallium	<2.0	50	44.5	mg/Kg	89.0	5.7	25.0	75 - 125
Vanadium	<1.0	50	47.9	mg/Kg	95.8	1.5	25.0	75 - 125
Zinc	<2.0	50	47.7	mg/Kg	95.3	0.98	25.0	75 - 125



**PES Environmental, Inc.**  
Engineering & Environmental Services

# CHAIN OF CUSTODY RECORD

1682 NOVATO BOULEVARD, SUITE 100  
NOVATO, CALIFORNIA 94947  
(415) 899-1600 FAX (415) 899-1601

LABORATORY: Entech  
JOB NUMBER: 241.055.01.006  
NAME / LOCATION: Bay Center Trenches  
PROJECT MANAGER: C. Michelsen

SAMPLERS: M. Buttress  
RECORDER: M. B. 49062

DATE				SAMPLE NUMBER / DESIGNATION
YR	MO	DY	TIME	
06	04	19	1500	Comp-T-A
06	04	20	1315	Comp-T-B

MATRIX				# of Containers & Preservatives					DEPTH IN FEET
Vapor	Water	Soil	Sedim't	Unpres.	EnCore	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	
		X		1					
		X		1					

ANALYSIS REQUESTED										
EPA 5035/8010	EPA 5035/8021	EPA 5035/8260B	TPHg by 5035/8015M	TPHd by 8015M	TPHmo by 8015M	EPA 8270C	MNA Parameters (see notes)	CAM 17 Metals	BTEX + TPHg (8260B)	
			X	X				X	X	001
			X	X				X	X	002

**1 DAY**

NOTES		CHAIN OF CUSTODY RECORD			
Turn Around Time: <u>1-day</u>	RELINQUISHED BY: (Signature) <u>[Signature]</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE	TIME	<u>4-20-06 13:00</u>
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME	
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME	
	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME	
	DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature)	DATE TIME
METHOD OF SHIPMENT:					

# **Entech Analytical Labs, Inc.**

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Carl Michelsen

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Lab Certificate Number: 49062

Issued: 05/01/2006

Project Number: 241.055.01.006

Project Name: Bay Center Trenches

## Certificate of Analysis - Additional Work

On April 20, 2006, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Solid	Metals on STLC extract by EPA 6010B

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/20/2006

Sample Collected by: Client

Lab # : 49062-001    Sample ID: Comp-T-A

Matrix: Solid    Sample Date: 4/19/2006    3:00 PM

### STLC Extraction - Metals on STLC extract by EPA 6010B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Lead	3.7		1.0	0.25	mg/L	5/1/2006	WMSTLC060501	5/1/2006	WMSTLC060501

Analyzed by: Hdinh

Reviewed by: equeja

Lab # : 49062-002    Sample ID: Comp-T-B

Matrix: Solid    Sample Date: 4/19/2006    1:15 PM

### STLC Extraction - Metals on STLC extract by EPA 6010B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Lead	3.7		1.0	0.25	mg/L	5/1/2006	WMSTLC060501	5/1/2006	WMSTLC060501

Analyzed by: Hdinh

Reviewed by: equeja

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - Metals on STLC extract by EPA 6010B

QC/Prep Batch ID: WMSTLC060501

Validated by: equeja - 05/01/06

QC/Prep Date: 5/1/2006

Parameter	Result	DF	PQLR	Units
Lead	ND	1	0.25	mg/L

LCS / LCSD - Solid - Metals on STLC extract by EPA 6010B

QC Batch ID: WMSTLC060501

Reviewed by: equeja - 05/01/06

QC/Prep Date: 5/1/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Chromium	<0.10	2.5	2.17	mg/L	86.9	75 - 125
Lead	<0.25	2.5	2.07	mg/L	82.8	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Chromium	<0.10	2.5	2.23	mg/L	89.2	2.6	30.0	75 - 125
Lead	<0.25	2.5	2.14	mg/L	85.6	3.3	30.0	75 - 125

MS / MSD - Solid - Metals on STLC extract by EPA 6010B

QC/Prep Batch ID: WMSTLC060501

Reviewed by: equeja - 05/01/06

QC/Prep Date: 5/1/2006

## MS

Sample Spiked: 48780-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Chromium	0.539	2.5	2.66	mg/L	5/1/2006	85.0	75 - 125

## MSD

Sample Spiked: 48780-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Chromium	0.539	2.5	2.72	mg/L	5/1/2006	87.1	0.0	30.0	75 - 125

**Peter Gorman**

---

**From:** Peter Gorman [pgorman@pesenv.com]  
**Sent:** Tuesday, April 25, 2006 11:09 AM  
**To:** 'Simon Hague'  
**Subject:** Emeryville soil samples

49062-001/002

49113-001

Hello Simon,  
Can you please run samples T-A and T-B for Lead-STLC. If sample T-C has total lead greater than 50 mg/Kg, we would also like to run that for STLC. Please perform this on a rush basis.  
Thanks,  
Pete

49062 Change Order



# **Entech Analytical Labs, Inc.**

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Carl Michelsen

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Lab Certificate Number: 49113

Issued: 05/01/2006

Project Number: 241.055.01.006

Project Name: Bay Center Trenches

## Certificate of Analysis-Additional Work

On April 24, 2006, a sample was received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Solid	Metals on STLC extract by EPA 6010B	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Erin Cunniffe  
Operations Manager

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/24/2006  
Sample Collected by: Client

Lab # : 49113-001    Sample ID: Comp-T-C

Matrix: Solid    Sample Date: 4/24/2006    2:10 PM

### STLC Extraction - Metals on STLC extract by EPA 6010B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Lead	8.8		1.0	0.25	mg/L	5/1/2006	WMSTLC060501	5/1/2006	WMSTLC060501

Analyzed by: Hdinh

Reviewed by: equeja

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - Metals on STLC extract by EPA 6010B

QC Batch ID: WMSTLC060501

Reviewed by: equeja - 05/01/06

QC/Prep Date: 5/1/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Chromium	<0.10	2.5	2.17	mg/L	86.9	75 - 125
Lead	<0.25	2.5	2.07	mg/L	82.8	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Chromium	<0.10	2.5	2.23	mg/L	89.2	2.6	30.0	75 - 125
Lead	<0.25	2.5	2.14	mg/L	85.6	3.3	30.0	75 - 125

MS / MSD - Solid - Metals on STLC extract by EPA 6010B

QC/Prep Batch ID: WMSTLC060501

Reviewed by: equeja - 05/01/06

QC/Prep Date: 5/1/2006

## MS Sample Spiked: 48780-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Chromium	0.539	2.5	2.66	mg/L	5/1/2006	85.0	75 - 125

## MSD Sample Spiked: 48780-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Chromium	0.539	2.5	2.72	mg/L	5/1/2006	87.1	0.0	30.0	75 - 125

Peter Gorman

---

From: Peter Gorman [pgorman@pesenv.com]  
Sent: Tuesday, April 25, 2006 11:09 AM  
To: 'Simon Hague'  
Subject: Emeryville soil samples

49062-001,002

49113-001

Hello Simon,  
Can you please run samples T-A and T-B for Lead-STLC. If sample T-C has total lead greater than 50 mg/Kg, we would also like to run that for STLC. Please perform this on a rush basis.  
Thanks,  
Pete

49113  
change order

# Entech Analytical Labs, Inc. Chain of Custody / Analysis Request

3334 Victor Court (408) 588-0200  
 Santa Clara, CA 95054 (408) 588-0201 - Fax

ELAP No. 2346

Attention to: <i>Carl Michelsen</i>	Phone No.: <i>45-899-1600</i>	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: <i>PES</i>	Fax No.:	Project No. / Name: <i>241055.01 006</i>	Company:	
Mailing Address:	Email Address:	Billing Address: (If Different)		
City:	State:	Zip Code:	Project Location: <i>Bay Center</i>	City:
			State:	Zip:

Entech Order ID: <i>49113</i>	Turn Around Time	Circle Applicable EPA 8260B Full List 8260 Petrolium: List includes: Gas, BTEX, MBE, EBE, TBA, TAME, DPE, 1,2-DCA, EDB EPA 8270: Base/Neutral/Acid Organics 8270 Full List PAHs Only PAHs - SIM Pesticides-8081 PCBs - 8082 TPH Extracable: Diesel, Motor Oil Other TPH Gas: BTEX, MBE by EPA 8015/8021B TPH (8015 M) BTEX + TPHg (8260B) Metals - Circle Below Total Dissolved STLC TCLP	Remarks Instructions					
EDF <input type="checkbox"/>	Global ID:		<input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 4 Day <input type="checkbox"/> 5 Day <input type="checkbox"/> 10 Day					
Sample Information		No. of Containers	Matrix					
Sampler <i>M. Buttriss</i>								
Client ID	Field Point	Date	Time	Entech Lab. No.	Matrix	No. of Containers	Matrix	Remarks Instructions
	<i>Comp-T-C</i>	<i>4/24/06</i>	<i>1410</i>	<i>007</i>	<i>S</i>			

1 DAY

Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: <i>4/24/06</i>	Time: <i>1415</i>	Lab Use:
Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: <i>4/24/06</i>	Time: <i>1600</i>	
Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date:	Time:	Metals: Al, As, Sb, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Ti, Sn, Tl, Zn, V <input type="checkbox"/> Plating <input type="checkbox"/> LUFT-5 <input type="checkbox"/> RCRA-8 <input type="checkbox"/> PPM-13 <input type="checkbox"/> CAM-17

Lab Use: Samples: Iced  Y/N Temperature: *6°C* Shipment Method: *FAL* If any N's, Explain: *(1) 6" Steel Tube Icd*  
 Appropriate Containers/Preservatives:  Y/N Custody Seals?  Y/N  
 Labels match CoC?  Y/N Headspace?  Y/N Separate Receipt Log  Y/N

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Carl Michelsen

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Lab Certificate Number: 49113

Issued: 04/25/2006

Project Number: 241.055.01.006

Project Name: Bay Center Trenches

## Certificate of Analysis - Final Report

On April 24, 2006, a sample was received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Solid	EPA 8260B
	Mercury - EPA 7471B
	Metals by ICP EPA 6010B
	TPH-Extractable by EPA 8015M
	TPH-Purgeable by GC/MS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy  
Laboratory Director

**Entech Analytical Labs, Inc.**

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

**Certificate of Analysis - Data Report**

Samples Received: 04/24/2006  
Sample Collected by: Client

Lab #: 49113-001 Sample ID: Comp-T-C

Matrix: Solid Sample Date: 4/24/2006 2:10 PM

**EPA 3050B - Metals by ICP EPA 6010B**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Antimony	ND		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Arsenic	5.5		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Barium	140		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Beryllium	ND		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Cadmium	ND		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Chromium	32		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Cobalt	6.8		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Copper	110		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Lead	110		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Molybdenum	1.3		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Nickel	33		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Selenium	ND		1.0	2.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Silver	ND		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Thallium	ND		1.0	2.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Vanadium	25		1.0	1.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424
Zinc	190		1.0	2.0	mg/Kg	4/24/2006	SM060424	4/25/2006	SM060424

Analyzed by: Equeja

Reviewed by: dqueja

**Mercury - EPA 7471B**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Mercury	0.18		1.0	0.050	mg/Kg	4/25/2006	SHG060425	4/25/2006	SHG060425

Analyzed by: RWipfler

Reviewed by: dqueja

**EPA 3545 - TPH-Extractable by EPA 8015M**

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	1200		25	62	mg/Kg	4/25/2006	SD060425A	4/25/2006	SD060425A
Atypical pattern									
TPH as Motor Oil	490		25	250	mg/Kg	4/25/2006	SD060425A	4/25/2006	SD060425A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	104	41 - 137

Analyzed by: JHsiang

Reviewed by: dba

Detection Limit = Detection Limit for Reporting.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

4/25/2006 5:37:55 PM - dba

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Carl Michelsen

Project Number: 241.055.01.006  
Project Name: Bay Center Trenches

## Certificate of Analysis - Data Report

Samples Received: 04/24/2006

Sample Collected by: Client

Lab #: 49113-001

Sample ID: Comp-T-C

Matrix: Solid Sample Date: 4/24/2006 2:10 PM

### EPA 5035A - EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		5000	25000	µg/Kg	4/25/2006	PM060425P	4/25/2006	PM060425P
Toluene	ND		5000	25000	µg/Kg	4/25/2006	PM060425P	4/25/2006	PM060425P
Ethyl Benzene	44000		5000	25000	µg/Kg	4/25/2006	PM060425P	4/25/2006	PM060425P
Xylenes, Total	72000		5000	50000	µg/Kg	4/25/2006	PM060425P	4/25/2006	PM060425P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	109	60 - 130
Dibromofluoromethane	88.7	60 - 130
Toluene-d8	89.7	60 - 130

Analyzed by: EricKun

Reviewed by: MFelix

### EPA 5035A - TPH-Purgeable by GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1600000		5000	500000	µg/Kg	4/25/2006	PM060425P	4/25/2006	PM060425P

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	105	60 - 130
Dibromofluoromethane	89.6	60 - 130
Toluene-d8	87.6	60 - 130

Analyzed by: EricKun

Reviewed by: MFelix

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

4/25/2006 5:38:10 PM - dba



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

## Method Blank - Solid - EPA 8260B

QC/Prep Batch ID: PM060425P

Validated by: MFelix - 04/25/06

QC/Prep Date: 4/25/2006

Parameter	Result	DF	PQLR	Units
Benzene	ND	50	250	µg/Kg
Ethyl Benzene	ND	50	250	µg/Kg
Toluene	ND	50	250	µg/Kg
Xylenes, Total	ND	50	500	µg/Kg

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	107	60 - 130
Dibromofluoromethane	86.7	60 - 130
Toluene-d8	85.6	60 - 130

## Method Blank - Solid - TPH-Purgeable by GC/MS

QC/Prep Batch ID: PM060425P

Validated by: MFelix - 04/25/06

QC/Prep Date: 4/25/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	50	5000	µg/Kg

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	107	60 - 130
Dibromofluoromethane	88.7	60 - 130
Toluene-d8	86.2	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Solid - TPH-Extractable by EPA 8015M

QC/Prep Batch ID: SD060425A

Validated by: dba - 04/25/06

QC/Prep Date: 4/25/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	2.5	mg/Kg
TPH as Motor Oil	ND	1	10	mg/Kg

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	92.3	41 - 137

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - EPA 8260B

QC Batch ID: PM060425P

Reviewed by: MFelix - 04/25/06

QC/Prep Date: 4/25/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<5.0	2000	2080	µg/Kg	104	70 - 135
Benzene	<5.0	2000	2350	µg/Kg	118	70 - 135
Chlorobenzene	<5.0	2000	2280	µg/Kg	114	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1720	µg/Kg	86.0	70 - 135
Toluene	<5.0	2000	2310	µg/Kg	116	70 - 135
Trichloroethene	<5.0	2000	2660	µg/Kg	133	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	84.7	60 - 130
Dibromofluoromethane	83.5	60 - 130
Toluene-d8	75.6	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<5.0	2000	1930	µg/Kg	96.5	7.6	30.0	70 - 135
Benzene	<5.0	2000	2230	µg/Kg	112	5.2	30.0	70 - 135
Chlorobenzene	<5.0	2000	2270	µg/Kg	114	0.44	30.0	70 - 135
Methyl-t-butyl Ether	<5.0	2000	1690	µg/Kg	84.5	1.8	30.0	70 - 135
Toluene	<5.0	2000	2260	µg/Kg	113	2.2	30.0	70 - 135
Trichloroethene	<5.0	2000	2500	µg/Kg	125	6.2	30.0	70 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	85.5	60 - 130
Dibromofluoromethane	84.1	60 - 130
Toluene-d8	75.8	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - TPH-Extractable by EPA 8015M

QC Batch ID: SD060425A

Reviewed by: dba - 04/25/06

QC/Prep Date: 4/25/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<2.5	50	47.0	mg/Kg	94.0	45 - 140
TPH as Motor Oil	<10	50	40.7	mg/Kg	81.4	45 - 140
Surrogate	% Recovery	Control Limits				
o-Terphenyl	92.2	41 - 137				

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<2.5	50	51.5	mg/Kg	103	9.1	30.0	45 - 140
TPH as Motor Oil	<10	50	44.4	mg/Kg	88.8	8.7	30.0	45 - 140
Surrogate	% Recovery	Control Limits						
o-Terphenyl	101.0	41 - 137						

# Entech Analytical Labs, Inc.

---

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - Mercury - EPA 7471B

QC Batch ID: SHG060425

Reviewed by: dqueja - 04/25/06

QC/Prep Date: 4/25/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Mercury	<0.050	0.20	0.205	mg/Kg	102	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Mercury	<0.050	0.20	0.214	mg/Kg	107	4.3	30.0	75 - 125

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Solid - Metals by ICP EPA 6010B

QC Batch ID: SM060424

Reviewed by: dqueja - 04/25/06

QC/Prep Date: 4/24/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Antimony	<1.0	50	50.1	mg/Kg	100	75 - 125
Arsenic	<1.0	50	49.4	mg/Kg	98.8	75 - 125
Barium	<1.0	50	50.3	mg/Kg	101	75 - 125
Beryllium	<1.0	50	48.3	mg/Kg	96.6	75 - 125
Cadmium	<1.0	50	45.4	mg/Kg	90.7	75 - 125
Chromium	<1.0	50	50.9	mg/Kg	102	75 - 125
Cobalt	<1.0	50	49.8	mg/Kg	99.7	75 - 125
Copper	<1.0	50	50.4	mg/Kg	101	75 - 125
Lead	<1.0	50	49.8	mg/Kg	99.7	75 - 125
Molybdenum	<1.0	50	49.2	mg/Kg	98.3	75 - 125
Nickel	<1.0	50	48.3	mg/Kg	96.5	75 - 125
Selenium	<2.0	50	45.5	mg/Kg	90.9	75 - 125
Silver	<1.0	50	50.2	mg/Kg	100	75 - 125
Thallium	<2.0	50	42.9	mg/Kg	85.8	75 - 125
Vanadium	<1.0	50	50.2	mg/Kg	100	75 - 125
Zinc	<2.0	50	49.4	mg/Kg	98.8	75 - 125

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Antimony	<1.0	50	51.5	mg/Kg	103	2.9	25.0	75 - 125
Arsenic	<1.0	50	50.4	mg/Kg	101	2.1	25.0	75 - 125
Barium	<1.0	50	51.3	mg/Kg	103	2.1	25.0	75 - 125
Beryllium	<1.0	50	49.5	mg/Kg	99.0	2.5	25.0	75 - 125
Cadmium	<1.0	50	45.6	mg/Kg	91.2	0.51	25.0	75 - 125
Chromium	<1.0	50	51.2	mg/Kg	102	0.57	25.0	75 - 125
Cobalt	<1.0	50	50.2	mg/Kg	100	0.62	25.0	75 - 125
Copper	<1.0	50	50.3	mg/Kg	101	0.20	25.0	75 - 125
Lead	<1.0	50	51.6	mg/Kg	103	3.5	25.0	75 - 125
Molybdenum	<1.0	50	50.5	mg/Kg	101	2.8	25.0	75 - 125
Nickel	<1.0	50	49.9	mg/Kg	99.9	3.4	25.0	75 - 125
Selenium	<2.0	50	46.5	mg/Kg	93.1	2.3	25.0	75 - 125
Silver	<1.0	50	51.4	mg/Kg	103	2.4	25.0	75 - 125
Thallium	<2.0	50	45.2	mg/Kg	90.4	5.2	25.0	75 - 125
Vanadium	<1.0	50	50.2	mg/Kg	100	0.040	25.0	75 - 125
Zinc	<2.0	50	49.6	mg/Kg	99.3	0.46	25.0	75 - 125

# Entech Analytical Labs, Inc. Chain of Custody / Analysis Request

334 Victor Court (408) 588-0200  
 Santa Clara, CA 95054 (408) 588-0201 - Fax

ELAP No. 2346

Attention to: <b>Carl Michelsen</b>	Phone No.: <b>45-899-1600</b>	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: <b>PES</b>	Fax No.:	Project No. / Name: <b>241055-01-006</b>	Company:	
Billing Address:	Email Address:	Billing Address: (If Different)		
City:	State: Zip Code:	Project Location: <b>Bay Center</b>	City:	State: Zip:

Entech Order ID: **49113**

Global ID:

Turn Around Time

Same Day  
 2 Day  
 4 Day  
 10 Day

1 Day  
 3 Day  
 5 Day

Sample Information

Sampler: **M. Buttress**

Client ID	Field Point	Date	Time	Entech Lab. No.	Matrix
	<b>Comp-T-C</b>	<b>4/24/06</b>	<b>1440</b>	<b>201</b>	<b>S</b>

No. of Containers	Circle Applicable	EPA 8260B Full List	EPA 8270 Full List	Pesticides-9081	TPH Extractables: Diesel, Motor Oil, Other	PCBs - 8082	TPH Gas, BTEX, MGBE by EPA 8015/8021B	Metals - Circle Below	Total Dissolved Solids	STLC	TCLP	Remarks Instructions
		8260 Petroleum List includes: Gas, BTEX, MGBE, EB&S, TBA, TAME, DIPSE, 1,2-DCA, EDB										

**1 DAY**

Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: <b>4/24/06</b>	Time: <b>1415</b>	Lab Use:
Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date: <b>4/24/06</b>	Time: <b>1000</b>	
Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date:	Time:	Metals: Al, As, Sb, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Tl, Sn, Ti, Zn, V

Lab Use: Samples: Iced  Y/N Temperature: **6°C**

Appropriate Containers/Preservatives:  Y/N

Labels match CoC?  Y/N Headspace?  Y/N

Shipment Method: **FAL**

Custody Seals?  Y/N

Separate Receipt Log  Y/N

If any N's, Explain: **(1) 6" STEEL Tube 1cd**

P. 10

ENTECH

APR-25-2006 17:58

TOTAL P. 10

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Will Mast

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Lab Certificate Number: 52886

Issued: 12/21/2006

**Project Name:** Bay Center Apts

**Project Location:** 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Final Report

On December 08, 2006, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	TPH-Extractable: EPA 3510C / EPA 8015B(M) VOCs: EPA 8260B TPH-Purgeable: GC/MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Erin Cunniffe  
Operations Manager



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-001    Sample ID: MW-7    Matrix: Liquid    Sample Date: 12/8/2006    9:18 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate      Surrogate Recovery      Control Limits (%)

4-Bromofluorobenzene	82.9		60	-	130
Dibromofluoromethane	89.6		60	-	130
Toluene-d8	91.2		60	-	130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate      Surrogate Recovery      Control Limits (%)

4-Bromofluorobenzene	100		60	-	130
Dibromofluoromethane	99.8		60	-	130
Toluene-d8	96.1		60	-	130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	420		0.99	50	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
Atypical pattern (C9-C24).									
TPH as Motor Oil	470		0.99	200	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

### Surrogate      Surrogate Recovery      Control Limits (%)

o-Terphenyl	97.1		22	-	133
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Analyzed by: JHsiang

Reviewed by: EricKum

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

12/21/2006 11:01:21 AM - ECuniffE

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-002    Sample ID: MW-8    Matrix: Liquid    Sample Date: 12/8/2006    12:40 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	13000		200	100	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	ND		200	100	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	640		200	100	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	500		200	100	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		200	200	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	83.3	60 - 130
Dibromofluoromethane	87.1	60 - 130
Toluene-d8	91.5	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	29000		200	5000	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	60 - 130
Dibromofluoromethane	97.0	60 - 130
Toluene-d8	96.6	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	2400		1.9	94	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
Higher boiling gasoline compounds mixed with Diesel (C9-C24).									
TPH as Motor Oil	ND		1.9	380	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	91.4	22 - 133

Analyzed by: JHsiang  
Reviewed by: EricKum

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-003    Sample ID: MW-9    Matrix: Liquid    Sample Date: 12/8/2006    9:55 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	2.8		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	83.9	60 - 130
Dibromofluoromethane	91.8	60 - 130
Toluene-d8	90.9	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	92		1.0	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Atypical pattern.									

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	60 - 130
Dibromofluoromethane	102	60 - 130
Toluene-d8	95.5	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/15/2006	WD061214A
120 ppb hydrocarbon (C9-C18). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/15/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	75.2	22 - 133

Analyzed by: JHsiang

Reviewed by: LGlantz

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Attn: Will Mast

Project Name: Bay Center Apts

Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006

Sample Collected by: Blaine Tech

Lab #: 52886-004 Sample ID: MW-10

Matrix: Liquid Sample Date: 12/8/2006 1:04 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	4600		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	42		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	90		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	52		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		50	50	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate

### Surrogate Recovery

### Control Limits (%)

Analyzed by: BDhabalia

4-Bromofluorobenzene

86.3

60 - 130

Reviewed by: MaiChiTu

Dibromofluoromethane

85.5

60 - 130

Toluene-d8

92.5

60 - 130

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	12000		50	1200	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate

### Surrogate Recovery

### Control Limits (%)

Analyzed by: BDhabalia

4-Bromofluorobenzene

104

60 - 130

Reviewed by: MaiChiTu

Dibromofluoromethane

95.3

60 - 130

Toluene-d8

97.3

60 - 130

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	19000		20	1000	µg/L	12/14/2006	WD061214A	12/19/2006	WD061214A
TPH as Motor Oil	ND		20	4000	µg/L	12/14/2006	WD061214A	12/19/2006	WD061214A

### Surrogate

### Surrogate Recovery

### Control Limits (%)

Analyzed by: JHsiang

o-Terphenyl

119

22 - 133

Reviewed by: ECunniffe

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

12/21/2006 11:01:22 AM - ECunniffe

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-005 Sample ID: MW-11 Matrix: Liquid Sample Date: 12/8/2006 10:52 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	26		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	4.5		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	1.8		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	5.4		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89.3	60 - 130
Dibromofluoromethane	85.1	60 - 130
Toluene-d8	89.4	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	920		2.0	50	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	108	60 - 130
Dibromofluoromethane	92.3	60 - 130
Toluene-d8	93.0	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/15/2006	WD061214A
370 ppb Higher boiling gasoline compounds (C9-C26). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/15/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	74.8	22 - 133

Analyzed by: JHsiang

Reviewed by: LGlantz

Detection Limit = Detection Limit for Reporting.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

12/21/2006 11:01:22 AM - ECunniffe

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab # : 52886-006    Sample ID: MW-12    Matrix: Liquid    Sample Date: 12/8/2006    11:33 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	9100		100	50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	51		100	50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	ND		100	50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	110		100	50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		100	100	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	84.5	60 - 130
Dibromofluoromethane	82.5	60 - 130
Toluene-d8	90.8	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	19000		100	2500	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	102	60 - 130
Dibromofluoromethane	91.9	60 - 130
Toluene-d8	95.5	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
880 ppb Higher boiling gasoline compounds (C9-C18). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	78.1	22 - 133

Analyzed by: JHsiang

Reviewed by: LGlantz

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-007    Sample ID: MW-13    Matrix: Liquid    Sample Date: 12/8/2006    12:01 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	18000		400	200	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	470		400	200	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	2400		400	200	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	3500		400	200	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		400	400	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.6	60 - 130
Dibromofluoromethane	83.6	60 - 130
Toluene-d8	89.6	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	87000		400	10000	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	105	60 - 130
Dibromofluoromethane	93.2	60 - 130
Toluene-d8	93.9	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	12000		10	500	µg/L	12/14/2006	WD061214A	12/19/2006	WD061214A
Diesel mixed with higher boiling gasoline compounds.									
TPH as Motor Oil	2100		10	2000	µg/L	12/14/2006	WD061214A	12/19/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	104	22 - 133

Analyzed by: JHsiang  
Reviewed by: ECunniffe

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Novato, CA 94947

Attn: Will Mast

Project Name: Bay Center Apts

Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006

Sample Collected by: Blaine Tech

Lab #: 52886-008

Sample ID: MW-14

Matrix: Liquid Sample Date: 12/8/2006 12:02 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	3700		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	240		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	230		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	260		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		50	50	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate Surrogate Recovery Control Limits (%)

4-Bromofluorobenzene	85.6		60	-	130
Dibromofluoromethane	85.2		60	-	130
Toluene-d8	90.3		60	-	130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	8300		50	1200	µg/L	N/A	N/A	12/18/2006	WM7061218

### Surrogate Surrogate Recovery Control Limits (%)

4-Bromofluorobenzene	103		60	-	130
Dibromofluoromethane	94.9		60	-	130
Toluene-d8	94.9		60	-	130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
550 ppb Higher boiling gasoline compounds (C9-C18). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

### Surrogate Surrogate Recovery Control Limits (%)

o-Terphenyl	75.8		22	-	133
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Analyzed by: JHsiang

Reviewed by: LGlantz

Detection Limit = Detection Limit for Reporting.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

12/21/2006 11:01:23 AM - ECunniffe



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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
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Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab # : 52886-009    Sample ID: MW-15    Matrix: Liquid    Sample Date: 12/8/2006    12:20 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	3700		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	ND		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	60		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	57		50	25	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		50	50	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	86.3	60 - 130
Dibromofluoromethane	84.2	60 - 130
Toluene-d8	91.9	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	9200		50	1200	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	60 - 130
Dibromofluoromethane	93.8	60 - 130
Toluene-d8	96.5	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
970 ppb Higher boiling gasoline compounds (C9-C18). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	77.6	22 - 133

Analyzed by: JHsiang  
Reviewed by: LGlantz

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Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab # : 52886-010    Sample ID: MW-16    Matrix: Liquid    Sample Date: 12/8/2006    11:12 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	11		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	1.4		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	86.1	60 - 130
Dibromofluoromethane	86.0	60 - 130
Toluene-d8	90.3	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline Atypical pattern.	190		1.0	25	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	60 - 130
Dibromofluoromethane	95.9	60 - 130
Toluene-d8	95.1	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel 400ppb Hydrocarbon (C9-C36). No Diesel pattern present.	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	70.6	22 - 133

Analyzed by: JHsiang  
Reviewed by: LGlantz

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Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab # : 52886-011 Sample ID: MW-17

Matrix: Liquid Sample Date: 12/8/2006 8:47 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	3400		50	25	µg/L	N/A	N/A	12/19/2006	WM7061219
Toluene	1100		50	25	µg/L	N/A	N/A	12/19/2006	WM7061219
Ethyl Benzene	480		50	25	µg/L	N/A	N/A	12/19/2006	WM7061219
Xylenes, Total	860		50	25	µg/L	N/A	N/A	12/19/2006	WM7061219
Methyl-t-butyl Ether	ND		50	50	µg/L	N/A	N/A	12/19/2006	WM7061219

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	86.2	60 - 130
Dibromofluoromethane	96.1	60 - 130
Toluene-d8	92.8	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	14000		50	1200	µg/L	N/A	N/A	12/19/2006	WM7061219

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	60 - 130
Dibromofluoromethane	107	60 - 130
Toluene-d8	98.9	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
1100 ppb Higher boiling gasoline compounds (C9-C26). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	77.8	22 - 133

Analyzed by: JHsiang

Reviewed by: L.Glantz

Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

12/21/2006 11:01:23 AM - ECunniffe

# Entech Analytical Labs, Inc.

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PES Environmental, Inc.  
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Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab # : 52886-012    Sample ID: MW-18    Matrix: Liquid    Sample Date: 12/8/2006    11:48 AM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	22		2.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	6.2		2.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	3.2		2.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	6.2		2.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		2.0	2.0	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	84.8	60 - 130
Dibromofluoromethane	78.2	60 - 130
Toluene-d8	86.8	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	120		2.0	50	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	102	60 - 130
Dibromofluoromethane	87.1	60 - 130
Toluene-d8	91.0	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	82.1	22 - 133

Analyzed by: JHsiang  
Reviewed by: LGlantz

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Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/08/2006  
Sample Collected by: Blaine Tech

Lab #: 52886-013    Sample ID: RW-1    Matrix: Liquid    Sample Date: 12/8/2006    1:10 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	100		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Toluene	1.3		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Ethyl Benzene	2.0		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Xylenes, Total	1.6		1.0	0.50	µg/L	N/A	N/A	12/18/2006	WM7061218
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	86.5	60 - 130
Dibromofluoromethane	77.6	60 - 130
Toluene-d8	87.0	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	640		1.0	25	µg/L	N/A	N/A	12/18/2006	WM7061218

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	102	60 - 130
Dibromofluoromethane	86.5	60 - 130
Toluene-d8	92.4	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A
480 ppb Hydrocarbons (C9-C26). No Diesel pattern present.									
TPH as Motor Oil	ND		1.0	200	µg/L	12/14/2006	WD061214A	12/16/2006	WD061214A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	84.9	22 - 133

Analyzed by: JHsiang  
Reviewed by: LGlantz

# Entech Analytical Labs, Inc.

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Phone: (408) 588-0200

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Method Blank - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061218

Validated by: MaiChiTu - 12/19/06

QC Batch Analysis Date: 12/18/2006

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	83.1	60 - 130
Dibromofluoromethane	90.7	60 - 130
Toluene-d8	92.5	60 - 130

Method Blank - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061218

Validated by: MaiChiTu - 12/19/06

QC Batch Analysis Date: 12/18/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	100	60 - 130
Dibromofluoromethane	101	60 - 130
Toluene-d8	97.0	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061218

Reviewed by: MaiChiTu - 12/19/06

QC Batch ID Analysis Date: 12/18/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	19.5	µg/L	97.5	70 - 130
Benzene	<0.50	20	18.7	µg/L	93.5	70 - 130
Chlorobenzene	<0.50	20	18.9	µg/L	94.5	70 - 130
Methyl-t-butyl Ether	<1.0	20	14.8	µg/L	74.0	70 - 130
Toluene	<0.50	20	20.6	µg/L	103	70 - 130
Trichloroethene	<0.50	20	18.4	µg/L	92.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	91.7	60 - 130
Dibromofluoromethane	90.0	60 - 130
Toluene-d8	92.0	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	19.7	µg/L	98.5	1.0	25.0	70 - 130
Benzene	<0.50	20	19.6	µg/L	98.0	4.7	25.0	70 - 130
Chlorobenzene	<0.50	20	19.8	µg/L	99.0	4.7	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	16.2	µg/L	81.0	9.0	25.0	70 - 130
Toluene	<0.50	20	21.1	µg/L	106	2.4	25.0	70 - 130
Trichloroethene	<0.50	20	19.2	µg/L	96.0	4.3	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	93.7	60 - 130
Dibromofluoromethane	91.5	60 - 130
Toluene-d8	91.2	60 - 130

LCS / LCSD - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061218

Reviewed by: MaiChiTu - 12/19/06

QC Batch ID Analysis Date: 12/18/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	110	µg/L	87.8	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102.0	60 - 130
Dibromofluoromethane	96.6	60 - 130
Toluene-d8	96.5	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	122	µg/L	97.2	10	30.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	103.0	60 - 130
Dibromofluoromethane	99.5	60 - 130
Toluene-d8	97.5	60 - 130

# Entech Analytical Labs, Inc.

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Method Blank - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061219

Validated by: MaiChiTu - 12/20/06

QC Batch Analysis Date: 12/19/2006

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	85.4	60 - 130
Dibromofluoromethane	91.8	60 - 130
Toluene-d8	91.5	60 - 130

Method Blank - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061219

Validated by: MaiChiTu - 12/20/06

QC Batch Analysis Date: 12/19/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	103	60 - 130
Dibromofluoromethane	102	60 - 130
Toluene-d8	97.0	60 - 130



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061219

Reviewed by: MaiChiTu - 12/20/06

QC Batch ID Analysis Date: 12/19/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	20.1	µg/L	100	70 - 130
Benzene	<0.50	20	19.1	µg/L	95.5	70 - 130
Chlorobenzene	<0.50	20	19.2	µg/L	96.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	15.2	µg/L	76.0	70 - 130
Toluene	<0.50	20	21.1	µg/L	106	70 - 130
Trichloroethene	<0.50	20	19.3	µg/L	96.5	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	90.3	60 - 130
Dibromofluoromethane	90.5	60 - 130
Toluene-d8	90.4	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	18.9	µg/L	94.5	6.2	25.0	70 - 130
Benzene	<0.50	20	18.1	µg/L	90.5	5.4	25.0	70 - 130
Chlorobenzene	<0.50	20	18.5	µg/L	92.5	3.2	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	15.5	µg/L	77.5	2.0	25.0	70 - 130
Toluene	<0.50	20	20.0	µg/L	100	4.9	25.0	70 - 130
Trichloroethene	<0.50	20	18.4	µg/L	92.0	4.8	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	90.0	60 - 130
Dibromofluoromethane	87.9	60 - 130
Toluene-d8	93.0	60 - 130

LCS / LCSD - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061219

Reviewed by: MaiChiTu - 12/20/06

QC Batch ID Analysis Date: 12/19/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	113	µg/L	90.2	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105.0	60 - 130
Dibromofluoromethane	97.7	60 - 130
Toluene-d8	97.4	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	118	µg/L	94.1	4.3	30.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105.0	60 - 130
Dibromofluoromethane	96.9	60 - 130
Toluene-d8	100.0	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WD061214A

Validated by: EricKum - 12/15/06

QC/Prep Date: 12/14/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L
TPH as Motor Oil	ND	1	200	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	88.7	22 - 133

LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC Batch ID: WD061214A

Reviewed by: EricKum - 12/15/06

QC/Prep Date: 12/14/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	987	µg/L	98.7	40 - 138
TPH as Motor Oil	<200	1000	931	µg/L	93.1	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	87.3	22 - 133

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	931	µg/L	93.1	5.9	25.0	40 - 138
TPH as Motor Oil	<200	1000	883	µg/L	88.3	5.3	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	80.9	22 - 133

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WD061213A

Validated by: EricKum - 12/15/06

QC/Prep Date: 12/13/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L
TPH as Motor Oil	ND	1	200	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	79.5	22 - 133

LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC Batch ID: WD061213A

Reviewed by: EricKum - 12/15/06

QC/Prep Date: 12/13/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	966	µg/L	96.6	40 - 138
TPH as Motor Oil	<200	1000	885	µg/L	88.5	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	84.5	22 - 133

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	982	µg/L	98.2	1.7	25.0	40 - 138
TPH as Motor Oil	<200	1000	834	µg/L	83.4	5.9	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	82.5	22 - 133

# BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE  
 SAN JOSE, CALIFORNIA 95112-1105  
 FAX (408) 573-7771  
 PHONE (408) 573-0555

## CONDUCT ANALYSIS TO DETECT

LAB

STC Entech

DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

- EPA
- LIA
- OTHER

RWQCB REGION \_\_\_\_\_

### SPECIAL INSTRUCTIONS

Invoice and Report to : PES

Attn: Will Mast

52886 1/2

CHAIN OF CUSTODY  
 BTS # 061207-DW-1

CLIENT PES

SITE Bay Center Apartments  
 65th Street & Bay Street  
 Emeryville, CA

C = COMPOSITE ALL CONTAINERS

TPH - G, BTEX, MTBE (8260)

TPH-D & Motor Oil (8015m)

SAMPLE I.D.	DATE	TIME	MATRIX		TOTAL	CONTAINERS	C	TPH - G, BTEX, MTBE (8260)	TPH-D & Motor Oil (8015m)						ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #	
			S=SOIL	W=H <sub>2</sub> O															
MW-7	12-8	0918	W		5	Hel Voas NP Ambers		X	X										
MW-8		1240						X	X										
MW-9		0955						X	X										
MW-10		1304						X	X										
MW-11		1052						X	X										
MW-12		1133						X	X										
MW-13		1201						X	X										
MW-14		1202						X	X										
MW-15		1220						X	X										
MW-16		1112						X	X										

(2) Volas  
(3) Volas red

SAMPLING COMPLETED DATE 12-8-06 TIME 1605 SAMPLING PERFORMED BY Dave Walter, Pete Cornish RESULTS NEEDED NO LATER THAN Standard

RELEASED BY David C. Shalt DATE 12-8-06 TIME 1605 RECEIVED BY DATE 12/8/06 TIME 1605

RELEASED BY DATE 12/8/06 TIME 1622 RECEIVED BY DATE 12/8/06 TIME 1630

RELEASED BY DATE TIME RECEIVED BY DATE TIME

SHIPPED VIA DATE SENT TIME SENT COOLER #



# **Entech Analytical Labs, Inc.**

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Will Mast

PES Environmental, Inc.

1682 Novato Boulevard, Suite 100

Novato, CA 94947

Lab Certificate Number: 52912

Issued: 12/15/2006

Project Name: Bay Center Apts

Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Final Report

On December 11, 2006, samples were received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	TPH-Extractable: EPA 3510C / EPA 8015B(M) VOCs: EPA 8260B TPH-Purgeable: GC/MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Erin Cunniffe  
Operations Manager

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/11/2006  
Sample Collected by: Blaine Tech

Lab # : 52912-001    Sample ID: MW-3    Matrix: Liquid    Sample Date: 12/7/2006    12:25 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Methyl-t-butyl Ether	2.0		1.0	1.0	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.3	60 - 130
Dibromofluoromethane	95.3	60 - 130
Toluene-d8	93.4	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	280		1.0	25	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	103	60 - 130
Dibromofluoromethane	106	60 - 130
Toluene-d8	99.2	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	350		0.96	48	µg/L	12/12/2006	WD061212B	12/13/2006	WD061212B
Atypical pattern (C9-C18).									
TPH as Motor Oil	230		0.96	190	µg/L	12/12/2006	WD061212B	12/13/2006	WD061212B
Atypical pattern (C18-C38).									

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	82.7	22 - 133

Analyzed by: JHsiang  
Reviewed by: LGlantz

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/11/2006  
Sample Collected by: Blaine Tech

Lab # : 52912-002    Sample ID: MW-4    Matrix: Liquid    Sample Date: 12/7/2006    1:38 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	87.3	60 - 130
Dibromofluoromethane	97.9	60 - 130
Toluene-d8	93.3	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	50		1.0	25	µg/L	N/A	N/A	12/13/2006	WM7061213
Not a gasoline pattern. Value due to chlorinated compounds.									

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	102	60 - 130
Dibromofluoromethane	109	60 - 130
Toluene-d8	99.1	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
TPH as Motor Oil	ND		1.0	200	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.1	22 - 133

Analyzed by: JHsiang

Reviewed by: EricKun



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/11/2006  
Sample Collected by: Blaine Tech

Lab #: 52912-003    Sample ID: MW-5    Matrix: Liquid    Sample Date: 12/7/2006    1:58 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	0.60		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	84.0	60 - 130
Dibromofluoromethane	99.1	60 - 130
Toluene-d8	93.1	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	25	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	60 - 130
Dibromofluoromethane	110	60 - 130
Toluene-d8	98.9	60 - 130

Analyzed by: BDhabalia  
Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	330		1.0	50	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
Atypical pattern (C9-C38).									
TPH as Motor Oil	ND		1.0	200	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	76.3	22 - 133

Analyzed by: JHsiang  
Reviewed by: EricKum

# Entech Analytical Labs, Inc.

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PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/11/2006  
Sample Collected by: Blaine Tech

Lab #: 52912-004    Sample ID: MW-6    Matrix: Liquid    Sample Date: 12/7/2006    2:20 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	1.1		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	12/13/2006	WM7061213
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)	Analysis Date
4-Bromofluorobenzene	82.5	60 - 130	Analyzed by: BDhabalia
Dibromofluoromethane	97.7	60 - 130	Reviewed by: MaiChiTu
Toluene-d8	92.2	60 - 130	

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	43		1.0	25	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)	Analysis Date
4-Bromofluorobenzene	99.5	60 - 130	Analyzed by: BDhabalia
Dibromofluoromethane	109	60 - 130	Reviewed by: MaiChiTu
Toluene-d8	97.9	60 - 130	

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	200		1.0	50	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
Atypical pattern (C9-C38).									
TPH as Motor Oil	ND		1.0	200	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

Surrogate	Surrogate Recovery	Control Limits (%)	Analysis Date
o-Terphenyl	78.8	22 - 133	Analyzed by: JHsiang
			Reviewed by: EricKum

# Entech Analytical Labs, Inc.

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Phone: (408) 588-0200

Fax: (408) 588-0201

PES Environmental, Inc.  
1682 Novato Boulevard, Suite 100  
Novato, CA 94947  
Attn: Will Mast

Project Name: Bay Center Apts  
Project Location: 65th Street & Bay Street, Emeryville, CA

## Certificate of Analysis - Data Report

Samples Received: 12/11/2006  
Sample Collected by: Blaine Tech

Lab # : 52912-005    Sample ID: MW-E    Matrix: Liquid    Sample Date: 12/7/2006    3:40 PM

### VOCs: EPA 8260B

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	910		20	10	µg/L	N/A	N/A	12/13/2006	WM7061213
Toluene	ND		20	10	µg/L	N/A	N/A	12/13/2006	WM7061213
Ethyl Benzene	10		20	10	µg/L	N/A	N/A	12/13/2006	WM7061213
Xylenes, Total	ND		20	10	µg/L	N/A	N/A	12/13/2006	WM7061213
Methyl-t-butyl Ether	ND		20	20	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	83.7	60 - 130
Dibromofluoromethane	92.0	60 - 130
Toluene-d8	93.1	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Purgeable: GC/MS

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1900		20	500	µg/L	N/A	N/A	12/13/2006	WM7061213

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	60 - 130
Dibromofluoromethane	103	60 - 130
Toluene-d8	99.1	60 - 130

Analyzed by: BDhabalia

Reviewed by: MaiChiTu

### TPH-Extractable: EPA 3510C / EPA 8015B(M)

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	280		1.0	50	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A
Atypical pattern (C9-C38).									
TPH as Motor Oil	ND		1.0	200	µg/L	12/13/2006	WD061213A	12/14/2006	WD061213A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	81.9	22 - 133

Analyzed by: JHsiang

Reviewed by: EricKum

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Method Blank - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061213

Validated by: MaiChiTu - 12/14/06

QC Batch Analysis Date: 12/13/2006

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	84.2	60 - 130
Dibromofluoromethane	96.2	60 - 130
Toluene-d8	92.5	60 - 130

Method Blank - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061213

Validated by: MaiChiTu - 12/14/06

QC Batch Analysis Date: 12/13/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	102	60 - 130
Dibromofluoromethane	107	60 - 130
Toluene-d8	98.4	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061213

Reviewed by: MaiChiTu - 12/14/06

QC Batch ID Analysis Date: 12/13/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	20.4	µg/L	102	70 - 130
Benzene	<0.50	20	18.6	µg/L	93.0	70 - 130
Chlorobenzene	<0.50	20	18.5	µg/L	92.5	70 - 130
Methyl-t-butyl Ether	<1.0	20	16.3	µg/L	81.5	70 - 130
Toluene	<0.50	20	20.3	µg/L	102	70 - 130
Trichloroethene	<0.50	20	19.0	µg/L	95.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	88.9	60 - 130
Dibromofluoromethane	94.0	60 - 130
Toluene-d8	92.7	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	18.9	µg/L	94.5	7.6	25.0	70 - 130
Benzene	<0.50	20	16.8	µg/L	84.0	10	25.0	70 - 130
Chlorobenzene	<0.50	20	16.9	µg/L	84.5	0.0	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	14.6	µg/L	73.0	11	25.0	70 - 130
Toluene	<0.50	20	18.1	µg/L	90.5	11	25.0	70 - 130
Trichloroethene	<0.50	20	16.8	µg/L	84.0	12	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	89.4	60 - 130
Dibromofluoromethane	94.2	60 - 130
Toluene-d8	92.0	60 - 130

LCS / LCSD - Liquid - TPH-Purgeable: GC/MS

QC Batch ID: WM7061213

Reviewed by: MaiChiTu - 12/14/06

QC Batch ID Analysis Date: 12/13/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	120	µg/L	96.2	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104.0	60 - 130
Dibromofluoromethane	100.0	60 - 130
Toluene-d8	99.1	60 - 130

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	103	µg/L	82.2	0.0	30.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104.0	60 - 130
Dibromofluoromethane	99.6	60 - 130
Toluene-d8	99.1	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

MS / MSD - Liquid - VOCs: EPA 8260B

QC Batch ID: WM7061213

Reviewed by: MaiChiTu - 12/14/06

QC Batch ID Analysis Date: 12/13/2006

MS Sample Spiked: 52912-002

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	20.7	µg/L	12/13/2006	104	70 - 130
Methyl-t-butyl Ether	ND	20	18.1	µg/L	12/13/2006	90.5	70 - 130
Toluene	ND	20	21.9	µg/L	12/13/2006	110	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	97.0	60 - 130
Dibromofluoromethane	99.3	60 - 130
Toluene-d8	93.2	60 - 130

MSD Sample Spiked: 52912-002

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	20.4	µg/L	12/13/2006	102	1.5	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	18.2	µg/L	12/13/2006	91.0	0.55	25.0	70 - 130
Toluene	ND	20	21.3	µg/L	12/13/2006	106	2.8	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	95.4	60 - 130
Dibromofluoromethane	98.1	60 - 130
Toluene-d8	92.2	60 - 130

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WD061212B

Validated by: dba - 12/14/06

QC/Prep Date: 12/12/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L
TPH as Motor Oil	ND	1	200	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	81.1	22 - 133

LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC Batch ID: WD061212B

Reviewed by: dba - 12/14/06

QC/Prep Date: 12/12/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	818	µg/L	81.8	40 - 138
TPH as Motor Oil	<200	1000	837	µg/L	83.7	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	103.0	22 - 133

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	740	µg/L	74.0	10	25.0	40 - 138
TPH as Motor Oil	<200	1000	803	µg/L	80.3	4.1	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	93.0	22 - 133

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WD061213A

Validated by: EricKum - 12/15/06

QC/Prep Date: 12/13/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L
TPH as Motor Oil	ND	1	200	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	79.5	22 - 133

LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC Batch ID: WD061213A

Reviewed by: EricKum - 12/15/06

QC/Prep Date: 12/13/2006

## LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	966	µg/L	96.6	40 - 138
TPH as Motor Oil	<200	1000	885	µg/L	88.5	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	84.5	22 - 133

## LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	982	µg/L	98.2	1.7	25.0	40 - 138
TPH as Motor Oil	<200	1000	834	µg/L	83.4	5.9	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	82.5	22 - 133



# BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE  
 SAN JOSE, CALIFORNIA 95112-1105  
 FAX (408) 573-7771  
 PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB

~~ST~~ ENTECH

DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

- EPA
- LIA
- OTHER

RWQCB REGION \_\_\_\_\_

CHAIN OF CUSTODY

CLIENT **PES**

SITE **Bay Center Apartments**  
**65th Street & Bay Street**  
**Emeryville, CA**

BTS # **061207-DW1**

C = COMPOSITE ALL CONTAINERS


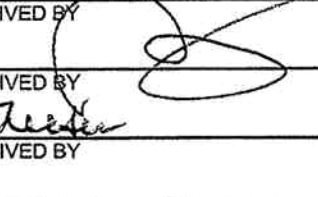
TPH - G, BTEX, MTBE (8260)



TPH-D & Motor Oil (8015m)

SAMPLE I.D.	DATE	TIME	MATRIX		TOTAL	CONTAINERS	CONDUCT ANALYSIS TO DETECT				ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #	
			S= SOIL	W=H <sub>2</sub> O			TPH - G, BTEX, MTBE (8260)	TPH-D & Motor Oil (8015m)							
MW-3	12-7	1225	✓		5	500s Analyzers	✓	✓							52912-001
MW-4		1338					✓	✓							-002
MW-5		1358					✓	✓							-003
MW-6		1420					✓	✓							-004
MW-E		1540					✓	✓							-005

(2) liters  
(3) 100As

SAMPLING COMPLETED DATE **12/7/06** TIME **1600** SAMPLING PERFORMED BY **Dave Walter** RESULTS NEEDED NO LATER THAN **Standard**

RELEASED BY  DATE **12/14/06** TIME **1505** RECEIVED BY  DATE **12/14/06** TIME **1505**

RELEASED BY  DATE **12/11/06** TIME **1522** RECEIVED BY  DATE **12/11/06** TIME **1522**

RELEASED BY \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_ RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_

SHIPPED VIA \_\_\_\_\_ DATE SENT \_\_\_\_\_ TIME SENT \_\_\_\_\_ COOLER # \_\_\_\_\_

**APPENDIX H**

**WASTE DISPOSAL MANIFESTS**

**Keller Canyon Sanitary Landfill**  
 901 Bailey Road  
 Pittsburg, CA 94565  
 Phone (925) 458-9800  
 Fax (925) 458-9891

**Coffin Butte Landfill**  
 28972 Coffin Butte Road  
 Corvallis, OR 97330  
 Phone (541) 745-2018  
 Fax (541) 745-3826

**Ox Mountain Sanitary Landfill**  
 12310 San Mateo Road  
 Half Moon Bay, CA 94019  
 Phone (650) 726-1819  
 Fax (650) 726-9183

**Newby Island Sanitary Landfill**  
 1601 Dixon Landing Road  
 Milpitas, CA 95035  
 Phone (408) 945-2800  
 Fax (408) 262-2871

**Forward Landfill**  
 9999 S. Austin Road  
 Manteca, CA 95336  
 Phone (209) 982-4298  
 Fax (209) 982-1009

**NON-HAZARDOUS WASTE MANIFEST**

GENERATOR <b>Emerybay Commercial Association</b>		WASTE ACCEPTANCE NO. <b>212Y65662</b>	
MAILING ADDRESS <b>100 Bush St., 26th Floor</b>		REQUIRED PERSONAL PROTECTIVE EQUIPMENT	
CITY, STATE, ZIP <b>San Francisco, CA 94104</b>		<input type="checkbox"/> GLOVES <input type="checkbox"/> GOGGLES <input type="checkbox"/> RESPIRATOR <input type="checkbox"/> HARD HAT <input type="checkbox"/> TY-VEK <input type="checkbox"/> SAFETY VEST	
PHONE <b>(415) 772-5900</b>		SPECIAL HANDLING PROCEDURES:	
CONTACT PERSON <b>Lynn Tolin</b>		RECEIVING FACILITY	
SIGNATURE OF AUTHORIZED AGENT / TITLE <i>* Lynn Tolin (AES on behalf of ERCA)</i>			
DATE <b>5/12/06</b>			
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.			
WASTE TYPE:			
<input type="checkbox"/> DISPOSAL <input type="checkbox"/> SLUDGE <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> WOOD <input type="checkbox"/> DEBRIS <input type="checkbox"/> OTHER <input type="checkbox"/> SPECIAL WASTE			
GENERATING FACILITY <b>6400 Christie Ave.      Emeryville</b>			
TRANSPORTER <b>DenBeste Transportation</b>		NOTES:	VEHICLE LICENSE NUMBER <b>BP95504</b>
ADDRESS <b>820 DenBeste Ct.</b>		TRUCK NUMBER <b>233</b>	
CITY, STATE, ZIP <b>Windsor, CA 95492</b>		END DUMP              BOTTOM DUMP              TRANSFER	
PHONE <b>(707)838-1407</b>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
SIGNATURE OF AUTHORIZED AGENT OR DRIVER <i>* Jose Millon</i>		ROLL-OFF(S)	FLAT-BED      VAN      DRUMS
DATE <b>5/12/06</b>		<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		CUBIC YARDS	
		DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)	
REMARKS		DISPOSE      OTHER	
FACILITY TICKET NUMBER		<input type="checkbox"/> SOIL	
SIGNATURE OF AUTHORIZED AGENT		<input type="checkbox"/> CONSTRUCTION DEBRIS	
DATE		<input type="checkbox"/> NON-FRIABLE ASBESTOS	
<i>*</i>		<input type="checkbox"/> WOOD	
		<input type="checkbox"/> ASH	
		<input type="checkbox"/> SPECIAL OTHER	

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

- |   |  |   |  |   |
|---|--|---|--|---|
| <input checked="" type="checkbox"/> <b>Keller Canyon</b><br>Sanitary Landfill<br>901 Bailey Road<br>Pittsburg, CA 94565<br>Phone (925) 458-9800<br>Fax (925) 458-9891 | <input type="checkbox"/> <b>Coffin Butte</b><br>Landfill<br>28972 Coffin Butte Road<br>Corvallis, OR 97330<br>Phone (541) 745-2018<br>Fax (541) 745-3826 | <input type="checkbox"/> <b>Ox Mountain</b><br>Sanitary Landfill<br>12310 San Mateo Road<br>Half Moon Bay, CA 94019<br>Phone (650) 726-1819<br>Fax (650) 726-9183 | <input type="checkbox"/> <b>Newby Island</b><br>Sanitary Landfill<br>1601 Dixon Landing Road<br>Milpitas, CA 95035<br>Phone (408) 945-2800<br>Fax (408) 262-2871 | <input type="checkbox"/> <b>Forward</b><br>Landfill<br>9999 S. Austin Road<br>Manteca, CA 95336<br>Phone (209) 982-4298<br>Fax (209) 982-1009 |
|---|--|---|--|---|

### NON-HAZARDOUS WASTE MANIFEST

<b>GENERATOR</b> Emerybay Commercial Association		<b>WASTE ACCEPTANCE NO.</b> 212Y65662	
<b>MAILING ADDRESS</b> 100 Bush St., 26th Floor		<b>REQUIRED PERSONAL PROTECTIVE EQUIPMENT</b> <input type="checkbox"/> GLOVES <input type="checkbox"/> GOGGLES <input type="checkbox"/> RESPIRATOR <input type="checkbox"/> HARD HAT <input type="checkbox"/> TY-VEK <input type="checkbox"/> SAFETY VEST	
<b>CITY, STATE, ZIP</b> San Francisco, CA 94104			
<b>PHONE</b> (415) 772-5900		<b>SPECIAL HANDLING PROCEDURES:</b>  	
<b>CONTACT PERSON</b> Lynn Tolin			
<b>SIGNATURE OF AUTHORIZED AGENT / TITLE</b> * <i>Lynn Tolin (PES on behalf ERCA)</i>	<b>DATE</b> 5/12/06		
<small>GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.</small>		<b>RECEIVING FACILITY</b>  	
<b>WASTE TYPE:</b> <input type="checkbox"/> DISPOSAL <input type="checkbox"/> SLUDGE <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> WOOD <input type="checkbox"/> DEBRIS <input type="checkbox"/> OTHER <input type="checkbox"/> SPECIAL WASTE			
<b>GENERATING FACILITY</b> 6400 Christie Ave.      Emeryville			
<b>TRANSPORTER</b> DenBeste Transportation		<b>NOTES:</b>	<b>VEHICLE LICENSE NUMBER</b> 8P85504
<b>ADDRESS</b> 820 DenBeste Ct.		<b>TRUCK NUMBER</b> 283	
<b>CITY, STATE, ZIP</b> Windsor, CA 95492			
<b>PHONE</b> (707) 838-1407			
<b>SIGNATURE OF AUTHORIZED AGENT OR DRIVER</b> * <i>Jose Millan</i>		<b>DATE</b> 5/12/06	
<b>I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.</b>		<b>END DUMP</b> <b>BOTTOM DUMP</b> <b>TRANSFER</b>	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>REMARKS</b>		<b>ROLL-OFF(S)</b> <b>FLAT-BED</b> <b>VAN</b> <b>DRUMS</b>	
		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>FACILITY TICKET NUMBER</b>		<b>CUBIC YARDS</b>	
<b>SIGNATURE OF AUTHORIZED AGENT</b> *		<b>DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)</b>	
<b>DATE</b>		<b>DISPOSE</b> <b>OTHER</b>	
		<input type="checkbox"/> SOIL	
		<input type="checkbox"/> CONSTRUCTION DEBRIS	
		<input type="checkbox"/> NON-FRIABLE ASBESTOS	
		<input type="checkbox"/> WOOD	
		<input type="checkbox"/> ASH	
		<input type="checkbox"/> SPECIAL OTHER	

**SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.**

**Keller Canyon Sanitary Landfill**  
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 9999 S. Austin Road  
 Manteca, CA 95336  
 Phone (209) 982-4298  
 Fax (209) 982-1009

**NON-HAZARDOUS WASTE MANIFEST**

<b>GENERATOR</b> Emerybay Commercial Association		<b>WASTE ACCEPTANCE NO.</b> 212Y65662																						
<b>MAILING ADDRESS</b> 100 Bush St., 26th Floor																								
<b>CITY, STATE, ZIP</b> San Francisco, CA 94104		<b>REQUIRED PERSONAL PROTECTIVE EQUIPMENT</b>																						
<b>PHONE</b> (415) 772-5900		<input type="checkbox"/> GLOVES <input type="checkbox"/> GOGGLES <input type="checkbox"/> RESPIRATOR <input type="checkbox"/> HARD HAT <input type="checkbox"/> TY-VEK <input type="checkbox"/> SAFETY VEST																						
<b>CONTACT PERSON</b> Lynn Tolin		<b>SPECIAL HANDLING PROCEDURES:</b>																						
<b>SIGNATURE OF AUTHORIZED AGENT / TITLE</b>																								
* <i>PDG (PES on behalf of EBCA)</i>																								
<b>DATE</b>																								
5/12/06																								
<b>GENERATOR'S CERTIFICATION:</b> I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.																								
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<b>GENERATING FACILITY</b> 6400 Christie Ave.      Emeryville																								
<b>TRANSPORTER</b> DenBeste Transportation		<b>NOTES:</b>																						
<b>ADDRESS</b> 820 DenBeste Ct.		VEHICLE LICENSE NUMBER <i>BP85504</i>																						
<b>CITY, STATE, ZIP</b> Windsor, CA 95492		TRUCK NUMBER <i>233</i>																						
<b>PHONE</b> (707)838-1407		<input type="checkbox"/> END DUMP <input type="checkbox"/> BOTTOM DUMP <input type="checkbox"/> TRANSFER <input type="checkbox"/> ROLL-OFF(S) <input type="checkbox"/> FLAT-BED <input type="checkbox"/> VAN <input type="checkbox"/> DRUMS																						
<b>SIGNATURE OF AUTHORIZED AGENT OR DRIVER</b>																								
* <i>Jose Mills</i>																								
<b>DATE</b>																								
5/12/06																								
<b>I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.</b>		<b>CUBIC YARDS</b>																						
<b>REMARKS</b>		<b>DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)</b>																						
		<table border="1"> <tr> <td></td> <td>DISPOSE</td> <td>OTHER</td> </tr> <tr> <td><input type="checkbox"/> SOIL</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> CONSTRUCTION DEBRIS</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> NON-FRIABLE ASBESTOS</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> WOOD</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> ASH</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> SPECIAL OTHER</td> <td></td> <td></td> </tr> </table>			DISPOSE	OTHER	<input type="checkbox"/> SOIL			<input type="checkbox"/> CONSTRUCTION DEBRIS			<input type="checkbox"/> NON-FRIABLE ASBESTOS			<input type="checkbox"/> WOOD			<input type="checkbox"/> ASH			<input type="checkbox"/> SPECIAL OTHER		
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<input type="checkbox"/> WOOD																								
<input type="checkbox"/> ASH																								
<input type="checkbox"/> SPECIAL OTHER																								
<b>FACILITY TICKET NUMBER</b>																								
<b>SIGNATURE OF AUTHORIZED AGENT</b>																								
*																								
<b>DATE</b>																								

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CA1C000260195249044</b>		Manifest Document No. <b>49044</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.							
3. Generator's Name and Mailing Address <b>EMERGENCY COMMERCIAL ASSOCIATION OF FACILITORS 100 CUSH ST., 26TH FLOOR, SAN FRANCISCO, CA 94104</b>						A. State Manifest Document Number <b>25049644</b>									
4. Generator's Phone (415) 772-1900						B. State Generator's ID									
5. Transporter 1 Company Name <b>KVREKREIN ENVIRONMENTAL SERVICES</b>				6. US EPA ID Number <b>CA10982413262</b>		C. State Transporter's ID [Reserved]									
7. Transporter 2 Company Name <b>PHILIP TRANSPORTATION &amp; REMEDIATION, INC.</b>						D. Transporter's Phone <b>510/795-4400</b>									
8. US EPA ID Number <b>CA10063547996</b>						E. State Transporter's ID [Reserved]									
9. Designated Facility Name and Site Address <b>21ST CENTURY, BMT 2095 NEWLANDS DRIVE EAST FERNLEY, NV 89408</b>						F. Transporter's Phone <b>408/683-0447</b>									
10. US EPA ID Number <b>NV10980895335</b>						G. State Facility's ID									
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		I. Waste Number			
a. <del>HAZARDOUS WASTE, LIQUID (OIL-DIESEL)</del>						No. Type		002 0 M 001 100 G		G		State <del>213</del> Gc			
						002 0 M 001 100 G						EPA/Other <del>1001</del> 017 Gc			
b. NON-RCRA HAZARDOUS WASTE, LIQUID (OIL WATERS)						003 0 M 001 120 G		G		State 221		EPA/Other NON-RCRA			
						001 0 M 002 00 P				State 352		EPA/Other NON-RCRA			
c. NON-RCRA HAZARDOUS WASTE, SOLID (OIL SOLIDS)						002 0 M 001 100 G		G		State 221		EPA/Other NON-RCRA			
						002 0 M 001 100 G				State 221		EPA/Other NON-RCRA			
d. NON-RCRA HAZARDOUS WASTE, LIQUID (OIL-DIESEL)						002 0 M 001 100 G		G		State 221		EPA/Other NON-RCRA			
						002 0 M 001 100 G				State 221		EPA/Other NON-RCRA			
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above									
11a PROFILE # 12640-00 Gc						a.									
11b PROFILE # 12053-00 (1X55 GALL)						b.									
11c PROFILE # 12068-00 (1X55 GALL)						c.									
11d PROFILE # 12093-00 (2X55 GALL)						d.									
15. Special Handling Instructions and Additional Information SITE: 6401 SHELLMOUND AVE., EYESVILLE, CA 94608 24 HOUR EMERGENCY CONTACT: 800-567-7455 WEAR PROTECTIVE CLOTHING & KYWEAR SITE: KVRG						R.R.G. # 11a. <del>TRC # 171</del> Gc 11b. TRC # 171 11c. TRC # 171 11d. TRC # 171									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.										If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>Peter Gorman (PES Environmental)</b>				Signature <i>Peter Gorman (PES signed for TUG)</i>				Month <b>04</b>		Day <b>03</b>		Year <b>06</b>			
17. Transporter 1 Acknowledgement of Receipt of Materials						18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name <b>Malcolm Smith</b>				Signature <i>Malcolm Smith</i>				Month <b>04</b>		Day <b>03</b>		Year <b>06</b>			
Printed/Typed Name				Signature				Month		Day		Year			
19. Discrepancy Indication Space															
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										Month		Day		Year	
Printed/Typed Name				Signature				Month		Day		Year			

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR  
TRANSPORTER  
FACILITY

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CA C 00260195276940		Manifest Document No. 1 of 1		2. Page 1 1 of 1		Information in the shaded areas is not required by Federal law.									
3. Generator's Name and Mailing Address Emergency Commercial Association of TMC Partners 100 Bush St. 26th Floor San Francisco, CA 94104						A. State Manifest Document Number <b>21676940</b>											
4. Generator's Phone (NIS) 1772-5900						B. State Generator's ID											
5. Transporter 1 Company Name DerBeate Transporter Windsor, CA			6. US EPA ID Number CA D 982513632			C. State Transporter's ID [Reserved]											
7. Transporter 2 Company Name						D. Transporter's Phone 1 800-838-1477											
8. US EPA ID Number			E. State Transporter's ID [Reserved]			F. Transporter's Phone											
9. Designated Facility Name and Site Address Chemical Waste Management 35251 Old Skyline Road Kettleman City, CA						G. State Facility's ID CA T 000646117											
10. US EPA ID Number CA T 000646117						H. Facility's Phone 800-222-2964											
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit		1. Waste Number					
						No. Type		Quantity		Wt/Vol		State EPA/Other					
a. Non-RCRA Hazardous waste Solid (with concrete)						001 CM 00015		Y		State 181		EPA/Other					
b.										State		EPA/Other					
c.										State		EPA/Other					
d.										State		EPA/Other					
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above											
15. Special Handling Instructions and Additional Information Site 6401 Stillmound Ave. Emeryville CA 94608 Probic EC8542						a. b. c. d.											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.										If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name Peter Cozman (PES Environmental)				Signature P. Cozman (PES Agent for TMO)				Month Day Year 05 21 06		17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name Phil McDonald				Signature [Signature]				Month Day Year 05 22 96		18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature				Month Day Year		19. Discrepancy Indication Space							
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										Printed/Typed Name				Signature		Month Day Year	

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CA16002601A5276938		Manifest Document No. 76938		2. Page 1 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Emergency Commercial Association c/o TMG Partners 100 Bush St. 26th Floor San Francisco, CA 94104						A. State Manifest Document Number <b>21676938</b>					
4. Generator's Phone (415) 772-5900						B. State Generator's ID					
5. Transporter 1 Company Name Don Beste Transportation Vanduser, CA				6. US EPA ID Number CA10982513632		C. State Transporter's ID (Reserved)					
7. Transporter 2 Company Name						D. Transporter's Phone 920-338-427					
8. US EPA ID Number						E. State Transporter's ID (Reserved)					
9. Designated Facility Name and Site Address Chemical Waste Management 38251 Old Skyline Road Bethelham City, CA						10. US EPA ID Number CA17900646117		F. Transporter's Phone			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol	
a. Non-REHA Hazardous Waste Solid						001 CM		01015		Y	
b.										I. Waste Number State 181 EPA/Other	
c.										State EPA/Other	
d.										State EPA/Other	
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above					
						a. b. c. d.					
15. Special Handling Instructions and Additional Information Site 6101 Stillman Ave. Emeryville CA 94608 Profile EC 8542											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name Peter Gorman (PES Environmental)				Signature [Signature] (PES Agent for TMG)				Month Day Year 05 22 06			
17. Transporter 1 Acknowledgement of Receipt of Materials											
Printed/Typed Name [Signature]				Signature [Signature]				Month Day Year 05 22 06			
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed/Typed Name				Signature				Month Day Year			
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.											
Printed/Typed Name				Signature				Month Day Year			

**DO NOT WRITE BELOW THIS LINE.**



# NON-HAZARDOUS WASTE MANIFEST

EES19

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.		Manifest Document No. <b>NH 3145</b>		2. Page 1 of 1					
3. Generator's Name and Mailing Address <i>EMERYBAY COMMERCIAL ASSOCIATION 6400 CHRISTIE AVE., EMERYVILLE, CA</i>											
4. Generator's Phone ( <i>415</i> ), <i>899-1600</i>											
5. Transporter 1 Company Name <i>PHILLIPS SERVICES West</i>		6. US EPA ID Number <del>CAD982410262</del>		A. State Transporter's ID							
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone <del>510-795-4400</del>							
9. Designated Facility Name and Site Address <i>EVERGREEN OIL, INC. 6880 Smith Avenue Newark, CA 94560</i>				10. US EPA ID Number <i>CAD980887418</i>		C. State Transporter's ID					
						D. Transporter 2 Phone					
						E. State Facility's ID					
						F. Facility's Phone <i>510 795-4400</i>					
11. WASTE DESCRIPTION						12. Containers	13. Total Quantity	14. Unit Wt./Vol.			
a. <u>Non-Hazardous waste, liquid</u>						No. <i>001</i>	Type <i>TT</i>	<i>1600</i>	<i>G</i>		
b.											
c.											
d.											
G. Additional Descriptions for Materials Listed Above						H. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information Profile # _____ Do not ingest Wear protective clothing In case of emergency call: CHEMTREC 800-424-9300 DOT ERG 171						Invoice: Sales Order:					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.											
Printed/Typed Name <i>Peter Gorman (PEs on behalf of EBCA)</i>						Signature <i>[Signature]</i>		Date Month <i>6</i> Day <i>8</i> Year <i>06</i>			
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name <i>Mike Johnston</i>		Signature <i>[Signature]</i>		Date Month <i>6</i> Day <i>09</i> Year <i>06</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.						Printed/Typed Name		Signature		Date	

NON-HAZARDOUS WASTE GENERATOR FACILITY

**DISTRIBUTION**

**CONSTRUCTION IMPLEMENTATION AND  
SEMI-ANNUAL OPERATIONS REPORT  
FREE-PHASE HYDROCARBON PRODUCT REMEDIATION SYSTEM  
EMERYBAY COMMERCIAL ASSOCIATION  
CHRISTIE AVENUE AND 64TH STREET  
EMERYVILLE, CALIFORNIA**

**MARCH 30, 2007**

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