



February 4, 1993

167.02.002

Alameda County Health Care Services Agency
Department of Environmental Health
UST Local Oversight Program
80 Swan Way, Room 200
Oakland, California 94621

Attention: Mr. Thomas F. Peacock

*workplan
acceptable
2-22-93
TFP*

**WORKPLAN
SUBSURFACE ENVIRONMENTAL INVESTIGATION
BILL COX CADILLAC
230 BAY PLACE
OAKLAND, CALIFORNIA**

Dear Mr. Peacock:

Presented herein is a workplan for a subsurface environmental investigation to be performed at the Bill Cox Cadillac dealership, located at 230 Bay Place in Oakland, California (Plate 1). The workplan has been prepared by PES Environmental, Inc. (PES) in response to a December 15, 1992 letter to Bill Theuringer of Bill Cox Cadillac from the Alameda County Department of Environmental Health (ACDEH) requesting a workplan to investigate the site of a former underground waste oil storage tank. PES has prepared this workplan on behalf of Wells Fargo Bank, Trustee of the Shepard Trust, which owns the subject site. The purpose of this workplan is to describe proposed investigation activities to evaluate chemical conditions of groundwater in the area immediately downgradient from the former tank location.

INTRODUCTION

Site Description

The nearly 2-acre site is bounded on the northwest by Harrison Street, on the southwest by Bay Place, and on the southeast by Vernon Street. The northeastern boundary abuts a steep embankment which is partially supported by a retaining wall. The former underground waste oil storage tank was located within a paved parking area southeast of and adjacent to the Cox Cadillac service facility (Plate 2). The former tank location is delineated by an asphalt patch that was placed after tank removal and excavation backfilling. Access to this parking lot is provided from Bay Place.

Mr. Thomas F. Peacock
February 4, 1993
Page 2

Project History

The 3,000-gallon former waste oil storage tank was removed from the site in December 1988 by R.S. Eagan & Company (Eagan) of Concord, California. Holes in the tank were reportedly observed at the time of removal and free-phase hydrocarbon product was present in the tank excavation. Soil and groundwater in the excavation were sampled at the time of tank removal but analytical data were inconclusive as to the presence of petroleum hydrocarbon compounds. Contaminated soil was placed back in the excavation. At the request of ACDEH in a March 8, 1989 letter to Eagan, the site was reexcavated and soil and water were resampled on March 17, 1989. Total petroleum hydrocarbons (TPH) quantified as gasoline (TPHg) and TPH quantified as diesel (TPHd) were detected at concentrations of 45 parts per million (ppm) and 150 ppm, respectively, in soil samples collected from 8 feet below ground surface (bgs). Analysis of the water sample collected from a holding tank storing water pumped from the excavation revealed the presence of 550 parts per billion (ppb) TPHg, 2,100 ppb TPHd, and 10,000 ppb total oil and grease.

A total of 27 cubic yards of petroleum hydrocarbon-affected soil was excavated and placed in a storage/transport bin in March 1989, and off-hauled for disposal in June 1989. In a telephone call from Mr. Dennis Byrne of ACDEH to Mr. Bob Corsun of Eagan on April 19, 1989, Mr. Byrne indicated that no further excavation was required but a groundwater monitoring well will be required on the site. The excavation was backfilled with imported fill materials by Eagan in June 1989.

PROPOSED SCOPE OF WORK

The purpose of the proposed investigation is to assess whether petroleum hydrocarbons or other chemicals that may have been released from the former waste oil tank have affected groundwater conditions immediately downgradient from the excavated area.

The investigation has been divided into the following tasks:

Task 1 - Groundwater Monitoring Well Installation;

Task 2 - Groundwater Monitoring Well Development, Sampling, and Analysis; and

Task 3 - Report Preparation.

These tasks are described in detail in the following sections.

Mr. Thomas F. Peacock

February 4, 1993

Page 3

Task 1 - Groundwater Monitoring Well Installation

PES will retain a utility locating service to clear the proposed boring location of utilities that could be encountered during drilling. After utility clearance and after receiving all necessary permits, PES will drill one boring to be converted to a groundwater monitoring well. The well will be positioned in the likely downgradient direction, based on site topography and regional hydrogeology, from the former tank location and immediately adjacent to the tank excavation (Plate 2).

Drilling Procedures

The boring will be drilled using a hollow-stem auger drilling rig and soil samples will be collected every 5 feet to a depth of about 15 feet below ground surface (bgs). The depth to groundwater is assumed to be between 5 and 10 feet bgs. Samples will also be collected at changes in lithology and at the bottom of the boring by driving a brass- or stainless steel-lined split-spoon sampler into the undisturbed soil beneath the cutting bit of the auger. Each sample will be lithologically logged by a PES hydrogeologist or engineer and will be screened with a photo-ionizing organic vapor detector. Soil samples will be submitted to the project analytical laboratory for preservation for possible future analyses in the event that field observations or groundwater analyses warrant soil testing.

Field and laboratory quality control (QC) procedures for the soil borings include:

- Sampling equipment will be decontaminated by steam cleaning and/or washing with phosphate-free soap and rinsing with distilled water;
- Soil samples to be preserved will be covered with teflon-lined plastic caps, sealed with silicon adhesive tape, and placed in a chilled, thermally-insulated cooler for delivery to the project analytical laboratory;
- Soil sample holding times and analyses will be pursuant to the current Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites (RWQCB Guidelines);
- Samples will be appropriately labeled and submitted to the laboratory accompanied by chain-of-custody documentation;
- Lithologic logs will be reviewed by a registered geologist or professional engineer;

Mr. Thomas F. Peacock

February 4, 1993

Page 4

- Laboratory QC will be performed pursuant to the procedures inherent with the specific methods used for analyses;
- Analyses will be performed by a laboratory certified by the State of California for each method of analysis;
- Analyses will be performed using the approved methods described in the RWQCB guidelines; and
- Soil cuttings generated during drilling will be stored on site in 55-gallon steel drums until laboratory analysis is completed and proper disposal is arranged.

Groundwater Monitoring Well Installation

The groundwater monitoring well will be constructed using 2-inch diameter, flush-threaded, PVC pipe and well screen. The well will be constructed so that the screened interval is at least 5 feet below the water level and will extend at least 2 feet above the water level. The well will be completed with a threaded cap on the bottom of the well and a clean sand pack extending from the bottom of the borehole to approximately two feet above the top of the screen. A bentonite pellet seal will be placed above the sand pack and a bentonite/cement grout will be placed above the bentonite pellet seal to the ground surface. The well will be completed below grade in a traffic-rated well vault with a locking water-tight cap.

Prior to initial sampling but at least 48 hours after well completion, the well will be developed until discharge is visually clear and free of sediment. Development will be performed by surging and/or bailing followed by pumping. All development water will be contained on site in 55-gallon steel drums until proper disposal is arranged.

Task 2 - Groundwater Monitoring Well Development, Sampling, and Analyses

Groundwater sampling will be performed a minimum of 24 hours after development. Sampling will include measurement for free product, if any, and water level prior to purging the well. At least three well volumes will be purged and groundwater temperature and conductivity will be measured. All purge water will be contained on site in 55-gallon steel drums until proper disposal is arranged.

Mr. Thomas F. Peacock
February 4, 1993
Page 5

The following QC procedures will be followed during the collection of groundwater samples:

- Sampling equipment will be decontaminated by steam cleaning and/or washing with phosphate-free soap and rinsing with distilled water;
- Groundwater samples will be placed in appropriate containers, preserved, and analyzed within the appropriate holding times;
- Samples will be appropriately labeled and submitted to the laboratory accompanied by chain-of-custody documentation;
- Laboratory QC will be performed pursuant to the procedures inherent with the specific methods used for analyses;
- All analyses will be performed by a laboratory certified by the State of California for each method of analysis used during the project; and
- All analyses will be performed using the approved methods described in the RWQCB guidelines.

A State-certified laboratory will analyze the sample in accordance with the RWQCB guidelines. The groundwater sample will be analyzed for the following:

TPHg by EPA Test Method 5030/8015 (modified);

TPHd by EPA Test Method 3550/8015;

Benzene, toluene, ethylbenzene and total xylenes by EPA Test Method 5030/8020;

Chlorinated Hydrocarbon Compounds by EPA Test Method 601;

Semi-volatile Organic Compounds by EPA Test Method 8270;

Total oil and Grease by Standard Method 5520 C&F;

Polychlorinated Biphenyls (PCBs) by EPA Test Method 8080; and

Dissolved concentrations of cadmium, chromium, lead, nickel, and zinc by inductively coupled argon plasma or atomic absorption techniques.

Mr. Thomas F. Peacock

February 4, 1993

Page 6

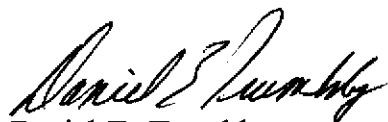
Task 3 - Report Preparation

The results of the investigation will be presented in a written report. The report will include background information, field investigation methods, investigation results and conclusions regarding chemical conditions of groundwater near the former waste oil tank. A copy of the report will be submitted to your office for review.

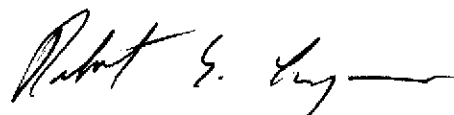
We trust this the information you require at this time. Please call either of the undersigned should you have any questions or comments.

Yours very truly,

PES ENVIRONMENTAL, INC.



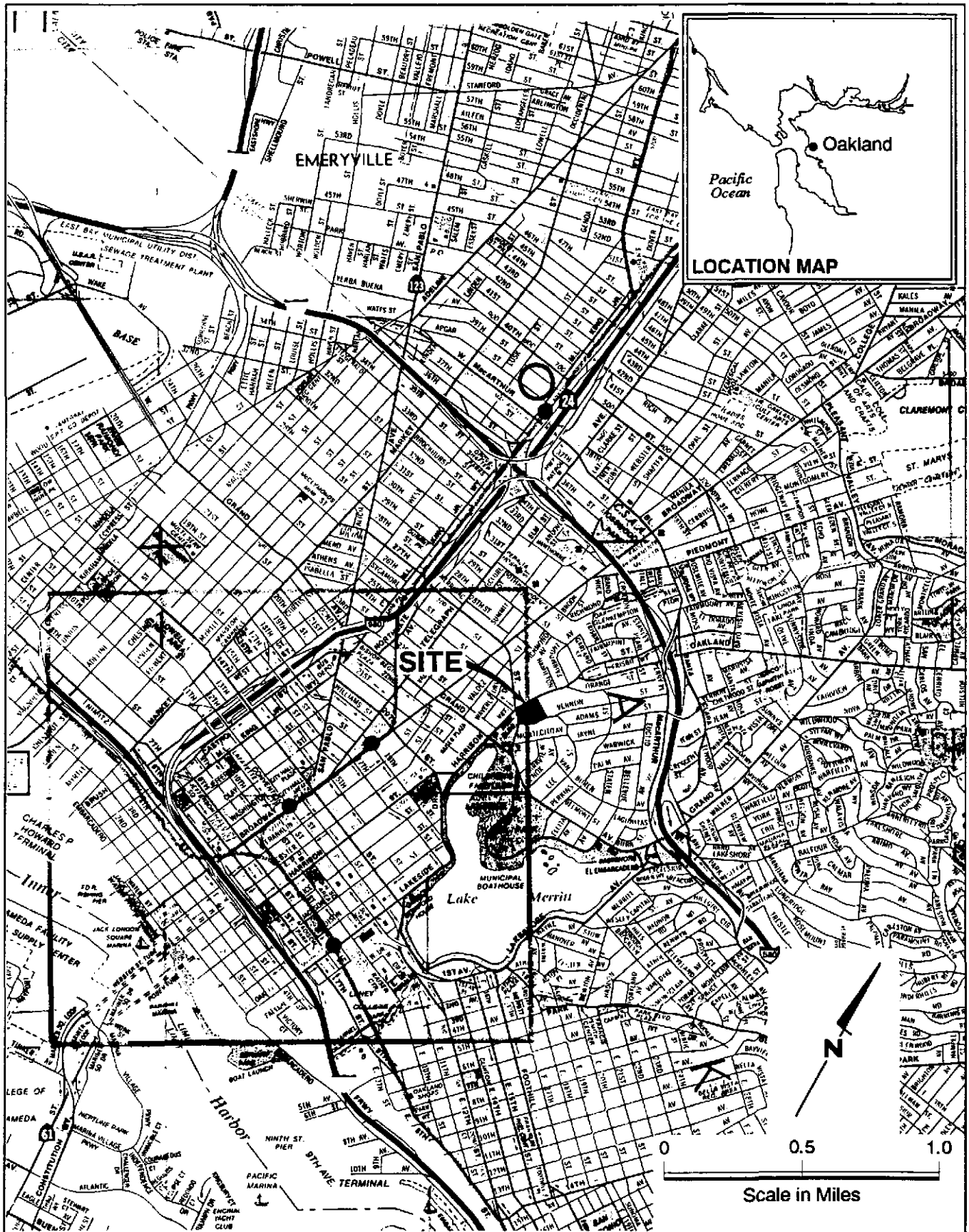
Daniel E. Trumbly
Senior Staff Geologist



Robert S. Creps, P.E.
Associate Engineer

Attachments: Site Location Map
Site Map

cc: Mr. J. Schrader
Mr. R. Campbell




PES Environmental, Inc.
 Engineering & Environmental Services

Site Location Map
 Cox Cadillac
 230 Bay Place
 Oakland, California

PLATE

1

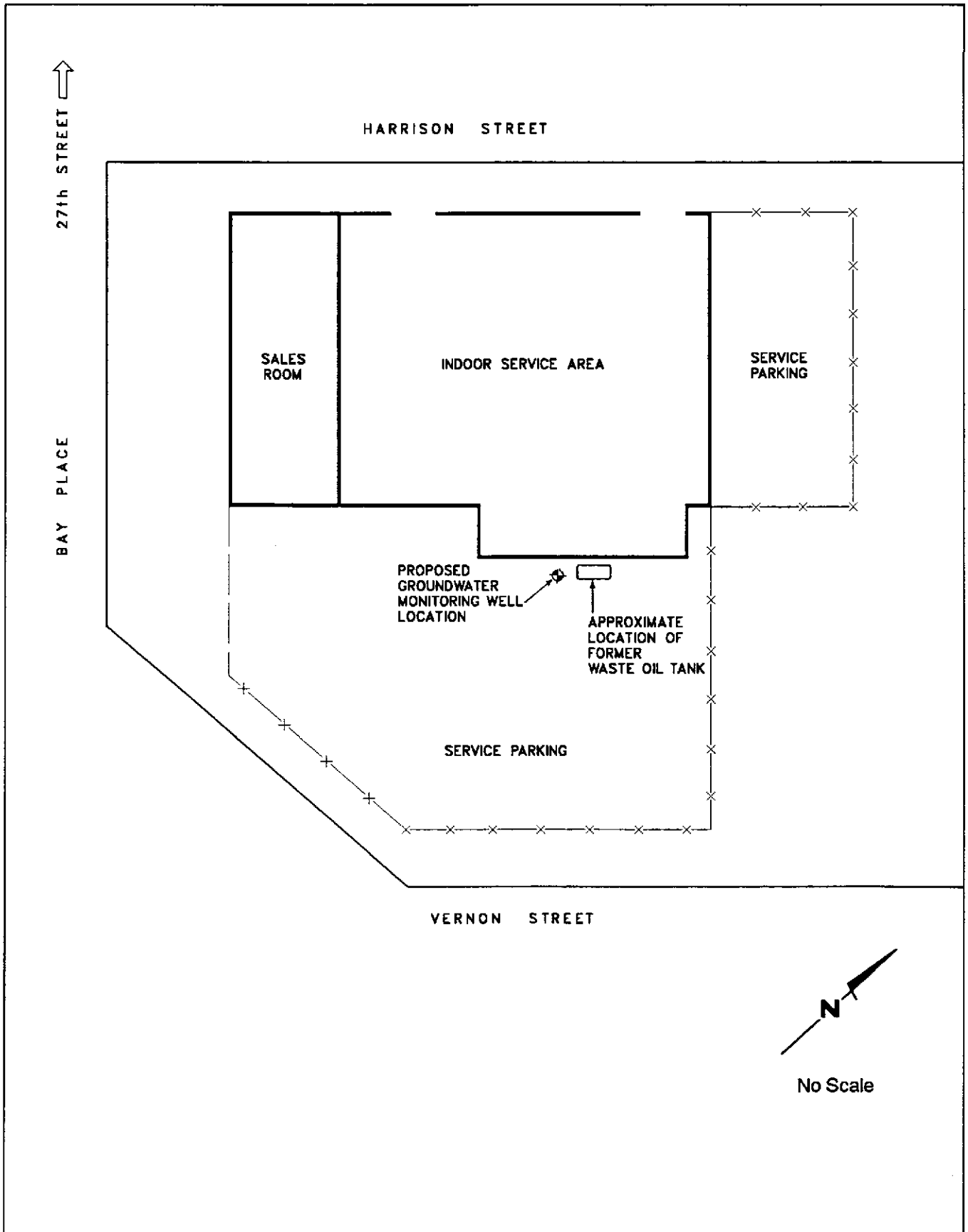
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PES Environmental, Inc.
Engineering & Environmental Services

Site Plan
Cox Cadillac
230 Bay Place
Oakland, California

PLATE

2

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