



PORT OF OAKLAND

ENVIRONMENTAL
PROTECTION
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June 17, 1996

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**SUBJECT: UNDERGROUND STORAGE TANK CLOSURE REPORT
OAKLAND, CALIFORNIA**

Dear Mr. Chan:

As you requested in your June 10, 1996 letter, the Port is forwarding to you a copy of a report titled, Underground Storage Tank Closure Report, Port of Oakland - Kaiser Yard, 2801 Seventh Street, Oakland, California, prepared by Geomatrix Consultants, Inc., in 1992. The report documents the removal and disposal of a steel UST discovered during grading activities associated with the realignment of Seventh Street.

Should you have any questions regarding this report, please contact me at 272-1373.

Sincerely,

John Prall, R.G.

Associate Environmental Scientist

Enclosure

cc: Neil Werner

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UNDERGROUND STORAGE TANK CLOSURE REPORT
Port of Oakland - Kaiser Yard
2801 Seventh Street
Oakland, California

1.0 INTRODUCTION

This report describes tank removal activities conducted on 13 August 1992 at the former Kaiser Yard at the Port of Oakland (Port) in Oakland, California (Figure 1). The work was performed in accordance with the 15 July 1992 Scope of Services prepared by Geomatrix Consultants, Inc., (Geomatrix), for the Port of Oakland.

One 2500-gallon-capacity underground storage tank (UST) was removed under an Alameda County Health Care Services Agency, Department of Environmental Health, (ACHCSA), tank closure plan. A copy of the plan is included in Appendix A. Project background, tank removal procedures, and soil sample collection and chemical analyses are discussed in the following sections.

2.0 BACKGROUND

The UST was discovered in July 1992 at the location shown on Figure 2 during earthwork associated with the Port's realignment of Seventh Street. When the tank was discovered, it contained about 400 gallons of residual fluid; the fluid appeared to be water. The tank was not in use and detailed records of the UST's history were not available in the Port's files. However, according to the Port, a 1940 map of the site shows a tank containing distillates located in the vicinity of the tank which was removed. It is not known who installed and used the tank, or when use of the tank was discontinued.

The Port retained Clayton Environmental Services, Inc. (Clayton), of Pleasanton, California, to collect a sample of the fluid in the tank on 7 July 1992. At the request of the Port, the sample was analyzed by Clayton for total petroleum hydrocarbons (TPH) as diesel by United States Environmental Protection Agency (EPA) Method 8015; TPH as oil by

EPA Method 8015; TPH as gasoline by modified EPA Method 8015; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8020. No constituents were detected above the laboratory detection limits. A copy of the analytical laboratory report for the fluid sample is included in Appendix B.

In August 1992, the Port retained Geomatrix to coordinate the removal of the tank according to ACHCSA requirements.

3.0 TANK REMOVAL

Zaccor Corporation (Zaccor) of Menlo Park, California was retained by the Port to perform tank removal and disposal activities. Zaccor removed the tank on 13 August 1992. A Geomatrix field engineer was on site to observe tank removal activities and to collect soil samples from the tank excavation. Representatives of the Oakland Fire Department (Gordon Gullett) and the ACHCSA (Barney Chan) were also on site to observe tank removal and soil sampling activities.

3.1 TANK STABILIZATION

Approximately 400 gallons of fluid were pumped from the tank by Allied Oil Pumping of Alviso, California, on 12 August 1992. The fluid was transported to Refinery Services of Patterson, California, for recycling. Zaccor inserted approximately 200 pounds of dry ice into the tank on 13 August 1992 to remove organic vapors and oxygen from the tank, rendering it inert. Explosivity meter readings taken in the tank before its removal indicated that vapor concentrations were less than 2 percent of the Lower Explosive Limit.

3.2 FIELD OBSERVATIONS

Geomatrix personnel made observations during the tank removal regarding sediment types encountered and the occurrence of petroleum in the soil. The condition of the tank was also observed.

The former tank location is shown on Figure 2. The tank, the top of which was approximately 1.5 feet below ground surface, was surrounded by native soil, a brown, medium-grained sand containing shells. The tank was 5 feet in diameter and 16.5 feet in length. The tank bottom was at approximately 6.5 feet below ground surface. No piping, such as product and vapor recovery lines or vents, were attached to the tank.

Upon removal of the tank, the tank was observed to be constructed of steel with rivets. Several holes were observed in the tank, including a dent and a hole on the top that reportedly were created when the tank was first encountered during earthwork in July 1992. Several one-inch-diameter holes were observed on the side of the tank; another hole was observed at the west end of the tank. Visual and olfactory observation of the native sediments surrounding the tank did not detect the presence of petroleum hydrocarbons. Organic vapor concentrations of soil samples measured using a field photoionization detector did not detect the presence of volatile petroleum hydrocarbon constituents.

3.3 TANK DISPOSAL

The tank was transported under a uniform hazardous waste manifest by Erickson, Inc., a licensed hazardous waste transporter, to their receiving facility in Richmond, California. A copy of the manifest is included in Appendix A. The tank was subsequently cut, cleaned, and rendered harmless by Erickson and disposed as scrap metal at Levin Metals Corporation in Richmond, California.

3.4 SAMPLING PROCEDURES

Soil samples were collected from native sediments at the west end (EX-1) and the east end (EX-2) of the excavation at depths of approximately 8.5 feet below grade, corresponding to 2 feet below the tank bottom. Sample locations are shown on Figure 2. The samples were collected directly from the bucket of the excavator by first removing the upper 6 inches of soil in the bucket and then driving a clean, thin-walled brass tube into the remaining soil. The sample was sealed at each end with aluminum foil, a plastic end cap, and duct tape.

The soil samples were labeled and stored in an ice-cooled container until delivered under Geomatrix chain-of-custody procedures to Clayton, a state-certified laboratory. A copy of the chain-of-custody record is included in Appendix C.

4.0 ANALYTICAL METHODS AND RESULTS

Recommended minimum verification analyses for underground tank leaks, included in the August 1990 Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, were used to determine the appropriate analyses for the soil samples. Because the former contents of the tank are unknown, the two soil samples collected from the excavation were analyzed for TPH as gasoline by EPA Method 5030; TPH as diesel by EPA Method 8015; BTEX by EPA Method 8020; and total oil and grease by SM 5520F. In addition, soil sample EX-1, collected from the west end of the tank near an observed hole in the tank, was analyzed for halogenated volatile organic compounds by EPA Method 8010; polychlorinated biphenyls (PCBs) by EPA Method 8080; base neutral and acid extractables by EPA Method 8270; and cadmium, total chromium, nickel, zinc, and lead by EPA Method 6010. All analyses were performed by Clayton. Barney Chan of the ACHCSA approved the suite of analyses before field activities began. Analytical results for the soil samples are summarized on Figure 2. Copies of the laboratory analytical reports are included in Appendix C.

Soil sample EX-2 did not contain TPH as gasoline, TPH as diesel, or oil and grease above the laboratory detection limits of 0.3, 1, and 50 milligrams per kilogram (mg/kg), respectively; no BTEX compounds were detected above the laboratory detection limit of 0.005 mg/kg.

Soil sample EX-1 did not contain TPH as gasoline or TPH as diesel above the laboratory detection limits of 2 and 20 mg/kg, respectively; oil and grease was reported at 90 mg/kg. BTEX compounds were not detected above the laboratory limits of 0.005, 0.005, 0.007, or 0.02 mg/kg, respectively. The laboratory detection limits for TPH as gasoline, TPH as

diesel, and xylenes were higher for this soil sample due to the presence of heavier hydrocarbons. No halogenated volatile organic compounds, PCBs, or semivolatile organic compounds were detected in soil sample EX-1. Cadmium, total chromium, nickel, zinc, and lead were detected at concentrations of 0.1, 18, 22, 460, and 5 mg/kg, respectively. The cadmium, chromium, nickel, and lead concentrations detected in sample EX-1 are within the typical range of background concentrations in soil. The concentration of zinc detected in sample EX-1 (460 mg/kg) is slightly higher than the typical background concentration for soil (120-400 mg/kg; Shacklette & Boerngen, 1984).

5.0 SUMMARY AND CONCLUSIONS

One UST and approximately 400 gallons of fluid were removed and disposed by licensed hazardous waste transportation companies under uniform hazardous waste manifests. The tank had apparently not been in use for a number of years, and the type of material stored in the tank is not known. Although several holes were observed in the tank, there were no indications that the tank contents had leaked into surrounding soil. No petroleum products were detected in a sample of fluid collected from the tank. Of the suite of analyses performed on the two soil samples, only 90 mg/kg of oil and grease was detected in one soil sample. Background concentrations of metals also were detected.

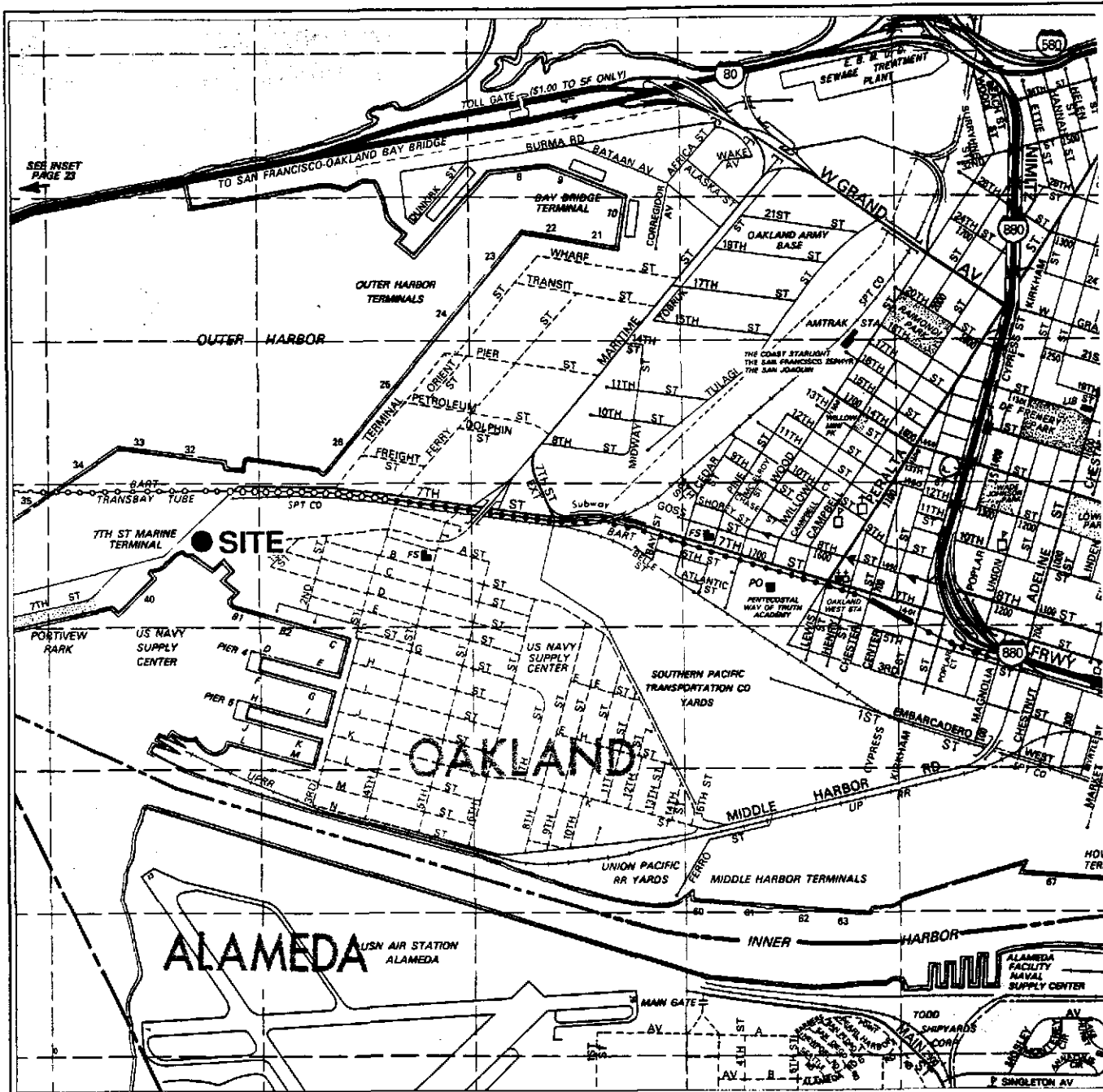
Based on these results, Geomatrix recommends no further action at the site, and that this report be submitted to the appropriate agencies as site closure.

6.0 REFERENCES

H.T. Shacklette and J.G Boerngen, 1984, Element Concentrations in soils and Other Surficial Materials of the Coterminous United States, U.S. Geological Survey, Professional Paper 1270.

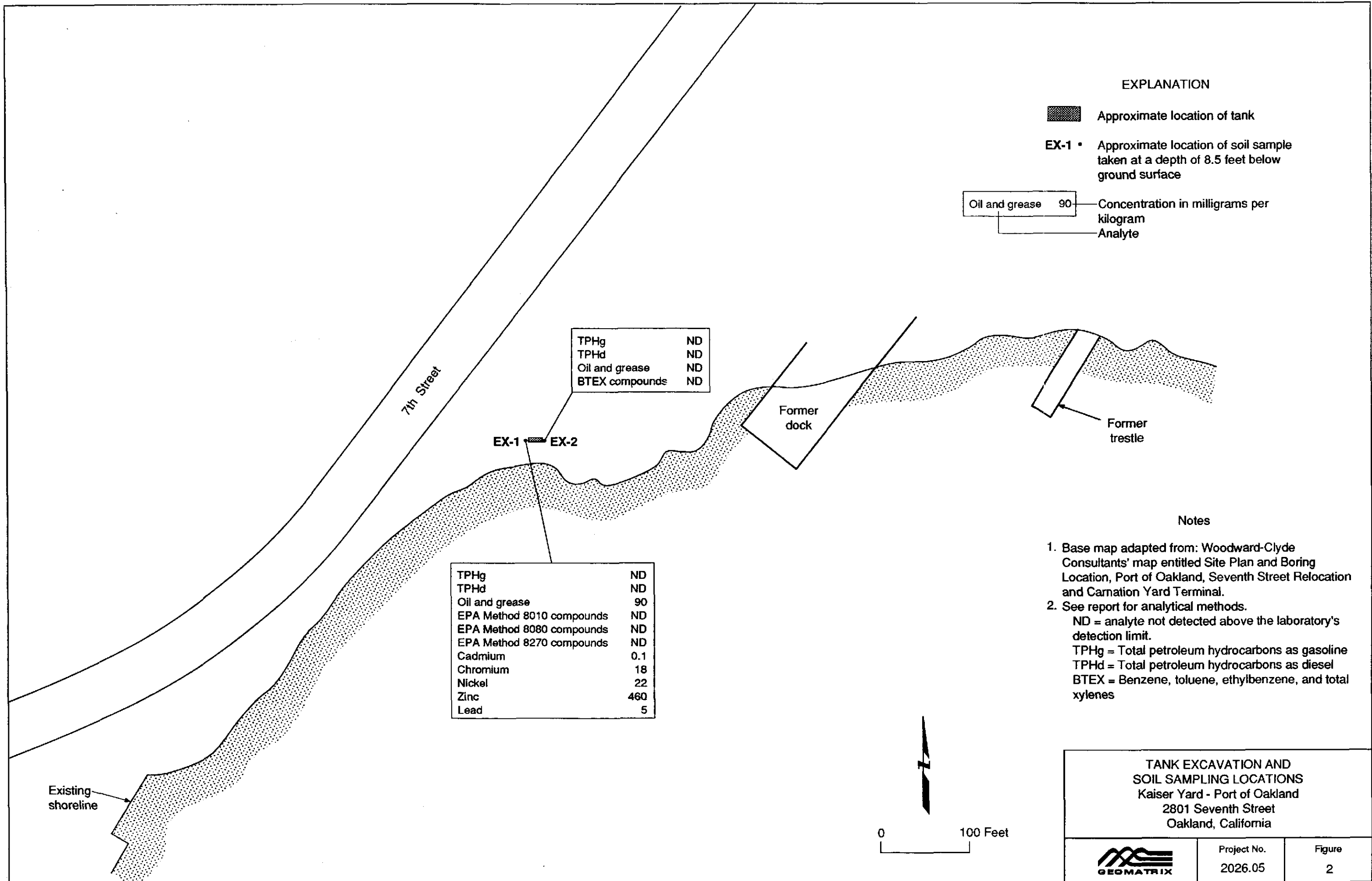
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FIGURES




SITE LOCATION MAP
 Kaiser Yard - Port of Oakland
 2801 Seventh Street
 Oakland, California

Figure
 1
 Project No.
 2026.05



EXPLANATION

-  Approximate location of tank
- EX-1** • Approximate location of soil sample taken at a depth of 8.5 feet below ground surface

Oil and grease 90 — Concentration in milligrams per kilogram
 Analyte

TPHg	ND
TPHd	ND
Oil and grease	ND
BTEX compounds	ND

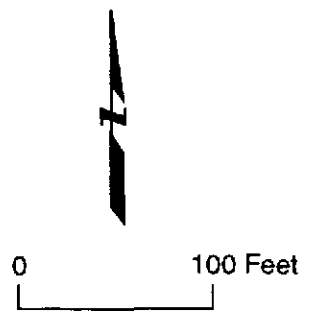
TPHg	ND
TPHd	ND
Oil and grease	90
EPA Method 8010 compounds	ND
EPA Method 8080 compounds	ND
EPA Method 8270 compounds	ND
Cadmium	0.1
Chromium	18
Nickel	22
Zinc	460
Lead	5

Notes

1. Base map adapted from: Woodward-Clyde Consultants' map entitled Site Plan and Boring Location, Port of Oakland, Seventh Street Relocation and Carnation Yard Terminal.
2. See report for analytical methods.
 ND = analyte not detected above the laboratory's detection limit.
 TPHg = Total petroleum hydrocarbons as gasoline
 TPHd = Total petroleum hydrocarbons as diesel
 BTEX = Benzene, toluene, ethylbenzene, and total xylenes

TANK EXCAVATION AND SOIL SAMPLING LOCATIONS
 Kaiser Yard - Port of Oakland
 2801 Seventh Street
 Oakland, California

	Project No. 2026.05	Figure 2
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Existing shoreline

7th Street

Former dock

Former trestle

EX-1 EX-2

APPENDIX A

**UNDERGROUND TANK CLOSURE PLAN AND
UNIFORM HAZARDOUS WASTE MANIFEST**

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
 DEPARTMENT OF ENVIRONMENTAL HEALTH
 HAZARDOUS MATERIALS DIVISION
 80 SWAN WAY, ROOM 200
 OAKLAND, CA 94621
 PHONE NO. 510/271-4320

Barney Chan

8/19/92 OK Blh

ACCEPTED

DEPARTMENT OF ENVIRONMENTAL HEALTH
 470 - 27th Street, 1st Floor
 Oakland, CA 94612
 Telephone: (510) 461-2737

This plan has been reviewed and approved by the Department of Environmental Health, Alameda County Health Care Services Agency, Hazardous Materials Division. The Department of Environmental Health, Alameda County Health Care Services Agency, Hazardous Materials Division, is not responsible for the design, construction, or operation of the tank or for the removal of the tank. The Department of Environmental Health, Alameda County Health Care Services Agency, Hazardous Materials Division, is responsible for the removal of the tank and for the removal of the tank contents and for the removal of the tank contents.

As a condition of approval, the applicant must comply with the following conditions: 1. The applicant must provide a copy of this plan to the Department of Environmental Health, Alameda County Health Care Services Agency, Hazardous Materials Division, at least 48 hours prior to the following inspection: 1. Pre-closure inspection; 2. Post-closure inspection.

_____ for removal of tank and piping

Signature

Title/Position

Removal of a tank and piping is dependent on compliance with accepted plans and all applicable laws and regulations.

THIS IS A FINANCIAL LIABILITY FOR NOT OBTAINING THESE INSURANCE POLICIES.

UNDERGROUND TANK CLOSURE PLAN

*** Complete according to attached instructions ***

- Business Name Port of Oakland
 Business Owner Board of Port Commissioners of City of Oakland
 - Site Address 2801 Seventh Street
 City Oakland Zip 94607 Phone _____
 - Mailing Address 530 Water Street, P.O. Box 2064, Environmental Dept.
 City Oakland Zip 94604-2064 Phone (510) 272-1184
 - Land Owner Port of Oakland
 Address 530 Water Street City, State Oakland, CA zip 94604-2064
 - Generator name under which tank will be manifested _____
Port of Oakland
- EPA I.D. No. under which tank will be manifested CAC 000627912

6. Contractor Zaccor Corporation
Address 791 Hamilton Avenue
City Menlo Park, CA 94025 Phone (415) 363-2181
License Type A ID# 478799

*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board. Indicate that the certificate has been received, in addition, to holding the appropriate contractors license type.

7. Consultant Geomatrix Consultants, Inc.
Address 4721 Tidewater Avenue, Ste. C
City Oakland, CA 94601 Phone (510) 535-2445

8. Contact Person for Investigation
Name Jon Amdur Title Asst. Env. Scientist
Phone (510) 272-1184

9. Number of tanks being closed under this plan 1
Length of piping being removed under this plan 0
Total number of tanks at facility 1

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground tanks are hazardous waste and must be handled **
as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name Allied Oil Pumping EPA I.D. No. CAT080014277
Hauler License No. 2477 License Exp. Date 7/93
Address P. O. Box 399
City Alviso State CA Zip 95002

b) Product/Residual Sludge/Rinsate Disposal Site

Name Refining Services EPA I.D. No. CA0083166728
Address 13331 No. Hwy. 33
City Patterson State CA Zip 95363

c) Tank and Piping Transporter

Name Erickson, Inc. EPA I.D. No. CAD009466392
Hauler License No. 019 License Exp. Date 5/93
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Erickson, Inc. EPA I.D. No. CAD009466392
Address 255 Parr Boulevard
City Richmond State CA Zip 94801

11. Experienced Sample Collector

Name Elizabeth Wells
Company Geomatrix Consultants, Inc.
Address 4721 Tidewater Avenue, Ste. C
City Oakland State CA Zip 94601 Phone (510) 535-2445

12. Laboratory

Name Clayton Environmental
Address 1252 Quarry Lane, P. O. 9019
City Pleasanton State CA Zip 94566
State Certification No. 1196

13. Have tanks or pipes leaked in the past? Yes [] No []

If yes, describe. No leaks documented.

