

**Subsurface Investigation**

**Bernita Leskowski Property  
Alameda, California**

August 6, 1992    BEI Job No. 89055

Prepared by:

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

Site:

Bernita Leskowski Property  
1701 Webster Street  
Alameda, California 94501

jmo\89055ssi.rpt

## 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 was conducted within the limitations prescribed by the client. Blymyer Engineers' opinions were based upon observations made at the site, review of available environmental and geological data pertaining to the site, review of boring 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 borings, analytical soil or groundwater 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.



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## OVERVIEW

Bernita Leskowski retained Blymyer Engineers, Inc. to conduct a subsurface investigation of her property, located at 1701 Webster Street in Alameda, California, following the removal of one 500-gallon and two 550-gallon underground gasoline storage tanks on May 2 and 3, 1989. Petroleum hydrocarbon contamination was detected in soil samples collected from the tank excavation and the excavated soil pile. Detectable concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline ranged up to 6,000 milligrams per kilogram (mg/kg) in the excavation. Blymyer Engineers received written permission from the Alameda County Health Care Services Agency (ACHCSA) to leave petroleum-contaminated soil in place due to the difficulty of excavating the soil in the area surrounding the tanks. Various nearby structural and utility considerations were cited.

The scope of work for the subsurface investigation included the installation of three soil bores and their subsequent conversion to 2-inch-diameter, 19-foot-deep groundwater monitoring wells on October 30 and 31, 1989. A total of seven soil samples from the soil bores were sent to NET Pacific, a California-certified laboratory, to be analyzed for TPH as gasoline and for benzene, ethylbenzene, toluene, and total xylenes (BETX). The monitoring wells were sampled and the groundwater samples were analyzed for the same constituents.

Three soil samples contained levels of TPH as gasoline, BETX, or both above respective method detection limits. The highest level of TPH as gasoline (2,300 mg/kg) was detected in a soil sample collected at a depth of 8 feet below grade surface (bgs) in soil bore B-2. The soil sample from a depth of 8 feet in soil bore B-3 contained detectable levels of all BETX analytes above the method detection limits, including 950 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) of benzene and 24,000  $\mu\text{g}/\text{kg}$  of total xylenes, in addition to 2,200 mg/kg of TPH as gasoline. The soil sample from a depth of 7 feet in soil bore B-2 contained 230 mg/kg of TPH as gasoline.

Two of the three groundwater samples, from monitoring wells MW-1 and MW-3, contained detectable levels of TPH as gasoline, benzene, ethylbenzene, and total xylenes. Upgradient monitoring well MW-1 contained the highest levels of TPH as gasoline and benzene at 0.36 milligrams per liter (mg/L) and 0.71 micrograms per liter ( $\mu\text{g/L}$ ), respectively. The downgradient monitoring well (MW-2) contained only 0.85  $\mu\text{g/L}$  of toluene and 0.07 mg/L of TPH as gasoline. Groundwater appears to flow in a northwesterly direction at a gradient of approximately 0.002 feet per foot.

Because petroleum contamination was detected in upgradient monitoring wells, the ACHCSA and San Francisco Bay Regional Water Quality Control Board were contacted to determine if any unauthorized releases had been reported in the immediate vicinity of the subject site. Unauthorized releases of petroleum have occurred at the three other sites on the corner of Webster Street and Pacific Avenue. On the opposite corner, upgradient of the subject site, concentrations of TPH as gasoline and benzene in groundwater are higher than those found in the upgradient monitoring wells at the subject site.

Blymyer Engineers recommends that quarterly groundwater monitoring be performed for a period of one year to assess changes in groundwater quality and conditions.

## 1.0 INTRODUCTION

### 1.1 Background

On May 2 and 3, 1989, Blymyer Engineers, Inc. coordinated the removal, by Accutite Tank Testing & Maintenance Services, of one 500-gallon and two 550-gallon underground gasoline storage tanks from beneath the sidewalk at a property owned by Bernita Leskowski and located at 1701 Webster Street in Alameda, California (Figure 1). Steven McKinley of the Alameda Fire Department was present during the tank removals. A maze of utility lines installed over the tanks, a telephone pole, and proximity to a building and public street complicated the removal. The tank disposal certificates and Uniform Hazardous Waste Manifests are included as Appendix A.

Four soil samples were collected from the tank excavations on May 2 and 3, 1989. The soil sample locations are indicated on Figure 2. One soil sample collected from beneath each of the tanks (S-1, S-2, and S-4) and one collected from the west sidewall (S-3) were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline using modified EPA Method 8015 and for benzene, ethylbenzene, toluene, and total xylenes (BETX) using EPA Method 8020. No BETX constituents were detected in any of the samples collected from the excavation. TPH as gasoline was detected at concentrations of 6,000 milligrams per kilogram (mg/kg), 5,200 mg/kg, and 2,000 mg/kg in the soil samples from beneath the tanks. The sidewall soil sample did not contain a level of TPH as gasoline above the detection limit of 0.5 mg/kg. The excavation soil sample analytical results are summarized in Table I and the full laboratory analytical report is included as Appendix B.

Four samples were also collected from the soil excavated during the tank removal on May 2 and 3, 1989. Concentrations of 170 mg/kg, 8.6 mg/kg, and 31 mg/kg of TPH as gasoline were detected in soil pile samples SP-2, SP-3, and SP-4, respectively. TPH as gasoline was not detected in soil pile sample SP-1 above the method detection

limit of 0.5 mg/kg. Several detectable concentrations of ethylbenzene, toluene, and total xylenes were also found in three of the soil pile samples. These results are summarized in Table II, and the full laboratory analytical report is included as Appendix C.

Because it was felt that soil pile soil sample SP-2 was collected from an isolated area of high petroleum contamination, a second set of soil samples (S-1 and S-2) from the soil pile were collected from either side of SP-2 and composited for analysis on May 15, 1989. TPH as gasoline and BETX were not detected above method detection limits in the composite soil pile sample. The analytical results are summarized in Table II and the full laboratory analytical report is included as Appendix D.

On May 31, 1989, Blymyer Engineers submitted a letter to the Alameda County Health Care Services Agency (ACHCSA) requesting a variance to leave the petroleum-contaminated soil found in the tank excavations in place (Appendix E). The letter stated that additional excavation of petroleum-contaminated soil was cost prohibitive and technically difficult for the following reasons:

- An underground electrical vault was located adjacent to the tank excavation.
- A utility pole was located adjacent to the tank excavation.
- Power lines ran directly over the area.
- A commercial building was present adjacent to the tank excavation.
- Any additional excavation would disturb city sidewalks along Pacific Avenue and Webster Street and would extend into Pacific Avenue.

The ACHCSA responded with a letter on June 24, 1989, which accepted Blymyer Engineers' proposal to leave the petroleum-contaminated soil in place (Appendix F). Consultation with Mr. Larry Seto at the ACHCSA confirmed the necessity of installing groundwater monitoring wells. Bernita Leskowski subsequently retained Blymyer Engineers in July 1989 to install three groundwater monitoring wells (MW-

1, MW-2, and MW-3) at the subject property to assess groundwater quality as required by the ACHCSA and the San Francisco Bay Regional Water Quality Control Board (RWQCB).

## **1.2 Site Conditions**

The site was located in a mixed residential and light industrial area of Alameda, California, on the northwest corner of Webster Street and Pacific Avenue (Figure 1). A site plan is provided as Figure 2. The building, located within ten feet of the work zone, was vacant at the time of the investigation. Several utilities were located at the site. An underground electrical vault ran beneath Pacific Avenue adjacent to the tank excavation and an electrical utility pole bearing a number of power and telephone lines was located directly on the site. A fire line and hydrant were also present.

Other businesses located at this intersection included a diner across Webster Street to the east, a Unocal service station across Pacific Avenue to the south, and an auto-parts store diagonally opposite to the southeast. Several underground storage tanks were known to be present in the immediate vicinity of the site.

## **1.3 Scope of Work**

The following work was performed to complete the subsurface investigation:

- Required permits and utility clearances were obtained.
- Three soil bores were drilled and sampled to a depth of 19 feet below grade surface (bgs) and converted to 2-inch-diameter groundwater monitoring wells.
- Soil and groundwater samples from each soil bore and groundwater monitoring

well were collected and analyzed for TPH as gasoline and BETX.

- Groundwater flow direction was determined.
- File records of the ACHCSA and RWQCB were reviewed for releases from other underground storage tanks in the area.

## 2.0 ENVIRONMENTAL SETTING

### 2.1 Regional Geology

The property is located in the city of Alameda on the gently sloping East Bay Plain, approximately ½-mile northeast of San Francisco Bay, at an approximate elevation of 15 feet based on the National Geodetic Vertical Datum (NGVD). The San Francisco Bay Area is a northwest-southeast trending region enclosed in the Coast Range Province of California. Rocks in the region range in age from Jurassic 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 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 San Francisco Bay and Quaternary alluvium (Goldman, 1967).

Alameda is currently an island which was historically connected to Oakland but has since been dredged so as to cut off the land connection to the remainder of the East Bay. 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, excepting the recently filled northern and easternmost portion, from the surface down, 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 writing, the entire Bay Area has experienced below-normal precipitation for the past six years. The mean monthly temperature in Oakland is 49.0° Fahrenheit in January and 65.0° Fahrenheit in September (NOAA, 1982).



## **3.0 DATA COLLECTION**

### **3.1 Soil Investigation**

#### **3.1.1 Soil Sample Collection**

On October 30 and 31, 1989, three 6-inch diameter soil bores (B-1, B-2, and B-3) were drilled to a depth of 19 feet bgs, each using a hollow-stem auger drill rig operated by Gregg Drilling and Testing, Inc. The soil bores were all located within approximately 10 feet of the former tank excavation. The soil bores were logged by a geologist from Blymyer Engineers and the logs are presented as Appendix G. The locations of soil bores are indicated on Figure 2.

Soil samples were collected at approximate depths of 6 feet and 8 feet bgs, with an additional soil sample collected at 7 feet bgs in bore B-3. The soil samples were collected using a California split-spoon sampler lined with clean 6-inch long brass liners. One of the full liners was selected for analysis for each soil sample. The split-spoon sampler was decontaminated using a trisodium phosphate solution and rinsed with clean water prior to each sampling. The soil samples were sealed with aluminum foil, plastic end caps, and duct tape. The samples were labeled and placed on ice for shipment to the analytical laboratory. All proper chain-of-custody procedures were observed in transit to the laboratory. Drill cuttings were placed in labeled, closed-top, 55-gallon, Department of Transportation (DOT)-approved drums for later disposal by the owner.

#### **3.1.2 Analytical Methods and Results**

The soil samples were shipped to NET Pacific, Inc., a California-certified analytical laboratory. The soil samples were analyzed for TPH as gasoline (modified EPA Method 8015) and BETX (EPA Method 8020). Detectable concentrations of TPH as

gasoline and BETX were detected in some of the soil samples analyzed. The results of the analyses are summarized in Table III and the full laboratory reports are presented as Appendix H.

## **3.2 Groundwater Investigation**

### **3.2.1 Groundwater Sample Collection**

Soil bores B-1, B-2, and B-3 were converted into 2-inch diameter groundwater monitoring wells MW-1, MW-2, and MW-3, respectively, on the same day they were drilled, October 30 and 31, 1989. The well construction diagram is included as Appendix I.

Three groundwater samples were collected by Blymyer Engineers from the groundwater monitoring wells on November 9, 1989 by Blymyer Engineers. One equipment rinse blank was also collected after initial decontamination of the Teflon<sup>®</sup> bailer used for collecting the groundwater samples. At least three well volumes were removed prior to sampling using a Teflon<sup>®</sup> bailer. Temperature, Ph, and conductivity were measured initially and after the removal of each well volume. The well was sampled when these measurements were within 15% of each other for three consecutive well volumes. Details of the well purging and sampling data are presented as Appendix J. The groundwater samples were each placed in 40-milliliter glass vials provided by the laboratory, labeled, and placed on ice for transportation to the analytical laboratory. Proper chain-of-custody procedures were observed. All purged water was stored in DOT-approved, 55-gallon drums for disposal by the owner.

### **3.2.2 Analytical Methods and Results**

The groundwater samples were analyzed for TPH as gasoline (modified EPA Method 8015) and BETX (EPA Method 602) at NET Pacific. The groundwater sample analytical results are summarized in Table IV and the full laboratory analytical report is presented as Appendix K.

### **3.2.3 Depth to Groundwater Measurements**

The top of well casing (TOC) elevations for all three wells were surveyed relative to a common, arbitrary datum. The depth to groundwater was measured from the tops of the well casings using an oil-water interface probe. Relative groundwater elevations were obtained by subtracting the depth to groundwater in each monitoring well from the respective TOC elevation. The results are presented in Table V and generally indicated a groundwater depth of approximately 8 feet bgs. The groundwater gradient is displayed graphically as a contour map in Figure 3.

### **3.2.4 Regulatory Agency Survey**

Because of the detectable petroleum contamination present at the site in upgradient groundwater monitoring wells, the ACHCSA and RWQCB were contacted to determine if any unauthorized releases have been reported in the immediate vicinity of the subject site.

## **4.0 DATA INTERPRETATION**

### **4.1 Site Geology**

Details of the site geology were obtained by Blymyer Engineers from three soil bores drilled on July 15, 1989. The soils were visually classified in the field according to the Unified Soils Classification System, ASTM D2488.

Subsurface soils at the site consisted of red-brown, light to dark-brown or gray silty sands, with thin interbedded fine gravels and moderately plastic clays. Groundwater was present at approximately 8 feet bgs. Petroleum hydrocarbon contamination was identified visually and by smell at a depth of between 5 and 8 feet in bore B-3.

### **4.2 Discussion of Soil Sample Analytical Results**

Two soil samples from soil bores B-1 and B-2 (MW-1 and MW-2) and three soil samples from soil bore B-3 (MW-3) were analyzed for BETX and TPH as gasoline. A total of three soil samples from soil bores B-2 and B-3 contained levels of one or several of these analytes above the respective method detection limits. The highest level of TPH (2,300 mg/kg) as gasoline was detected in the soil sample from a depth of 8 feet bgs in soil bore B-2. The soil sample from a depth of 8 feet bgs in soil bore B-3 contained detectable levels of all BETX analytes including 950 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) of benzene and 24,000  $\mu\text{g}/\text{kg}$  of total xylenes in addition to 2,200 mg/kg of TPH as gasoline. The sample from a depth of 7 feet bgs in soil bore B-2 contained 230 mg/kg of TPH as gasoline. Soil samples from soil bore B-1 contained no detectable concentrations of TPH as gasoline or BETX.

### **4.3 Discussion of Groundwater Sample Analytical Results**

All three groundwater samples contained detectable levels of TPH as gasoline. The highest levels of TPH as gasoline occurred in the groundwater sample from upgradient monitoring well MW-1 at 0.36 milligrams per liter (mg/L). Benzene, ethylbenzene, and total xylenes were present in monitoring wells MW-1 and MW-3, but not in downgradient monitoring well MW-2. The highest detectable concentration of benzene was found in groundwater sample MW-1 at 0.71 micrograms per liter ( $\mu\text{g/L}$ ). Toluene was only detected in groundwater sample MW-2 at a level of 0.85  $\mu\text{g/L}$ .

### **4.4 Groundwater Gradient**

When the groundwater levels were measured on November 9, 1989, the groundwater gradient was approximately 0.002 feet per foot in a northwesterly direction (Figure 3).

### **4.5 Regulatory Agency Survey Results**

Information provided by the ACHCSA and RWQCB agencies indicated that releases of petroleum hydrocarbons had occurred at three sites adjacent to the subject property. The details of these releases are summarized below.

#### **Unocal Service Station**

**1629 Webster Street**

A release is known to ACHCSA to have occurred at this site, southwest and crossgradient to the subject facility, but no information on the work performed in response to the release was available for review at either agency.

**Pacific Properties**

**1628 Webster Street**

This site is located south and approximately upgradient to the subject site on the opposite corner of Webster Street and Pacific Avenue. A 550-gallon waste oil tank was removed in April 1989. Analysis of soil samples from the tank excavation indicated the presence of 270,000 parts per billion (ppb) of TPH as diesel, 760,000 ppb of Total Recoverable Oil and Grease using Standard Method 413.1, 19 ppb of toluene, and 62 ppb of total xylenes. Groundwater samples were found to contain levels of TPH as gasoline up to 8,000 ppb and BETX up to 95 ppb of benzene, 29 ppb of toluene, 220 ppb of ethylbenzene, and 1,100 ppb of total xylenes. Additional soil was excavated from the site in July 1990.

**Duffy's Diner**

**1700 Webster Street**

*proposed  
final closure?*

This site is located directly across Webster Street, upgradient from the subject property. A 550-gallon waste oil tank was removed from the parking lot at the back of the property on April 18, 1991. Soil samples collected from the tank excavation sidewalls contained up to 18,700 mg/kg of Total Recoverable Oil and Grease using EPA Method 413.2 and 640 mg/kg of Total Fuel Hydrocarbons using modified EPA Method 8015. Five Resource Conservation and Recovery Act Metals were also detected. Twenty cubic yards of soil were excavated from the former tank location, and five verification samples were collected from the excavation sidewalls and analyzed for TPH. TPH was not detected in any of the verification samples above the method detection limit of 1 mg/kg.

## 5.0 SUMMARY AND CONCLUSIONS

- One 500-gallon and two 550-gallon underground gasoline storage tanks were removed from the property on May 2 and 3, 1989.
- Soil samples collected from the excavation revealed concentrations up to 6,000 mg/kg of TPH as gasoline remaining in soil at the site.
- The ACHCSA accepted a Blymyer Engineers' proposal to leave the soil in place. Further remediation was found to be cost prohibitive and technically difficult. Any additional excavation would disturb city sidewalks along Pacific Avenue and Webster Street and would extend into Pacific Avenue.
- The horizontal extent of the petroleum contamination in soil has been defined to the northeast of the former tank excavation.
- Detected levels of BETX were highest in crossgradient soil bore B-3, including 950 µg/kg of benzene and 24,000 µg/kg of total xylenes.
- The highest detected levels of TPH as gasoline occurred in soil bore B-2 at a concentration of 2,300 mg/kg.
- Petroleum hydrocarbons were detected in groundwater samples from all three monitoring wells.
- Groundwater flow direction appears to be towards the northwest.
- The highest detected levels of benzene and TPH as gasoline in groundwater occurred in upgradient monitoring well MW-1 at 0.71 µg/L and 0.36 mg/L, respectively.
- Off-site sources may be contributing to petroleum hydrocarbon contamination on the site.

## 6.0 RECOMMENDATIONS

- Blymyer Engineers recommends that a copy of this report be submitted to the following regulatory agencies:

Alameda County Health Care Services Agency  
80 Swan Way, Room 200  
Oakland, California 94621  
(510) 271-4320

San Francisco Bay Regional Water Quality Control Board  
2101 Webster  
Oakland, California 94612  
(510) 464-1255

- Blymyer Engineers recommends that quarterly groundwater monitoring of the three existing wells be performed for a period of one year to assess changes in groundwater quality and conditions.



## 7.0 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, Kelvin, and Muir, Kenneth, 1988. *Geohydrology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California, 205(J) Report*; submitted to San Francisco Bay Regional Water Quality Control Board, 83 p.
- 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

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**TABLE I**  
**Summary of Excavation Soil Sample Analytical Results**  
**BEI Job No. 89055, Bernita Leskowski Property**  
**1701 Webster Street, Alameda, Ca 94501**

Sample ID	EPA Method 8020 ( $\mu\text{g}/\text{kg}$ )				Modified EPA Method 8015 ( $\text{mg}/\text{kg}$ )
	B	E	T	X	TPH as Gasoline
S-1	<1,000	<2,000	<1,000	<5,000	6,000
S-2	<1,000	<2,000	<1,000	<5,000	5,200
S-3	<10	<20	<10	<50	<0.5
S-4	<1,000	<2,000	<1,000	<5,000	2,000

$\mu\text{g}/\text{kg}$  = micrograms per kilogram

$\text{mg}/\text{kg}$  = milligrams per kilogram

TPH = Total Petroleum Hydrocarbons

B = Benzene

E = Ethylbenzene

T = Toluene

X = Total Xylenes

where results are reported as <x, x represents the method detection limit

**TABLE II**  
**Summary of Soil Pile Sample Analytical Results**  
**BEI Job No. 89055, Bernita Leskowski Property**  
**1701 Webster Street, Alameda, Ca 94501**

Sample ID	EPA Method 8020 ( $\mu\text{g}/\text{kg}$ )				Modified EPA Method 8015 ( $\text{mg}/\text{kg}$ )
	B	E	T	X	TPH as Gasoline
SP-1	<8	<10	<8	<40	<0.5
SP-2	<20	<30	560	<100	170
SP-3	<8	63	33	390	8.6
SP-4	<20	230	120	1600	31
S-1/S-2 Composite	<10	<20	<10	<50	<0.5

$\mu\text{g}/\text{L}$  = micrograms per liter

$\text{mg}/\text{L}$  = milligrams per liter

TPH = Total Petroleum Hydrocarbons

B = Benzene

E = Ethylbenzene

T = Toluene

X = Total Xylenes

where results are reported as <x, x represents the method detection limit

**TABLE III**  
**Summary of Soil Bore Soil Sample Analytical Results**  
**BEI Job No. 89055, Bernita Leskowski Property**  
**1701 Webster Street, Alameda, CA 94501**

Sample ID	Depth (feet)	EPA Method 8020 (µg/kg)				Modified EPA Method 8015 (mg/kg)
		B	E	T	X	TPH as Gasoline
B-1	5.5 - 6.0	<25	<75	<25	<75	<10
B-1	7.5 - 8.0	<25	<75	<25	<75	<10
B-2	5.5 - 6.0	<25	<75	<25	<75	<10
B-2	7.5 - 8.0	<25	<75	<25	24,000	2,300
B-3	5.5 - 6.0	<25	<75	<25	<75	<10
B-3	6.5 - 7.0	<25	<75	<25	<75	230
B-3	7.5 - 8.0	950	3,500	13,000	24,000	2,200

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

TPH = Total Petroleum Hydrocarbons

B = Benzene

E = Ethylbenzene

T = Toluene

X = Total Xylenes

Where results are reported as <x, x represents the method detection limit

**TABLE IV**  
**Summary of Groundwater Sample Analytical Results**  
**BEI Job No. 89055, Bernita Leskowski Property**  
**1701 Webster Street, Alameda, Ca 94501**

Sample ID	EPA Method 8020 ( $\mu\text{g/L}$ )				Modified EPA Method 8015 ( $\text{mg/L}$ )
	B	E	T	X	TPH as Gasoline
MW-1	0.71	0.81	<0.5	1.4	0.36
MW-2	<0.5	<0.5	0.85	<0.5	0.071
MW-3	0.58	1.2	<0.5	2.1	0.32

$\mu\text{g/L}$  = micrograms per liter

$\text{mg/L}$  = milligrams per liter

TPH = Total Petroleum Hydrocarbons

B = Benzene

E = Ethylbenzene

T = Toluene

X = Total Xylenes

where results are reported as <x, x represents the method detection limit

**TABLE V**  
**Groundwater Elevation Survey Results**  
**October 31, 1991**  
**BEI Job No. 89055, Bernita Leskowski Property**  
**1701 Webster Street, Alameda, California 94501**

Monitoring Well ID	TOC ELEVATION (feet*)	DEPTH TO WATER (feet below TOC)	WATER SURFACE ELEVATION (feet*)
MW-1	99.52	7.91	91.61
MW-2	99.48	7.92	91.56
MW-3	99.55	7.95	91.60

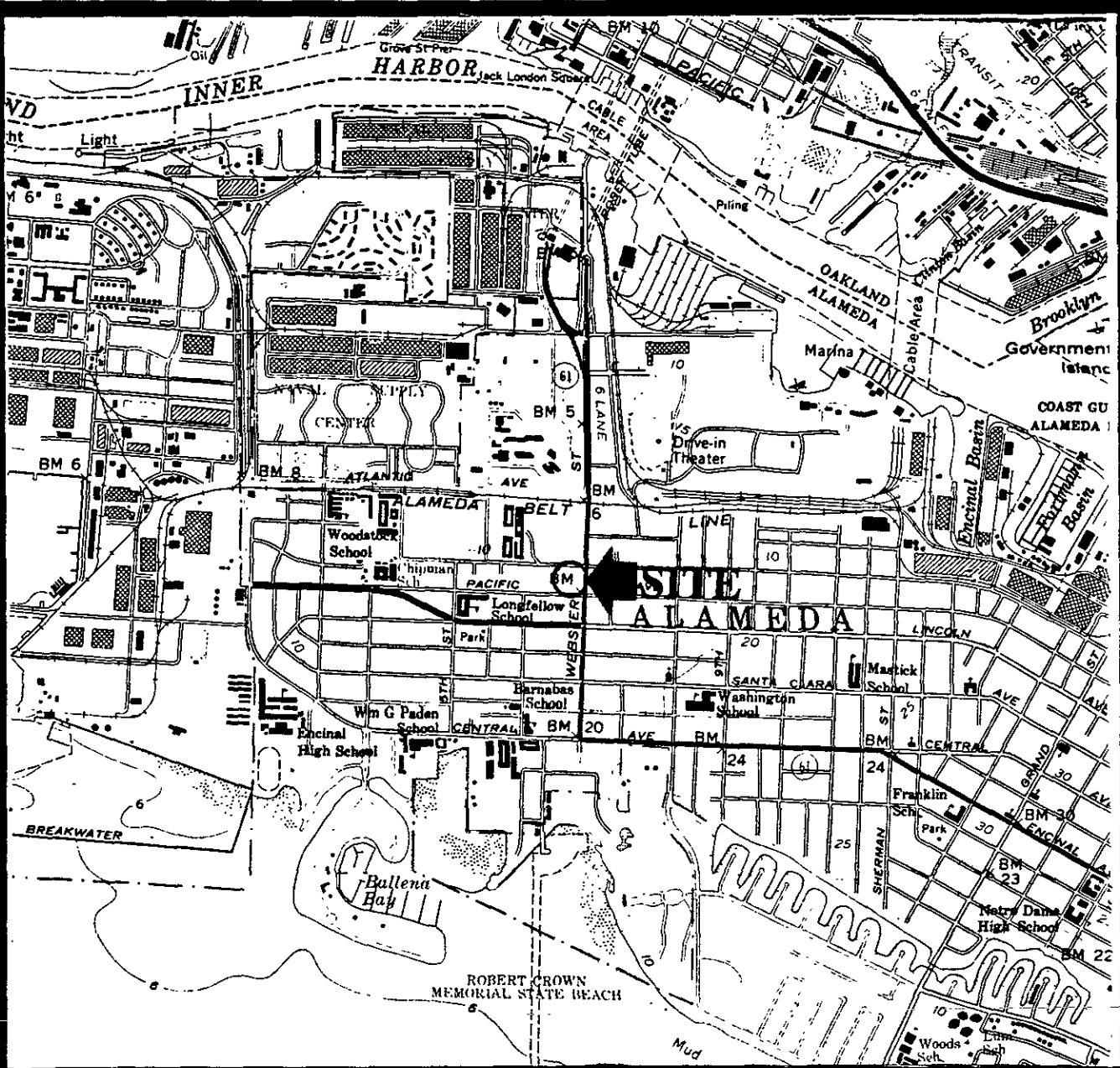
\*relative to an arbitrary datum  
 TOC = top of well casing



# Figures

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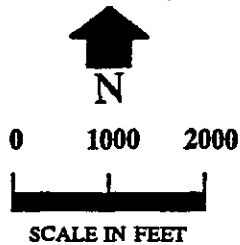




Source: United States Geological Survey, "Oakland West, CA", photorevised 1980

**BERNITA LESKOWSI**  
**1701 WEBSTER ST.**  
**ALAMEDA, CA**

FIGURE 1



JOB #89055



BUILDING

WEBSTER ST.

FIRE HYDRANT

B-1 (MW-1) 360

2-550 GAL. U.G. TANKS

B-2 (MW-2) 2300

ELECTRICAL VAULT

S-3 S-2 S-1 S-4

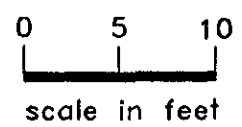
*\* - TPH in ppm in soil*  
*\* - TPH in ppb in groundwater*

UTILITY POLE

500 GAL. U.G. TANK

PACIFIC AVE.

B-3 (MW-3) 320 2200 6000 5200



<b>BLMYER ENGINEERS, INC.</b>		
BEI JOB NO. 89055	DATE 8/92	

**LEGEND**

- MONITORING WELL
- SOIL SAMPLE LOCATION

**PROJECT**  
BERNITA LESKOWSKI  
ALAMEDA, CA

**SITE PLAN**

**FIGURE**  
2



BUILDING

WEBSTER ST.

FIRE HYDRANT

91.56' 91.58' 91.60'



GROUNDWATER GRADIENT ON NOVEMBER 9, 1989

MW-2 (91.56')

2-550 GAL. U.G. TANKS

MW-1 (91.61')

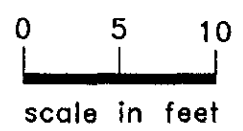
ELECTRICAL VAULT

PACIFIC AVE.

UTILITY POLE

500 GAL. U.G. TANK

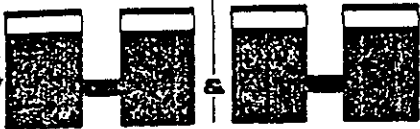
MW-3 (91.60')



<b>BLYMYER</b> ENGINEERS, INC.			<b>LEGEND</b> MONITORING WELL (91.60') GROUNDWATER ELEV.	<b>PROJECT</b> BERNITA LESKOWSKI ALAMEDA, CA GROUNDWATER GRADIENT MAP	<b>FIGURE</b> 3
BEI JOB NO. 89055	DATE 8/92				

# Appendix A

---



ENVIRONMENTAL SERVICES  
DIVISION OF H & H SHIP SERVICE CO., INC.)

CERTIFICATE OF DISPOSAL

MAY 04, 1989

H & H Ship Service Company hereby certifies to OLYMPIC OIL  
that:

1. The storage tank(s), size(s) TWO (2) 550 GALS.

removed from the JOB SITE

facility at 1701 WEBSTER

ALAMEDA, CALIFORNIA

were transported to H & H Ship Service Company, 220 China Basin St.,  
San Francisco, California 94107.

2. The following tank(s), H & H Job Number 0207  
have been steamed cleaned, cut with approximately 2' X 2' holes,  
rendered harmless and disposed of as scrap metal.

3. Disposal site: LEVIN METALS CORPORATION, RICHMOND, CALIFORNIA.

4. The foregoing method of destruction/disposal is suitable for the  
materials involved, and fully complies with all applicable  
regulatory and permit requirements.

5. Should you require further information, please call  
(415) 543-4836.

Very Truly Yours,

  
Cleveland Valrey  
Q. A. & Safety Coordinator

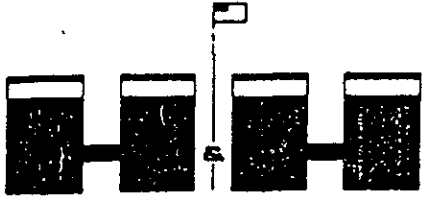
220 CHINA BASIN, P.O. BOX 77363 • SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835





<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CA100015587300001	Manifest Document No. 010101	2. Date 08/22/89	Information to the transporter (Name, address, and telephone number)	
3. Generator's Name and Address BERNITA LESKOWSKI 2819 EAST W 286TH OAKLAND, CA 94611		4. Generator's Phone US 531-8790		5. State of Origin CA 94611		
6. Transporter 1 Company Name H & H Ship Service		7. US EPA ID Number CA1000147711168		8. State of Origin CA 94611		
9. Transporter 2 Company Name		10. US EPA ID Number		11. State of Origin		
12. Designated Facility Name and Site Address H & H Ship Service 2819 East W 286th San Francisco, CA 94611		13. US EPA ID Number CA1000147711168		14. State of Origin CA 94611		
15. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
Empty Gasoline Tanks Flammable UN 1203		1 RTI 0101002	9	55	State: CA EPA/Other: 62	
Additional Descriptions for Materials Listed Above: Empty underground gasoline storage tanks with less than one gallon of residual liquid in each tank		K. Handling Codes for Wastes Listed Above D1				
16. Special Handling Instructions and Additional Information						
17. 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 BERNITA LESKOWSKI		Signature <i>Bernita Leskowski</i>		Month Day Year 08 22 89		
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Martin Costello		Signature <i>Martin Costello</i>		Month Day Year 08 22 89		
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 Clemens Valley						
Signature <i>Clemens Valley</i>		Month Day Year 08 22 89				

GENERATOR'S FACILITY



**ENVIRONMENTAL SERVICES**  
(DIVISION OF H & H SHIP SERVICE CO., INC.)

CERTIFICATE OF DISPOSAL

MAY 05, 1989

H & H Ship Service Company hereby certifies to OLYMPIC OIL  
that:

1. The storage tank(s), size(s) ONE (1) 500 GALS.

removed from the JOB SITE

facility at 1701 WEBSTER

ALAMEDA, CALIFORNIA

were transported to H & H Ship Service Company, 220 China Basin St.,  
San Francisco, California 94107.

2. The following tank(s), H & H Job Number 0220  
have been steamed cleaned, cut with approximately 2' X 2' holes,  
rendered harmless and disposed of as scrap metal.

3. Disposal site: LEVIN METALS CORPORATION, RICHMOND, CALIFORNIA.

4. The foregoing method of destruction/disposal is suitable for the  
materials involved, and fully complies with all applicable  
regulatory and permit requirements.

5. Should you require further information, please call  
(415) 543-4836.

Very Truly Yours,

Cleveland Valrey  
Q. A. & Safety Coordinator

*Ref # 928*

220 CHINA BASIN, P.O. BOX 77363 • SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835



print or type. (Form designed for use on silite (12-pitc  
 writer).

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>8AC001015SR93271417</b>	Manifest Document No. <b>417</b>	2. Information in the shaded area is not required by Federal law.		
3. Generator's Name and Mailing Address <b>BERNITA LESKOWSKI 639 CASTLE DR. OAKLAND, CA 94671</b>		A. State Manifest Document Number <b>88227147</b>		B. State Generator's ID		
4. Generator's Phone <b>531-8790</b>		C. State Transporter's ID <b>092770</b>		D. Transporter's Phone <b>(408) 53-9035</b>		
5. Transporter 1 Company Name <b>H2H SHIP SERVICE</b>		6. US EPA ID Number <b>CAC01041721168</b>		E. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		F. Transporter's Phone		
9. Designated Facility Name and Site Address <b>H2H SHIP SERVICE CO. 220 CHINA BASIN ST. SF. CA 94107</b>		10. US EPA ID Number <b>CAC01041721168</b>		G. State Facility's ID		
				H. Facility's Phone <b>(415) 543-4835</b>		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <b>WASTE GASOLINE TANK - FLAMMABLE LIQUID UN1203</b>		<b>091</b>	<b>TD</b>	<b>1</b>	<b>GAL</b>	<b>512 NA</b>
b.						State EPA/Other
c.						State EPA/Other
d.						State EPA/Other
J. Additional Descriptions for Materials Listed Above <b>EMPTY GASOLINE STORAGE TANK - LESS THAN 1 GAL.</b>		K. Handling Codes for Wastes Listed Above		a.		b.
				c.		d.
15. Special Handling Instructions and Additional Information <b>PROTECTIVE GEAR AND CLOTHING REQUIRED</b>						
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 <b>BERNITA LESKOWSKI</b>		Signature <i>Bernita Leskowski</i>		Month Day Year <b>10 3 89</b>		
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>SID FOSTER</b>		Signature <i>Sidney W Foster</i>		Month Day Year <b>10 3 89</b>		
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 <b>CLEVELAND VAICO</b>		Signature <i>Cleveland Vaico</i>		Month Day Year <b>10 3 89</b>		

GENERATOR

TRANSPORTER

FACILITY

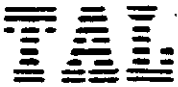
Do Not Write Below This Line

White: TSD/ SENDS THIS COPY TO DOHS WITHIN 30 D/ To: P.O. Box 3000, Sacramento, CA 95812



## Appendix B

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DATE: 5/24/89  
LOG NO.: 7336A  
DATE SAMPLED: 5/2/89  
DATE RECEIVED: 5/3/89

CUSTOMER: Blymyer Engineers, Inc.  
REQUESTER: Sue Black  
PROJECT: No. 89055, Leskowski, Pacific and Webster St.

Sample Type: Soil

Method and Constituent	Units	S-1		S-2		S-3	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/kg	6,000,000	30,000	5,200,000	30,000	< 500	500
Modified EPA Method 8020:							
Benzene	ug/kg	< 1,000	1,000	< 1,000	1,000	< 10	10
Toluene	ug/kg	< 1,000	1,000	< 1,000	1,000	< 10	10
Xylenes	ug/kg	< 5,000	5,000	< 5,000	5,000	< 50	50
Ethyl Benzene	ug/kg	< 2,000	2,000	< 2,000	2,000	< 20	20

DATE: - '89  
LOG NO.: 7336A  
DATE SAMPLED: 5/2/89  
DATE RECEIVED: 5/3/89  
PAGE: Two

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>S-4</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/kg	2,000,000	30,000
Modified EPA Method 8020:			
Benzene	ug/kg	< 1,000	1,000
Toluene	ug/kg	< 1,000	1,000
Xylenes	ug/kg	< 5,000	5,000
Ethyl Benzene	ug/kg	< 2,000	2,000

Dan Farah

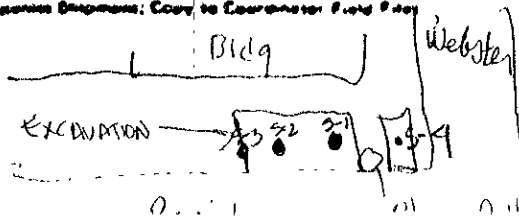
Dan Farah, Ph.D.  
Supervisory Chemist

DF:mln

CHAIN OF CUSTODY RECORD

PROJ NO		PROJECT NAME		NO OF CONTAINERS	REMARKS	
SAMPLERS (Signature)		STATION LOCATION			REMARKS	
STA NO	DATE	TIME	DEPTH	TYPE	STATION LOCATION	REMARKS
89055	Pacific Ave LESKOWSKI & WEBSTER ST					
Joe Black						
S-1	5/2/89	2:30	X		Bottom of Tank (10')	
S-2	5/2/89	3:75	X		Bottom of Tank (10')	Verbal to Dan (Green)
S-3	5/2/89	3:40	X		sidewalk (10')	
						Return Ice Chest
						to BEL.
						Bill BEL Directly.
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Received by: (Signature)
Joe Black		5/3/89 4:10	Carrine Deller			
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Date / Time	Received by: (Signature)
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)		Date / Time	Remarks

Distribution: Original Accompanying Shipments; Copy to Coordinator Field File





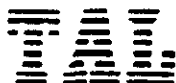
## Appendix C

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Trace Analysis Laboratory, Inc.

3423 Investment Boulevard, #8 • Hayward, California 94545

(415) 783-6960



DATE: 5/5/89

LOG NO.: 7336

DATE SAMPLED: 5/2/89 and 5/3/89

DATE RECEIVED: 5/3/89

CUSTOMER: Blymyer Engineers Inc.

REQUESTER: Sue Black

PROJECT: No. 89055, Leskowski, Pacific Avenue and Webster Street

## Sample Type: Soil

Method and Constituent	Units	SP-1		SP-2		SP-3	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:							
Total Petroleum Hydro- carbons as Gasoline	ug/kg	< 500	500	170,000	1000	8600	500
Modified EPA Method 8020:							
Benzene	ug/kg	< 8	8	< 20	20	< 8	8
Toluene	ug/kg	< 8	8	560	20	33	8
Xylenes	ug/kg	< 40	40	< 100	100	390	40
Ethyl Benzene	ug/kg	< 10	10	< 30	30	63.	10

DATE: 5/5/89  
LOG NO.: 7336  
DATE SAMPLED: 5/2/89 and 5/3/89  
DATE RECEIVED: 5/3/89  
PAGE: Two

Sample Type: Soil

<u>Method and Constituent</u>	<u>Units</u>	<u>SP-4</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/kg	31,000	1000
Modified EPA Method 8020:			
Benzene	ug/kg	< 20	20
Toluene	ug/kg	120	20
Xylenes	ug/kg	1600	100
Ethyl Benzene	ug/kg	230	30

Dan Farah

Dan Farah, Ph.D.  
Supervisory Chemist

DF:sr

CHAIN OF CUSTODY RECORD

TRACE ANALYSIS

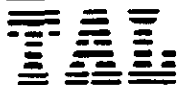
PROJECT NO		PROJECT NAME		NO OF CONTAINERS	REMARKS
89055		Pacific & Alaska Bernie Lukowski Lu Black			
STA NO	DATE	TIME	STATION LOCATION		
S-1	5/3/89	2:10	BOTTOM OF TANK 11'	1-5	TPT-9 W/BIXE 10-DAY T.A.T. 48-H T.A.T.
SP-1		2:25	Soil Pile		
SP-2		2:30	" "		
SP-3		2:35	" "		
SP-4		2:40	" "		INDICE BET.
					Return Ice Chest to BET
					(Drawing of sampling LOCATIONS in file)

Relinquished by: (Signature) <i>Lu Black</i>	Date / Time 5/3/89 4:10	Received by: (Signature) <i>Carrie Decker</i>	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)	Date / Time	Remarks	

Distribution: Original Acquisition Document; Copy to Coordinator Field File



## Appendix D



DATE: 5/19/89  
LOG NO.: 7379  
DATE SAMPLED: 5/15/89  
DATE RECEIVED: 5/15/89

CUSTOMER: Blymyer Engineers Inc.  
REQUESTER: Sue Black  
PROJECT: No. 89055 Leskowski, Pacific and Webster

<u>Method and Constituent</u>	<u>Units</u>	<u>Sample Type: Soil</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/kg	< 500	500
Modified EPA Method 8020:			
Benzene	ug/kg	< 10	10
Toluene	ug/kg	< 10	10
Xylenes	ug/kg	< 50	50
Ethyl Benzene	ug/kg	< 20	20

Dan Farah

Dan Farah, Ph.D.  
Supervisory Chemist

DF:vs

CHAIN OF CUSTODY RECORD

PRJ NO		PROJECT NAME		PACIFIC C		NO OF CONTAINERS	COMPOSITE IPK & W/BIKE 24H. TAT			REMARKS
80055		LESKOWSKI		WEBSTER						
STATION NO		DATE	TIME	GRAB	STATION LOCATION					
See Black										
S-1	5/15/89	9:20	X	S-1	S-1	X	X	X		
S-2	5/15/89	9:23	X	S-2	S-2	X	X	X		
										Verbal to See Black
										Invoice BET Directly
Relinquished by (Signature)		Date / Time		Received by (Signature)		Relinquished by (Signature)		Date / Time		Received by (Signature)
See Black		5/15/89 10:15		See Webster						
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		

Destination: Original (Laboratory) (Signature) Copy to Coordinator Field File

BLDG

S-1

Webster

3-0605



## Appendix E

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May 31, 1989  
BEI Job No. 89055

Mr. Larry Seto  
ALAMEDA COUNTY HEALTH DEPARTMENT  
80 Swan Way, Room #200  
Oakland, CA. 94621

SUBJECT: TANK REMOVAL PROJECT  
1701 WEBSTER STREET  
ALAMEDA, CALIFORNIA

Dear Mr. Seto:

Enclosed are the soil sample results and a plot plan for the subject site. Grab samples were taken below each of the tanks and one sample was taken from the west end of the excavation wall above the water table. The City of Alameda Fire Department dictated sample locations and the number of samples to be collected. As indicated in the results, three soil samples exceeded the mg/kg action level designated in the RWQCB.

On behalf of Ms. Bernita Leskowi, the subject property owner, BEI is requesting a variance to leave gasoline-contaminated soil in the ground at the subject site. Excavation of the contaminated soil at this facility is cost prohibitive and is technically difficult for the following reasons:

- (1) An underground, electrical vault is located adjacent to the required excavation. This vault presents a major obstacle for equipment and could easily be damaged during field activities.
- (2) A utility pole is located in the center of the required excavation area.
- (3) Power lines run directly overhead of the required excavation including feeder lines to the building. The proximity of the lines to the work area poses an electrical and fire hazard.
- (4) The required excavation is located within 10 feet of a commercial building and poses a threat to the structural integrity of the building.
- (5) The required excavation would disturb city sidewalks along Pacific Avenue and Webster Street and would extend into Pacific Avenue. The operation of heavy equipment and the existence of an open pit would present a hazard to pedestrian and vehicular traffic.

BEI proposes to install three monitoring wells in locations indicated on the attached site plan. The objective is to place the wells within 10 feet of the former tanks; however, because of physical constraints at the site, this may not be possible. Soil samples will be collected at five-foot intervals down to the water table. The borings will extend 10 feet into the water table

Mr. Larry Seto  
ALAMEDA COUNTY HEALTH DEPARTMENT  
Page Two

May 31, 1989

and will be converted to 4" schedule 40 PVC monitoring wells. Water samples will be collected from the developed wells. All soil and water samples will be analyzed for total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, xylenes and ethylbenzene (ETXE). A final report, including a summary of the work performed and recommendations for additional work, will be submitted to your department and the RWQCB.

BEI will await your review of this matter.

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

Cordially,

BLYMYER ENGINEERS, INC.

Dan Gorecki  
Environmental Engineer

DG/ds

Attachments

cc: Ms. Bernita Leskowski



# Appendix F

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ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



June 24, 1989

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415) 271-4320

Mr. Dan Gorecki, Environmental Engineer  
Blymyer Engineer  
1829 Clement Ave.  
Alameda, CA 94501-1395

RE: 1701 Webster Street, Alameda, CA 94501

Dear Mr. Gorecki:

Your proposal for the remediation for the above site dated,  
May 31, 1989, has been accepted.

If you have any questions, please contact Larry Seto, Senior Hazardous  
Materials Specialist, at 271-4320.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Rafat A. Shahid'.

Rafat A. Shahid, Chief,  
Hazardous Materials Program

RAS:LS:mnc

cc: RWQCB  
Howard Hatayama, DOHS  
Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Agency  
Larry Seto, Alameda County Hazardous Materials Program  
Files



## Appendix G

**BLMYER**

ENGINEERS, INC.


 Job #: 89055  
 Site: ALAMEDA, CA

 Log of Boring No.: B-1  
 Client: BERNITA LESKOWSKI

Date: 10/30/89

Rig:

 Driller: GREGG DRILLING  
 Logged by: M. WEBER

Diameter: 6"

Depth (Ft.)	Blows/6 In.	P.I.D. (ppm)	Sample Type and Depth	Unified Soil Classification	EXPLANATION	Graphic Log	Water Depth
					▼ Initial water level. ▼ Stabilized water level.		
					DESCRIPTION		
				F	0.0-2.0' Gravel fill	F	
				SM	2.0-5.0' Dark brown silty sand, medium-grained, dry		
5				SC	5.0-5.6' Clayey sand, slightly stiff		
					5.6-19.0' Dark brown silty sand, slightly plastic, very wet		8.2' ▼
10				SM			
15							
20					Total depth 19.0 feet		
25							
30							

**BLMYER**

ENGINEERS, INC.

Job #: 89055  
Site: ALAMEDA, CALog of Boring No.: B-2  
Client: BERNITA LESKOWSKI

Date: 10/30/89

Rig:

Diameter: 6"

Depth (Ft.)	Blows/6 In.	P.I.D. (ppm)	Sample Type and Depth	Unified Soil Classification	EXPLANATION	Graphic Log	Water Depth
					▼ Initial water level. ▼ Stabilized water level.		
					DESCRIPTION		
				F	0.0-2.0' Gravel fill	F	
5				SM	2.0-19.0' Dark brown to red-brown silty sand, medium-grained, dry to damp		
					Strong gasoline odor and staining		
10					At 9.5' dark brown silty sand with thin interbedded, slightly plastic clays and pebbly sand, very wet		8' ▼
15							
20					Total depth 19.0 feet		
25							
30							

**BLMYER**

ENGINEERS, INC.


 Job #: 89055  
 Site: ALAMEDA, CA

 Log of Boring No.: B-3  
 Client: BERNITA LESKOWSKI

Date: 10/30/89

Rig:

 Driller: GREGG DRILLING  
 Logged by: M. WEBER

Diameter: 6"

Depth (Ft.)	Blows/6 In.	P.I.D. (ppm)	Sample Type and Depth	Unified Soil Classification	EXPLANATION	Graphic Log	Water Depth
					▼ Initial water level. ▼ Stabilized water level.		
					DESCRIPTION		
5				F	0.0-2.0' Gravel fill		8.2' 
				SP	2.0-3.0' Dark brown, poorly graded sand, fine/medium grained		
				SM	3.0-6.7' Light to dark brown silty sand		
				CL	6.7-7.0' SANDY CLAY		
				SP	7.0-12.6' Gray, medium-grained sand, staining and gasoline odor		
10							
				M	12.6-13.0' Sandy silt, very wet		
				SM	13.0-19.0' Dark brown, silty sand, very wet		
15							
20					Total depth 19.0 feet		
25							
30							



## Appendix H

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NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

NET Pacific, Inc.  
435 Tesconi Circle  
Santa Rosa, CA 95401  
Tel: (707) 526-7200  
Fax: (707) 526-9623

Formerly: ANATEC Labs, Inc.

Michael Weber  
Blymyer Engineers, Inc  
1829 Clement Ave  
Alameda, CA 94501

11-14-89  
NET Pacific Log No: 8391  
Series No: 495  
Client Ref: Project# 89055

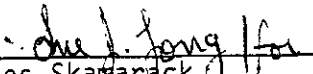
Subject: Analytical Results for "Alameda" Received 10-31-89.


Dear Mr. Weber:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Approved by:

  
Jules Skamarack  
Laboratory Manager

  
Brian Fies  
Group Leader  
Atomic Spectroscopy

/ma  
Enc: Sample Custody Document



## KEY TO ABBREVIATIONS and METHOD REFERENCES

### Abbreviations

- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NR : Not requested.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

### Method References

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

\* Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated reporting limits by the dilution factor.



SAMPLE DESCRIPTION: Bore 1 5.5-6.0' 10-30-89 0915  
LAB NO.: (-38570 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-08-89	
METHOD GC FID/5030		--	
as Gasoline	10	ND	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: Bore 1 7.5-8.0' 10-30-89 0920  
LAB NO.: (-38571 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-08-89	
METHOD GC FID/5030		--	
as Gasoline	10	ND	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg





SAMPLE DESCRIPTION: Bore 2 5.5-6.0' 10-30-89 1125  
LAB NO.: (-38572 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-08-89	
METHOD GC FID/5030		--	
as Gasoline	10	ND	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: Bore 2 7.5-8.0' 10-30-89 1130  
LAB NO.: (-38573 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		100	
DATE ANALYZED		11-11-89	
METHOD GC FID/5030		--	
as Gasoline	10	2,300	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	24,000	ug/Kg



SAMPLE DESCRIPTION: Bore 3 5.5-6.0' 10-30-89 1235  
LAB NO.: (-38574 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-09-89	
METHOD GC FID/5030		--	
as Gasoline	10	ND	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: Bore 3 6.5-7.0' 10-30-89 1240  
LAB NO.: (-38575 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		20	
DATE ANALYZED		11-11-89	
METHOD GC FID/5030		--	
as Gasoline	10	230	mg/Kg
METHOD 8020		--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg



SAMPLE DESCRIPTION: Bore 3 7.5-8.0' 10-30-89 1245  
LAB NO.: (-38576 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (SOIL)		--	
DILUTION FACTOR *		20	
DATE ANALYZED		11-11-89	
METHOD GC FID/5030		--	
as Gasoline	10	2,200	mg/Kg
METHOD 8020		--	
Benzene	25	950	ug/Kg
Ethylbenzene	75	3,500	ug/Kg
Toluene	25	13,000	ug/Kg
Xylenes, total	75	24,000	ug/Kg

# BEI Field Services

1829 Clement Avenue  
Alameda, CA 94501

8391

## CHAIN OF CUSTODY RECORD

PROJ NO. 89055		PROJECT NAME ALAMEDA				NO OF CON-TAINERS	TPH as gasoline + BTXE	TPH as diesel	Oil & Grease (SM503E)	VOC (EPA 624/8240)	Semi-VOC (EPA 625/8270)	10-DAY DEGRADABLE						REMARKS
SAMPLERS (Signature) <i>Michael E. Weber</i>																		
DATE	TIME	COMP.	GRAB	SAMPLE LOCATION														
10/30/89	9:15			Bore 1	5.5 to 6.0'	1	+										report to: Mike Weber	
"	9:20			Bore #1	7.5' to 8.0'	1	+										bill to: Blymyer	
"	11:25			Bore 2	5.5' to 6.0'	1	+										per ML to KJ 10/31/89 0850	
"	11:30			Bore 2	7.5' to 8.0'	1	+											
"	12:35			Bore 3	5.5' to 6.0'	1	+											
"	12:40			Bore 3	6.5' to 7.0'	1	+											
"	12:45			Bore 3	7.5 to 8.0'	1	+											
Relinquished by: (Signature)		Date/Time		Received by: (Signature)				Relinquished by: (Signature)		Date/Time		Received by: (Signature)						
<i>M. Weber</i>		10/30 4:35		<i>Jeff Smith</i>				<i>Jeff Smith</i>										
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								
<i>CVIA NCS</i>				<i>K. Temple</i>				10/31/89 0700										

# Appendix I

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# BLMYER ENGINEERS, INC.

CLIENT: BERNITA LESKOWSI

SITE: PACIFIC & WEBSTER,  
ALAMEDA, CA

JOB# 89055

DRILLER: GREGG DRILLING

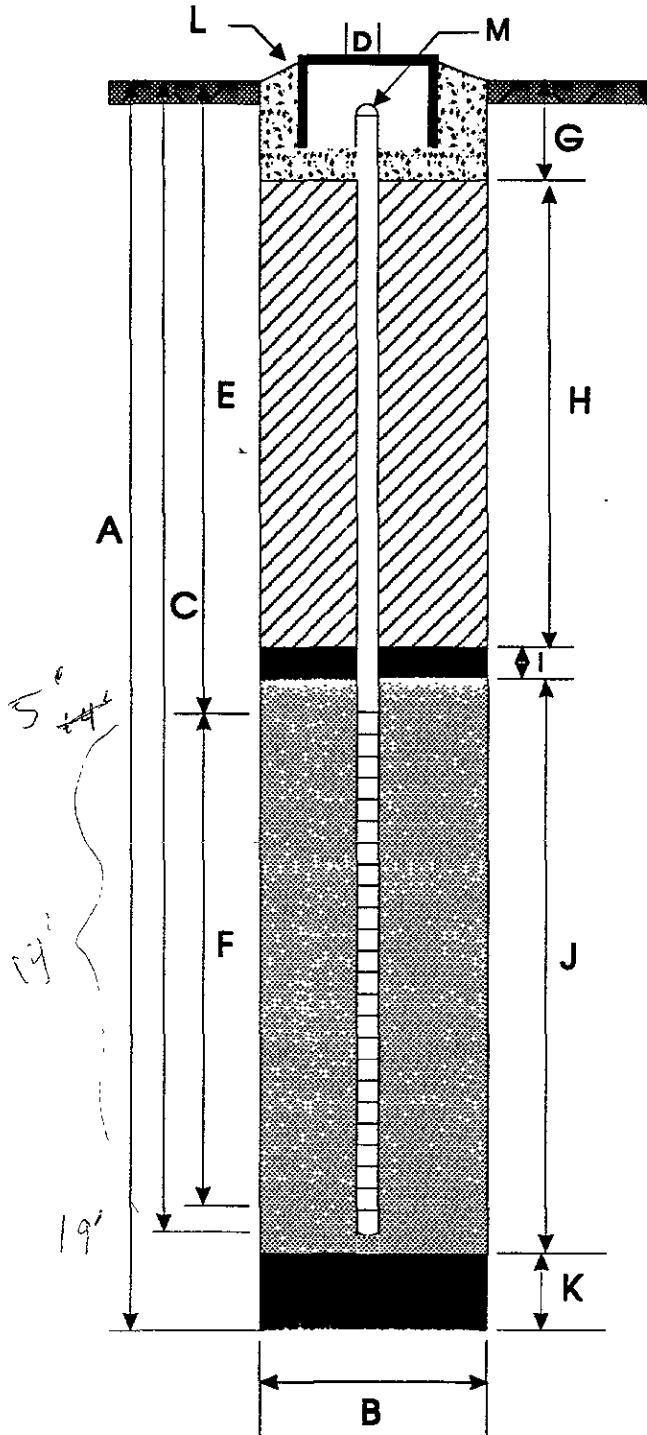
LOGGED BY: M. WEBER

BORING/WELL NO.: MW-1, MW-2, MW-3

TOP OF CASING ELEV.:

GROUND SURFACE ELEV.:

DATUM:



## WELL CONSTRUCTION

- A. Total Depth 19 feet
- B. Diameter 8 Inches
- Drilling Method Hollow stem auger
- C. Casing Length 19 feet
- Material Schedule 40 PVC
- D. Casing Diameter 2 inches
- E. Depth to Top Perforations 5 feet
- F. Perforated Length 14 feet
- Perforated Interval from 5 to 9 ft.
- Perforation Type Slotted
- Perforation Size 0.020 inches
- G. Surface Seal 4 feet
- Seal Material Grout + 4% bentonite
- H. Backfill 0 feet
- Backfill Material \_\_\_\_\_
- I. Seal 1 foot
- Seal Material Bentonite
- J. Sand Pack 14 feet
- Pack Material #2 sand
- K. Bottom Seal 0 feet
- Seal Material \_\_\_\_\_
- L. \_\_\_\_\_
- M. \_\_\_\_\_

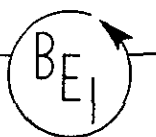


# Appendix J

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# BEI

FIELD SERVICES



### GROUNDWATER MONITORING DATA

Project Name Leskowski - Alameda Project No. 89055

Date 11-9-89 Field Technician ML/MW Sheet 1 of 1

Weather Sunny Temperature 75° Wind Slight

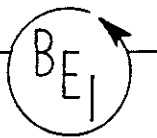
WELL ID	TOC ELEV.	DTW	DTP	PT	PT x .8	ADJ. DTW	WATER ELEV.
<u>MW-1</u>	_____	<u>7'-11"</u>	_____	_____	_____	_____	_____
<u>MW-2</u>	_____	<u>7'-10<sup>7</sup>/<sub>8</sub>"</u>	_____	_____	_____	_____	_____
<u>MW-3</u>	_____	<u>7'-11<sup>7</sup>/<sub>8</sub>"</u>	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

TOC = TOP-OF-CASING  
 DTW = DEPTH TO WATER  
 DTP = DEPTH TO PRODUCT  
 PT = PRODUCT THICKNESS

COMMENTS:

MW-1; Total depth = 15' Volume ≈ 7.5 gals  
MW-2; Total depth = 19' Volume ≈ 7.5 gals  
MW-3; Total depth = 19' Volume ≈ 7.5 gals





PURGE DATA

Project Name Leskowski - Alameda Project No. 89055

Date 11-9-89 Field Technician ML/MW Sheet 1 of 1

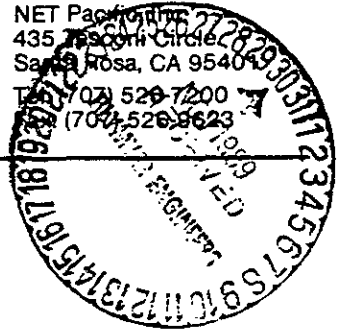
WELL ID	WELL VOLUME NO.	pH	TEMPERATURE (C)	CONDUCTIVITY (umhos)
<u>MW-1</u>	<u>0</u>	<u>6.50</u>	<u>23.8</u>	<u>583</u>
	<u>1</u>	<u>6.47</u>	<u>21.1</u>	<u>631</u>
	<u>2</u>	<u>6.49</u>	<u>20.9</u>	<u>534</u>
	<u>3</u>	<u>6.70</u>	<u>20.8</u>	<u>486</u>
<u>MW-2</u>	<u>0</u>	<u>6.43</u>	<u>24.5</u>	<u>630</u>
	<u>1</u>	<u>6.44</u>	<u>23.0</u>	<u>574</u>
	<u>2</u>	<u>6.25</u>	<u>22.0</u>	<u>589</u>
	<u>3</u>	<u>6.40</u>	<u>22.2</u>	<u>577</u>
<u>MW-3</u>	<u>0</u>	<u>6.67</u>	<u>23.1</u>	<u>660</u>
	<u>1</u>	<u>6.61</u>	<u>21.0</u>	<u>625</u>
	<u>2</u>	<u>6.56</u>	<u>20.7</u>	<u>581</u>
	<u>3</u>	<u>6.72</u>	<u>20.9</u>	<u>569</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

## Appendix K

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NATIONAL  
ENVIRONMENTAL  
TESTING, INC.



Mike Lewis  
Blymyer Engineers, Inc  
1829 Clement Ave  
Alameda, CA 94501

11-28-89  
NET Pacific Log No: 8559  
Series No: 495  
Client Ref: Proj# 89055

Subject: Analytical Results for "Leskowski, Alameda" Received 11-10-89.

Dear Mr. Lewis:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Submitted by:

Approved by:

  
Judy Ridley  
Client Services

  
Jules Skamarack  
Lab Manager

/ma  
Enc: Sample Custody Document



## KEY TO ABBREVIATIONS and METHOD REFERENCES

### Abbreviations

- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NR : Not requested.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

### Method References

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

\* Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated reporting limits by the dilution factor.





SAMPLE DESCRIPTION: MW-3 11-09-89 1420  
LAB NO.: (-39556 )

<u>Parameter</u>	<u>Reporting Limit</u>	<u>Results</u>	<u>Units</u>
PETROLEUM HYDROCARBONS		--	
VOLATILE (WATER)		--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-22-89	
METHOD GC FID/5030		--	
as Gasoline	0.05	0.32	mg/L
METHOD 602		--	
Benzene	0.5	0.58	ug/L
Ethylbenzene	0.5	1.2	ug/L
Toluene	0.5	ND	ug/L
Xylenes, total	0.5	2.1	ug/L



# BEI Field Services

1829 Clement Avenue

Alameda, CA 94501

## CHAIN OF CUSTODY RECORD

PROJ NO.		PROJECT NAME			NO OF CONTAINERS	TPH as gasoline + BTXE	TPH as diesel	Oil & Grease (SM1503E)	VOC (EPA 624/8240)	Semi-VOC (EPA 625/8270)	HOLD	REMARKS
89055		Leskowski - Alameda										
SAMPLERS (Signature)												
<i>Michael S. L. / msl</i>												
DATE	TIME	COMP.	GRAB	SAMPLE LOCATION								
11-9-89	12:30P		X	Bailer Blank	2 VOAS w/HCL						X	
11-9-89	12:40P		X	MW-2	2 VOAS w/HCL	X						10 day TAT
11-9-89	1:45P		X	MW-1	2 VOAS w/HCL	X						10 day TAT
11-9-89	2:20P		X	MW-3	2 VOAS w/HCL	X						10 day TAT
Relinquished by: (Signature)				Date/Time	Received by: (Signature)			Relinquished by: (Signature)		Date/Time	Received by: (Signature)	
<i>Michael S. L. / msl</i>				11/10 11:15	<i>Jeff Smith</i>			<i>Jeff Smith</i>				
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			
					<i>Schwartz</i>			11-10-89 2:30	8559			