

**Revised
Preliminary Site Assessment
Phase I Subsurface Investigation
Workplan**

**Encinal Terminals
Alameda, California**

October 28, 1992

BEI Job No. 92150

Prepared by:

Blymyer Engineers, Inc.
1829 Clement Avenue
Alameda, CA 94501

Site:

Encinal Terminals
1521 Buena Vista Avenue
Alameda, CA 94501

LIMITATIONS

The conclusions and recommendations presented herein were prepared in accordance with generally accepted professional engineering and/or geologic practices and principles. The scope of work for the project will be conducted within the limitations prescribed by the client. Our opinions are based upon observations made at the site; review of available environmental, climatological, and geological data pertaining to the site; review of bore logs and subsurface data obtained during the investigation; and evaluation of analytical soil and/or groundwater data provided by an approved testing laboratory. All data obtained from investigations of this type are reviewed by state or local regulatory agencies for conformance with their criteria. Therefore, there is no guarantee that additional bores, soil or groundwater analytical tests, or remedial work will not be required at the site. This warranty is in lieu of all other warranties either expressed or implied pertaining to this project.

Laurie A. Buckman
Project Geologist

Harry Short, RG-CEG
Registered Geologist

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- Appendix B: Final Closure Report for Encinal Terminals, Blymyer Engineers, Inc., dated March 3, 1988
- Appendix C: Letter to Alameda County Health Care Services Agency, documenting waste oil tank containments sump removal, Blymyer Engineers, Inc., dated March 21, 1989
- Appendix D: Correspondence from the Alameda County Health Care Service Agency, Department of Environmental Health, dated October 1992.

1.0 INTRODUCTION

1.1 Background

Blymyer Engineers, Inc. has been retained by Encinal Terminals to conduct a Preliminary Site Assessment (PSA) at the property located at 1521 Buena Vista Avenue, Alameda, California (Figure 1). This report constitutes a workplan requested by the Alameda County Health Care Services Agency (ACHCSA), Department of Environmental Health in a letter to Encinal Terminals, dated April 15, 1992 (Appendix A). The work is required as a result of the removal of three gasoline underground storage tanks (USTs) and a concrete secondary containment sump, which was located beneath a buried waste oil aboveground storage tank (AST). The UST removal details were documented in Blymyer Engineers' *Final Closure Report*, dated March 3, 1988 (Appendix B). The removal of the concrete secondary containment sump is documented in Blymyer Engineers' letter to the ACHCSA, dated March 21, 1989 (Appendix C). This workplan is in accordance with the Regional Water Quality Control Board's (RWQCB) *Staff Recommendation for the Initial Evaluation and Investigation of Underground Tanks*, August 1990, and the State Water Resources Control Board's LUFT manual.

On January 27, 1988, three gasoline USTs with capacities of 1,500 gallons, 5,000 gallons, and 8,500 gallons (Figure 2) were removed from the site by Trace Environmental Services, Inc. Two soil samples were collected from beneath each tank and along the product piping run and analyzed for Total Volatile Hydrocarbons (TVH) by modified EPA Method 8015 and benzene, toluene, and total xylenes (BTX) by modified EPA Method 8020. Soil sample T-1 Fill contained 77,000 micrograms per kilogram ($\mu\text{g}/\text{kg}$) of TVH, and soil sample T-1 Vent contained 35,000 $\mu\text{g}/\text{kg}$ of TVH, 410 $\mu\text{g}/\text{kg}$ of benzene, 32 $\mu\text{g}/\text{kg}$ of toluene, and 550 $\mu\text{g}/\text{kg}$ of total xylenes. Soil sample T-2 Fill contained 1,300 $\mu\text{g}/\text{kg}$ of TVH, 180 $\mu\text{g}/\text{kg}$ of benzene, and 35 $\mu\text{g}/\text{kg}$ of total xylenes, and soil sample T-2 Vent contained 95 $\mu\text{g}/\text{kg}$ benzene. No concentrations of toluene were detected in either soil samples collected from UST excavation T-2. Benzene, at 230 $\mu\text{g}/\text{kg}$ and 110 $\mu\text{g}/\text{kg}$, was the only analyzed constituent detected in the soil samples collected from the gasoline UST excavation T-3 (T-3 Fill and T-3 Vent, respectfully). Two soil samples (FRP Trench 20' and FRP Trench 40') were collected along the piping run from tank T-3. Only one of the piping run soil samples (FRP Trench 40') contained detectable concentrations of TVH at 1,900 $\mu\text{g}/\text{kg}$. BTX was not detected in either piping run soil sample analyzed. The soil sample analytical results from the UST are summarized in Table I. The laboratory analytical reports are included in Appendix B.

Groundwater samples were obtained from UST excavations T-1 and T-3 and analyzed for TVH by modified EPA Method 8015 and BTX by modified EPA Method

8020. Concentrations of TVH of 100,000 micrograms per liter ($\mu\text{g/L}$) in groundwater sample No. 1 collected from UST excavation T-1 and 1,800 $\mu\text{g/L}$ in groundwater sample No. 3 collected from UST excavation T-3 were detected. Total concentrations of BTX of 1,780 $\mu\text{g}\backslash\text{L}$ were detected in the groundwater sample from UST excavation T-1 of and 16.37 $\mu\text{g}\backslash\text{L}$ in the groundwater sample T-3. The groundwater sample analytical results are summarized in Table II and the laboratory analytical report is included in Appendix B.

On February 1, 1988, 17 cubic yards of backfill and naturally occurring soils which appeared to contain petroleum contamination were removed from excavation T-1 and stockpiled on and covered with heavy plastic sheeting by Trace Environmental Services. Upon completion of the removal of the petroleum-contaminated soils, soil samples were collected along the north, south, and east sidewalls of the excavation and analyzed for TVH and BTX, using the above noted analytical methods. Concentrations of TVH and BTX were not detected in the analyzed soil samples. Following profiling of the stockpiled soil for disposal, the stockpiled soil was disposed of on August 8, 1988, at the Forward Landfill in Manteca, California.

On February 1, 1989, a concrete secondary containment sump , which previously contained a waste oil AST, was removed by Trace Environmental Services. Upon removal of the sump, soil that was apparently contaminated with petroleum was

excavated, excluding the petroleum hydrocarbon-impacted soil located underneath the adjacent building. Approximately 7 tons of concrete rubble and contaminated soil was disposed of at Casmalia Resources, Inc. in Casmalia, California. Following the excavation of petroleum-contaminated soil, one soil sample (No.-1) was obtained at an approximate depth of 2 feet below grade surface (bgs) and analyzed for Volatile Organics by EPA Method 8240 and Oil & Grease by Standard Method 503E. The laboratory analytical report is included in Appendix C. Volatile Organics were not detected. Oil & Grease were detected at a concentration of 250,000 ug/kg.

This revised workplan outlines the scope of work specified in the letters from the ACHCSA dated April 15, 1992 and October 19, 1992 (Appendix D).

1.2 Site Conditions

The site is located at 1521 Buena Vista Avenue in Alameda, California. The surrounding area is light industrial and residential. The property is located along the southern shore of the Alameda-Oakland Estuary surrounding the Alaska and Fortmann Basins. A residential area and Pacific Mini Storage are located to the west across Sherman Street, Buena Vista Park is located to the south across Buena Vista Avenue, and Weyerhaeuser Containerboard Packaging is located to the east across Nautilus Street. The site is occupied by loading and distribution facilities which include ASTs, warehouses, loading docks, outdoor storage areas, offices, maintenance

shops, and asphalt parking areas. A railroad easement runs through the southern portion of the property with track traversing through the western, central, and eastern portion of the site. The site is relatively flat with a slight slope to the north.

1.3 Project Objectives

The primary objective of the preliminary site assessment is to assess the horizontal and vertical extent of petroleum contamination within the site soil and groundwater in the vicinity of the former USTs and ASTs. Other investigative objectives include the determination of local groundwater flow direction and gradient in order to comply with current RWQCB requirements.

2.0 ENVIRONMENTAL SETTING

2.1 Regional Geology and Anticipated Site Stratigraphy

The project site is located in the city of Alameda on the gently sloping East Bay Plain, approximately 1/2 mile northeast of San Francisco Bay, at an approximate elevation of 15 feet above mean sea level, based on the National Geodetic Vertical Datum (NGVD). The San Francisco Bay Area is a northwest-southeast trending region within the Coast Range Province of California. Rocks within the region range from Jurassic-aged sedimentary, metamorphic, and plutonic basement rocks to Holocene alluvium. The geologic structure of the region is dominated by a major fault system which includes the San Andreas Fault on the west side of the San Francisco Bay and the Hayward Fault at the base of the Berkeley Hills on the east side of the Bay. These faults are a result of the forces which have uplifted the Coast Range and dropped the section now covered by the open water of the San Francisco Bay and Quaternary alluvium (Goldman, 1967).

Alameda is currently an island, but was historically connected to the city of Oakland but a channel was dredged so as to eliminate the land connection to the remainder of the East Bay landmass. Alameda was originally formed as a near-shore deposit known as the Merritt Sand. "The Merritt Sand is a loose, well-sorted, fine to medium

grained sand and silt, with lenses of sandy clay and clay (Hickenbottom, et al., 1988). The sands grade laterally into the surrounding Bay Mud deposits. The generalized local stratigraphy of Alameda island, from the surface down, excepting the recently filled northernmost and easternmost portions, includes approximately 50 feet of Merritt Sand overlying several hundred feet of older alluvium (Hickenbottom et al., 1988).

2.2 Climate

The East Bay Plain exhibits a Mediterranean-type climate with cool, wet winters and warmer, dry summers. Mean annual precipitation in nearby Oakland is 25.42 inches. Mean monthly rainfall is 4.03 inches in January and 0.05 inches in August. At the time of this investigation, the entire Bay Area has experienced six years of below-normal precipitation. The mean monthly temperature in Oakland is 49.0 degrees Fahrenheit in January and 65.0 degrees Fahrenheit in September (NOAA, 1982).

3.0 METHODS OF INVESTIGATION

3.1 Soil Investigation

3.1.1 Soil Sample Collection

Blymyer Engineers proposes to install two soil bores (MW-1 and MW-3, Figure 2) to an approximate depth of 20 feet bgs using a hollow-stem auger drill rig. The bores will be placed within 10 feet of the former tank locations T-1 and T-3 in the assumed downgradient groundwater flow direction. Soil bores MW-1 and MW-3 will be completed as 2-inch-diameter groundwater monitoring wells. Two additional soil borings, SB-1 (adjacent to the removed waste oil tank), and SB-2 (adjacent to the removed gasoline tank) (Figure 2), will be drilled to a depth of 10 feet bgs.

Drill cuttings will be stored at the site in labeled, D.O.T.-approved, 55-gallon drums for proper disposal by the property owner.

Soil samples for lithologic identification will be collected at a minimum of 5-foot intervals and at encountered zones of noticeable change in lithology. The soil samples will be collected with a split-spoon core barrel lined with three 2-inch-diameter by 6-inch-long brass sleeves. Each sample will be screened for volatile organic compounds (VOCs) using a photoionization detector (PID). One soil sample will be selected for

analysis from the interval with the highest VOCs based on PID readings and another soil sample from the interval directly above the water-bearing zone from each soil bore will be analyzed. One brass sleeve from each sample interval will be packaged for analysis by placing Teflon™ over each end of the brass sleeve and sealing the ends with plastic end caps and nonadhesive silicone tape. The soil samples will be placed on ice and shipped to NET Pacific, Inc., a California certified laboratory, for analysis.

Soil borings SB-1 and SB-2 will be filled to grade with a cement/bentonite grout following the collection of groundwater samples.

3.1.2 Analytical Methods

All of the soil samples will be analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline by modified EPA Method 8015 and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8020. The soil sample collected from bore SB-1 (adjacent to the removed waste oil AST) will also be analyzed for TPH as diesel by modified EPA Method 8015, Halogenated Volatile Organics (HVOs) by EPA Method 8010 or 8240, and Oil & Grease by Standard Method 5520D/F. All proper chain-of-custody procedures will be observed.

3.2 Groundwater Investigation

3.2.1 Monitoring Well Installation

The 20-foot deep soil bores, MW-1 and MW-3, will be converted to 2-inch diameter monitoring wells at the locations indicated in Figure 2. One groundwater piezometer (MW-2 on Figure 2) will be installed in the assumed upgradient groundwater flow direction of the former USTs, in order to establish an accurate groundwater direction and gradient at the site.

The wells and piezometer will be constructed of 2-inch-diameter, schedule 40 PVC casing. The casing will be 0.02-inch factory-slotted from the bottom of the bore to 5 feet above the water table. The remainder of the casing will be blank. A threaded cap or a slip cap with machine screws will be attached to the bottom of the casing.

The annulus between the borehole wall and the casing will be backfilled with clean sand, appropriate for the chosen slot size, from the bottom of the bore to 2 feet above the screened interval. Two feet of bentonite pellets will be placed in the annulus and hydrated to form a seal. The annulus will be backfilled to grade with a neat cement slurry. The top of the casing will be secured with a locking well cap and a flush-mounted traffic box will be installed over each well.

Each well will be developed by surging and pumping approximately 6 to 10 well volumes. Development water will be stored at the site in labeled, D.O.T.-approved, 55-gallon drums for proper disposal by the owner.

3.2.2 Groundwater Sample Collection

Groundwater samples will be collected from well MW-1 and MW-3 at least 24 hours after development. At least three well volumes will be removed prior to sampling. Temperature, pH, and conductivity will be measured initially and after the removal of each well volume. Each well will be sampled when these measurements are all within 15% of each other for three consecutive well volumes. Grab groundwater samples will be collected from SB-1 and SB-2 immediately following the completion of drilling. All groundwater samples will be collected using a decontaminated PVC hand pump or a Teflon™ bailer. One bailer blank will be collected. The groundwater and bailer blank samples will be placed in appropriate containers provided by the laboratory, labeled, and placed on ice for transportation to the analytical laboratory. All proper chain-of custody procedures will be observed.

Purge water will be stored at the site in labeled D.O.T.-approved, 55-gallon drums for proper disposal by the owner.

3.2.3 Analytical Methods

The groundwater samples and the bailer blank sample will be analyzed by NET Pacific, Inc. for TPH as gasoline by modified EPA Method 8015 and BTEX by EPA Method 8020. The groundwater sample collected from monitoring well MW-3 and soil bore SB-1 will also be analyzed for TPH as diesel by modified EPA Method 8015, HVOs by EPA Method 8010 or 8240, and Oil & Grease by Standard Method 5520B/F.

3.2.4 Groundwater Elevation Survey

The water levels in all of the wells at the site will be measured from the top-of-casing (TOC) using an interface probe. The TOC elevation for each well will be surveyed with a rod and level to an arbitrary datum. This will allow the determination of the local groundwater gradient direction.

4.0 HEALTH AND SAFETY PLAN

A site-specific health and safety plan will be prepared by Blymyer Engineers which will cover all phases of the work. The plan will address key personnel and their responsibilities relative to health and safety, chemical and physical hazards, risk evaluation and management, personal protective equipment, and emergency procedures. A "tail-gate meeting" will be performed prior to each phase of the work to discuss pertinent health and safety issues and review the site safety plan with all site workers.

5.0 FINAL REPORT

Upon completion of the work described in the preceding sections, a final report will be prepared for submittal to the Alameda County Health Care Services Agency, Department of Environmental Health. The final report will include a description of all field work performed at the site, analytical results and interpretation, soil and groundwater contamination characterization, conclusions, and recommendations.

6.0 REFERENCES

- Goldman, Harold B, 1967. Geology of San Francisco Bay, California Division of Mines and Geology, prepared for the San Francisco Bay Conservation and Development Commission, 58 p.
- Hickenbottom, K. and Kenneth, M., 1988, *Geohydrogeology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California*; 205(J) Report, submitted to the California Regional Water Quality Control Board, San Francisco Bay Region, 83 p.
- National Oceanic and Atmospheric Administration, 1982, *Monthly Normal of Temperature Precipitation, and Heating and Cooling Degree Days 1951-1980, California*.
- National Oceanic and Atmospheric Administration, 1982, *Climatology of the United States No. 81 (by state). Monthly normals of temperature, precipitation, and heating and cooling degrees 1951-1980, California*: National Climatic Center, Asheville, N.C.

Tables

Table I
Summary of Soil Sample Analytical Results
Encinal Terminals, Inc.
Alameda, California
BEI Job No. 92159

Sample ID No.	Modified EPA Method 8015	EPA Method 8020	EPA Method 8020	EPA Method 8020	EPA Method 8240	Standard Method 503E
	TVH (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Total Xylenes (µg/kg)	VOC (µg/kg)	Oil & Grease (µg/kg)
No. 1 Fill	77,000	<20	<10	<20	NA	NA
No. 1 Vent	35,000	410	32	550	NA	NA
No. 2 Fill	1,300	180	<10	35	NA	NA
No. 2 Vent	<600	95	<10	<20	NA	NA
No. 3 Fill	<600	230	<80	<20	NA	NA
No. 4 Vent	<600	110	<80	<20	NA	NA
No. 1, FRP Trench 20'	<300	<30	<20	<40	NA	NA
No. 2, FRP Trench 40'	1,900	<30	<20	<30	NA	NA
No. 4, T-1 Redone	<300	<30	<20	<30	NA	NA
No. 5, T-1 Redone	<300	<30	<20	<30	NA	NA
No. 6, T-1 Redone	<300	<30	<20	<40	NA	NA
No. 1	NA	NA	NA	NA	<10	750,000

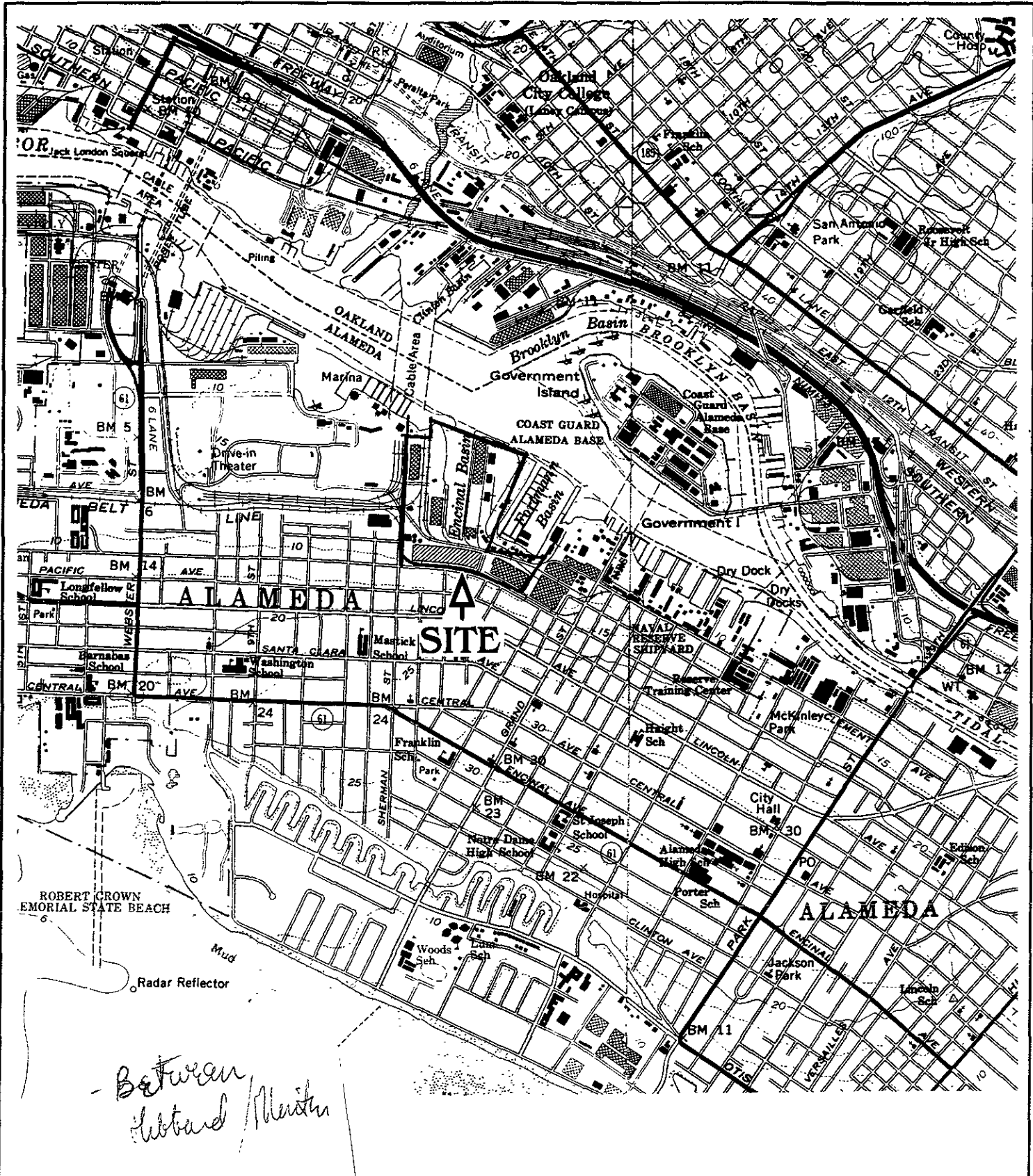
µg/kg = micrograms per kilogram (parts per billion)
 NA = not analyzed for that parameter
 < = below method detection limit
 TVH = Total Volatile Hydrocarbons
 VOCs = Volatile Organic Compounds

Table II
Summary of Groundwater Analytical Sample Results
Encinal Terminals, Inc.
Alameda, California
BEI Job No. 92150

Sample ID	Modified EPA Method 8015	EPA Method 8020	EPA Method 8020	EPA Method 8020
	TVH (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Total Xylenes (µg/L)
No. 1	100,000	910	750	120
No. 3	1,800	3	3	10

µg/L = micrograms per liter (parts per billion)
TVH = Total Volatile Hydrocarbons

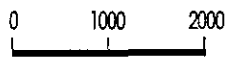
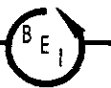
Figures



SO.

7.5' QUAD. 'OAKLAND WEST, CA' PHOTOREVISED 1980 AND 'OAKLAND EAST, CA' PHOTOREVISED 1980.

BLMYER
ENGINEERS, INC.



SITE LOCATION MAP

FIGURE

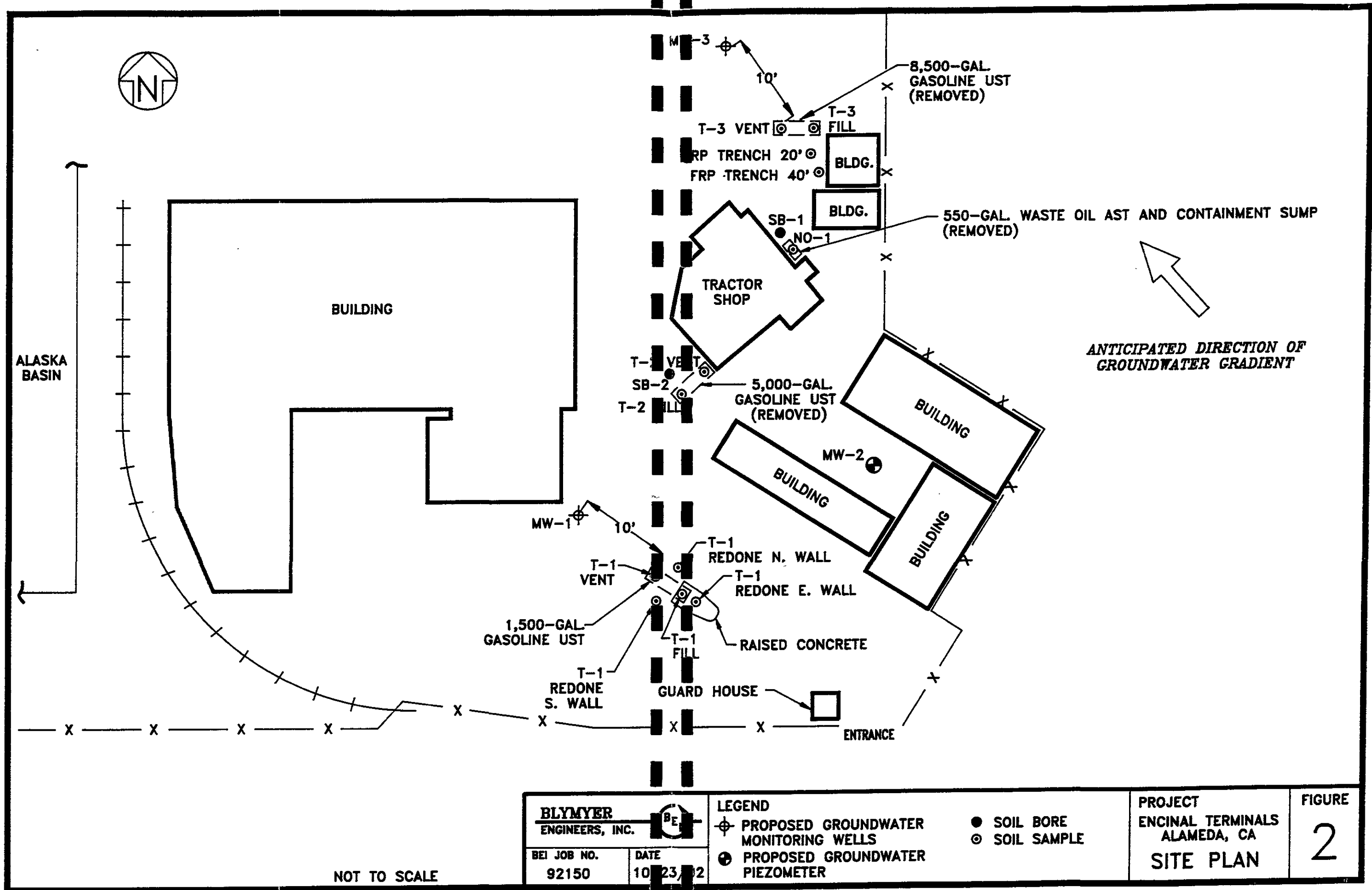
ENCINAL TERMINALS
ALAMEDA, CA

1

BEI JOB NO. 92150

DATE 10/92

SCALE IN FEET



Appendix A

P2095

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division

1380 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320



April 15, 1992

Peter Wang
Encinal Terminals
1521 Buena Vista Avenue
Alameda, CA 94501

STID 3522

RE: Investigations at 1521 Buena Vista Avenue, Alameda, California

Dear Mr. Wang,

Alameda County Environmental Health Department, Hazardous Materials Division, has currently been delegated authority from the San Francisco Regional Water Quality Control Board (RWQCB) to oversee a large number of remediation cases within Alameda County. Therefore, we will be the lead contact agency for the oversight duties regarding this case.

The files for the case referenced above have recently been reviewed by our office. According to the Final Closure Report, dated March 8, 1988, three underground storage tanks (T-1, T-2, and T-3) were removed from the site on January 27, 1988. The analysis of groundwater samples collected from tank pits T-1 and T-3 identified up to 100,000 parts per billion (ppb) Total Petroleum Hydrocarbons (TPH) and 910 ppb Benzene. Additionally, the analysis of soil samples collected from these tank pits, and tank pit T-2, identified concentrations of TPH and Benzene.

Guidelines established by RWQCB requires that a groundwater investigation be conducted whenever an unauthorized release of product is suspected from an underground storage tank (UST). The groundwater contamination identified from the tank pits would indicate that such an event has occurred. The guidelines state that a groundwater monitoring well must be installed within ten feet downgradient of a former UST. Since groundwater contamination was documented in water collected from tank pits T-1 and T-3, monitoring wells will be required to be installed within 10 feet downgradient of these former USTs. Additionally, a third well must also be installed to complete the triangulation necessary to determine the groundwater gradient behavior.



You are required to submit a preliminary site assessment (PSA) work plan describing the proposed work at the site. It should include, among other elements, a depiction of the proposed locations for monitoring well installations and sampling plan. Initial soil and groundwater samples shall be analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) and Benzene, Toluene, Ethylbenzene, and Xylenes using appropriate EPA or DHS methods. Additionally, due to concern over the former above-ground waste oil tank, initial soil and groundwater samples should also be analyzed for TPH as diesel fuel, volatile organic compounds (EPA method 8010 or 8240) and oil and grease (EPA 5520 series).

The PSA must be conducted in accordance with the RWQCB's Staff Recommendation for the Initial Evaluation and Investigation of Underground Tanks, August 1990, and the State Water Resources Control Board's LUFT field manual. Please reference the attached Appendix A summarizing the technical scope of such a PSA proposal.

The PSA shall be conducted under the direction of a registered engineer/geologist. A technical report shall be submitted following completion of this initial stage of work at the site. Subsequent reports are to be submitted quarterly until this site qualifies for final RWQCB "sign-off".

The referenced initial and quarterly reports must describe the status of the investigation and must include, among others, the following elements:

- o Details and results of all work performed during the designated period of time: records of field observations and data, boring and well construction logs, water level data, chain-of-custody forms, laboratory results for all samples collected and analyzed, tabulations of free product thicknesses and dissolved fractions, etc.
- o Status of groundwater contamination characterization
- o Interpretation of results: water level contour maps showing gradients, free and dissolved product plume definition maps for each target component, geologic cross sections, etc.
- o Recommendations or plans for additional investigative work of remediation

The need for any follow-up investigative or remedial actions at this site will be based upon the data derived from this groundwater investigation.

If you have any questions or comments please contact Juliet Shin at
(510) 271-4320.

Sincerely,



Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

Attachment

cc: Richard Hiett, RWQCB
Richard Quarante, Alameda Fire Dept.

Appendix B

FINAL CLOSURE REPORT

FOR

ENCINAL TERMINALS, INC.
1521 BUENA VISTA AVENUE
ALAMEDA, CALIFORNIA 94501

BY

BLYMYER ENGINEERS, INC.
1829 CLEMENT AVENUE
ALAMEDA, CALIFORNIA 94501

BEI JOB NO. 87139
MARCH 3, 1988

On January 27, 1988, three underground gasoline tanks ranging in capacity from 1,500 gallons to 8,500 gallons were permanently closed at Encinal Terminals.

The tanks were high pressure rinsed prior to removal. All rinsate was transported by Refineries Service (Transporter I.D. No. CAD83166728) to their facility (State Facility No. CAD981997570) for disposal. The tanks were also dry iced before removal.

Two soil samples were taken from the bottom of each tank excavation in locations dictated by Mr. Ariu Levi of the Alameda County Health Agency. In addition, water samples were obtained from the T-1 and T-3 excavations. It was noted at the time that the T-2 and T-3 excavations appeared relatively clean, while the T-1 excavations appeared to have some contamination. All samples were analyzed by Trace Analysis Laboratory for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix A.

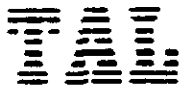
Mr. Levi indicated that the 40 foot fiberglass piping run from T-3 would have to be removed and soil samples taken at 20' intervals. This work was performed on February 1, 1988. Two soil samples (labelled FRP Trench - 20' and FRP Trench - 40') were obtained from the locations indicated on the attached site plan and analyzed by Trace Analysis Laboratory for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix B.

The oil/water separator was removed intact on February 1, 1988. The discharge line was permanently capped with concrete. One soil sample was obtained from the bottom of the excavation

and analyzed by Trace Analysis Laboratory for total oil and grease. The analysis results and chain-of-custody documentation are attached in Appendix B. The oil/water separator is on site awaiting transport and disposal at a Class I facility.

The contaminated soil in the T-1 excavation was excavated on February 1, 1988, and stockpiled on Visqueen in a bermed area. The pile was then covered with Visqueen. Soil samples were obtained from the north, south and east walls of the excavation to confirm that grossly contaminated soil had been removed. The samples were analyzed by Trace Analysis Laboratories for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix B. The contaminated soil will be properly disposed of when contaminant concentrations are determined.

APPENDIX A

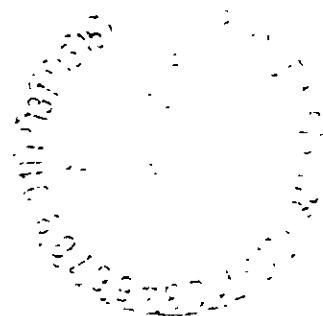


DATE: 2/17/88

LOG NO.: 5615

DATE SAMPLED: 1/27/88

DATE RECEIVED: 1/27/88



CUSTOMER: Blymyer and Sons Engineering, Inc.

REQUESTER: Michael S. Lewis

PROJECT: No. 87139, Encinal Terminals

Sample Type: Water

Method and Constituent	Units	No. 1, Water		No. 3, Water	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit
Modified EPA Method 8015:					
Volatile Hydrocarbons	ug/l	100,000	1,000	1,800	2
Modified EPA Method 8020:					
Benzene	ug/l	910	80	3.3	0.2
Toluene	ug/l	750	400	3	0.8
Xylenes	ug/l	120	130	10	0.2

DATE: 2/17/88
 LOG NO.: 5615
 DATE SAMPLED: 1/27/88
 DATE RECEIVED: 1/27/88
 PAGE: Two

Sample Type: Soil

Method and Constituent	Units	No. 1, Fill		No. 1, Vent		No. 2, Fill	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	77,000	600	35,000	600	1,300	600
Modified EPA Method 8020:							
Benzene	ug/kg	< 20	20	410	10	180	10
Toluene	ug/kg	< 10	10	32	10	< 10	10
Xylenes	ug/kg	< 20	20	550	20	35	10
		No. 2, Vent		No. 3, Fill		No. 3, Vent	
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	< 600	600	< 600	600	< 600	600
Modified EPA Method 8020:							
Benzene	ug/kg	95	10	230	20	110	20
Toluene	ug/kg	< 10	10	< 10	10	< 80	80
Xylenes	ug/kg	< 20	20	< 20	20	< 20	20

Hugh R. McLean
 Hugh R. McLean
 Supervisory Chemist

CHAIN OF CUSTODY RECORD

10 day TAT

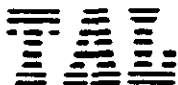
PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	<div style="display: flex; justify-content: space-around;"> Soil Aqueous water AQ water TVN + BTX VOC + SVOC </div>					REMARKS	
87139		Encinal Terminals											
SAMPLERS: (Signature) Michael S. Kim													
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION								
3	1/27/88	2:30P		X	Vent T-3	1	X		X				
3	1/27/88	2:35P		X	Water T-3	1		X	X		} one sample		
3	1/27/88	2:36P		X	Water T-3	1			X	X			
3	1/27/88	2:37P		X	Water T-3	1			X	X			
3	1/27/88	2:45P		X	Fill T-3	1	X			X			
1	1/27/88	3:15P		X	Vent T-1	1	X			X			
1	1/27/88	3:25P		X	Water T-1	1		X		X	} one sample		
1	1/27/88	3:26P		X	Water T-1	1			X	X			
1	1/27/88	3:27P		X	Water T-1	1			X	X			
1	1/27/88	3:30P		X	Fill T-1	1	X			X			
2	1/27/88	3:50P		X	Vent T-2	1	X			X			
2	1/27/88	3:58P		X	Fill T-2	1	X			X			
Relinquished by: (Signature) Michael S. Kim			Date / Time 1/27/88 5:40PM		Received by: (Signature)			Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)			Date / Time		Received by: (Signature)			Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)			Date / Time		Received for Laboratory by: (Signature) Louis D. Pina			Date / Time 1/27/88 5:40PM		Remarks			

Distribution: Original Accompanies Shipment; Copy to Coordinator; Field File

TRACE ANALYSIS LABORATORY
3423 INVESTMENT BLVD., UNIT 3
HAYWARD, CA 94545
(415) 783-6960

3-0605

APPENDIX B



DATE: 2/26/88
 LOG NO.: 5639
 DATE SAMPLED: 2/1/88
 DATE RECEIVED: 2/2/88

CUSTOMER: Blymyer and Sons Engineers, Inc.
 REQUESTER: Michael S. Lewis
 PROJECT: No. 87139, Encinal Terminals

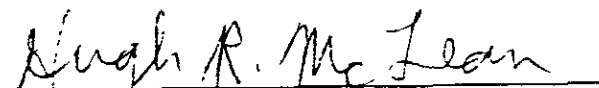
Sample Type: Soil

Method and Constituent	Units	No. 1, FRP Trench - 20'		No. 2, FRP Trench - 40'		No. 3 - OWS Excavation	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	< 300	300	1,900	300		
Modified EPA Method 8020:							
Benzene	ug/kg	< 30	30	< 30	30		
Toluene	ug/kg	< 20	20	< 20	20		
Xylenes	ug/kg	< 40	40	< 30	30		
Standard Method 503E, Hydrocarbons:							
Oil and Grease	ug/kg					700,000	10,000

DATE: 2/26/88
 LOG NO.: 5639
 DATE SAMPLED: 2/1/88
 DATE RECEIVED: 2/2/88
 PAGE: Two

Sample Type: Soil

Method and Constituent	Units	No. 4, T-1 Redone South Wall		No. 5, T-1 Redone East Wall		No. 6, T-1 Redone North Wall	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	< 300	300	< 300	300	< 300	300
Modified EPA Method 8020:							
Benzene	ug/kg	< 30	30	< 30	30	< 30	30
Toluene	ug/kg	< 20	20	< 20	20	< 20	20
Xylenes	ug/kg	< 30	30	< 30	30	< 40	40


 Hugh R. McLean
 Supervisory Chemist

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME			NO. OF CONTAINERS	REMARKS				
BT139		ENCINAL TERMINALS								
SAMPLERS: (Signature)					Soil TVH + BTX Oil & Grease					
Michael S. [Signature]										
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION					
1	2/1/88	9:55A	X		FRP Trench - 20'	1	X	X		10 day turnaround
2	2/1/88	9:25A	X		FRP Trench - 40'	1	X	X		↓
3	2/1/88	11:30A	X		OWS Excavation	1	X		X	
4	2/1/88	3:20P	X		T-1 Redone South wall	1	X	X		
5	2/1/88	3:40P	X		T-1 Redone East wall	1	X	X		
6	2/1/88	3:50P	X		T-1 Redone North wall	1	X	X		
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Michael S. [Signature]		2/2/88 7:55A	[Signature]		2/2/88 3:20P	[Signature]		[Signature]		
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)		Date / Time	Remarks				

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3-0605



Appendix C

BLYMYER

ENGINEERS. INC.



March 21, 1989
BEI Job No. 88322

Mr. Ariu Levi
ALAMEDA COUNTY HEALTH AGENCY
80 Swan Way, Room #200
Oakland, CA. 94621

SUBJECT: ENCINAL TERMINALS
 1521 BUENA VISTA AVENUE
 ALAMEDA, CALIFORNIA

Dear Mr. Levi:

The old waste oil tank containment sump at the subject facility was removed on February 1, 1989. Approximately seven tons of concrete rubble and contaminated soil was removed and transported to Casmalia Resources, Inc. (copy of manifest attached) for disposal. One soil sample was obtained from the bottom center of the excavation. Captain Marvin Helms of the Alameda Fire Department was on site to witness the soil sampling. The sample was delivered to Trace Analysis Laboratory and analyzed for volatile organics (EPA Method #8240) and oil and grease (SM 503E). As indicated in the attached analytical report, 750 mg/kg oil and grease was detected in the sample. No volatile organic compounds were detected.

If you have any questions, please give me a call at 521-3773.

Cordially,

BLYMYER ENGINEERS, INC.

— Michael S. Lewis
Environmental Specialist

MSL/ds

Attachments

cc: Mr. Peter Wong -ENCINAL TERMINALS
 Capt. Marvin Helms-ALAMEDA FIRE DEPARTMENT

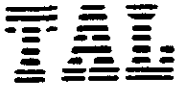
IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-862-7650

88252632

GENERATOR

FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. 08 10 91 30 10 14 16 15	Manifest Document No. 45 13 75	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Esqinal Terminals 1521 Buena Vista Ave./ Alameda CA				A. State Manifest Document Number 88252632	
4. Generator's Phone (415) _____				B. State Generator's ID H A H 100 164 B 12 91 7 37	
5. Transporter 1 Company Name Dillard Trucking		6. US EPA ID Number 10 30 98 1 15 92 14 70		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 901 101 415-475-7062	
9. Designated Facility Name and Site Address Casmalia Resources, Inc NTU Road Casmalia, CA 93439				E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone 505 937 8489	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)			12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
a. Contaminated Soil And Concrete California Regulated Waste Only			OT		
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above Concrete and Soil Contaminated With Less Than 1% Motor Oil			K. Handling Codes for Wastes Listed Above		
			a.	b.	
			c.	d.	
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name			Signature		Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name Allen DUT...			Signature		Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		Month Day Year
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name			Signature		Month Day Year



DATE: 3/7/89
LOG NO.: 6979
DATE SAMPLED: 2/1/89
DATE RECEIVED: 2/2/89

CUSTOMER: Blymyer Engineers, Inc.
REQUESTER: Mike Lewis
PROJECT: No. 88322, Encinal - Alameda

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>No. 1</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
Standard Method 503E, Hydrocarbons: Oil and Grease	ug/kg	750,000	20,000

TRACE ANALYSIS LABORATORY

ORGANIC ANALYSIS DATA SHEET

Page Two

Client: Blymyer Engineers, Inc. Date Sampled: 2/1/89
 Contact: Mike Lewis Date Received: 2/2/89
 Client Project: No. 88322, Encinal - Alameda Date Analyzed: 02/14/89
 Sample Point: _____ Date Reported: 02/14/89
 LAB Project: 6979 Dilution Factor: 1.00
 Sample ID: 01 Analysis Method: _____
 Analyst: Lee Do QA/QC Supervisor: Dan Farah

Comment: U, J = Compounds are below Detection Limit
10 ug/kg = Detection Limit

TARGET COMPOUNDS

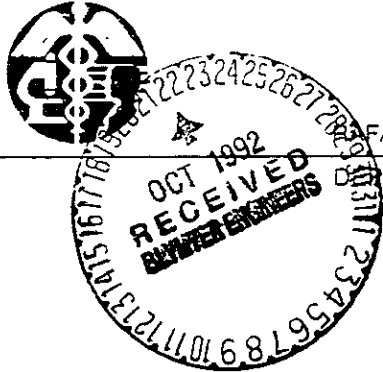
CONCENTRATION UNITS:

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	10.00	U
74-83-9	BROMOMETHANE	10.00	U
75-01-4	VINYL CHLORIDE	10.00	U
75-00-3	CHLOROETHANE	10.00	U
75-09-2	METHYLENE CHLORIDE	10.00	U
75-69-4	TRICHLOROFLOUROMETHANE	10.00	U
75-35-4	1 1-DICHLOROETHENE	10.00	U
107-6-2	2-DICHLOROETHANE	10.00	U
75-34-3	1 1-DICHLOROETHANE	10.00	U
156-60-5	TRANS-1 2-DICHLOROETHENE	10.00	U
67-66-3	CHLOROFORM	10.00	U
71-55-6	1 1 1-TRICHLOROETHANE	10.00	U
56-23-5	CARBONTETRACHLORIDE	10.00	U
75-27-4	BROMODICHLOROMETHANE	10.00	U
78-87-5	2-DICHLOROPROPANE	10.00	U
10061-02-6	TRANS 1 3-DICHLOROPROPENE	10.00	U
79-01-6	TRICHLOROETHENE	10.00	U
124-48-1	DIBROMOCHLOROMETHANE	10.00	U
71-43-2	BENZENE	10.00	0J
79-00-5	1 1 2-TRICHLOROETHANE	10.00	U
10061-01-5	CIS-1 3-DICHLOROPROPENE	10.00	U
110-75-8	2-CHLOROETHYLVINYLEETHER	10.00	U
75-25-2	BROMOFORM	10.00	U
79-34-5	1 1 2 2 TETRACHLOROETHANE	10.00	U
127-18-4	TERTRACHLOROETHENE	10.00	U
108-88-3	TOLUENE	10.00	1J
108-90-7	CHLOROBENZENE	10.00	U
100-41-4	ETHYLBENZENE	10.00	U
541-73-1	3-DICHLOROBENZENE	10.00	U
3588-82-1	4-DICHLOROBENZENE	10.00	U
95-50-1	2-DICHLOROBENZENE	10.00	U

Appendix D

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



FAT A. SHAHID, ASST. AGENCY DIRECTOR

October 19, 1992

Peter Wang
Encinal Terminals
1521 Buena Vista Avenue
Alameda, CA 94501

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 3522

RE: The approval of work plan for investigations at 1521 Buena Vista Avenue, Alameda, California

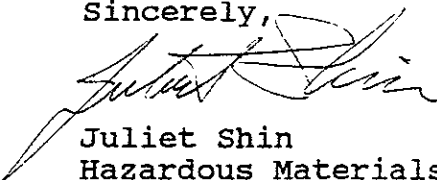
Dear Mr. Wang,

This office has received and reviewed the work plan, dated October 14, 1992, for the above site. In addition to soil samples being collected from boring SB-1, a grab ground water sample should also be collected and analyzed for waste oil constituents. Additionally, ground water investigations should be conducted to address the area downgradient of T-2. Per the conversation between Sue Black, Blymer Engineering, and myself on October 19, 1992, it will be acceptable to collect and analyze grab ground water samples from this area to determine whether releases from T-2 have impacted ground water. If the ground water samples identify unacceptable levels of contaminants, you may be required to install a permanent monitoring well in this area. With the above additional requirements, the work plan will be acceptable to this office.

Lastly, please be reminded to collect soil samples at changes in lithology, in addition to soil samples being collected at depth intervals of 5 feet.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,


Juliet Shin
Hazardous Materials Specialist

cc: Richard Hiett, RWQCB

Robert La Grone, Alameda Fire Dept.

Appendix A

P2095

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division

1380 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320



April 15, 1992

Peter Wang
Encinal Terminals
1521 Buena Vista Avenue
Alameda, CA 94501

STID 3522

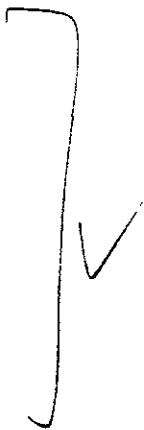
RE: Investigations at 1521 Buena Vista Avenue, Alameda, California

Dear Mr. Wang,

Alameda County Environmental Health Department, Hazardous Materials Division, has currently been delegated authority from the San Francisco Regional Water Quality Control Board (RWQCB) to oversee a large number of remediation cases within Alameda County. Therefore, we will be the lead contact agency for the oversight duties regarding this case.

The files for the case referenced above have recently been reviewed by our office. According to the Final Closure Report, dated March 8, 1988, three underground storage tanks (T-1, T-2, and T-3) were removed from the site on January 27, 1988. The analysis of groundwater samples collected from tank pits T-1 and T-3 identified up to 100,000 parts per billion (ppb) Total Petroleum Hydrocarbons (TPH) and 910 ppb Benzene. Additionally, the analysis of soil samples collected from these tank pits, and tank pit T-2, identified concentrations of TPH and Benzene.

Guidelines established by RWQCB requires that a groundwater investigation be conducted whenever an unauthorized release of product is suspected from an underground storage tank (UST). The groundwater contamination identified from the tank pits would indicate that such an event has occurred. The guidelines state that a groundwater monitoring well must be installed within ten feet downgradient of a former UST. Since groundwater contamination was documented in water collected from tank pits T-1 and T-3, monitoring wells will be required to be installed within 10 feet downgradient of these former USTs. Additionally, a third well must also be installed to complete the triangulation necessary to determine the groundwater gradient behavior.



You are required to submit a preliminary site assessment (PSA) work plan describing the proposed work at the site. It should include, among other elements, a depiction of the proposed locations for monitoring well installations and sampling plan. Initial soil and groundwater samples shall be analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) and Benzene, Toluene, Ethylbenzene, and Xylenes using appropriate EPA or DHS methods. Additionally, due to concern over the former above-ground waste oil tank, initial soil and groundwater samples should also be analyzed for TPH as diesel fuel, volatile organic compounds (EPA method 8010 or 8240) and oil and grease (EPA 5520 series).

The PSA must be conducted in accordance with the RWQCB's Staff Recommendation for the Initial Evaluation and Investigation of Underground Tanks, August 1990, and the State Water Resources Control Board's LUFT field manual. Please reference the attached Appendix A summarizing the technical scope of such a PSA proposal.

The PSA shall be conducted under the direction of a registered engineer/geologist. A technical report shall be submitted following completion of this initial stage of work at the site. Subsequent reports are to be submitted quarterly until this site qualifies for final RWQCB "sign-off".

The referenced initial and quarterly reports must describe the status of the investigation and must include, among others, the following elements:

- o Details and results of all work performed during the designated period of time: records of field observations and data, boring and well construction logs, water level data, chain-of-custody forms, laboratory results for all samples collected and analyzed, tabulations of free product thicknesses and dissolved fractions, etc.
- o Status of groundwater contamination characterization
- o Interpretation of results: water level contour maps showing gradients, free and dissolved product plume definition maps for each target component, geologic cross sections, etc.
- o Recommendations or plans for additional investigative work of remediation

The need for any follow-up investigative or remedial actions at this site will be based upon the data derived from this groundwater investigation.

If you have any questions or comments please contact Juliet Shin at
(510) 271-4320.

Sincerely,



Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

Attachment

cc: Richard Hiett, RWQCB
Richard Quarante, Alameda Fire Dept.

Appendix B

FINAL CLOSURE REPORT

FOR

ENCINAL TERMINALS, INC.
1521 BUENA VISTA AVENUE
ALAMEDA, CALIFORNIA 94501

BY

BLYMYER ENGINEERS, INC.
1829 CLEMENT AVENUE
ALAMEDA, CALIFORNIA 94501

BEI JOB NO. 87139
MARCH 3, 1988

On January 27, 1988, three underground gasoline tanks ranging in capacity from 1,500 gallons to 8,500 gallons were permanently closed at Encinal Terminals.

The tanks were high pressure rinsed prior to removal. All rinsate was transported by Refineries Service (Transporter I.D. No. CAD83166728) to their facility (State Facility No. CAD981997570) for disposal. The tanks were also dry iced before removal.

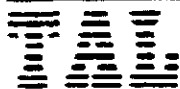
Two soil samples were taken from the bottom of each tank excavation in locations dictated by Mr. Ariu Levi of the Alameda County Health Agency. In addition, water samples were obtained from the T-1 and T-3 excavations. It was noted at the time that the T-2 and T-3 excavations appeared relatively clean, while the T-1 excavations appeared to have some contamination. All samples were analyzed by Trace Analysis Laboratory for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix A.

Mr. Levi indicated that the 40 foot fiberglass piping run from T-3 would have to be removed and soil samples taken at 20' intervals. This work was performed on February 1, 1988. Two soil samples (labelled FRP Trench - 20' and FRP Trench - 40') were obtained from the locations indicated on the attached site plan and analyzed by Trace Analysis Laboratory for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix B.

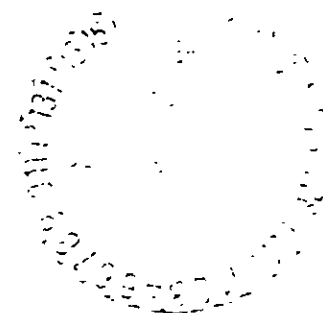
The oil/water separator was removed intact on February 1, 1988. The discharge line was permanently capped with concrete. One soil sample was obtained from the bottom of the excavation

and analyzed by Trace Analysis Laboratory for total oil and grease. The analysis results and chain-of-custody documentation are attached in Appendix B. The oil/water separator is on site awaiting transport and disposal at a Class I facility.

The contaminated soil in the T-1 excavation was excavated on February 1, 1988, and stockpiled on Visqueen in a bermed area. The pile was then covered with Visqueen. Soil samples were obtained from the north, south and east walls of the excavation to confirm that grossly contaminated soil had been removed. The samples were analyzed by Trace Analysis Laboratories for total volatile hydrocarbons and BTX. The analysis results and chain-of-custody documentation are attached in Appendix B. The contaminated soil will be properly disposed of when contaminant concentrations are determined.



DATE: 2/17/88
 LOG NO.: 5615
 DATE SAMPLED: 1/27/88
 DATE RECEIVED: 1/27/88



CUSTOMER: Blymyer and Sons Engineering, Inc.

REQUESTER: Michael S. Lewis

PROJECT: No. 87139, Encinal Terminals

Sample Type: Water

<u>Method and Constituent</u>	<u>Units</u>	<u>No. 1, Water</u>		<u>No. 3, Water</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>	<u>Concen- tration</u>	<u>Detection Limit</u>
Modified EPA Method 8015:					
Volatile Hydrocarbons	ug/l	100,000	1,000	1,800	2
Modified EPA Method 8020:					
Benzene	ug/l	910	80	3.3	0.2
Toluene	ug/l	750	400	3	0.8
Xylenes	ug/l	120	130	10	0.2

DATE: 2/17/88
 LOG NO.: 5615
 DATE SAMPLED: 1/27/88
 DATE RECEIVED: 1/27/88
 PAGE: Two

Sample Type: Soil

Method and Constituent	Units	No. 1, Fill		No. 1, Vent		No. 2, Fill	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	77,000	600	35,000	600	1,300	500
Modified EPA Method 8020:							
Benzene	ug/kg	< 20	20	410	10	180	10
Toluene	ug/kg	< 10	10	32	10	< 10	10
Xylenes	ug/kg	< 20	20	550	20	35	10

Method and Constituent	Units	No. 2, Vent		No. 3, Fill		No. 3, Vent	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	< 600	600	< 600	600	< 600	600
Modified EPA Method 8020:							
Benzene	ug/kg	95	10	230	20	110	20
Toluene	ug/kg	< 10	10	< 10	10	< 80	80
Xylenes	ug/kg	< 20	20	< 20	20	< 20	20

Hugh R. McLean
 Hugh R. McLean
 Supervisory Chemist

CHAIN OF CUSTODY RECORD

10 day TAT

PROJ. NO.		PROJECT NAME		NO. OF CONTAINERS	<div style="display: flex; justify-content: space-around; border: 1px solid black;"> Soil Quart. water 40ml water TVN + BTX OTI & BTX </div>					REMARKS	
87139		Encinal Terminals									
SAMPLERS: (Signature)		Michael S. Lee									
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION						
3	1/27/88	2:30P	X	X	Vent T-3	1	X				
3	1/27/88	2:35P	X	X	Water T-3	1	X			} one sample	
3	1/27/88	2:36P	X	X	Water T-3	1		X	X		
3	1/27/88	2:37P	X	X	Water T-3	1		X	X		
3	1/27/88	2:45P	X	X	Fill T-3	1	X		X		
1	1/27/88	3:15P	X	X	Vent T-1	1	X		X		
1	1/27/88	3:25P	X	X	Water T-1	1	X		X	} one sample	
1	1/27/88	3:26P	X	X	Water T-1	1		X	X		
1	1/27/88	3:27P	X	X	Water T-1	1		X	X		
1	1/27/88	3:35P	X	X	Fill T-1	1	X		X		
2	1/27/88	3:50P	X	X	Vent T-2	1	X		X		
2	1/27/88	3:55P	X	X	Fill T-2	1	X		X		
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Michael S. Lee		1/27/88 5:40pm									
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks			
				Loui DuPon		1/27/88 5:40pm					

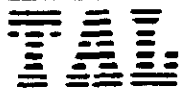
NO 1 likely to be high

Distribution: Original Accompanies Shipment; Copy to Coordinator's Field File

TRACE ANALYSIS LABORATORY
3423 INVESTMENT BLVD., UNIT 3
HAYWARD, CA 94545
(415) 783-6960

3-0605

APPENDIX B



DATE: 2/26/88

LOG NO.: 5639

DATE SAMPLED: 2/1/88

DATE RECEIVED: 2/2/88

CUSTOMER: Blymyer and Sons Engineers, Inc.

REQUESTER: Michael S. Lewis

PROJECT: No. 87139, Encinal Terminals

Sample Type: Soil

Method and Constituent	Units	No. 1, FRP Trench - 20'		No. 2, FRP Trench - 40'		No. 3 - OWS Excavation	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
Modified EPA Method 8015:							
Volatile Hydrocarbons	ug/kg	< 300	300	1,900	300		
Modified EPA Method 8020:							
Benzene	ug/kg	< 30	30	< 30	30		
Toluene	ug/kg	< 20	20	< 20	20		
Xylenes	ug/kg	< 40	40	< 30	30		
Standard Method 503E, Hydrocarbons:							
Oil and Grease	ug/kg					700,000	10,000

DATE: 2/26/88
 LOG NO.: 5639
 DATE SAMPLED: 2/1/88
 DATE RECEIVED: 2/2/88
 PAGE: Two

Sample Type: Soil

Method and Constituent	Units	No. 4, T-1 Redone South Wall		No. 5, T-1 Redone East Wall		No. 6, T-1 Redone North Wall	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
Modified EPA Method 8015: Volatile Hydrocarbons	ug/kg	< 300	300	< 300	300	< 300	300
Modified EPA Method 8020: Benzene	ug/kg	< 30	30	< 30	30	< 30	30
Toluene	ug/kg	< 20	20	< 20	20	< 20	20
Xylenes	ug/kg	< 30	30	< 30	30	< 40	40

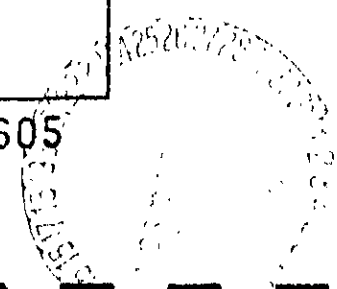
Hugh R. McLean
 Hugh R. McLean
 Supervisory Chemist

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	REMARKS			
87139		ENCINAL TERMINALS								
SAMPLERS: (Signature)						Soil TVH + BTX Oil & Grease				
Michael S. Lee										
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION					
1	2/1/88	9:55A	X		FRP Trench - 20'	1	X	X		10 day turnaround
2	2/1/88	9:25A	X		FRP Trench - 40'	1	X	X		↓
3	2/1/88	11:30A	X		OWS Excavation	1	X	X		
4	2/1/88	3:20P	X		T-1 Redone South wall	1	X	X		
5	2/1/88	3:40P	X		T-1 Redone East Wall	1	X	X		
6	2/1/88	3:50P	X		T-1 Redone North Wall	1	X	X		
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Michael S. Lee		2/2/88 7:55A	Kenny [Signature]		2/2/88 3:30P	Kenny [Signature]		[Signature]		
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)		Date / Time	Remarks				

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3-0605



Appendix C

BLYMYER

ENGINEERS, INC.



March 21, 1989
BEI Job No. 88322

Mr. Ariu Levi
ALAMEDA COUNTY HEALTH AGENCY
80 Swan Way, Room #200
Oakland, CA. 94621

SUBJECT: ENCINAL TERMINALS
 1521 BUENA VISTA AVENUE
 ALAMEDA, CALIFORNIA

Dear Mr. Levi:

The old waste oil tank containment sump at the subject facility was removed on February 1, 1989. Approximately seven tons of concrete rubble and contaminated soil was removed and transported to Casmalia Resources, Inc. (copy of manifest attached) for disposal. One soil sample was obtained from the bottom center of the excavation. Captain Marvin Helms of the Alameda Fire Department was on site to witness the soil sampling. The sample was delivered to Trace Analysis Laboratory and analyzed for volatile organics (EPA Method #8240) and oil and grease (SM 503E). As indicated in the attached analytical report, 750 mg/kg oil and grease was detected in the sample. No volatile organic compounds were detected.

If you have any questions, please give me a call at 521-3773.

Cordially,

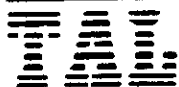
BLYMYER ENGINEERS, INC.

— Michael S. Lewis
Environmental Specialist

MSL/ds

Attachments

cc: Mr. Peter Wong -ENCINAL TERMINALS
 Capt. Marvin Helms-ALAMEDA FIRE DEPARTMENT



DATE: 3/7/89
LOG NO.: 6979
DATE SAMPLED: 2/1/89
DATE RECEIVED: 2/2/89

CUSTOMER: Blymyer Engineers, Inc.
REQUESTER: Mike Lewis
PROJECT: No. 88322, Encinal - Alameda

<u>Method and Constituent</u>	<u>Units</u>	<u>Sample Type: Soil</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
Standard Method 503E, Hydrocarbons:			
Oil and Grease	ug/kg	750,000	20,000

TRACE ANALYSIS LABORATORY

ORGANIC ANALYSIS DATA SHEET

Page Two

Client: Blymyer Engineers, Inc. Date Sampled: 2/1/89
 Contact: Mike Lewis Date Received: 2/2/89
 Client Project: No. 88322, Encinal - Alameda Date Analyzed: 02/14/89
 Sample Point: _____ Date Reported: 02/14/89
 LAB Project: 6979 Dilution Factor: 1.00
 Sample ID: 01 Analysis Method: _____
 Analyst: Lee Do QA/QC Supervisor: Dan Farah

Comment: U, J = Compounds are below Detection Limit
10 ug/kg = Detection Limit

TARGET COMPOUNDS

CONCENTRATION UNITS:

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	10.00	U
74-83-9	BROMOMETHANE	10.00	U
75-01-4	VINYL CHLORIDE	10.00	U
75-00-3	CHLOROETHANE	10.00	U
75-09-2	METHYLENE CHLORIDE	10.00	U
75-69-4	TRICHLOROFLOUROMETHANE	10.00	U
75-35-4	1 1-DICHLOROETHENE	10.00	U
107-6-2	1 2-DICHLOROETHANE	10.00	U
75-34-3	1 1-DICHLOROETHANE	10.00	U
156-80-5	TRANS-1 2-DICHLOROETHENE	10.00	U
67-66-3	CHLOROFORM	10.00	U
71-55-6	1 1 1-TRICHLOROETHANE	10.00	U
56-23-5	CARBONTETRACHLORIDE	10.00	U
75-27-4	BROMODICHLOROMETHANE	10.00	U
78-87-5	1 2-DICHLOROPROPANE	10.00	U
10061-02-6	TRANS 1 3-DICHLOROPROPENE	10.00	U
79-01-6	TRICHLOROETHENE	10.00	U
124-48-1	DIBROMOCHLOROMETHANE	10.00	U
71-43-2	BENZENE	10.00	0J
79-00-5	1 1 2-TRICHLOROETHANE	10.00	U
10061-01-5	CIS-1 3-DICHLOROPROPENE	10.00	U
110-75-8	2-CHLOROETHYLVINYLEETHER	10.00	U
75-25-2	BROMOFORM	10.00	U
79-34-5	1 1 2 2 TETRACHLOROETHANE	10.00	U
127-18-4	TERTRACHLOROETHENE	10.00	U
108-88-3	TOLUENE	10.00	1J
108-90-7	CHLOROENZENE	10.00	U
100-41-4	ETHYLBENZENE	10.00	U
541-73-1	1 3-DICHLOROENZENE	10.00	U
3588-82-1	1 4-DICHLOROENZENE	10.00	U
95-50-1	1 2-DICHLOROENZENE	10.00	U

Appendix D

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



FAT A. SHAHID, ASST. AGENCY DIRECTOR

October 19, 1992

Peter Wang
Encinal Terminals
1521 Buena Vista Avenue
Alameda, CA 94501

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

STID 3522

RE: The approval of work plan for investigations at 1521 Buena Vista Avenue, Alameda, California

Dear Mr. Wang,

This office has received and reviewed the work plan, dated October 14, 1992, for the above site. In addition to soil samples being collected from boring SB-1, a grab ground water sample should also be collected and analyzed for waste oil constituents. Additionally, ground water investigations should be conducted to address the area downgradient of T-2. Per the conversation between Sue Black, Blymer Engineering, and myself on October 19, 1992, it will be acceptable to collect and analyze grab ground water samples from this area to determine whether releases from T-2 have impacted ground water. If the ground water samples identify unacceptable levels of contaminants, you may be required to install a permanent monitoring well in this area. With the above additional requirements, the work plan will be acceptable to this office.

Lastly, please be reminded to collect soil samples at changes in lithology, in addition to soil samples being collected at depth intervals of 5 feet.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,


Juliet Shin
Hazardous Materials Specialist

cc: Richard Hiett, RWQCB

Robert La Grone, Alameda Fire Dept.