PES Environmental, Inc.
Engineering & Environmental Services

December 13, 1996

167.0200.003

STID 494

California UST Cleanup Fund
2014 T Street
Sacramento, California 94244-2120

Attention: Mr. Christopher Stevens

LETTER
CALIFORNIA UNDERGROUND STORAGE TANK CLEANUP FUND
COST PRE-APPROVAL REQUEST
INTERIM REMEDIAL ACTIONS
FORMER BILL COX CADILLAC FACILITY
230 BAY STREET
OAKLAND, CALIFORNIA

Dear Mr. Stevens:

On behalf of Bill Cox and Wells Fargo Bank, PES Environmental, Inc. (PES) has enclosed the above referenced application for your review and approval (see Appendix A). The purpose of this application is to request pre-approval of costs associated with the proposed remedial activities of gasoline-affected soil and groundwater resulting from a former 10,000-gallon underground gasoline tank operated by Cox Cadillac. PES has proposed to remediate the affected soil and groundwater using soil excavation and passive in-situ bioremediation, respectively. As part of this cost pre-approval request included in Appendix A, the following supporting documentation has been enclosed:

- Revised Interim Remedial Action Plan for Soil Excavation and Passive In-situ Bioremediation, which also includes the time schedule for project initiation and duration (Appendix B);
- Addendum to Revised Interim Remedial Action Plan (Appendix B);
- A signed copy of the oversight agency letter approving the work plan (Appendix C); and
- Cost estimate for the soil and groundwater remediation (Appendix D).

Competitive bids were not obtained for the consulting services for the following reasons: (1) environmental conditions at the site are considered to be high risk and the delays associated with obtaining three bids and potentially retaining an additional consultant would likely result in delays to the implementation of the remedial program; (2) the cost associated with the request for bid solicitation process would likely exceed any potential savings considering the limited scope and relatively low cost of the proposed activities; (3) PES has conducted numerous investigations at the facility since 1992 and has the best knowledge of the site history, facility features, and site environmental conditions; and (4) PES has conducted successful remediation at other client facilities using the proposed soil and groundwater remediation methods. Consequently, it is more cost effective for PES to provide the professional consulting services for the proposed remediation activities. PES did solicit cost estimates for outside services such as soil excavation, well installation, groundwater sampling, and laboratory analyses (Appendix E). Subcontractor cost estimates are summarized in tables (Appendix E).

If you have any questions regarding this application or its contents, please do not hesitate to call me at (415) 899-1600.

Yours very truly,

PES ENVIRONMENTAL, INC.

Andrew A. Briefer, P.E.
Associate Engineer

Enclosures: Appendices
- A - California Underground Storage Tank Cleanup Fund Cost Pre-Approval Request
- B - Revised Interim Remedial Action Plan, Soil Excavation and Passive In-Situ Bioremediation, and Addendum to Revised Interim Remedial Action Plan
- C - Agency Approval Letter
- D - Cost Estimate - Soil and Groundwater Remediation
- E - Subcontractor Bids

cc: Leah Goldberg, Esq., Hanson, Bridgett, Marcus, Vlahos & Rudy
Mr. Steven Schulman, Wells Fargo Bank
Dale Klettke, ACDEH
Bill Cox, Cox Cadillac
Don Eisenberg, EOA, Inc.

PES Environmental, Inc.
Engineering & Environmental Services

December 13, 1996

167.0200.003

California UST Cleanup Fund
2014 T Street
Sacramento, California 94244-2120

Attention: Mr. Christopher Stevens

TRANSMITTAL
LETTER - CALIFORNIA UNDERGROUND STORAGE TANK CLEANUP FUND
COST PRE-APPROVAL REQUEST
INTERIM REMEDIAL ACTIONS
FORMER BILL COX CADILLAC FACILITY
230 BAY STREET
OAKLAND, CALIFORNIA

Dear Mr. Stevens:

Enclosed please find a copy of the above-referenced document for your review and approval. Please note that a signed copy of the Cost Pre-approval Request form from the applicant's designated representative is forthcoming.

If you have any questions regarding this letter or its contents, please do not hesitate to call me at (415) 899-1600.

Yours Very Truly,

PES ENVIRONMENTAL, INC.

Andrew A. Briefer, P.E.
Associate Engineer

Enclosure

1670200T.006

APPENDIX A

CALIFORNIA UNDERGROUND STORAGE TANK CLEANUP FUND COST PRE-APPROVAL REQUEST

CALIFORNIA UNDERGROUND STORAGE TANK CLEANUP FUND
COST PRE-APPROVAL REQUEST
(Complete form, enclose required items, sign, date & return)

TO: Christopher Stevens — UST Cleanup Fund, 2014 T Street, Sacramento, CA 94244-2120
Phone: (916) 227-4519 Fax: (916) 227-4530

I. CLAIM INFORMATION

A. CLAIM NO.: 11577 B. CLAIMANT: Wells Fargo Bank

C. CLAIM STATUS (complete appropriate section)

LOC ISSUED FOR: $_____

ON PRIORITY LIST: ____YES ____NO. IF YES, PRIORITY CLASS: ☐ A ☐ B ☐ C ☐ D

NOT YET FILED: EXPECTED FILE DATE: _____

CONTACT PERSON: Andrew Briefer PHONE: (415) 899-1600

ADDRESS: PES Environmental, Inc. FAX: (415) 899-1601
1682 Novato Blvd. #100
Novato, CA 94947

II. TYPE OF REQUEST (check appropriate boxes)

☒ PRE-APPROVAL ☐ 3-BID REVIEW ☐ BIDDING WAIVER

THE FOLLOWING DOCUMENTS ARE REQUIRED FOR THE SPECIFIED REQUEST. ALL DOCUMENTS REQUESTED MUST BE SUBMITTED IN THEIR ENTIRETY OR THE REQUEST(S) WILL BE RETURNED UNPROCESSED.

A. REQUEST FOR PRE-APPROVAL OF PROPOSED COSTS - The following items are required before review and determination will be made by Fund staff.

1. ✓ A complete signed copy of the proposed Investigation Work plan or Corrective Action Plan (CAP) (as defined and required by Article 11, Chapter 16, California Underground Storage Tank Regulations). CAPs must include the required feasibility study and chosen cost-effective alternative.

2. ✓ A signed copy of the oversight agency letter directing the work or approving the Work plan/CAP.

3. ✓ A complete copy of the Request For Bids, including all attachments. A list of all firms requested to bid must be included. If the claimant is requesting a waiver of the bidding requirement for a specific contract or change order, then claimant must include a cover letter describing why it is "unnecessary, unreasonable or impossible" to comply with the three bid requirement.

4. ✓ Complete copies of all bids or proposals with detailed project budgets and all other correspondence submitted in response to the Request For Bids.

5. ___ A time schedule, if not part of bid documents, for project initiation and duration. See Work Plan.

B. THREE-BID REVIEW & EVALUATION - Fund staff will assist on request any claimant requesting an evaluation of bids. The following information must be submitted: Items 1, 2, 3 and 4 as described in Item A above.

C. WAIVER OF THREE BID REQUIREMENT - The following information must be submitted: Items 1, 2, 3, 4 and 5 as described in Item A above.

III. CERTIFICATION

I certify under penalty of perjury that all information submitted with this request is complete, accurate and in accordance with all applicable laws and regulations.

Claimant's Signature _____

Date _____

APPENDIX B

REVISED INTERIM REMEDIAL ACTION PLAN, SOIL EXCAVATION AND PASSIVE IN-SITU BIOREMEDIATION, AND ADDENDUM TO REVISED INTERIM REMEDIAL ACTION PLAN

PES Environmental, Inc.
Engineering & Environmental Services

October 31, 1996

167.0200.P02

Mr. Steven Schulman
Wells Fargo Bank
c/o Rory Campbell, Esq.
Hanson, Bridgett, Marcus, Vlahos, & Rudy
333 Market Street, Suite 2300
San Francisco, California 94105-2173

REVISED INTERIM REMEDIAL ACTION PLAN
SOIL EXCAVATION AND PASSIVE IN-SITU BIOREMEDIATION
FORMER BILL COX CADILLAC FACILITY
230 BAY STREET
OAKLAND, CALIFORNIA

Dear Messrs. Campbell and Schulman:

PES Environmental, Inc. ("PES") is pleased to present Wells Fargo Bank ("Wells Fargo") and Hanson, Bridgett, Marcus, Vlahos & Rudy ("Hanson Bridgett") this Revised Interim Remedial Action Plan (Workplan) for remediation of gasoline-affected soil and groundwater associated with a former 10,000-gallon underground gasoline tank operated by Bill Cox Cadillac at 230 Bay Street, Oakland, California (Plate 1). This Workplan is proposed to supersede *EOA's Corrective Action Plan* dated September 5, 1996. It was requested by Mr. Dale Klettke of Alameda County Department of Environmental Health Services (ACDEH) in a letter to Ms. Leah Goldberg of Hanson Bridgett dated October 24, 1996. The October 24, 1996 ACDEH letter specified that soil remediation will include excavation of hydrocarbon-affected soil, and groundwater remediation will include implementation of an oxygen-releasing system. This Workplan contains: (1) a brief discussion of background information; (2) a summary of previous findings; (3) a summary of the remediation approach and scope of work for remediation of soil and groundwater at the site; and (4) a schedule for conducting the work.

1.0 BACKGROUND INFORMATION

The nearly two-acre Bill Cox Cadillac facility is bounded on the northwest by Harrison Street, the southwest by Bay Street, and on the southeast by Vernon Street (Plate 1). The facility has historically been used for automobile sales and services. The onsite activities have included automobile sales, storage, maintenance, repair and painting. Onsite activities have also included use and storage of chemicals associated with these activities, including fuels, oils, greases, paint, thinners, and petroleum solvents. The facility presently contains an approximately 30,000 square feet vacant building. Approximately 6,500 square feet of the building was used or a sales showroom and offices, while the remainder of the building was

used for automobile storage, body work and painting and an indoor service area. The remaining areas of the site are asphalt covered parking areas.

2.0 PREVIOUS FINDINGS

In December 1988, a 3,000-gallon waste oil storage tank was removed from the southern side of the building in December 1988 by R.S. Eagan & Company ("Eagan") of Concord, California. The location of this former tank is shown on Plate 2. Soil and groundwater in the excavation were sampled at the time of tank removal; however, analytical data were inconclusive as to the presence of petroleum hydrocarbon compounds.

Mr. Thomas Peacock of ACDEH requested in a letter to Mr. Bill Theuringer of Bill Cox Cadillac dated December 15, 1992 that a workplan for a soil and groundwater investigation related to the former waste oil tank be submitted to ACDEH.

PES was retained by Wells Fargo and Hanson Bridgett in January 1993 to prepare a workplan, and install one groundwater monitoring well down gradient of the former waste oil tank and obtain groundwater samples from the well for laboratory analyses. In February and March 1993, one monitoring well (Well MW-1) was installed and sampled. The results of the groundwater sample analyses indicated that Total Petroleum Hydrocarbons quantified as gasoline (TPHg) was present at a concentration of 110 ppm. Gasoline detected in groundwater was characterized as "fresh" and no waste oil constituents were detected. Consequently, an additional phase of investigation was conducted to investigate the degree and extent, and the likely source of the gasoline contamination. In October 1993, seven temporary monitoring wells (Wells TW-1 through TW-7) were installed at locations shown on Plate 2. Groundwater samples were collected and analyzed and the groundwater gradient was determined. Results of the additional investigation indicated petroleum hydrocarbon related compounds were detected in four of the temporary wells and in well MW-1. TPHg concentrations ranged from 2 mg/l to 140 mg/l, benzene from 0.065 mg/l to 48 mg/l, toluene from 0.018 mg/l to 25 mg/l, ethylbenzene from 0.049 mg/l to 4 mg/l and total xylenes from 0.033 mg/l to 23 mg/l. The highest concentrations of petroleum hydrocarbon constituents were detected in groundwater samples from two wells (TW-5 and TW-7) closest to the 10,000-gallon gasoline tank and product piping. The general groundwater flow direction was determined to be west-southwest, toward Bay Place, at a gradient of approximately 0.04 feet per foot. The methods and results of the March and October 1993 investigations were presented in PES' December 23, 1993 report, *Soil and Groundwater Investigation, Bill Cox Cadillac, 230 Bay Place, Oakland, California.*

Based on the detection of fresh gasoline in groundwater in the vicinity of the 10,000-gallon gasoline tank, the tank was removed by DECON Environmental Services of Hayward, California and observed and documented by Eisenberg, Olivieri & Associates (EOA) of Oakland, California in January 1994. At that time a corrosion hole was observed in the

product piping between the tank and dispenser. Floating free-phase product was observed on the groundwater surface in the tank excavation.

Following tank removal, additional affected soils were excavated and disposed offsite. Some affected soils were left in place because, according to EOA, of geotechnical stability concerns for the adjacent building. EOA, on behalf of Bill Cox, subsequently performed limited investigation to evaluate the offsite extent of gasoline contamination. Additionally, EOA prepared several portions of a Corrective Action Plan (CAP) dated April 1, July 25 and September 5, 1996. The CAP sections recommended active in-situ bioremediation and passive enhanced bioremediation.

3.0 EVALUATION OF REMEDIAL ALTERNATIVES

Although the remedial approaches presented by EOA in their September 5, 1996 CAP, have been approved by ACDEH, the anticipated timeliness and effectiveness of the proposed interim groundwater remedy was not sufficient to meet the redevelopment schedule for the property. PES reviewed potentially applicable alternative groundwater remedial methods. These include: (1) extraction and treatment of groundwater; (2) active in-situ bioremediation of groundwater; and (3) regulatory compliance monitoring. A summary of each method is presented below.

Groundwater Remediation

Extraction and treatment is a method in which groundwater is pumped from an extraction well through a treatment system such as activated carbon or air stripper to remove the hydrocarbons prior to discharge to the sanitary or storm sewer under the authority of the appropriate discharge permit. Groundwater extraction can be effective in preventing migration of hydrocarbon-affected groundwater. However, due to (1) the low solubility of petroleum hydrocarbons in groundwater, (2) the high affinity of petroleum hydrocarbons to fine soil particles, and (3) the low groundwater extraction rate, petroleum hydrocarbons would be removed from the site subsurface at a slow rate. This method is relatively costly and requires significant amounts of equipment and operator attention. In addition, permitting, design, construction, and start-up of an extraction and treatment system may not be completed until March 1997 and operation may be required for an indefinite period of time.

In-Situ Groundwater Remediation

Active in-situ bioremediation, proposed by EOA in their September 5, 1996 CAP, involves introduction of oxygen and nutrients into the subsurface to biologically degrade hydrocarbon in groundwater. Groundwater extraction and treatment is performed concurrently to maintain hydraulic control of the hydrocarbons and injected nutrients. Nutrient injection and groundwater extraction are usually accomplished with a system of wells or trenches. Although

active in-situ bioremediation may be able to address both petroleum hydrocarbons in groundwater and currently unsaturated soils which are not accessible for excavation, it is PES' opinion it is a costly method which may be less effective than a passive bioremediation approach. Active bioremediation may be less effective than a passive approach because operating a groundwater extraction system will prevent the flow of injected nutrients from reaching the offsite areas downgradient of the groundwater extraction points. In addition, permitting, design, construction and start-up of an extraction and treatment system may not be completed until March 1997. Furthermore, significant amounts of equipment and operator attention are required for this approach and the above ground facilities may be an impediment to redevelopment of the site.

It is PES' experience that during the time required to perform additional testing, design, permitting, installation and start-up (as proposed by EOA), considerable progress could be achieved using a passive bioremediation method to introduce oxygen and nutrients into the contaminated zones to accelerate the natural biodegradation of dissolved petroleum hydrocarbons. Introducing oxygen and nutrients into the subsurface and allowing the natural groundwater flow to carry them to the contaminated areas requires relatively little effort and expense and could be achieved using existing monitoring wells.

Non-Attainment Area Monitoring

Regulatory compliance monitoring is an alternative to remediation. Recent revisions to the RWQCB's Water Quality Control Plan (also known as the Basin Plan), and revisions to state-wide and regional policy regarding remediation of leaking underground fuel tanks, allow for alternative approaches to remediation of petroleum hydrocarbon-affected groundwater. Specifically, if it can be demonstrated that a groundwater hydrocarbon plume has not migrated offsite and is not continuing to migrate, then long term monitoring of the groundwater may be acceptable in lieu of an active remediation program. The source of the contamination must be removed or isolated. Furthermore, it must be demonstrated that no cost-effective remedial alternatives exist and an evaluation of risks must be performed. This alternative is not a viable option for this site because risk evaluations performed by EOA indicate unacceptable risk levels for users of the property.

4.0 PROPOSED REMEDIAL APPROACH

Wells Fargo intends to lease or sell the property. In order to prepare the property for lease or sale, the risk to human health posed by environmental conditions must be addressed and regulatory closure of the former 10,000-gallon UST obtained. PES' recommendation, as described below, is intended to cost-effectively reduce concentrations of petroleum hydrocarbons in soil and groundwater concurrently with completing the characterization of the lateral extent of contamination. The reduction in petroleum hydrocarbon concentrations, particularly benzene, will reduce the currently unacceptable risk levels. Additionally, the

implementation of an approved remedial plan will allow the property to be leased or sold. PES' proposed approach is a flexible one that will accommodate the use and/or redevelopment of the site.

Soil Remediation

The hydrocarbon-affected soils beneath the former piping between the former UST excavation and the former dispenser will be excavated, characterized and disposed at an appropriately licensed disposal facility. The hydrocarbon-affected soil beneath the former piping and adjacent to the north wall of the former UST excavation is present at depths from approximately 2 feet below ground surface (bgs) to 6 feet bgs (Plate 3). The extent of soil excavation will be limited to the area beneath the former piping that was affected by hydrocarbons based on soil analytical results obtained during the UST removal activities (EOA, 1994). Based on EOA's soil analytical results the extent of hydrocarbon-affected soil extends from the north wall of the former excavation to the approximate location of soil sample number S4. Soil sample S4 was collected beneath the former piping approximately 27 feet to the northeast of the north wall of the former excavation. The excavation of hydrocarbon-affected soil will extend approximately 27 feet northeast of the north wall of the former UST excavation to an estimated depth of approximately 6 feet bgs. The depth of the excavation is estimated to be 6 feet bgs; however, the excavation will not extend into the shallow water-bearing zone. The approximate extent of the proposed excavation is presented on Plate 3. The excavation will be conducted during dry weather prior to implementation of the proposed groundwater remediation.

Groundwater Remediation

PES proposes to conduct enhanced passive in-situ bioremediation as the interim remediation measure. Enhanced passive in-situ bioremediation is a technique that uses naturally occurring hydrocarbon-utilizing microbes to degrade petroleum hydrocarbons in soil and groundwater. The recommended bioremediation approach involves stimulating the native soil bacteria through the addition of oxygen and nutrients (possible including nitrogen and phosphorus) to the affected zone which results in the accelerated degradation of petroleum hydrocarbons in the soil and groundwater by these microbes. This method has several advantages relative to conventional groundwater remediation methods in that it destroys the hydrocarbons and, because the process occurs in-situ, it is not as limited as groundwater extraction by the low solubility of the hydrocarbons in groundwater.

Bioremediation has been previously approved by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) and implemented at similar sites in the Bay Area. PES has implemented bioremediation programs at gasoline-contaminated sites, including sites regulated by ACDEH and RWQCB.

The rate of bioremediation of hydrocarbons in soils and groundwater is typically limited by the supply of available oxygen and possibly by nutrients such as nitrogen and phosphorus. Therefore, PES proposes to apply a combination of passive in-situ bioremediation methods to introduce oxygen and nutrients into groundwater at the site to enhance biodegradation rates of petroleum hydrocarbons. The methods include: (1) adding a nutrient- and hydrogen peroxide-enriched water (hereinafter referred to as enriched water) and (2) placement of Oxygen Releasing Compound (ORC) in selected wells at the site.

The enriched water will consist of concentrated hydrogen peroxide and nutrients mixed with dechlorinated potable water. When the enriched water is introduced, the hydrogen peroxide decomposes into water and oxygen. The introduction of enriched water provides several advantages over other techniques for supplying oxygen to groundwater. Enriched water carries more oxygen than ORC- or oxygen-saturated water and the use of concentrated hydrogen peroxide can prevent biofouling in wells. Periodic addition of enriched water does not require installation of a permanent distribution system and does not preclude the subsequent use of other remedial actions should they be required.

The proposed ORC is a powder form of time release magnesium peroxide. The ORC is blended with an inert carrier matrix of sand and the blend is contained in an approximately two-inch diameter polyethylene webbed sock in one foot lengths (ORC Filter Sock). The ORC Filter Socks become saturated following insertion into groundwater, and begin releasing oxygen into the subsurface. The ORC product contains both magnesium oxide and magnesium peroxide (the active ingredient). Essentially, ORC is "oxygenated magnesia" and releases the oxygen upon contact with water. The spent magnesium peroxide is converted to magnesium hydroxide (a suspension of magnesium hydroxide in water is ordinary "milk of magnesia"). ORC releases of oxygen have been documented to enhance microbial growth in both soil and groundwater, and in turn, accelerate biodegradation rates of petroleum hydrocarbons.

5.0 SCOPE OF WORK

The proposed approach for this Workplan consists of five tasks: (1) project planning; (2) implement interim remediation; (3) complete site characterization; (4) conduct quarterly groundwater monitoring; and (5) prepare site characterization and progress evaluation reports.

The objective of the remediation is to reduce the concentrations of petroleum hydrocarbons in soil and groundwater to achieve acceptable risk levels. The remedial goals for the site are based on risk analyses conducted by EOA. The remedial goals, as stated in a June 25, 1996 ACDEH letter, are 69 parts per billion (ppb) of benzene in groundwater and 16 ppb of benzene in soil. PES recommends the excavation of hydrocarbon-affected soil and the use of a combination of oxygen delivery methods to utilize the advantages of each of the methods to accelerate the rate of biodegradation.

Excavation of hydrocarbon-affected soil will effectively remove the source of hydrocarbons leaching from soil into the shallow groundwater beneath the site. The removal of the source of the hydrocarbons leaching into groundwater through excavation may increase the effectiveness of the oxygen delivery methods proposed for groundwater remediation.

The use of hydrogen peroxide provides a method for introducing a greater mass of oxygen to groundwater relation to other methods of oxygen delivery. Additionally, because high concentrations of hydrogen peroxide inhibit microbial growth, the concentration of hydrogen peroxide introduced can be adjusted to prevent excessive microbial growth in the introduction wells and prevent plugging of the water-bearing zone by biomass.

While the hydrogen peroxide is capable of supplying a large mass of oxygen in a short time, the primary advantage of the ORC is that it provides a longer-lasting and steady supply of oxygen. The hydrogen peroxide introductions typically provide elevated oxygen levels for up to approximately two weeks. After the peroxide is utilized, there is typically not sufficient oxygen present to maintain the rate of microbial degradation. The ORC will provide sufficient oxygen to maintain the microbial populations until the subsequent peroxide introduction, thereby reducing the required frequency of peroxide introductions.

The following sections describe the scope of work proposed to implement a one year program to stimulate the natural biodegradation of petroleum hydrocarbons by indigenous microorganisms and to monitor the progress of the remediation. The program includes the following five tasks.

5.1 Task 1 - Project Planning

PES will conduct project preparation activities following Workplan approval by ACDEH. This task will include: (1) preparation of a site safety plan to be used during the remediation program; (2) filing for permits from Alameda County and the City of Oakland prior to implementing the remedial program; and (3) obtaining bids from qualified subcontractors for the soil remediation.

As part of this task PES will also conduct negotiations with State Underground Storage Tank Cleanup Fund ("USTCF") representatives for pre-approval of costs for the remediation program.

5.2 Task 2 - Soil Remediation

The hydrocarbon-affected soils beneath the former piping between the former UST and former dispenser will be excavated and disposed offsite at an appropriately licensed disposal facility. The hydrocarbon-affected soil beneath the former piping and adjacent to the north wall of the former UST excavation ranges in depth from approximately 2 feet bgs to 6 feet bgs. PES' proposed extent of soil excavation is limited to the area beneath the former piping that was

affected by hydrocarbons based on soil analytical results obtained during the UST removal activities. The excavation of hydrocarbon-affected soil is proposed to extend approximately 27 feet northeast of the north wall of the former UST excavation to an estimated depth of approximately 6 feet bgs (see Plate 3).

The excavation will be conducted by a qualified subcontractor using a backhoe. The asphalt surface will be removed and segregated for disposal. The soil will be removed and segregated through field screening and characterized to evaluate offsite disposal/recycling and reuse alternatives. Hydrocarbon-affected soil will be placed on and covered with visqueen until disposal arrangements are completed. Off site disposal or recycling of the hydrocarbon-affected soil will be conducted based on the soil stockpile analytical results and in accordance with applicable Federal, State, and local regulations.

Confirmation soil samples will be collected from the sidewalls of the excavation using a hand sampler and the backhoe. The soils adjacent to the cutting edge within the backhoe bucket will be sampled because they represent the deepest and least disturbed soils. In general, the backhoe bucket will not be decontaminated between sampling locations; however, in order to avoid cross contamination of samples, soil samples will be collected from soil which does not come in direct contact with the bucket surface.

Soil samples will be collected from backhoe bucket using a hand-held impact sampler with stainless-steel liners. Following collection in stainless-steel liners, each soil sample will be sealed with Teflon tape, polypropylene end caps and tape. The soil samples will be labeled, and stored in an iced cooler for delivery to a California-Department of Heath Services-approved laboratory for chemical analysis. Confirmation soil samples will be analyzed for TPHg using U.S. Environmental Protection Agency (USEPA) Test Method 8015 modified, and BTEX using USEPA Test Method 8020.

The excavation will be backfilled with imported crushed rock, placed in 8 to 12 inch lifts, compacted to 90 percent relative maximum density. The subgrade and asphalt will be replaced and to match the thickness and grade of the existing subgrade and asphalt. Groundwater remediation activities will be implemented following the completion of the soil remediation activities at the subject property.

5.3 Task 3 - Nutrient Introduction

A mixture of potable water, hydrogen peroxide and a blend of micronutrients (enriched water) will be prepared and introduced twice each quarter into wells TW-3, TW-5, TW-6, TW-7, and MW-1 to stimulate natural biodegradation of the hydrocarbons.

The in-situ bioremediation system will consist of a drum of 35 percent concentrated hydrogen peroxide and a metering pump to deliver a controlled amount of hydrogen peroxide to a mixing tank where it will be combined with dechlorinated potable water and small quantities of

nitrogen and phosphorus nutrients. A centrifugal pump, globe valve and flow meter will be attached to the mixing tank to allow periodic controlled addition of enriched water at a constant rate into TW-4, TW-5, TW-6, TW-7, and MW-1.

The enriched water will be mixed at a concentration to maximize oxygen delivery and prevent accumulation of biomass in the immediate vicinity of the wells while reducing the potential for precipitation of inorganic carbonates. It is currently anticipated that a volume of approximately 800-900 gallons per event (two events per quarter) will be introduced into the wells at a concentration between 2,000 and 12,000 ppm hydrogen peroxide. This delivery program is intended to result in a concentration of hydrogen peroxide which will inhibit biological activity in the vicinity of the wells to prevent plugging of the well screen by biomass. Higher concentrations of hydrogen peroxide in the well may result in precipitation of carbonates and plugging of the well screen. Application rates and concentrations may be adjusted as necessary to minimize mounding of the groundwater and well plugging and to maximize oxygen delivery.

Following enriched water introduction, ORC Filter Socks will be installed in each of the five designated wells. The ORC Filter Socks will provide continuous supply of oxygen between enriched water introductions. The ORC Filter Socks will be replaced when they no longer maintain elevated dissolved oxygen concentrations. PES estimates that the ORC will be replaced after approximately six months of use.

5.4 Task 4 - Complete Site Characterization and Install and Develop a Downgradient Monitoring Well

PES will conduct a subsurface investigation beneath the building and sidewalk to complete characterization of the lateral extent of gasoline hydrocarbons at the west-southwest portion of the site. The additional site characterization will include installation of three sample points and one temporary well at the site. Two of the sample points will be installed inside the building near the southwest corner (in the former office/showroom) and one will be installed outside the building in the sidewalk along Bay Street. The temporary well will be installed in the former showroom inside the building. The proposed sample points and temporary well locations are presented on Plate 2.

The sample points will be installed to the depths ranging from six to eight feet bgs using a direct push coring method. The direct push coring method enables continuous sampling of the soil and minimizes the amount of soil cuttings generated. The temporary well will be drilled using hollow-stem auger drilling equipment. The equipment will be cleaned using a combination steam/high pressure wash system.

The subsurface soils will be logged from the core samples and drill cuttings in accordance with the Unified Soil Classification System by a PES field geologist. Soil samples from each sampling drive will be retained in cleaned stainless steel liners and will be field screened for volatile petroleum hydrocarbons using a photo-ionization organic vapor meter (OVM). The OVM readings will be recorded on the boring logs and used to assist in selection of samples for laboratory analyses. One sample from each soil boring, which exhibits the greatest indications of contamination, will be selected for laboratory chemical analyses. The sample liners will be sealed with Teflon sheeting, plastic end caps, and adhesive-less silicone tape; labeled with project name and number, boring identification and sample depth, sampling date and time, and requested laboratory analyses; placed in a chilled thermally-insulated chest; and submitted to the project laboratory under chain-of-custody protocol.

After coring the sample points to a depth of at least 2 feet below the first encountered groundwater, a cleaned 1-inch diameter Schedule 40 PVC casing with 5 feet of 0.020 inch machine slotted screen will be placed in the borehole for groundwater sampling. Groundwater samples will be collected using a clean teflon bailer. The samples will be transferred to the appropriate laboratory sample containers by filling slowly to minimize sample volatilization and to ensure that the sample is free of bubbles. Groundwater sample containers will be labeled with project name and number, sample identification number, sampling date and time, and requested laboratory analyses, placed in a chilled thermally-insulated chest, and submitted to the project laboratory for analyses under chain-of-custody protocol. After completion of sampling, the borehole will be grouted to ground surface with neat cement.

The monitoring well will be installed in a boring drilled to approximately 20 feet below ground surface by using hollow-stem auger drilling equipment. The approximate location of the temporary well is shown on Plate 2. The location may be modified based on the results of the field screening from the sampling points. Soil samples will be collected for lithologic logging and possible chemical analyses as described above. A 2-inch diameter well casing with approximately 15 feet of slotted well screen will be installed in the boring and the screened interval will be located to intersect the groundwater surface. The annulus between the casing and the borehole wall will be packed with Number 2/12 size clean sand to approximately one foot above the screen. Two feet of bentonite will be placed above the sand to seal the annulus and the well will be grouted to ground surface with neat cement. The well will be completed at ground surface with a locking well cap.

A temporary well will be installed at the approximate location shown on Plate 2. After drilling to approximately 20 feet bgs, the temporary well will be constructed following protocol for permanent wells with the exception of the surface completion. A 2-inch diameter Schedule 40 PVC casing with 10 feet of 0.020 inch machine slotted screen will be placed in the borehole through the hollow stem of the augers. The annulus between the casing and the borehole will be packed with Number 2/12 size clean sand to approximately one foot above the screen. A two feet thick seal of bentonite pellets will be placed above the sand and a Portland

cement seal will be placed to approximately 0.5 bgs. The temporary well casing will be fitted at the top with a locking expansion plug.

The monitoring well and temporary well will be developed to remove fine-grained sediment from the well borehole and sort the sandpack to allow for collection of representative groundwater samples free of excessive sediment. Well development will consist of alternately surging and bailing the well until the water is reasonably clear and free of sediment. Following development, the monitoring well and temporary well will be sampled as described below in Section 5.5.

To avoid cross contamination, drilling and sampling equipment will be decontaminated prior to use and between each sampling location. Sampling equipment rinseate and soil cuttings will be contained in sealed 55-gallon drums as necessary and stored onsite until appropriate disposal arrangements are made.

Soil and groundwater samples collected from the sample points, temporary well and downgradient well will be submitted under proper chain-of-custody control to a California-certified laboratory for analyses. Samples will be analyzed for TPHg by USEPA Test Method 5030/8015 modified and BTEX by USEPA Test Method 8020. The samples will be analyzed on a standard 10-day turnaround time.

5.5 Task 5 - Quarterly Groundwater Monitoring

Quarterly groundwater monitoring at the site will be conducted to evaluate environmental conditions and monitor the progress of the remedial program. Water levels in all the wells will be measured before quarterly groundwater sampling events and converted to water-level elevations to evaluate groundwater gradient. Water-level measurements will be obtained using an electronic water-level sounder.

Prior to sampling each well, a minimum of three well volumes will be purged using a clean stainless steel bailer, bladder pump, or teflon bailer. During purging, the discharge water will be monitored for pH, temperature, and electrical conductivity. Once the water quality parameters have stabilized, groundwater samples will be collected using a teflon bailer.

Wells TW-2, TW-6, TW-7, MW-1 and the new temporary and downgradient well will be purged and sampled quarterly and samples submitted to a California-certified analytical laboratory under chain-of-custody procedures. Samples will be analyzed for TPHg by EPA Test Method 5030/8015 modified and BTEX by EPA Test Method 8020. The samples will be analyzed on a standard 10-day turnaround time.

In addition to recording the groundwater quality parameters, PES will monitor parameters related to the progress of the bioremediation. To monitor the progress of the bioremediation and effectiveness of nutrient delivery, the concentration of dissolved oxygen will be measured in all the wells during quarterly groundwater monitoring and prior to and following each nutrient delivery event. Dissolved oxygen is an indirect indicator of hydrocarbon concentration. In areas of high hydrocarbon concentration, dissolved oxygen is consumed by the native bacteria and residual dissolved oxygen concentrations are expected to be low. Conversely, effective nutrient addition will be demonstrated by elevated concentrations of dissolved oxygen in the monitoring wells.

5.6 Task 6 - Site Characterization Report and Performance Evaluation and Reporting

After completing the field investigation and reviewing the sample analytical results of the additional site characterization, PES will prepare a summary report. The report will include the results of the site characterization evaluation of the quantity of hydrocarbons present in subsurface soil and groundwater and present recommended modifications to this proposed remedial program as necessary.

In addition, PES will evaluate the progress of the program quarterly and adjust the nutrient delivery and monitoring programs as necessary to maximize biodegradation of hydrocarbons and reduce the potential for plugging the aquifer.

Reports will be prepared quarterly summarizing the bioremediation activities performed and the findings of each quarterly monitoring event. The reports will present results of water-level measurements, a brief description of sampling procedures, a summary of chemical analysis results, water-level elevation contour map and an evaluation and interpretation of results. Data from the bioremediation program will be incorporated into the quarterly groundwater monitoring reports. Copies of laboratory reports and chain-of-custody forms will be included in an appendix.

At the end of the one year program, PES will review and summarize the results and assess whether the program is effective in remediating hydrocarbon-affected groundwater contamination at the site. PES will evaluate residual risk levels at that time. Recommendations will be developed for future remedial actions at the site, which may include continuation of the passive bioremediation program.

6.0 SCHEDULE

Upon approval of the workplan by the ACDEH, PES will initiate the project preparation activities. Acquisition of permits is expected to take approximately two to three weeks. Upon receipt of the permits, PES can coordinate the soil excavation, additional site characterization and interim groundwater remediation. Soil excavation will be conducted during dry weather prior to onset of significant winter rainfall. Soil excavation and backfilling is expected to take approximately two days to complete. The additional site investigation is expected to take approximately two days to complete. Well development will require one additional day. Nutrient applications will be scheduled to follow within several days and midway between of each quarterly groundwater monitoring event to maximize the opportunity for transport of the enriched water and biological degradation of hydrocarbons.

PES trusts this scope of work and schedule meet your requirements at this time. Please do not hesitate to call if you have any questions or comments.

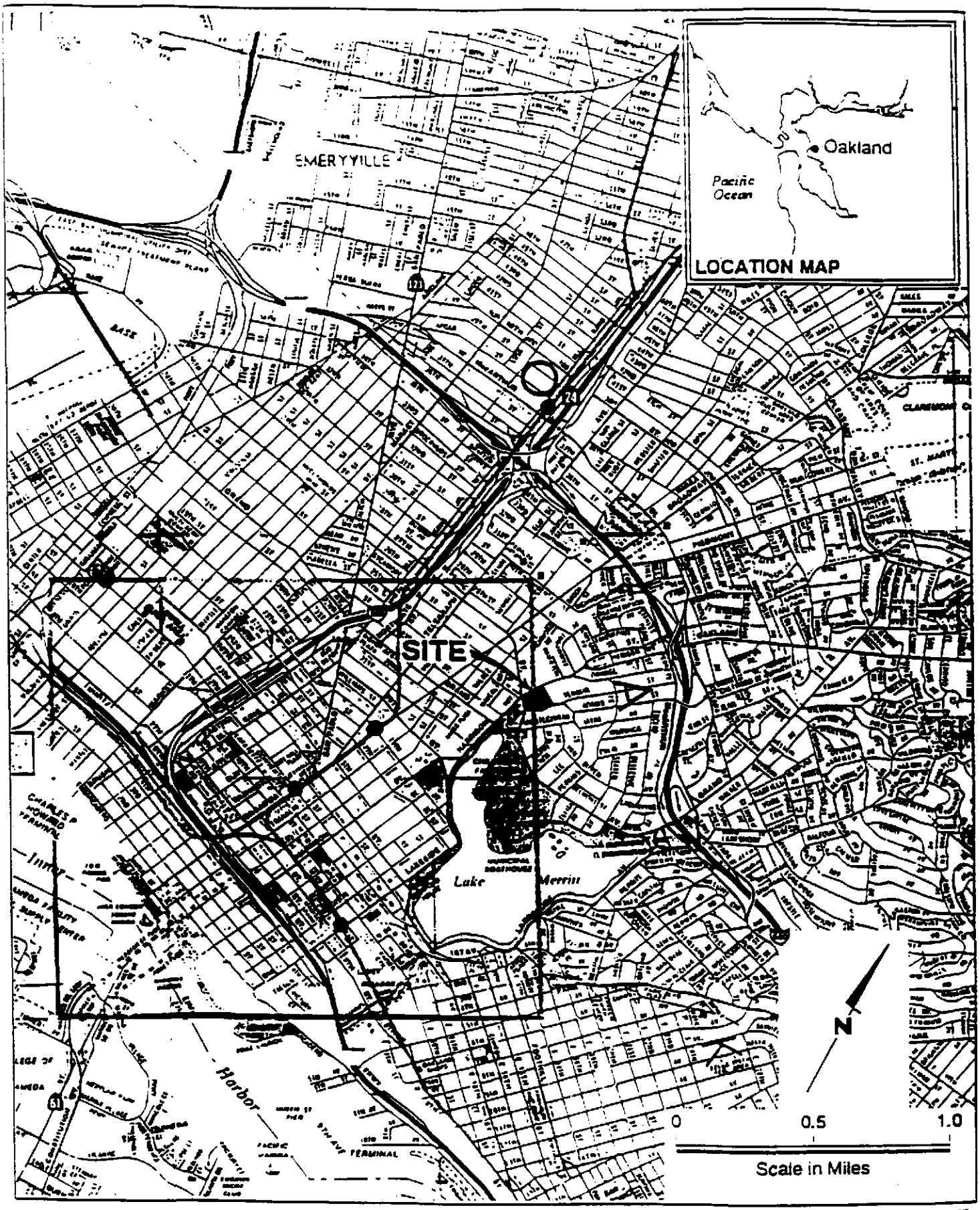
Yours very truly,

PES ENVIRONMENTAL, INC.

Kyle S. Flory, R.G.
Senior Geologist

Andrew A. Briefer, P.E.
Associate Engineer

Attachments: Plate 1 Site Location Map
Plate 2 Proposed Sample Point and Well Location Map
Plate 3 Proposed Soil Excavation Map

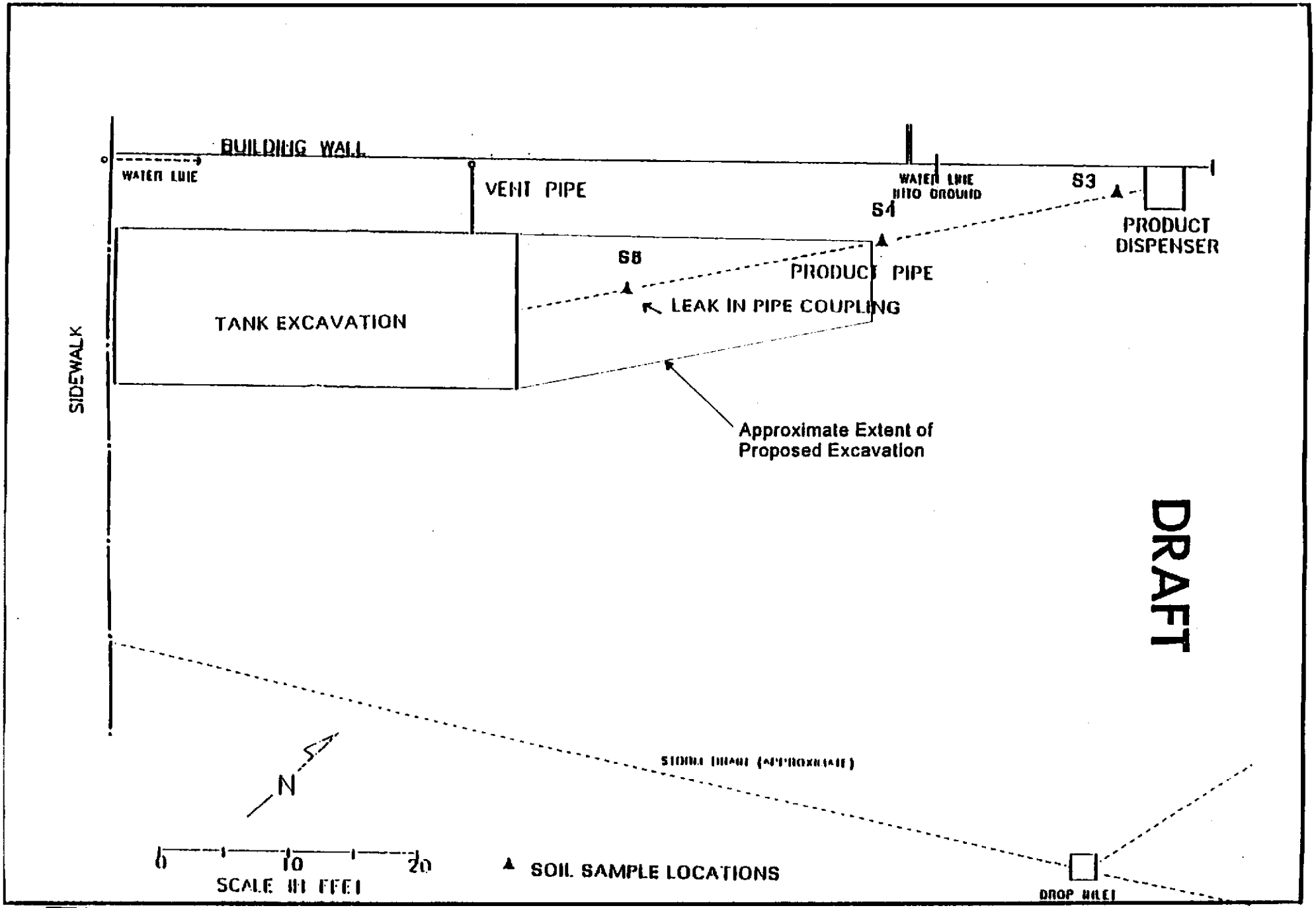


PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
Cox Cadillac
230 Bay Place
Oakland, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
167.0200.002		11/93		



PES Environmental, Inc.
Engineering & Environmental Services

Proposed Soil Excavation Map
Cox Cadillac
230 Bay Place
Oakland, California

PLATE
3

167.0200.P01 02P01_D1.CDR 10/96

PES Environmental, Inc.
Engineering & Environmental Services

November 26, 1996

167.0200.002

Mr. Steven Schulman
Wells Fargo Bank
c/o Rory Campbell, Esq.
Hanson, Bridgett, Marcus, Vlahos, & Rudy
333 Market Street, Suite 2300
San Francisco, California 94105-2173

ADDENDUM
REVISED INTERIM REMEDIAL ACTION PLAN
SOIL EXCAVATION AND PASSIVE IN-SITU BIOREMEDIATION
FORMER COX CADILLAC FACILITY
230 BAY STREET
OAKLAND, CALIFORNIA

Dear Messrs. Campbell and Schulman:

PES Environmental, Inc. ("PES") is pleased to present Wells Fargo Bank ("Wells Fargo") and Hanson, Bridgett, Marcus, Vlahos & Rudy ("Hanson Bridgett") this Addendum to the Revised Interim Remedial Action Plan for remediation of gasoline-affected soil and groundwater associated with a former 10,000-gallon underground gasoline tank operated by Bill Cox Cadillac at 230 Bay Street, Oakland, California (Plate 1). This Addendum presents revisions to PES' *Revised Interim Remedial Action Plan* ("IRAP") dated October 31, 1996. This Addendum is submitted in response to a verbal request by Mr. Dale Klettke of Alameda County Department of Environmental Health Services ("ACDEH") in a telephone conversation with Andrew Briefer of PES on November 21, 1996.

This Addendum addresses the following activities proposed in PES' October 31, 1996 IRAP: (1) clarification of the area of soil excavation; (2) completion of a monitoring well inside the building; and (3) use of the new interior well as a potential oxygen and nutrient introduction point.

SOIL EXCAVATION

As proposed in the IRAP, the hydrocarbon-affected soils beneath the former piping between the former UST excavation and the former dispenser will be excavated. The hydrocarbon-affected soil beneath the former piping and adjacent to the north wall of the former UST excavation is present at depths from approximately 2 feet below ground surface (bgs) to 6 feet bgs (Plate 3). The excavation of hydrocarbon-affected soil will extend approximately 27 feet northeast of the north wall of the former UST excavation to an estimated depth of approximately 6 feet bgs.

The depth of the excavation is estimated to be 6 feet bgs; however, the excavation will extend as deep as possible without penetrating the shallow water-bearing zone.

If accessible hydrocarbon-affected soil is encountered to the northeast and east of the proposed excavation, the excavation will be expanded to the extent feasible, to remove the additional soil. The proposed excavation will also be expanded to the northwest, as close to the building as possible without compromising the stability of the building, if results of field screening and/or soil analytical results indicate the presence of accessible hydrocarbon-affected soil.

COMPLETION OF INTERIOR MONITORING WELL

The IRAP proposed a subsurface investigation beneath the building and sidewalk to complete characterization of the lateral extent of gasoline hydrocarbons at the west-southwest portion of the site. It included installation of a temporary well in the former showroom inside the building (Plate 2). As discussed with Mr. Klettke, PES will complete the proposed temporary well as a permanent groundwater monitoring well. The interior groundwater monitoring well will be installed to a depth of 20 feet bgs using hollow-stem auger drilling equipment.

Soil samples will be collected and logged by a PES geologist per the procedures presented in the IRAP. The monitoring well will be installed, developed, and sampled using the procedures presented the IRAP.

NUTRIENT INTRODUCTION

The IRAP presented a proposal to conduct enhanced passive in-situ bioremediation as an interim remedial measure. The proposed program consists of introducing enriched water into selected wells to deliver oxygen and stimulate bacterial degradation of hydrocarbons. Following enriched water introduction, oxygen releasing compounds (ORC) Filter Socks will be installed in each of the designated wells. The ORC Filter Socks will provide continuous supply of oxygen between enriched water introductions.

If results of the investigation beneath the building indicate the presence of significant hydrocarbon contamination, PES will expand the proposed bioremediation program by utilizing the new interior well as an oxygen and nutrient introduction point. The procedures presented in the IRAP for the introduction of oxygen and nutrients into the previously designated wells will apply to the introduction of the oxygen and nutrients into the new interior well.

PES trusts this Addendum meets your requirements at this time. Please do not hesitate to call if you have any questions or comments.

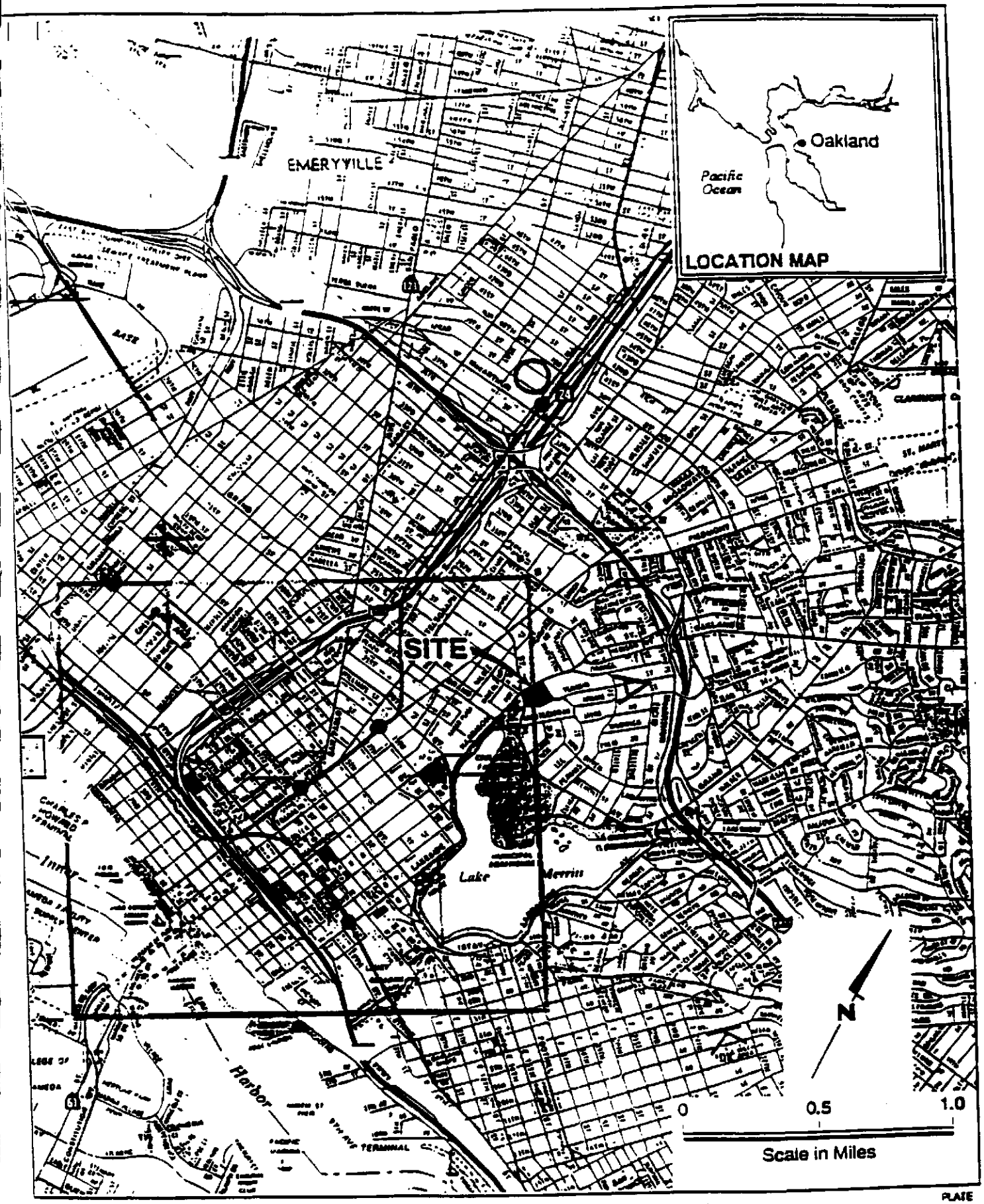
Yours very truly,

PES ENVIRONMENTAL, INC.

Kyle S. Flory, R.G.
Senior Geologist

Andrew A. Briefer, P.E.
Associate Engineer

Attachments: Plate 1 Site Location Map
Plate 2 Proposed Sample Point and Well Location Map
Plate 3 Proposed Soil Excavation Map



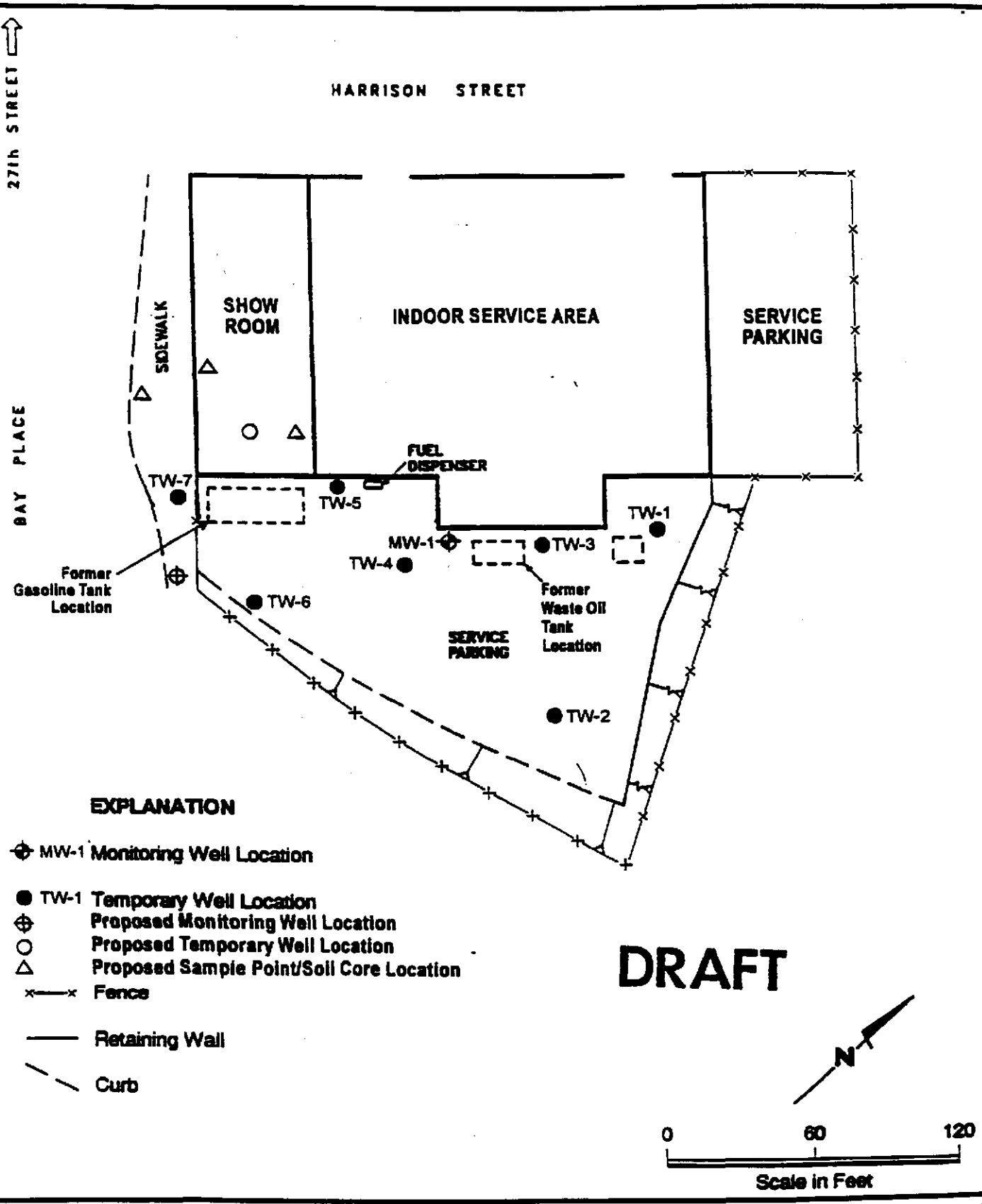
PLATE

PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
Cox Cadillac
230 Bay Place
Oakland, California

1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
167.0200.002		11/93		



PES Environmental, Inc.
Engineering & Environmental Services

Proposed Sample Point and Well Location Map
Cox Cadillac
230 Bay Street
Oakland, California

PLATE 2

167.0200.P02	00P02_S1.CDR		10/9
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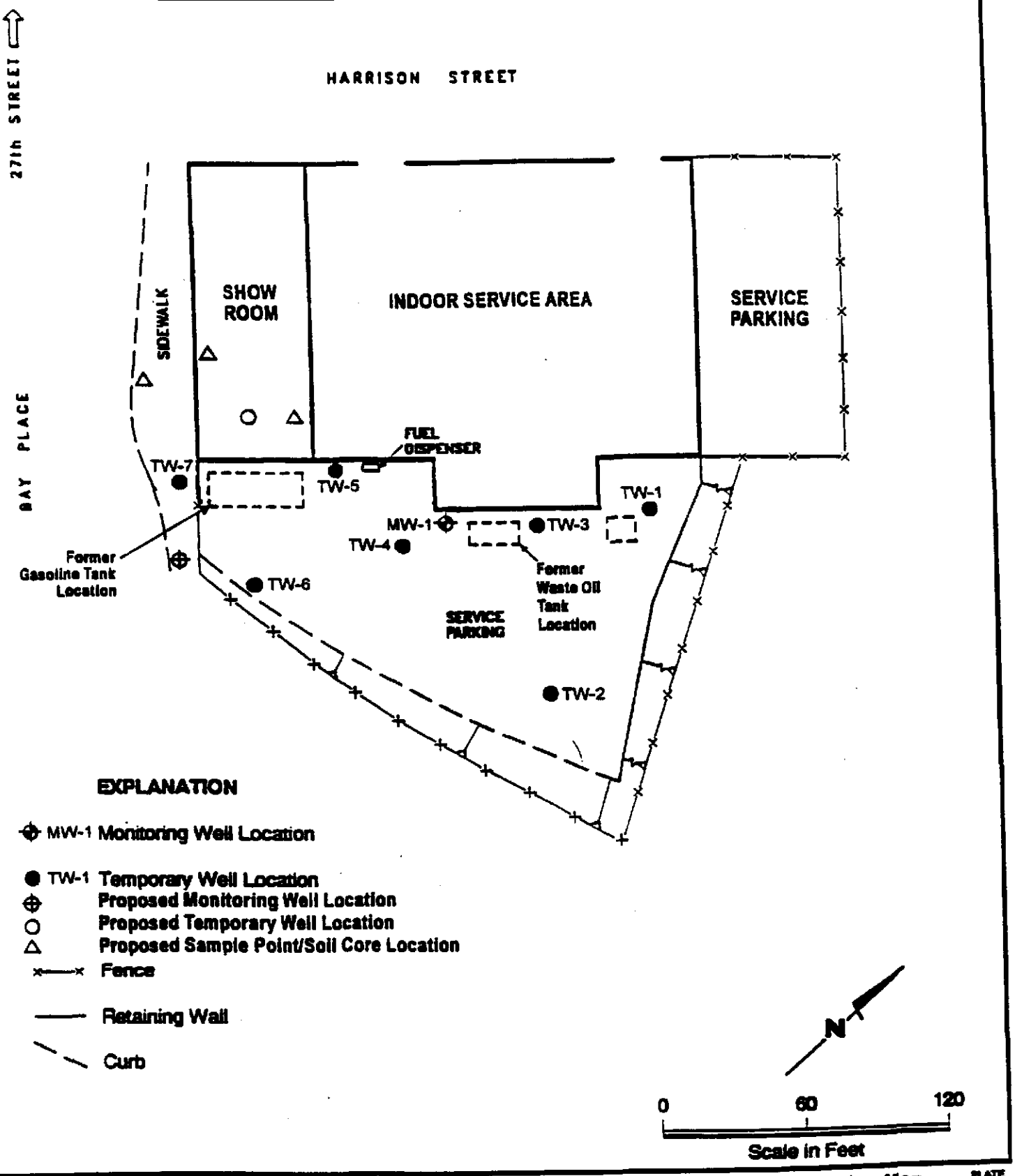
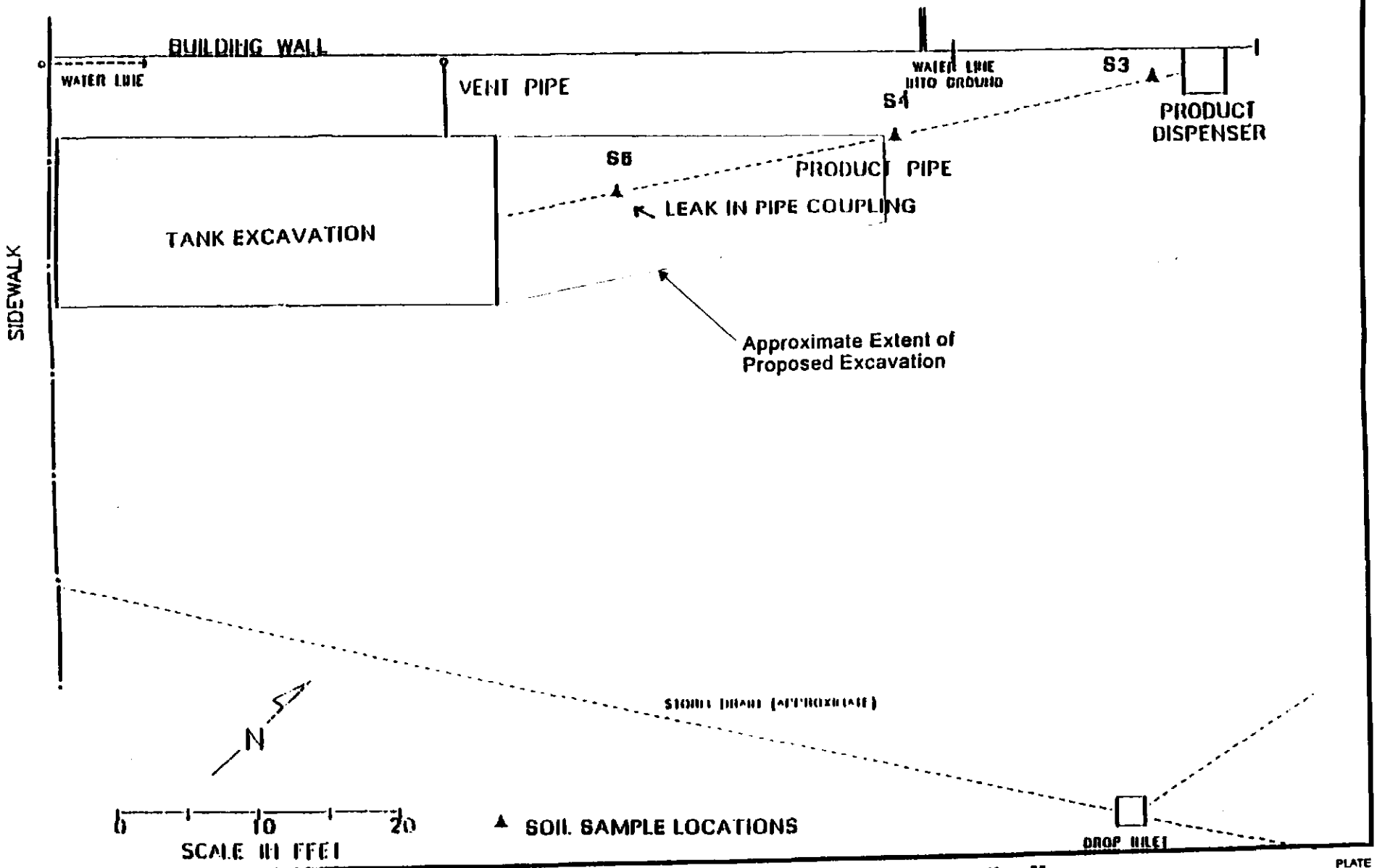


PES Environmental, Inc.
Engineering & Environmental Services

Proposed Sample Point and Well Location Map
Cox Cadillac
230 Bay Street
Oakland, California

PLATE 2

167.0200.P02 — JOB NUMBER
00P02_S1.CDR — DRAWING NUMBER
REVIEWED BY
10/96 — DATE



PES Environmental, Inc.
Engineering & Environmental Services

Proposed Soil Excavation Map
Cox Cadillac
230 Bay Place
Oakland, California

PLATE
3

167.0200.P01	02P01_D1.CDR		10/98
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX C

AGENCY APPROVAL LETTER

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

STID 494

November 27, 1996

Bill Cox Cadillac
ATTN: Bill Cox
232 East 14th Street
San Leandro, CA 94577

H. W. Shephard, Jr.
Wells Fargo Bank Trust
P. O. Box 63700
San Francisco, CA 94163

RE: 230 BAY PLACE, OAKLAND, CA 94612

Dear Bill Cox:

This office is in receipt of and has completed review of the case file for this site, up to and including the November 26, 1996 PES Environmental, Inc., (PES) "Addendum to Revised Interim Remedial Action Plan".

This work plan is approved. Please submit a minimum of three bids for proposed work for pre-approval to Christopher Stevens of the State Water Resources Control Board. Recent changes in the legislation governing the UST Fund require that the UST Fund provide you with assistance in procuring contractor and consultant services for the implementation of the corrective action plan. Mr. Steven's direct line at the UST Fund in Sacramento is (916)227-4519.

Please submit for pre-approval a minimum of three bids for the approved SCI work plan to Christopher Stevens of the UST Fund, within 15 days of the date of this letter, or no later than December 13, 1996.

Please be advised that this letter constitutes a formal request for technical reports pursuant to California Water Code Section 13267(b) and Health and Safety Code Sections 25299.37 and 25299.78. Should you have any questions or comments, please feel free to call me directly at (510)567-6880.

Sincerely,

Dale Klettke

Dale Klettke, CHMM
Hazardous Materials Specialist

c: Don Eisenberg, EOA, Inc., 1410 Jackson Street, Oakland, CA 94612
Andy Briefer, PES Environmental, 1682 Novato Blvd., Suite 100, Novato, CA 94947
Leah S. Goldberg, c/o Hanson, Bridgett, Marcus, Vlahos & Rudy, LLP, 333 Market Street Suite 2300, San Francisco, CA 94105-2173
Jeri Alexander, Subsurface Consultants, Inc., 171-12th St., Suite 201, Oakland, CA 94607
Dale Klettke--files

0494irap.ok

APPENDIX D

COST ESTIMATE - SOIL AND GROUNDWATER REMEDIATION

Table D-1. Cost Estimate
Soil and Groundwater Remediation
Former Bill Cox Cadillac
230 Bay Street
Oakland, California

Task		Cost
TASK 1 - Project Planning		
PES Labor		$3,600.00
Permitting		$395.00
	TASK 1 Subtotal	**$3,995.00**
TASK 2 - Soil Remediation		
PES Labor		$3,500.00
Subcontractor Labor[1]		$11,657.00
- Mob/demob	$300.00	
- Sawcut asphaltic concrete (A/C) (75 linear feet)	$259.00	
- Remove and dispose of A/C (243 square feet)	$350.00	
- Excavate hydrocarbon-affected soils beneath former piping. (55 cubic yards)	$1,955.00	
- Confirmation soil sample analyses (6 samples @ $63.25 per analysis)	$380.00	
- Backfilling and soil compaction (includes delivery, clean fill, backfilling, and compaction)	$3,071.00	
- Soil compaction testing (includes proctor test, and two relative density tests per lift of backfilled material @ $79/hr)	$600.00	
- Replace A/C (243 square feet)	$912.00	
- Misc. equipment and supplies	$230.00	
- Soil loading, transportation and recycling	$3,600.00	
	TASK 2 Subtotal	**$15,157.00**
TASK 3 - Nutrient Introduction (8 events)		
PES Labor	$900/event	$7,200.00
Materials and Equipment		$7,500.00
	TASK 3 Subtotal	**$14,700.00**

Table D-1. Cost Estimate
Soil and Groundwater Remediation
Former Bill Cox Cadillac
230 Bay Street
Oakland, California

Task		Cost
TASK 4 - Site Characterization and Downgradient Well Installation & Development		
PES Labor		**$4,320.00**
Subcontractor Labor[1]		**$4,307.00**
- Drilling (3 direct push borings 8 feet deep & 2 monitoring wells 20 feet deep)	$3,255.00	
- Laboratory analyses (8 8015/8020/MTBE analyses @ $57.50 per analysis)	$460.00	
- Well development	$592.00	
	TASK 4 Subtotal	**$8,627.00**
TASK 5 - Quarterly Groundwater Monitoring (5 quarters)		
PES Labor (First Quarter Only)	$1,370.00	**$1,370.00**
Subcontractor Labor[1]		**$6,009.00**
- Well sampling (7 monitoring wells)	$3,996.00	
- Laboratory analyses (35 8015/8020/MTBE analyses @ $57.50 per analysis)	$2,013.00	
	TASK 5 Subtotal	**$7,379.00**
TASK 6 - Reporting		
PES Labor		**$14,300.00**
- Site characterization report	$4,445	
- Quarterly performance evaluation & monitoring report (3 Quarters)	$1,923/Qtr	
- Year-end evaluation report	$4,086	
	TASK 6 Subtotal	**$14,300.00**
	TOTAL COST	**$64,158.00**

Notes
(1) = All subcontractor line items include 15% mark-up.

APPENDIX E

SUBCONTRACTOR BIDS

Table E-1. Summary of Soil Excavation Bids
Soil and Groundwater Remediation
Former Bill Cox Cadillac
230 Bay Street
Oakland, California

Activity	Bid Prices		
	VCI of California	DECON Environmental Services, Inc.	Universal Environmental[1]
Mob/Demob	$261	$130	
Sawcut asphaltic concrete (A/C)	$225	$150	
Remove & Dispose A/C	$304	$575	
Excavate & Segregate aggregate base	$340	$334	
Excavate & Segregate soil	$1,360	$1,336	
Import Fill Material (Includes cost for material, transport, placement, and compaction	$2,670	$3,400	
Replace A/C	$793	750	
Load and transport soil to TPS Technologies, Inc. (TPS) in Richmond, California for recycling. Recycling fee of $36 per ton for TPS is not included.	$510	$1,250	
Misc. equipment and supplies	$200	$220	
Subtotal	$6,663	$8,145	$11,600
15% markup	$1,000	$1,222	$1,740
TOTAL BID PRICE	**$7,663[2]**	$9,367	$13,340

Notes

(1) = Refer to Appendix E for Universal Environmental bid. Itemized costs not provided.
(2) = Contractor selected cost is presented in bold.

VCI of California

Environmental Services • General Engineering Contractor • Hazardous • Lic. #487537

FAX TRANSMITTAL

RE: QOUTE

TO: KYLE

COMPANY: PES.

FROM: MERLIN

MESSAGE: REPLACE 2" A/C @ $3.25 SQUARE FOOT
VISQUEEN IS $100.00 PER ROLL
SAW-CUT A/C IS $3.00 PER LINEAL FOOT
REMOVE AND DISPOSE OF 2" A/C PER SQ. FT IS $1.25 SQ. FT.
THIS JOB COULD BE ACCOMPLISHED THROUGH A SERVICE CONTRACT ON A TIME AND MATERIAL BASIS.

Thanks.

Merlin Baer

- IMPORT FILL MATERIAL =

DATE: 11/6/94 $32 - 28/TON MATERIAL

NUMBER OF PAGES TRANSMITTED:

→ 1.5 ton/yd

295 139th Ave., San Leandro, Ca. 94578 (510)351-2525 Fax(510)351-4414

CATEGORY RATE SCHEDULE

4 HOUR MINIMUM.

HEAVY EQUIPMENT	HOURLY RATE
Caterpillar 225 Excavator.....w/operator..	$175.00
Mobilize and Demobilize (minimum charge).....	$500.00
John Deere 455- Loader/Ripper.....w/4-1 bucket and operator.....	$ 85.00
John Deere 510 - Backhoe/Loader.....w/operator...	$ 85.00
John Deere 410 - Backhoe/Loader.....w/operator...	$ 80.00
Bomag 56" Sheep Foot Roller.....w/operator.....	$ 95.00
Bomag 36" Smooth Drum Roller.....w/operator.....	$ 50.00
10 Wheel Dump Truck - w/Driver (10 yard).....	$ 72.50
5 Yard Bobtail Dump Truck - w/Driver.....	$ 53.00
Skiploader.....w/operator..	$ 70.00
WATER TRUCK 3,000 GAL w/OPERATOR	$ 55.00
Maintenance Truck..	$ 125.00 per day, plus $.20 per mile.

Cost for mobilization and de-mobilization will be from a portal to portal basis.

There is a 4 hour minimum charge for all equipment.

Hourly rental charges for time greater than 30 minutes over an hour will be charged an additional full hour. Hourly rental charges for time less than 30 minutes over the hour will be billed to that hour.

All charges will be reviewed by the Client and agreed upon between Client and Contractor. Said charges will be itemized on a work order and signed by the Client and or his representatives.

Rental of equipment not owned by the Contractor will be on a cost plus 20% basis, unless otherwise noted in contract and or agreement between Contractor and client.

SMALL EQUIPMENT
DAILY RATES (4 HOUR MINIMUM)

Jackhammer and Compressor (Daily rate).....$ 140.00

Wacker/Compactor (Daily rate).....$ 120.00

Concrete Saw.....per foot.....$ 4.00

Gas Techtor (oxygen/LEL).....PER DAY....$ 125.00

All respirators and filters.....cost plus 20%

Suits, gloves, goggles and other protective equipment .....cost plus 20%

Cutting torches (Daily rate).....$ 75.00

Hand tools.....$ 125.00

Diaphragm Pumps (Daily rate).....$ 75.00

Barricades(15 flashing barricades).....$ 75.00

Landia hot-water pressure washer.....$100.00

CATEGORY	Hourly rate
Clerk/Typist	$ 35.00
Technician (soil sampling)	$ 45.00
Laborer (OSHA certified)	$ 45.00
Supervisor	$ 65.00
Project Directors	$ 95.00
Operators (OSHA certified)	$ 50.00
Pipefitters	$ 46.50
Electricians	$ 47.50
Drivers	$ 45.50

DECON ENVIRONMENTAL SERVICES, INC.

FAX TRANSMISSION

DECON Environmental Services, Inc.
23490 Connecticut Street
Hayward, CA 94545
Phone: (510) 732-6444
Fax: (510) 782-8584

TO: Chris Rositto FAX: (415) 899-1601

COMPANY: PES Env. PHONE: (415) 899-1600

FROM: Bill Bassett DATE: 12/5/96 TIME: 12:30 P.M

REFERENCE: Requested task cost estimates

TOTAL NUMBER OF PAGES SENT (Including Cover Sheet): 1

Original to follow by:

_____ U.S. Mail _____ Express Overnight Mail

_____ Courier X No Hard Copy to Follow

COMMENTS:

Chris: Task cost estimates, as requested. Figures are ballpark only, and would likely be subject to revision for specified work scopes.

Task 1: Sawcut 2" AC, 75' $150.00

Task 2: Load, transport, + dispose 240# AC $575.00

Task 3: Import Class II AB, 55 c.y.; placement; compact to 90% $3400.00

Task 4: Replace 240# Asphalt $750.00

Task 5: Load + transport to Altamont; 55 c.y. (90 tons) $1,600.00

Task 6: Load + transport to TPS: $1,250.00

Task 7: Disposal @ Altamont: $21/ton

Assumption: we are doing all the work (i.e., our equipment + personnel only mob once)

Typical mob/demob = $130.00

Questions or comments, call me. Bill

DECON
ENVIRONMENTAL SERVICES, INC.

STANDARD PRICES
JANUARY 1, 1996

PERSONNEL

FIELD PERSONNEL:	STRAIGHT TIME HOURLY	OVERTIME DIFFERENTIAL HOURLY	PREMIUM TIME DIFFERENTIAL HOURLY
Technician	35.00	13.00	25.00
Senior Technician	40.00	14.00	28.00
Equipment Operator	42.00	14.50	29.50
Supervisor	48.00	17.50	31.50
Superintendent	65.00	22.00	44.00
Engineer/Chemist	75.00	24.50	49.50
Project Manager	80.00	29.00	56.00
Technical Director	90.00	33.00	59.50
OTHER PROFESSIONALS:			
Clerk/Typist	23.00	9.50	16.50
Word Processor	32.00	12.50	22.00
Field Accountant	34.00	13.00	25.00

EQUIPMENT WITHOUT OPERATORS - STRAIGHT TIME[1]

EARTH MOVING EQUIPMENT	DAILY	WEEKLY	MONTHLY
Backhoe (Case 580)	360.00	1,400.00	4,100.00
- Breaker	280.00	1,150.00	3,450.00
- Compactor	260.00	1,040.00	3,120.00
Dozer (Cat D6)	1050.00	3,800.00	11,691.00
Dump Truck (5 yard)	370.00	1,170.00	3,700.00
Excavator (Cat 215)	800.00	3,070.00	9,750.00
Excavator (Cat 225)	950.00	3,800.00	11,700.00
Excavator (JD 792)	1,150.00	4,025.00	12,075.00
- With Thumb	1,250.00	4,375.00	13,125.00
- With 5,000 lb. Hammer	2,350.00	8,225.00	24,675.00
Loader, Rubber Tire (Case-721)	800.00	3,200.00	8,950.00
Loader, Steel Track (JD-455)	1,120.00	4,080.00	12,640.00
Skip Loader (JD-401C)	380.00	1,520.00	4,560.00
- Rototiller	220.00	880.00	2,640.00
Bobcat (743)	270.00	1,100.00	3,300.00
Bobcat (843)	310.00	1,250.00	3,600.00
Vacuum Truck (40 bbl)	400.00	1,550.00	5,420.00
Water Truck	380.00	1,450.00	5,100.00

[1] Models listed are for reference only. We reserve the right to substitute equivalent pieces of equipment as necessary.

TRANSPORTATION EQUIPMENT	UNITS	PRICE
Fork Lift (Construction)	Day	210.00
Fork Lift (Yard)	Day	190.00
Heavy Duty Trailer	Day	95.00
Pickup Truck	Day	100.00
Service Vehicle	Day	50.00
Stake Bed Truck (1 ton)	Hour	25.00
Stake Bed Truck (2 ton)	Hour	35.00

SAFETY EQUIPMENT	UNITS	PRICE
Air Monitoring Pump	Day	30.00
Decontamination Shower	Day	60.00
Draeger Pump	Day	25.00
Extraction Device	Day	50.00
Fire Extinguisher	Day	15.00
First Aid Kit	Day	15.00
HEPA Filtration System	Day	125.00
LEL/O_2/H_2S Meter	Day	50.00
Photoionization Detector	Day	125.00
Portable Eyewash	Day	30.00
Safety Belt	Day	7.50
Safety Extraction Tripod	Day	50.00
Safety Harness	Day	10.00
Wading Pool	Day	20.00
Water Level Meter	Day	25.00

DECONTAMINATION EQUIPMENT	UNITS	PRICE
Drum Compactor	Day	200.00
HEPA Negative Air Machine (2,000 CFM)	Day	120.00
HEPA Vacuum, Standard	Day	80.00
HEPA Vacuum, Back Pack	Day	50.00
Hudson Sprayer	Day	20.00
Hydro Blaster (10,000 PSI)	Day	660.00
Mercury/HEPA Vacuum	Day	150.00
Pressure Washer Hot Water (3,000 PSI)	Day	200.00
Pressure Washer (1,500 PSI)	Day	150.00
Steam Cleaner (350 ^{0}F)	Day	250.00
Wet/Dry Vacuum	Day	75.00

PUMPS AND HOSES	UNITS	PRICE
Hose-Compressed Air (50') 1"	Day	7.50
Hose-Suction & Discharge (2")	Day	10.00
Hose-Suction & Discharge (3")	Day	20.00
Hose-Water (50')	Day	5.00
Pump-Barns (6")	Day	290.00
Pump-Double Diaphragm, 3"	Day	65.00
Pump-Double Diaphragm, 2"	Day	55.00
Pump-Drum (Chemical)	Day	50.00
Pump-Electric, Submersible	Day	20.00

PUMPS AND HOSES (CONT.)	UNITS	PRICE
Pump-Electric Transfer, 12v	Day	10.00
Pump-Electric Transfer, 125v	Day	40.00
Pump-Trash (2")	Day	95.00
Pump-Trash (3")	Day	110.00

MISCELLANEOUS EQUIPMENT	UNITS	PRICE
Air Compressor, 185 CFM	Day	180.00
Air Compressor, Electric	Day	80.00
Bailer, Sampling	Day	15.00
Barricade (A-Frame)	Day	2.00
Chain Saw (16")	Day	100.00
Chipping Gun	Day	60.00
Compactor (wacker) Jumping Jack	Day	120.00
Concrete Core Drill	Day	120.00
Concrete Vibrator	Day	50.00
Cutting Torch	Day	50.00
Demo Saw (12")	Day	75.00
Drum Dolly	Day	5.00
Drum Grabber (Forklift Attachment)	Day	45.00
Drum Tipper (Forklift Attachment)	Day	35.00
Dump Bin	Day	75.00
Electric Generator, 4000 watt	Day	100.00
Electric Drill	Day	30.00
Electric Extension Cord, 25'	Day	3.00
Filter Press, 5 cubic feet	Day	240.00
Filter Press, 2 cubic feet	Day	120.00
Hand Auger	Day	20.00
Hand Tools, Digging	Day	5.00
Hand Tools, Small	Day	10.00
Haz-Cat Sampling Kit	Sample	100.00
Hopper 1 cu yd (Forklift Attachment)	Day	60.00
Hopper 1.5 cu yd (Forklift Attachment)	Day	75.00
Jackhammer (60 lb)	Day	45.00
Jackhammer (90 lb)	Day	110.00
Jackhammer Point	Day	15.00
Lights, Halogen	Day	25.00
Lights, Quartz	Day	20.00
Monitoring Well Level Meter	Day	25.00
Non-Sparking Tool Set	Day	70.00
Portable Tank, 1000 gal	Day	25.00
Portable Tank, 2000 gal	Day	35.00
Portable Tank, 5000 gal	Day	45.00
Sawsall	Day	25.00
Skill Saw	Day	20.00
Slide Hammer	Day	5.00
Tool & Material Storage Box	Day	10.00
Utility Locator	Day	50.00
Venturi Blower	Day	25.00
Wheelbarrow	Day	10.00

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY EQUIPMENT	UNITS	PRICE
Airline Escape Unit	Day	100.00
Breathable Air Hose, 50'	Day	15.00
Breathing Air Filtration System	Day	220.00
Compressed Air Cylinder (300 CF)	Day	100.00
Compressed Air Six Pack (1800 CF)	Day	300.00
PAPR	Day	22.00
PAPR Filter	Pair	22.00
Respirator, Full Face, Supplied Air	Day	10.00
Respirator, Full Face, Air Purifying	Day	5.00
Respirator, Half Face, Air Purifying	Day	3.50
Respirator Cartridge, Acid Gas	Pair	10.40
Respirator Cartridge, OVA	Pair	11.00
Respirator Cartridge, HEPA	Pair	10.20
Respirator Cartridge, OVA/Acid Gas/HEPA	Pair	25.00
Respirator Sanitizer	Each	.25
SCBA	Day	200.00

PROTECTIVE CLOTHING	UNITS	PRICE
Boots, Steel Toed	Pair	25.00
Boots, Rubber, Steel Toed	Pair	40.00
Boots, Neoprene	Pair	45.00
Glasses, Safety	Pair	7.50
Glove Liners 60/box = 30 pair	Pair	.50
Gloves, Latex	Pair	2.00
Gloves, Cotton	Pair	4.00
Gloves, Nitrile (Black)	Pair	4.00
Gloves, PVC (Green)	Pair	4.00
Gloves, Leather	Pair	5.00
Gloves, Neoprene	Pair	20.00
Gloves, Viton	Pair	44.00
Goggles	Pair	8.50
Hard Hats	Day	3.00
Suit, Acid - Class I	Day	40.00
Suit, Acid - Class II	Day	64.00
Suit, Full Environmental - Level A	Day	450.00
Suit, Splash/Rain	Each	20.00
Suit, Tyvek - Poly-Coated	Each	22.00
Suit, Tyvek - Saranex	Each	32.00
Suit, Tyvek - White	Each	10.50

MATERIALS	UNITS	PRICE
Absorbent Pads	Each	9.00
Absorbent Booms	L.F.	15.00
Absorbent	20 lb. Bag	10.50
Acetylene (#4)	Bottle	46.00
Air Sample Cassettes	Each	4.10
Blades, Sawsall	Each	2.50
Brass Tubes, with Caps	Each	6.00
Carbide Blades	Each	120.00
Caution Tape	Roll	25.00
Clor-D-Tect (1,000 kit)	Each	15.00
Demo Saw Blades	Each	20.00
Disposable Bags, 6 mil	Case	165.00
(25/box)	Each	6.60
Disposable Bags, 4 mil	Case	85.00
(25/box)	Each	3.40
Drum Liners, 6 mil	Each	2.50
Drum Liners, 4 mil	Each	1.75
Drum, 85 gallon overpack	Each	120.00
Drums, Poly (17H or 17E)	Each	65.00
Drum, Steel - Recon. (17H or 17E)	Each	45.00
Duct Tape	Roll	9.50
Glass Tube, 1m x 12mm	Each	10.50
Hazardous Waste Labels	Each	.50
Plastic, 10 mil, 20'x100'	Roll	110.00
Plastic, 6 mil, 20'x100'	Roll	95.00
Plastic, 4 mil, 20'x100'	Roll	80.00
Plastic, 2 mil, 20'x100'	Roll	65.00
Rags (Box = 50 pounds)	Pound	3.50
Sample Jar, 125ml	Each	6.00
Sample Jars, 1 liter	Each	10.00
Sample Tubes (disposable)	Each	2.00
Spray Adhesive	Can	12.00
TSP	Pound	.50
V.O.A. Sample Vial, 40ml	Each	3.00
Vacuum Bags, Paper (HEPA Vacuums)	Each	3.00
Zepexo	Gallon	15.00

UE UNIVERSAL ENVIRONMENTAL

December 6, 1996

Mr. Chris Rossitto
PES Environmental
1682 Novato Blvd., Suite 100
Novato, CA 94947

FAX: 415-899-1601

RE: Bay Street, Oakland

Dear Mr. Rossitto:

Universal Environmental is pleased to submit the following quote to perform the following:

1. Sawcut 75 feet of 2" asphalt.
2. Remove, transport and dispose of approximately 55 yards of soil to TPS, Altamont pricing dependent of analytical results
3. Bring in 55 yards of 3/4" AB, compacted to 90%
4. Reasphalt 240 square feet of asphalt with 4" of AB under asphalt

Quote $11,600.00

The above quote is based upon job being completed with one mob/demob. If more than one mob/demob is required, there will be an additional charge of $700.00 per occurrence.

If you need any additional information please give me a call at 707-747-6699.

Sincerely,

Greg Reed

GR:mr

Table E-2. Summary of Drilling Bids
Soil and Groundwater Remediation
Former Bill Cox Cadillac
230 Bay Street
Oakland, California

Activity	Bid Prices		
	Gregg Drilling and Testing, Inc.	Bayland Drilling, Inc.	Soils Exploration Services, Inc.
Mob/Demob	$400	$200	$230
Drill 3 boreholes, collect soil and groundwater samples. Drill and install 2 groundwater monitoring wells	$2,000	$2,030	$1,606
Concrete coring (5 holes)	$250	$390	$650
Soil drums	$180	$280	$114
Subtotal	$2,830	$2,900	$2,600
15% Markup	$425	$435	$390
TOTAL BID PRICE	**$3,255**[1]	$3,335	$2,990

Notes

(1) = Contractor selected cost is presented in bold.
Contractor selected based relevant experience and equipment availability.

GREGG

GREGG DRILLING & TESTING, INC.

SPECIALIZING IN CONTAMINANT SAMPLING AND MONITORING WELL INSTALLATIONS

October 1, 1996

PES Environmental
Mr. Chris Rossitto
1682 Novato Blvd., Suite 100
Novato, CA 94947-7021

SUBJECT: **COST ESTIMATE FOR DRILLING, SAMPLING AND WELL INSTALLATION AT THE PROJECT LOCATED IN OAKLAND, CALIFORNIA**

Dear Mr. Rossitto:

Pursuant to our conversation you will find the enclosed cost estimate for the project located in Oakland, California. A copy of this proposal is being faxed to you with a hard copy to follow in the mail today.

Gregg Drilling & Testing, Inc. looks forward to assisting you on this project. We will be pleased to discuss the details of this work and to provide any further information you may require.

Thank you for providing us the opportunity to submit a bid on this proposed work. Please feel free to contact me at (510) 313-5800 with any questions you may have.

Sincerely,
GREGG DRILLING & TESTING, INC.

Christopher Pruner
Operations Manager

CWP/tbg

SOUTHERN CALIFORNIA: 2475 CERRITOS AVENUE · SIGNAL HILL, CA 90806 · (310) 427-6899 · FAX (310) 427-3314
NORTHERN CALIFORNIA: 950 HOWE ROAD · MARTINEZ, CA 94553 · (510) 313-5800 · FAX (510) 313-0302

COST ESTIMATE

Mobilization/Demobilization	
2 days @ $200.00/day	**$400.00**
Probe and sample three soil borings to a depth of 10 feet (soil sampling every five feet, collect a water sample from each boring and all materials included)	
3 borings @ $200.00/boring	**$600.00**
Drill, sample and install three, two-inch monitoring wells to a depth of 20 feet using the "Rhino" limited access rig (soil sampling every five feet and all materials included except drums)	
3 wells @ $700.00/well	**$2,100.00**
Concrete cores	
5 cores @ $50.00/core	**$250.00**
Drums for soil containment	
4 drums @ $45.00/drum	**$180.00**
TOTAL	**$3,530.00**

The preceding costs represent our best estimate for the tasks as we understand them. The cost estimate does not reflect additional charges which would be incurred for standby time or adverse drilling conditions. The client will be responsible for obtaining necessary permits and for the clearance of underground utilities.

e:\proposal\pes.cr

BAYLAND DRILLING INC.
dba GREEN'S DRILLING
LICENSE #374187
911 HAMILTON AVENUE
MENLO PARK, CA 94025
(415) 322-7900 (800) 564 WELL
FAX (415) 322-2919

November 21, 1996

PRS Environmental
1682 Novato Blvd., Suite 100
Novato, CA 94947
Attention: Chris Rossitto

Reference: Cost Estimate
Oakland

One (1) 2" Well to 20', One (1) Temporary Well to 20' w/Half-Tower, Three (3) Borings to 8' (one w/Half-Tower), 5' Interval Sampling

Mobilization and Demobilization:	
2 hours reduced rate @ 100.00 per hour	$ 200.00
Rig Time:	
8 hours regular time @ 135.00 per hour	1,080.00
1 hour overtime @ 160.00 per hour	160.00
Steam Cleaner:	
1 day @ 100.00 per day	100.00
Support Truck:	
1 day @ 125.00 per day	125.00
Load/Unload:	
.5 hour @ 75.00 per hour	38.00
Concrete Corer (estimate only)	390.00
Materials:	
7 drums @ 40.00 per drum	280.00
20' of 2" well material	252.00
Temporary well material	189.00
Cement for borings	86.00
TOTAL	$ 2,900.00

This estimate is based on information compiled by the client. Permits, marking of utilities, ingress and egress are the responsibility of the client. If bedrock, cobbles, flowing sands or other adverse conditions are encountered, drilling will be continued on a time and materials basis. Client delays will be billed at rig rates. This estimate is good for 60 days.

Should you have any questions, or require additional information, please call me at the above number or at 1-800-564-WELL.

Sincerely,

Robin Rosellini

Robin Rosellini
Manager
RR/up

SOILS EXPLORATION SERVICES, Inc.

ESTIMATE FACSIMILIE

To: PES Environmental **Fax: (415) 899-1601**

Attn: Chris Rossitto **Date: 11/19/96**

From: Jeff Johnson **Pages: 2**

Location: Oakland

Scope: Using the Cuttingless Probe System (CPS), push (3) 8' holes, sample every 5', set 2" temp. casing in each, grab a water sample, then pull casing and grout. Using 8" HSA, drill (2) 2" x 20' wells (one is temporary), sample every 5'. Drum cuttings. Two of the CPS holes will be inside a bldg. Estimate assumes holes are accessable w/ a CME 55.

Description:	Quantity:	Unit Price:	Cost:
Hourly Charge			
Drilling hours w/ CME 55 (discounted)	7.0	$115.00	$805.00
Mobilization hours w/ CME 55 (discounted)	2.0	$115.00	$230.00
Daily Charge			
Support truck	1.0	$75.00	$75.00
Self contained decontamination unit (discounted)	1.0	$120.00	$120.00
Per unit charge			
Riser 2" x 10', PVC sch 40	1.0	$27.00	$27.00
Screen 2" x 10', .020 PVC sch 40	6.0	$42.00	$252.00
Lockable well plug, 2"	1.0	$25.00	$25.00
Slip cap, 2" PVC	5.0	$2.00	$10.00
Well box, 8" dia., Brainard Kilman	1.0	$70.00	$70.00
Washed filter sand #3, 100 lb. sack	5.0	$7.00	$35.00
Portland cement, 94 lb. sack	7.0	$11.00	$77.00
Ready mix concrete 60 lb. sack	5.0	$6.00	$30.00
Bentonite chips, 50 lb. sack	1.0	$12.00	$12.00
Bentonite powder, 50 lb. sack	1.0	$12.00	$12.00
Drum, 55 gallon (Dot 17 H rating)	3.0	$38.00	$114.00
	Total of this estimate:		$1,894.00
If required:			
Brass liners 2" x 6" w/ caps	14.0	$4.00	$56.00
Concrete cutter, lump sum for five 10" dia. cores (Concrete cutting will be subcontracted).	1.0	$650.00	$650.00

Estimate Code: PES1119b **See Attachment A.**

11383 PYRITES WAY RANCHO CORDOVA, CALIFORNIA 95670 (916) 853-0848

CONTRACTORS LIC. C-57 # 582696

Attachment A

This proposal includes:

1. **Mobilization/Demobilization:** Includes travel to and from our service yard(s) and travel time for all personnel, drill rigs, support vehicles, equipment, etc., which are required to perform the work. Per diem or subsistence is not included in mobilization/demobilization.

2. **Drilling & Sampling:** Sampling interval is assumed to be 18" per 5' unless specified otherwise in the proposal. If SES supplies sampling liners, we assume that one 6" long sampling liner (with caps) will be retained by the client and the other two liners will be returned to SES for reuse after decon. If more than one liner is to be retained, the additional liners will be billed accordingly to our published Fee Schedule. We have assumed that samples will be logged and processed so as to not impact the speed of the drilling program. If additional time is needed for logging, handling or processing of samples, such additional time will be invoiced at the standby rate.

3. **Decontamination:** "Decon." includes steam cleaning augers, bits and/or drill rods with equipment provided by SES unless otherwise specified in the proposal and washing of samplers with deionized water and laboratory grade soap (alconox or equivalent). We will steam clean at the beginning and end of operations each day and between each boring. If additional steam cleaning is required by Client, this will be invoiced as an additional charge.

This proposal excludes:

1. **Surveying and Utility Clearances:** We assume that all borings will be located by others and that utility clearances (USA Alert, etc.) will be done by others. Client assumes the responsibility and liability for determining the location, depth and angle of penetration of test sites and drill holes and for test sites and drill holes which are left open or are not sealed/closed. SES accepts no responsibility or liability for damage to underground utilities, tanks or pipelines or for collapse which is directly or indirectly attributes to its work, or any other damage which results from exploration work on work site.

2. **Traffic Control:** If the work to be done is in or near traffic, we assume that traffic controls including signs, flagging, etc. will be done by others, unless otherwise provided for in the proposal. SES will provide traffic safety (orange) vests for its forces which are required to work in or near traffic.

3. **Environmental Monitoring:** Our forces will rely upon the Client to provide monitoring sufficient to determine: the presence of hazardous materials or substances, and/or the absence of adequate air (oxygen) supplies, and to inform our forces so that they may employ proper equipment and techniques to protect themselves.

4. **Permits, Bonds, Site Access:** Unless otherwise provided, Client agrees to provide and pay for any permits or bonds (except municipality driller's bonds) which may be required to perform the work, and to provide SES with right-of-access to the project site.

5. **Well Development, Pump Installation:** On projects which require installation of wells, unless otherwise specified, SES does not include well development, surging, purging bailing or pump installation. These services will be performed on a time and materials basis according to our Fee Schedule or quoted separately upon request.

6. **Disposal of Hazardous Materials and Contaminated Equipment:** SES will be performing services on behalf of the Client and shall not be considered the party which creates, generates, owns or takes possession of hazardous materials as a result of its performance of work on any project. SES does not independently arrange for the transport, disposal or treatment of any hazardous materials. Should such services be performed in connection with the work, it is performed as an agent of Client. All hazardous materials such as: samples, drilling fluids, decon. fluids, development fluids, soil cuttings as well as used personal protective equipment and gear, used DOT drums and bins are the property of the Client, who shall have the responsibility for proper disposal unless prior arrangements have been made.

Unit price and lump sum prices are based upon unobstructed access to drill locations by truck mounted equipment (unless confined space or special equipment is specified in the proposal), continuous operations (no standby) and normal drilling conditions including normal wear and tear on bits and cutter heads, cutter teeth/plates, etc. If bedrock, cobbles, flowing sands, or other adverse drilling conditions are encountered or if site conditions exist which differ from those conditions which were characterized to SES during the bidding process, drilling will be continued on a time and materials basis or terminated at the discretion of SES. We reserve the right to charge for loss or excessive wear and tear on our equipment due to ground conditions. We reserve the right to increase the quoted price(s) if the quantity of work is significantly reduced.

Materials, supplies or services which are required that exceed the stated work scope will be furnished according to our published Fee Schedule. Payment terms for all work performed are: Net 30 days from the date of the invoice unless prior arrangements have been made. This quote is valid for 90 days.

Table E-3. Summary of Well Development and Sampling Bids
Soil and Groundwater Remediation
Former Bill Cox Cadillac
230 Bay Street
Oakland, California

Activity	Bid Prices		
	Blaine Tech Services, Inc.	PES Environmental, Inc.	Environmental Sampling Services
Well development (Two 2- inch dia. wells)	$515	$680	$699
Well sampling (Seven 2- inch dia. wells)	$695	$960	$1,237
	X 5 events	X 5 events	X 5 events
Total well sampling cost	$3,475	$4,800	$6,185
Subtotal	$3,990	$5,480	$6,884
15% Markup	$599	not applicable	$1,033
TOTAL BID PRICE	**$,4,589**[1]	$5,480	$7,917

Notes

(1) = Contractor selected cost is presented in bold.

BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

Date: 11-25-96

Client: CHRIS ROSSITTO
(415) 899-1601

Site: 230 BAY ST.
OAKLAND

Requested Services: Development of two 2" monitoring wells. Return visit to sample seven 2" monitoring wells. Sample visits to be conducted for five seperate events.

Cost estimate: Development: Not to exceede 5 hrs @ 85.00 = $425.00
SAMPLING: Not to exceede 6 hrs @ 85.00 = $510.00

Field Services= SAMPLING: 510.00 Develop: 425.00

Reportage= $800.00 55.00

Materials: Drums 3500 each $
As Needed = 3 Drums 105.00 1 Drum $ 35.00

Analytical Services: N/A

_____ Samples to be analyzed for _____ = $
Development

Total cost = $ 515.00

SAMPLING: $ 590.00 PER EVENT + Drums
$ 3055.00 for five events

Please call if you have any questions or wish to schedule this project. We look forward to working with you.

3,570

Sincerely,

Jim Keller
Vice President

Environmental
Sampling Services

November 27, 1996

Mr. Chris Rossitto
PES Environmental, Inc.
1682 Novato Blvd., Suite 100
Novato, California 94947

Re: Cost Estimate for Well Development and Groundwater Sampling for Oakland Bid

Dear Mr. Rossitto,

Environmental Sampling Services (ESS) is pleased to submit a cost proposal and technical proposal to perform well development for two new monitoring wells and sample a total of seven (7) monitoring wells in the city of Oakland, California. ESS proposes to perform these tasks for: $698.42 and $1237.15 respectively.

The following assumptions were incorporated in determining total cost:

1) PES will provide all pertinent information regarding the groundwater level monitoring and sampling event (i.e. Scope of Work, well construction, well location, required Chain of Custody information, name of Analytical Laboratory) within two weeks upon awarding contract.
2) All wells will be clearly marked and physically unobstructed during well development and groundwater sampling.
3) Two (2) wells will be developed until turbidity readings are less than 10 NTUs or until a maximum of ten (10) casing volumes are removed.
4) A total of seven (7) wells will be evacuated and sampled. Each well will be evacuated and sampled within one (1) hour. A maximum of four (4) casing volumes will be removed. Following well evacuation, eighty (80) percent recovery will occur within five (5) minutes.
5) PES will provide ESS with a well sampling order (from least contaminated to most contaminated).
6) Water Quality parameters to be measured and recorded are: pH, specific conductance(uS/cm), turbidity (NTU), and temperature (celsius).
7) A total of three (3) barrels will be obtained by ESS for storage of purged groundwater and decontamination water. Disposal of contained water is PES's responsibility.
8) Organic vapor readings will be provided.
9) An on-site water supply will be available.
10) One (1) QA/QC sample will be collected for analysis.
11) Samples will be analyzed for TPH(gas)/BTEX.
12) Contracted laboratory will provide: sample containers, labels, cooler, one (1) set of trip blanks, one (1) temperature blank, and courier service for delivery and pick-up.
13) ESS will provide complete documentation of both well development and well sampling.

Environmental Sampling Services

Thank you for contacting Environmental Sampling Services. If you need more information, please do not hesitate to contact us at (510) 372-8108.

Sincerely,

Stephen Penman
Vice-President

attachment

Environmental
Sampling Services

COST ESTIMATE

DATE	ESTIMATE NO.
11/27/96	0011

NAME / ADDRESS
PES ENVIRONMENTAL, INC. Mr. Chris Rossitto 1682 Novato Blvd., Suite 100 Novato, CA 94947

JOB NUMBER	TERMS	PROJECT NAME	PROJECT TASK
	Net 30	CITY OF OAKLAND ...	Well Development

DESCRIPTION	QTY	RATE	TOTAL
WELL DEVELOPMENT FOR TWO (2) MONITORING WELLS:			
Mobilization	1.5	35.00	52.50
Regular Labor Hour(s)	6	45.00	270.00
Report: Field Activity Report	1.5	40.00	60.00
EQUIPMENT & SUPPLIES:			
Vehicle Rental	1	45.00	45.00
Daily Rental-Field Turbidity Meter	1	35.00	35.00
Daily Rental-OVM Meter	1	100.00	100.00
55-gallon Drum	1	35.50	35.50
Feet of 1" Suction Hose	50	1.48	74.00
Daily Rental-2 inch Surge block	1	5.00	5.00
Box(es) of Latex Gloves	1	9.50	9.50
Pairs of Nitrile Gloves	4	1.73	6.92
Field Supplies (DI Water)	1	5.00	5.00

This cost estimate is on a time and material basis.

Total $698.42

Environmental Sampling Services

COST ESTIMATE

DATE	ESTIMATE NO.
11/27/96	0012

NAME / ADDRESS
PES ENVIRONMENTAL, INC. Mr. Chris Rossitto 1682 Novato Blvd., Suite 100 Novato, CA 94947

JOB NUMBER	TERMS	PROJECT NAME	PROJECT TASK
	Net 30	CITY OF OAKLAND ...	GW SAMPLING

DESCRIPTION	QTY	RATE	TOTAL
GROUND WATER SAMPLING FOR (5) EXISTING AND (2) NEW MONITORING WELLS:			
LABOR:			
Mobilization	1.5	35.00	52.50
Regular Labor Hour(s)	12	45.00	540.00
Report: Field Activity Report	2.5	40.00	100.00
SAMPLING EQUIPMENT AND SUPPLIES:			
Vehicle Rental	1	45.00	45.00
Daily Rental-OVM	1	100.00	100.00
Daily Rental-Field Turbidity Meter	1	35.00	35.00
Weighted Disposable Bailer(s)	7	13.80	96.60
55-gallon Drum(s)	2	35.50	71.00
Feet of 1" Suction Hose	100	1.48	148.00
Field Supplies (Ice, DI Water, Ziplock and Garbage Bags)	1	20.00	20.00
Box(es) of Latex Gloves	1	9.50	9.50
Dozen(s) of Nitrile Gloves	1	19.55	19.55

This cost estimate is on a time and material basis.

Total $1,237.15

Environmental Sampling Services
6680 Alhambra Ave., #102, Martinez, CA 94553 Phone/Fax: (510) 372.8108
www.Envsampling.com

American Environmental Network, Inc.

3440 Vincent Road, Pleasant Hill, California 94523
Phone 510-930-9090 * Fax 510-930-0256

SPECIAL PRICES SUBMITTED TO PES ENVIRONMENTAL

Project: Standard **6/10/96** *Quotation Number: dtp61096*

TEST	METHOD	UNIT COST	
		7 Day Rates	5 Day Rates *
ORGANICS			
Volatile Organics	601/602/8010/8020	$105.00	$120.00
Volatile Organics	601/8010	$65.00	$75.00
Volatile Organics	602/8020	$65.00	$75.00
Pesticides/PCB's	608/8080	$90.00	$100.00
PCB'S (only)	608/8080	$65.00	$75.00
Pesticides (only)	608/8080	$80.00	$92.00
Volatile Organics	624/8240	$145.00	$165.00
Semi-Volatiles	625/8270	$260.00	$290.00
TRPH or O & G	5520 B or F	$50.00	$60.00
TRPH + O & G	5520 B + F	$55.00	$65.00
TPH G/BTEX	8015/8020	$50.00	$55.00
TPH Diesel	8015M	$50.00	$55.00
INORGANICS			
CAM 17 metals	6010/7000	$150.00	$170.00
PP 13 metals	6010/7000	$120.00	$135.00
RCRA metals	6010/7000	$85.00	$100.00
AA/ICP metals	6010/7000	$8.00 **	$9.00 **
GFAA	7000	$11.00 **	$12.00 **
Sample Digestion		$8.00	$9.00
STLC or TCLP		$85.00	$75.00

ALL OTHER TESTS PERFORMED IN-HOUSE 30% OFF STANDARD PRICES FOR 7 DAY TAT.

* 5 day rate is expressed in business days and includes surcharge.

** price per metal, not including sample digestion.

All prices (apply to water and soil matrices) are for 7 Working Day turnaround time and include normal QA/QC data.
Rush TAT's are available for the following surcharges:

- 1 Working Day - 7 Day Price + 100%
- 2 Working Days - 7 Day Price + 75%
- 3 Working Days - 7 Day Price + 50%
- 5 Working Days - 7 Day Price + 15%

Sample bottles, bottle delivery, and sample pick-up are provided at no extra charge.
Prices are effective 6/11/95 and valid throughout 1996.
Thank you for considering American Environmental Network.

Dean Peters

CHROMALAB, INC.

Environmental Services (SDB)

April 1996

PRICE LIST EXCLUSIVELY FOR PES Environmental

Soil and Water same price

		Turnaround Time
TPH--TOTAL PETROLEUM HYDROCARBONS		5 DAY
TPH gasoline/BTEX	EPA 5030/8015 /8020	$65.00
TPH diesel	EPA 3550 or 3510/8015M	65.00
TPH extractable (kerosene, diesel, motor oil)	EPA 3550 or 3510/8015M	80.00
TPH gasoline	EPA 5030/8015	65.00
BTEX	EPA 5030/8020	65.00
TPH gasoline/BTEX with MTBE	EPA 5030/8015 /8020 *(MTBE confirmed by MS)*	80.00
BTEX with MTBE	EPA 5030/8020 *(MTBE confirmed by MS)*	80.00
Oil and grease	Std Meth 5520 E&F or B&F, EPA 413.1	70.00
Total recoverable pet. hydrocarbons (TRPH)	EPA 418.1	70.00
ORGANIC ANALYSIS		
Purgeable halocarbons (CIHC)	EPA 601/8010	80.00
Purgeable aromatics	EPA 602/8020	80.00
Polynuclear Aromatic Hydrocarbons (PAH, PNA)	EPA 625/8270	150.00
Polynuclear Aromatic Hydrocarbons (PAH, PNA)	EPA 8310	175.00
Phenols	EPA 625/8270	150.00
Organochlorine pesticides and PCBs	EPA 608/8080	125.00
Polychlorinated biphenyls (PCBs)	EPA 608/8080 (mod)	67.50
Organophosphorus pesticides	EPA 614/8140	140.00
Organochlorine herbicides	EPA 615/8150	160.00
Volatile organics	EPA 624/8240	200.00
Semivolatile organics	EPA 625/8270	350.00
Volatile organics, drinking water	EPA 524.2	270.00
Semivolatile organics, drinking water	EPA 525	442.50
METALS ANALYSIS--TTLC		
LUFT heavy metals (5 metals)	EPA 6010(ICP)	100.00
Priority pollutants (13 metals)	EPA 6010 and 7000 series	150.00
Title 22 (CAM 17 metals)	EPA 6010 and 7000 series	200.00
Individual metals (price per metal)	EPA 6010 and 7000 series	22.50
Mercury (cold vapor)	EPA 7470/7471	45.00
Hexavalent chromium	EPA 7196	55.00
EXTRACTION METHODS--TCLP or STLC (CAM WET) and miscellaneous		
TCLP or STLC (CAM WET) extraction	EPA 1311/W.E.T.	75.00
TCLP w/ RCRA 8 metals	EPA 1311/6010, 7000 series	175.00
TCLP (ZHE) w/BTEX	EPA 1311/8020	170.00
TCLP (ZHE) w/ volatile organics	EPA 1311/624	275.00
RCI (reactivity, corrosivity, and ignitability in soil)	CA Title 22	67.50
pH	EPA 9040/9045	7.50
Compositing fee (each container)		3.75
AIR TESTING--*Samples in Tedlar bags*		
TPH gasoline	EPA 5030/8015	110.00
TPH gasoline/BTEX	EPA 5030/8015/8020	150.00
Benzene *by PID GC*	CARB 410A(mod.)/EPA 8020	150.00
Halogenated organics	CARB 422/EPA 8010	190.00
Volatile organics *by GC/MS*	CARB 410B/EPA 8240	250.00

SERVICE INCLUDES AT NO CHARGE:

- *Sample pickup in the Bay Area*
- *Final report faxed to you on time*
- *Sample bottles and brass tubes*
- *Consultation with the chemists*

DATA PACKAGES AND DELIVERABLES

EPA Level 2	included
Data validation EPA Level 3,	+15%
Data validation EPA Level 4,	+20%
Electronic Deliverable,	+5%

RUSH CHARGES (add to 5 day prices)

THREE DAYS TURNAROUND...	add 25%
48 HOURS...	add 50%
24 HOURS...	add 100%
SAME DAY...	add 200%

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096

Curtis & Tompkins, Ltd.
Analytical Laboratories. Since 1878

1996 FEE SCHEDULE

1	2	3	4
2	3	µg/l	1
3	4	1	2
2	µg/l	4	1
1	2	µg/l	4
2	3	4	1

QUALITY ASSURANCE/QUALITY CONTROL

Curtis & Tompkins implements a comprehensive laboratory data quality assurance program (QAP) based on ISO-9000, and US-EPA standards for good laboratory practices as part of its laboratory management systems. Requirements are written in a comprehensive Quality Assurance Manual (QAM) which details all aspects of the QA program at both the Irvine and Berkeley laboratories. The QAM specifies procedures implemented for quality control (QC) samples such as blanks, spikes, duplicates, performance evaluation and laboratory control samples. Stringent specifications for instrument calibration are employed based on internal and external standards, surrogate standards, and standard additions. These specifications are implemented to ensure accuracy and precision of our measurement data. We participate in US-EPA WS and WP and more than six "round robin" performance evaluation sample programs associated with certification programs operated by private industry, government entities, or our clients.

Quality, in its absolute sense, is defined as adherence to specifications. In the world of analytical chemistry, the QAP is aimed specifically at procedures for control of common errors including false negatives, false positives and misquantitations. The QAP is also implemented to ensure appropriate, accurate and complete documentation of all events related to the measurement process. Curtis & Tompkins has a policy of establishing quality specifications which encompass limits and acceptance criteria for calibration events, standard additions (spikes), precision (duplicates), and control samples for false positives (blanks) for every measurement procedure employed in its laboratories.

Curtis & Tompkins has developed and implemented a comprehensive training program for chemists in its laboratories. As part of this program, each chemist completes seven laboratory control samples at each workstation he or she operates each year. Performance evaluation samples are completed each time a chemist changes workstations to demonstrate their performance to acceptable levels of accuracy and precision. Performance evaluation and laboratory control sample results are evaluated for accuracy and precision and opportunities for improving in the measurement process.

Curtis & Tompkins' two laboratories operate state-of-the-art computerized laboratory data management and process automation computer networks. Instruments and data centers within each laboratory are linked into common data structures from which all results are reported. Using this automated data acquisition process and relational database technology, Curtis & Tompkins pioneered the development of Real Time Quality control (RTQC), a system for automatically validating the accuracy and completeness of lab data in real time. RTQC significantly improves Curtis & Tompkins' data quality and reduces time required to comprehensively evaluate and control data quality. Curtis & Tompkins also pioneered the development of an EDD engine for producing electronic data deliverables (EDD) which contain electronic data which exactly match hardcopy reports.

While data quality is paramount, another important aspect of client service quality is on-time delivery. Through our advanced data management systems, we evaluate on-time delivery daily in real time. Using these systems clients of Curtis & Tompkins are assured the highest level of on-time delivery service of any environmental laboratory.

SERVICES

Sample Pickup

Curtis & Tompkins' employees familiar with chain-of-custody procedures, use company vehicles to pickup coolers from our clients at no charge, provided we are given 24 hours notice. The pickup site must be within 35 miles of the receiving laboratory.

Sample Containers

Curtis & Tompkins will furnish pre-preserved sample bottles free of charge. We will also provide coolers, custody seals, blue ice and chain-of-custody forms. Once samples are logged into our system, Curtis & Tompkins will store samples six weeks before disposal. At the client's request, Curtis & Tompkins will store samples for longer than six weeks. This service can be arranged for a nominal charge with your technical project manager at Curtis & Tompkins.

Data Packages

Level I: Sample Results & Batch QC Summary . . . . . No Charge

Level II: As Above, Including Surrogates & Batch QC . . . . . As Requested

Level III: Summary CLP-Type Data Package, Forms Only . . . . . 15% surcharge

Level IV: Complete CLP-Type Data Package, Forms & Raw Data . . . . . 25% surcharge

LA County: RWQCB Forms . . . . 15% surcharge

The turnaround time for a CLP-Type data package is 20 working days. Electronic diskette deliverables that match the hard copy data package are also available. Please contact your technical project manager for more information.

Electronic Diskette Deliverables (EDDs)

Curtis & Tompkins has built a national reputation for its state-of-the-art laboratory information management system (LIMS). This technically advanced and automated system gives Curtis & Tompkins the flexibility to provide analytical data to our clients in any format. Most common formats are: ASCII, Lotus and Excel spreadsheets, dBase, Paradox and Access databases. Custom formats are also developed by working directly with our client's specific needs. We also plan to offer data in the standardized format to be developed by the RWQCB, as required under AB 3537. Please contact your technical project manager for more information.

Turnaround Times

Curtis & Tompkins offers a wide selection of turnaround time options to give clients maximum flexibility in meeting their demanding schedules. For rush turnaround time services, please call your technical project manager before your samples arrive to assure your turnaround time needs are met:

10	Working Days	List Price
7	Working Days	List Price + 25%
5	Working Days	List Price + 50%
3-4	Working Days	List Price + 75%
1-2	Working Days	List Price + 100%
Same Day	. . . . .	List Price + 200%

Samples may be delivered to Curtis & Tompkins from 7:30 a.m. to 6:00 p.m. on Monday through Friday. Saturday delivery must be arranged a day in advance. Special arrangements to receive samples can be made directly with your technical project manager. Samples received after 5:00 p.m. Monday through Friday, or during the weekend, are assigned a log-in time of 8:00 a.m. the next work day. Rush results are reported via Fax as soon as the results are available.

OTHER INFORMATION

Curtis & Tompkins has a $75 minimum laboratory charge. Compositing of samples has a $5 per unit cost and there is a $4 Disposal Fee for non-aqueous samples. Discounts are available for project specific needs and large volume opportunities. All Terms and Conditions apply.

UNDERGROUND STORAGE TANK

Total Volatile Hydrocarbons - Gas	EPA 8015/LUFT	$	85
Total Extractable Hydrocarbons - Diesel	EPA 8015/LUFT	$	85
Aromatic Hydrocarbons (BTEX only)	EPA 8020	$	85
Total Volatile Hydrocarbons/BTEX	EPA 8015/8020	$	95
Ethylene Dibromide (EDB)	EPA 8010/504	$	90
Oil and Grease (Gravimetric)	SMWW 5520BF/EF/413.1	$	60
Oil and Grease (IR)	EPA 413.2	$	60
Total Recoverable Petroleum Hydrocarbons	EPA 418.1	$	60
MTBE	EPA 8020	$	85
Organic Lead	DHS LUFT Manual	$	60
Total Lead	EPA 6010	$	25
LUFT Metals (cadmium, chromium, lead, nickel, zinc)	EPA 6010	$	75

ORGANIC CHEMISTRY

Halogenated Volatile Organics	EPA 8010/601	$	115
Aromatic Volatile Organics	EPA 8020/602	$	100
Halogenated/Aromatic Volatile Organics	EPA 8010/8020/601/602	$	180
Halogenated/Aromatic Volatile Organics (Modified List)	EPA 8021	$	225
PCBs	EPA 8080/608	$	90
Organochlorine Pesticides & PCBs	EPA 8080/608	$	160
Organochlorine Pesticides	EPA 8080/608	$	140
Organophosphorus Pesticides	EPA 8140/614	$	225
Chlorinated Herbicides	EPA 8150/615	$	225
Volatile Organics	EPA 8240/624	$	225
Volatile Organics (Modified List)	EPA 8260	$	250
Pentachlorophenol	EPA 8270/625	$	150
Phenols (8040 list)	EPA 8270/625	$	175
Phthalate Esters (8060 list)	EPA 8270/625	$	175
Semi-Volatile Organics (BNAs)	EPA 8270/625	$	400
Polynuclear Aromatic Hydrocarbons (8100 list)	EPA 8270/625	$	175
Polynuclear Aromatic Hydrocarbons	EPA 8310	$	225
Explosives	EPA 8330	$	350

METALS PACKAGES

RCRA Metals (8) Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver	EPA 6010/7000	$	150
EPA Priority Pollutant Metals (13) Antimony, Arsenic, Beryllium, Cadmium, Chromium (total), Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, & Zinc	EPA 6010/7000	$	175
Title 22/CAM Metals (17) Ag, Ar, Ba, Be, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Sb, Se, Ti, V, Zn	EPA 6010/7000	$	225

PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

		TTLC	STLC
Waste Extraction Test (WET)		N/A	$ 100
Metals (17)	CA Title 22	$225	$ 225*
Hexavalent Chromium	CA Title 22	$ 65	$ 65*
Individual Metals	CA Title 22	see p. 6	see p. 6
Fluoride	CA Title 22	$ 35	$ 35*

*Fee does not include extraction.

HAZARDOUS WASTE CHARACTERISTICS

IGNITABILITY		
Flashpoint/Flammability	EPA 1010	$ 25
CORROSIVITY		
NACE Corrosivity to Steel	EPA 1110	$ 175
pH	EPA 9045	$ 10
REACTIVITY		
Reactive Cyanide	SW-846, Ch. 7	$ 45
Reactive Sulfide	SW-846, Ch. 7	$ 45
RCI		
Reactivity, Corrosivity (as pH) & Ignitability		$ 125

TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)

EXTRACTION		
TCLP Extraction (Required for Metals, Pesticides, Herbicides, Semi-Volatile Organics & TEH)	EPA 1311	$ 100
TCLP Zero Headspace Extraction (Required for Volatiles & TVH)	EPA 1311	$ 150
SPLP Extraction (Synthetic Precipitation Leaching Procedure)	EPA 1312	$ 100
TCLP ANALYSIS		
RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	EPA 6010/7000	$ 150
Organochlorine Pesticides	EPA 8080	$ 150
Chlorinated Herbicides	EPA 8150	$ 200
Volatile Organics	EPA 8240	$ 225
Semi-Volatile Organics	EPA 8270	$ 400
Total Volatile Petroleum Hydrocarbons - Gas	EPA 8015M	$ 85
Total Extractable Petroleum Hydrocarbons - Diesel	EPA 8015M	$ 85

METALS SAMPLES PREPARATION

ICP Preparation	EPA 200/3000	$ 10
Graphite Furnace Preparation	EPA 200/3000	$ 10
Flame Atomic Absorption (FAA)	EPA 200/3000	$ 10
Dissolved Metals Filtration	0.45µ	$ 15
Fuels Digestion	ASTM D3683	$ 30

SPECTROPHOTOMETRY

Atomic Absorption Spectrophotometry *Per Metal Charges (prep not included)*

Flame Atomic Absorption (FAA)	EPA 200/7000	$ 15
Graphite Furnace AA (GFAA)	EPA 200/7000	$ 25
Mercury, Cold Vapor AA (Includes Prep)	EPA 7470/7471	$ 50
Chromium, Hexavalent (Includes Prep)	EPA 200/7196	$ 55

SPECTROSCOPY (ICP)

Inductively Coupled Argon-Plasma Atomic Emission Spectroscopy (ICP)
Per Metal Charges (prep not included)

Individual Metals by ICP — EPA 200.7/6010 — $ 15

Al - Aluminum	Cd - Cadmium	Mn - Manganese	Se - Selenium
Ag - Silver	Co - Cobalt	Mo - Molybdenum	Sn - Tin
As - Arsenic	Cr - Chromium	Na - Sodium	Ti - Titanium
B - Boron	Cu - Copper	Ni - Nickel	Tl - Thallium
Ba - Barium	Fe - Iron	Pb - Lead	V - Vanadium
Be - Beryllium	K - Potassium	Sb - Antimony	Zn - Zinc
Ca - Calcium	Mg - Magnesium		

AIR ANALYSES

HYDROCARBONS

TPH-Gasoline (TVH)	LUFT/8015M	$ 100
BTXE	EPA 8020	$ 100
TVH/BTXE	LUFT/8020	$ 150
Halogenated VOCs (8010 List)	EPA TO-14	$ 175
Volatile Organics (8240 List)	EPA TO-14	$ 275

EPA COMPENDIAL METHODS

Volatile Organics	EPA TO-14	$ 275
SUMMA Canister Rental	EPA TO-14	Quote
Polynuclear Aromatics (PAH)	EPA TO-13	$ 250
Organochlorine Pesticides & PCBs	EPA TO-10[1]	$ 185
Organochlorine Pesticides & PCBs	EPA TO-4[2]	$ 185
Phenols & Cresols	EPA TO-8	$ 150

CALIFORNIA AIR RESOURCES BOARD

Multiple Metals	CARB 436	$ 390
Lead	CARB 12	$ 60
Mercury	CARB 101	$ 95
Beryllium	CARB 104	$ 60
Benzene	CARB 410A[3]	$ 100
Arsenic	CARB 423	$ 85
Cadmium	CARB 424	$ 60
Chromium (total)	CARB 425	$ 60
Chromium (hexavalent)	CARB 425	$ 60
Nickel	CARB 433	$ 60
Fluoride	CARB 13B	$ 35
Chloride/Fluoride	CARB 421	$ 70
Chloride only	CARB 421	$ 35
Volatile Organics	CARB 422[3]	$ 175
Cyanide	CARB 426	$ 50

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Lead	SCAQMD 12.1	$ 60

EPA STATIONARY SOURCE STANDARDS (40 CFR 60)

Multiple Metals	EPA 29	$ 500
Lead	EPA 12	$ 60
Fluoride	EPA 13B	$ 35
Chloride	EPA 26[4]	$ 35

EPA AMBIENT AIR QUALITY STANDARDS (40 CFR 50)

Total Suspended Particulate (TSP)	Appendix B	$ 30
Lead	Appendix G	$ 30

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY & HEALTH (NIOSH)

Metals (ICP)	NIOSH 7300	$10 digestion, $15 ea metal
Metals (GFAA)	Various NIOSH	$10 digestion $25 ea metal
Mercury	NIOSH 6009	$35
Inorganic Acids	NIOSH 7903	$35 each

NOTES:
[1]Low-volume sampler
[2]High-volume sampler
[3]Using EPA Method TO-14
[4]Using CARB Method 421

This is a partial listing of the analytical services available for air samples. Please contact the laboratory for information regarding methods not appearing in this table.

GENERAL CHEMISTRY

Acidity	EPA 305.1	$	30
Alkalinity	EPA 310.1/310.2	$	30
Biochemical Oxygen Demand	EPA 405.1	$	65
Bromide	EPA 320.1	$	35
Carbonate	EPA 310.1/310.2	$	30
Chemical Oxygen Demand	EPA 410.1/410.4	$	35
Chloride	EPA 325.2/300.0	$	35
Chlorine - Residual	EPA 330.5	$	30
Color	EPA 110.2	$	20
Conductivity	EPA 120.1	$	15
Corrosivity to Steel	EPA 1110	$	175
Cyanide - Total	EPA 335.3	$	45
Cyanide - Amenable	EPA 335.3	$	65
Flashpoint	EPA 1010/ASTM D93	$	25
Fluoride	EPA 340.2	$	35
Hardness - Total	EPA 130.2	$	20
Hardness - Ca & Mg	SMWW2340B	$	35
Heating Value (BTU)	ASTM	$	50
General Mineral[1]	EPA Methods	$	275
Major Anions[2]	EPA 300 Series	$	90
Major Cations[3]	EPA 6010/7000	$	60
Mercaptans	Colorimetric	$	70
Moisture	EPA CLP	$	20
Nitrogen - Ammonia	EPA 350.1/350.2	$	35
Nitrogen - Nitrate	EPA 353.2/300.0	$	35
Nitrogen - Nitrite	EPA 354.1/353.2	$	35
Nitrogen - Nitrate & Nitrite	EPA 353.2	$	35
Nitrogen - Total Kjeldahl	EPA 351.3/351.4	$	40
Organic Lead	DTSC/LUFT Manual	$	60
Paint Filter Liquids Test	EPA 9095	$	20
pH	EPA 9040/9045/150.1	$	12
Phenolic Compounds	EPA 420.1/420.2	$	50
Phosphate - Ortho	EPA 365.2 /365.1/300.0	$	35
Phosphate - Total	EPA 365.4	$	35
Salinity	SM210B	$	35
Silicon Dioxide (Silica)	EPA 270.1	$	35
Solids - Dissolved	EPA 160.1	$	25
Solids - Suspended	EPA 160.2	$	25
Solids - Total	EPA 160.3	$	25
Solids - Volatile	EPA 160.4	$	25
Solids - Settleable	EPA 160.5	$	25
Specify Gravity	ASTM D854	$	25
Sulfate	EPA 375.2/300.0	$	35
Sulfide	EPA 376.2	$	45
Sulfite	EPA 377.1	$	35
Surfactant Test (MBAS)	EPA 425.1	$	75
Temperature	EPA 170.1	$	10
Thiosulfate	LA County SJCWQ Lab	$	35
TOC	EPA 9060	$	50
TOX	EPA 9020	$	100
Turbidity	EPA 180.1	$	15

NOTES:

[1] Bicarbonate, carbonate, hydroxide alkalinity, calcium, chloride, copper MBAS, iron, magnesium, pH, sodium, sulfate, conductivity, total dissolved solids, total hardness, and zinc.

[2] Bicarbonate, carbonate, chloride and sulfate.

[3] Calcium, magnesium, sodium and potassium.

Curtis & Tompkins is a commercial testing laboratory. We always have been consulting chemists and microbiologists specializing in the measurement business. We are proud to be a member of the American Council of Independent Laboratories.

Northern California/Corporate Headquarters
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532 fax

Southern California
2495 DaVinci Drive
Irvine, CA 92714
(714) 252-9700
(714) 252-9701 fax

TPS
TECHNOLOGIES INC.

20 Recycling Lane ☐ Richmond, California 94801
Telephone: (510) 235-8778 ☐ Fax: (510) 231-4154

November 6, 1996

Mr. Kyle Flory
PES Environmental Inc.
1682 Novato Blvd.
Novato, CA 94947

Re: 230 Bay Street, Oakland

Dear Kyle,

TPS Technologies greatly appreciates the opportunity to submit a price quote for the recycling/thermal treatment of hydrocarbon impacted soil located at 230 Bay Street, Oakland.

The following is the gate rate for all soil generated from the above referenced project, with volumes projected to be 73 tons. The soil must be classified as non-hazardous according to both State and Federal regulations. Manifests are printed by TPS. There are no taxes, profile fees, or any undisclosed fees. There is no change in price for soil types, contaminant level or type, debris, moisture content, or clay content.

Recycling/thermal treatment.....$31.00/ton
Transportation.....$170 load

All soils received at the TPS Technologies facility are thermally treated to non-detect levels (10ppm TPH, 10 ppb Benzene, 10ppb Toluene, 10ppb Ethylbenzene, 10ppb Xylenes) thus eliminating future liability and permanently ending the chain of custody. Included in the above pricing is all post-process analytical testing (1 sample per every 20 tons, composited to represent every 200 tons), a soil recycling certificate and a customer job report.

Indemnification
TPST agrees to indemnify and hold harmless Client, its directors, officers, employees, agents, and subcontractors from and against any and all costs, liabilities, claims, demands and causes of actions including, without limitation, bodily injury to or death of any person or destruction of or damage to any property that Client may suffer, incur or pay out resulting from negligent acts or omissions of TPST, its agents, employees or subcontractors during the performance of this Agreement, except to the extent such liabilities, claims, demands and causes of action occur as a result of (a) the negligent or willful acts or omissions of the Client, its employees or agents or (b) the storage, transportation, handling or remediation of any soils materially varying from that disclosed by Client in the SDCS for such soil.

Client shall indemnify and hold harmless TPST, its directors, officers, employees, agents and subcontractors from and against any and all cost, liabilities, claims, demands and causes of action including, without limitation, any bodily injury to or death of any person or destruction of or damage to property which they, individually or collectively, may suffer, incur or pay out resulting from (a) the negligent acts or omissions of the Client, its employees or agents or (b) the storage, transportation, handling or remediation of any soils materially varying from those disclosed by Client in the SDCS.

Insurance
Please find attached a certificate of liability insurance. Our limits are $2,000,000 general liability and is underwritten by Federal Insurance Company.

References
Please find attached a partial national account list of other large firms which utilize TPS Technologies for their recycling needs.

Bonding Rate
TPS Technologies is capable of securing bonding in excess of $10,000,000. If this is a project requirement please contact Leah Yeager in our corporate headquarters at (407)-886-2000.

If you should have any further questions, please call me at 415-893-9086. Thank you for choosing TPS Technologies for your soil recycling needs.

Always Recycling,

Brian Dardzinski
Sales Manager, Northern California