

DEPARTMENT OF TRANSPORTATION

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ST10 226J

November 7, 1995

Ms. Susan Hugo, Senior Hazardous Waste Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: Workplans for Monitoring Well Sampling and Analysis at Former UST Locations in
the Cypress Reconstruction Project

Dear Ms. Hugo:

Enclosed for your review and comments are the draft workplans for the sampling and analysis of monitoring wells located at two former underground storage tank (UST) sites involved in the Cypress freeway reconstruction project (J&A Truck Repair, 500 Kirkham Street and Thomas A. Short Co., 3430 Wood Street). The installation of the wells will be performed by Geocon Environmental for Caltrans. Geocon's draft workplans for installing the wells at these sites and the health & safety plans were sent to you in October. The well development, sampling, and groundwater analyses will be performed by our office, and are discussed in the enclosed workplans.

Delays in construction activities have suspended the start of the monitoring well installation work, but the wells should be completed the last week of November. Therefore, I would appreciate receiving your comments on these workplans before Thanksgiving, if possible. Please call me with any additions or comments you may have at 286-5647.

Sincerely,

Christopher R. Wilson

Christopher R. Wilson, P.E.
Office of Environmental Engineering

Enclosures

cc: file

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ENVIRONMENTAL
PROTECTION

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MONITORING WELL SAMPLING AND ANALYSIS WORKPLAN

**J&A TRUCK REPAIR
500 KIRKHAM STREET
OAKLAND, CALIFORNIA**

Submitted By:

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
OAKLAND, CALIFORNIA**

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November 6, 1995

I Introduction

This workplan is for the groundwater study at the former J&A Truck Repair site at 500 Kirkham Street in Oakland, California (see Figure 1 for location map) that will be conducted by the Department of Transportation's District 4 Office of Environmental Engineering. The site is the former location of a gasoline underground storage tank (UST), which soil sample analyses have shown leaked gasoline into the site subsurface. The tank was removed in August 1995, and three monitoring wells will be installed around the former tank location so that groundwater samples can be collected and analyzed quarterly to determine the extent of groundwater contamination and the trend in contaminant concentrations over the next year.

II Site Background

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For thirty years, from the mid-1950's to the mid-1980's, the site was occupied by Smilo Chemical Company, a wholesale distributor of chemicals and chemical-related products. Starting in 1984, the site was occupied by J&A Truck Repair, but was still owned by Barney Smilo, president of Smilo Chemical Company. In 1994 the site was purchased by Caltrans so that a portion of the southeast corner could be used as right of way for a local road being realigned as part of the Cypress freeway reconstruction. Shortly after Caltrans purchased the property and J&A Truck Repair relocated its operations to another site, an old gasoline pump and concrete slab overlying a UST were discovered at the southwest corner of the building (see Figure 2 for site map). Mr. Smilo was contacted about the tank, and said it was there before he purchased the property in 1976, in the midst of Smilo Chemical's occupancy of the site. He also said the tank had a volume of approximately 2000 gallons, and was last used to store gasoline during the 1973 Arab Oil Embargo.

In October 1994, Environmental Solutions performed a subsurface soil and groundwater investigation of the site for Caltrans, and prepared a Preliminary Endangerment Assessment (PEA) report from the investigation results. Nine soil samples and one groundwater sample collected from three borings drilled immediately adjacent to the UST were analyzed for gasoline and diesel constituents. All nine soil samples (2, 4, and 8-foot deep from each boring) had non-detectable levels of total petroleum hydrocarbons as diesel (TPH-d), as did the groundwater sample from one of the borings. The analyses for gasoline constituents, however, were far from non-detect. The 8-foot deep soil samples had total petroleum hydrocarbons as gasoline (TPH-g) concentrations of 330 mg/kg, 3600 mg/kg, and 6500 mg/kg. A scan for volatile aromatic hydrocarbons was performed on two of the three 8-foot samples, and showed benzene concentrations of 440 and 7700 ug/kg, toluene at 3200 and 94,000 ug/kg, ethyl benzene at 2700 and 44,000 ug/kg, and total xylenes at 14,000 and 250,000 ug/kg. The groundwater sample had 59 mg/L of TPH-g and volatile organic compounds at the following concentrations: 15,000 ug/L benzene, 7700 ug/L toluene, 2100 ug/L ethyl benzene, 7200 ug/L xylenes, 26 ug/L cis-1,2-dichloroethene, and 44 ug/L methyl ethyl ketone.

Following the site investigation and the completion of the PEA report, the UST was removed

from the site in August 1995. The draft tank closure report was submitted to Caltrans in late October. The analyses of the soil and groundwater samples taken from the tank pit parallel the results from the Environmental Solutions site investigation. The two soil samples and one groundwater sample from the tank excavation had non-detectable levels of TPH-d, but the soil and groundwater were found to be contaminated by gasoline constituents. One of the soil samples had a TPH-g concentration of 5500 mg/kg, benzene at 40,000 ug/kg, toluene at 260,000 ug/kg, ethyl benzene at 100,000 ug/kg, and xylenes at 520,000 ug/kg (the other soil sample was non-detect for all the gasoline analyses). The groundwater sample had a TPH-g level of 32 mg/L, benzene at 5600 ug/L, toluene at 5100 ug/L, ethyl benzene at 63 ug/L, and xylenes at 5500 ug/L.

In November, the entire site will be excavated to a depth of four feet and backfilled with non-contaminated soil, as called for by Caltrans site remediation plans. A restriction will be placed on the property's deed forbidding any future occupant to excavate soil on-site, and, therefore, expose the contamination that will remain at greater depths. After the excavation and back-filling are completed, the site will be paved and used as a parking lot for United States Postal Service vehicles. When the paving work is complete, the monitoring wells will be installed for Caltrans by Geocon Environmental, as described in Geocon's workplan submitted to Alameda County Health Care Services Agency. A Caltrans survey crew will determine the top of casing elevation, relative to mean sea level, for each well to the nearest hundredth of a foot.

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III Scope of Work

At least 24 hours after the borings for the wells have been drilled, the soil samples collected for laboratory analysis, and the monitoring wells constructed by Geocon Environmental, Caltrans' Office of Environmental will develop the wells using surge and bail techniques. The wells will be surged and bailed sufficiently enough to obtain sediment-free groundwater samples. All purged groundwater will be stored on-site or in the immediate vicinity in labeled 55-gallon drums, pending laboratory analysis for proper disposal.

At least 24 hours after development, the wells will be sampled. Before any groundwater is purged for sampling, the distance to the static water table in each well will be measured by an electric water level meter and recorded. The water level meter will be washed and rinsed with distilled water after each measurement. Following the depth-to-water measurements, the wells will be purged of at least three well casing volumes, using dedicated, disposable bailers. The groundwater temperature, conductivity, and pH will be recorded before purging activities begin, and again approximately every purged well casing volume, and also after the samples have been collected. Proper personal protective equipment will be worn during all purging and sampling activities.

After purging, the wells will be allowed to recover to approximately 90% of their original volumes before samples are collected. The groundwater samples will be collected by lowering the dedicated bailers into each well, and will then be released through disposable

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VOC samplers into sterile, laboratory-supplied containers. The samples will be collected in order of decreasing analyte volatility, labeled for the laboratory, and placed in a cooler chilled to 4 degrees Celsius with blue ice. The cooler will be transported under chain of custody to American Environmental Network, a state-certified laboratory in Pleasant Hill, for analysis. The groundwater samples will be analyzed for the following contaminants:

CAM 17 Metals by EPA Method 6010

Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1

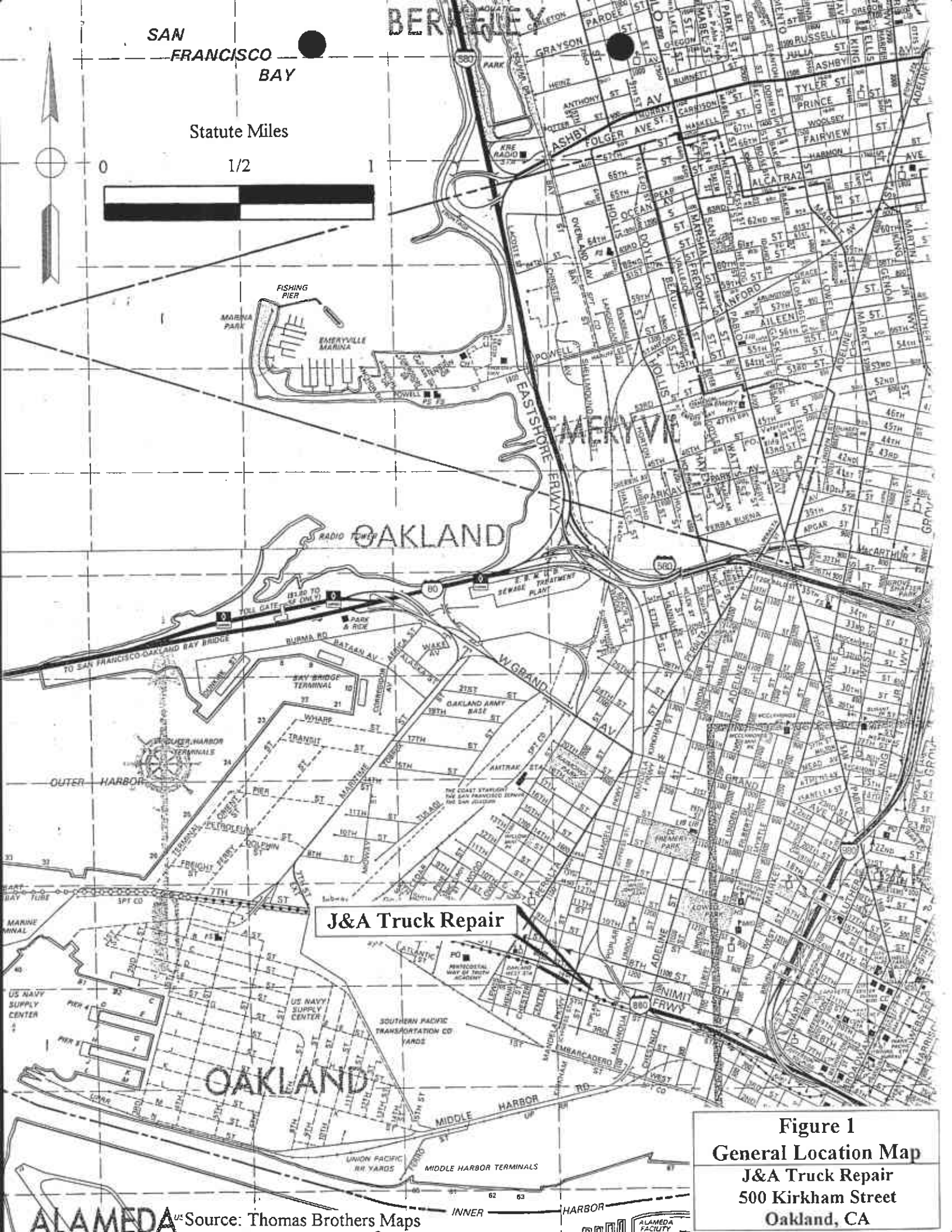
Total Petroleum Hydrocarbons as Gasoline (TPH-g) by EPA Method 8015-m

Volatile Organic Compounds (VOCs) by EPA Method 8240

IV Report

After the lab analysis results are completed, the Office of Environmental Engineering will report to Alameda County Health Care Services Agency on the monitoring well installation, the soil and groundwater sampling and analyses, the groundwater gradient and direction, and our conclusions and recommendations regarding the site.

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J&A Truck Repair

Figure 1
General Location Map
J&A Truck Repair
500 Kirkham Street
Oakland, CA

