

ENVIRONMENTAL
PROTECTION
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June 20, 2000

Jeannette St. Onge
1863 Sweetwood Drive
Daly City, California 94105

RE: Case Closure Summary
2411 Webb Avenue, Alameda, California
ACC Project No. 00-6632-001.00

Dear Ms. St Onge:

Enclosed please find two copies of the Case Closure Summary for the site located at 2411 Webb Avenue, Alameda, California. This Summary has been requested by the Alameda County Health Care Services Agency as a condition of regulatory site closure.

On your behalf, ACC will forward a copy of the Summary to Mr. Larry Seto at the Alameda County Health Care Services Agency for review.

If you have any questions regarding the Summary, please contact me at (510) 638-8400, extension 109.

Sincerely,



David R. DeMent, RG
Environmental Division Manager

/nhd:drd

Enclosures

cc: Mr. Larry Seto, ACHCSA



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CASE CLOSURE SUMMARY

June 20, 2000

2411 Webb Avenue
Alameda, California

Prepared For:
Jeannette St. Onge
1863 Sweetwood Drive
Daly City, California 94105

OAKLAND ▪ SACRAMENTO
SEATTLE ▪ LOS ANGELES

ACC Project No. 00-6632-001.00

CASE CLOSURE SUMMARY

**2411 Webb Avenue
Alameda, California**

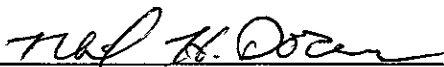
ACC Project No. 00-6632-001.00

Prepared for:

Ms. Jeannette St. Onge
1863 Sweetwood Drive
Daly City, California 94105

June 20, 2000

Prepared by:



Neil H. Doran
Staff Geologist

Reviewed by



David R. DeMent, RG
Environmental Division Manager

TABLE OF CONTENTS

| | Page |
|-------------------------------------------------------------|------|
| 1.0 CORRECTIVE ACTION BACKGROUND | 1 |
| 1.1 Site Characterization Activities..... | 1 |
| 1.1.1 <i>Subsurface Characterization Activities</i> | 1 |
| 1.1.2 <i>Findings/Conclusions</i> | 2 |
| 1.2 Initiation of Corrective Action..... | 3 |
| 1.2.1 <i>Removal of USTs</i> | 3 |
| 2.0 EVALUATION OF INVESTIGATIVE METHODS | 4 |
| 3.0 EXTENT OF SOIL AND GROUNDWATER IMPACT | 4 |
| 4.0 LOCAL AND REGIONAL HYDROGEOLOGY | 5 |
| 5.0 BENEFICIAL USES | 5 |
| 6.0 REMEDIAL ACTIVITIES | 6 |
| 7.0 REMEDIATION EFFECTIVENESS | 6 |
| 8.0 CONCLUSIONS | 6 |
| 9.0 REQUEST FOR REGULATORY CLOSURE | 7 |
| TABLES | |
| 1 – Blymyer Soil Sample Analytical Results..... | 2 |
| 2 – Blymyer Grab Groundwater Sample Analytical Results..... | 2 |
| 3 – TEC/Accutite Soil Sample Analytical Results..... | 3 |

FIGURES

- 1 – Location Map
- 2 – Site Plan

CASE CLOSURE SUMMARY

**2411 Webb Avenue
Alameda, California**

This Case Closure Summary has been prepared by ACC Environmental Consultants, Inc. (ACC) on behalf of Ms. Jeannette St. Onge. The Summary describes remediation and site investigation performed at 2411 Webb Avenue in Alameda, California. This Summary was requested by the Alameda County Health Care Services Agency (ACHCSA) as a condition of regulatory case closure.

1.0 CORRECTIVE ACTION BACKGROUND

The subject site is located at 2411 Webb Avenue, Alameda, California (Figure 1). The site is approximately 27 feet above sea level and is located 2,200 feet southwest of the Alameda/Oakland Estuary separating Alameda from Oakland. San Francisco Bay is an additional 5,070 feet to the southwest. The site is underlain by native poorly-sorted sands and silts interspersed with shallow fill materials. Land use in the vicinity of the site is characterized by a combination of residential and commercial buildings.

1.1 Site Characterization Activities

1.1.1 Subsurface Characterization Activities

Blymyer Engineers, Inc. (Blymyer) conducted a subsurface investigation at the site on October 28, 1997. The goal of this investigation was to characterize impact to soil and groundwater due to the suspect release from one 500-gallon fuel oil underground storage tank (UST) and one 500-gallon gasoline UST.

The work performed included advancing two exploratory soil borings to 12 and 14 feet below ground surface (bgs) and collecting one soil sample and one grab groundwater sample from each boring. The soil borings were advanced approximately 5 feet north and downgradient of the USTs, within the adjacent building. Soil boring locations and corresponding sample locations are illustrated on Figure 2.

The sample intervals selected for analysis were labeled and stored in a pre-chilled, insulated container to be transported following chain of custody protocol to Sequoia Analytical, a state-certified analytical laboratory for analysis of total extractable petroleum hydrocarbons (TEPH) as diesel by EPA Method 8015M, total purgeable petroleum hydrocarbons (TPPH) as gasoline by EPA Method 8015M/8020, benzene, toluene, ethylbenzene and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8020/, and total lead by EPA Method 6010.

During the investigation, native soils consisted of brown silty sand (SM) with minor clay to approximately 6.5 to 9.5 feet bgs, underlain by green silt (ML) to a depth of approximately 11.5 to 13.5 feet bgs. This unit was underlain by brown silty sand (SM) to the total depth of investigation (12 to 14 feet bgs). Groundwater was encountered in the borings at depths ranging

from 11.8 to 13.5 feet bgs and stabilized at approximately 10 feet bgs, suggesting slightly confined groundwater conditions. Analytical results from the Blymyer investigation are summarized in Tables 1 and 2.

TABLE 1 - BLYMYER SOIL SAMPLE ANALYTICAL RESULTS

| Sample ID | TEPH As Diesel (mg/kg) | TPPH As Gasoline (mg/kg) | Total Lead (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | MTBE (mg/kg) |
|-------------------------|------------------------|--------------------------|--------------------|-----------------|-----------------|-----------------------|-----------------------|--------------|
| SB1 soil 11.5-12.0' | 3,300 | --- | --- | <0.5 | <0.5 | <0.5 | 0.64 | --- |
| SB-2 soil 11.0-11.8' | 4,300 | 320 | <5.0 | <0.5 | <0.5 | <0.5 | 0.59 | <2.5 |

Notes: mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
< Indicates sample tested below the specified laboratory detection limit
--- Not analyzed

TABLE 2 - BLYMYER GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS

| Sample ID | TEPH As Diesel (µg/L) | TPPH As Gasoline (µg/L) | Total Lead (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) |
|-----------|-----------------------|-------------------------|-------------------|----------------|----------------|----------------------|----------------------|-------------|
| SB-1 | 4,300 | --- | --- | <0.005 | <0.005 | <0.005 | <0.005 | --- |
| SB-2 | 9,400 | 1,400 | <0.10 | <0.002 | <0.002 | <0.0025 | <0.002 | <0.01 |

Notes: µg/L = micrograms per liter, equivalent to parts per billion (ppb)
< Indicates sample tested below the specified laboratory detection limit
--- Not analyzed

1.1.2 Findings / Conclusions

Based on analytical results and field observations, Blymyer reported the following conclusions regarding shallow soil and groundwater at the site in their subsurface investigation report dated November 20, 1997:

- Because fuel oil is known to have been stored at the site, TEPH concentrations identified by the laboratory as weathered diesel is likely fuel oil; and
- The lack of detectable BTEX compounds, with the exception of low concentrations of xylenes reported in soil samples, suggests that the source of the release was primarily the fuel oil UST.

1.2 Initiation of Corrective Action

1.2.1 Removal of USTs

According to the December 21, 1999 tank removal report prepared by TEC/Accutite (Accutite), one 500-gallon gasoline UST and one 500-gallon fuel oil UST were removed from the site on December 9, 1999. The date of UST installation is unknown. According to the report, the USTs were located beneath the sidewalk in front of the subject site, and the bases of the tanks were located approximately 6 feet below ground surface (bgs). The distribution of the tanks in relation to the building is illustrated on Figure 2.

Was tank empty after samples taken? GW in 10/99? No

Following removal, the former USTs were examined by Mr. Scott Seery of the ACHCSA and each was found to have several holes. The total depth of the excavation was 6 feet bgs, and no water was encountered in the pit. Staining and petroleum hydrocarbon odor was observed in soil in direct contact with the tank bottom.

Under direction of Mr. Seery, Accutite collected one confirmation soil sample from beneath each tank at approximately 8 feet bgs, and one 4-point composite soil sample from soil generated during excavation. Analytical results reported 8,300 parts per million (ppm) total petroleum hydrocarbons as diesel (TPHd), 450 ppm total petroleum hydrocarbons as gasoline (TPHg), 4.6 ppm xylenes, and trace concentrations of toluene and ethylbenzene from the soil sample collected beneath the heating oil UST. Analytical results for the soil sample collected beneath the gasoline UST reported 5,300 ppm TPHd, 300 ppm TPHg, 2.2 ppm xylenes, and trace amounts of toluene and ethylbenzene. Stockpiled soil analytical results reported 56 ppm TPHd, 1.8 ppm TPHg, and 0.017 ppm xylenes. Soil sample analytical results are summarized in Table 3. Accutite sample locations and corresponding analytical results are summarized on Figure 2.

TABLE 3 - TEC/ACCUTITE SOIL SAMPLE ANALYTICAL RESULTS

| Sample ID | TPHd (mg/kg) | TPHg (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | MTBE (mg/kg) |
|------------|--------------|--------------|-----------------|-----------------|----------------------|-----------------------|--------------|
| SP-1,2,3,4 | 56 | 1.8 | <0.005 | <0.005 | <0.005 | 0.017 | <0.005 |
| CS-1@8.0 | 8,300 | 450 | <0.125 | 0.56 | 0.75 | 4.6 | <0.125 |
| CS-2@8.0 | 5,300 | 300 | <0.125 | 0.76 | 0.60 | 2.2 | <0.01 |

Notes. mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
 < Indicates sample tested below the specified laboratory detection limit
 --- Not analyzed

Accutite reported that the tanks were emptied prior to tank removal activities. The tanks were inerted using dry ice, the lower explosion limit and oxygen content were measured with a Gas-

Tech meter, and the tanks were removed and transported under manifest to the Ecology Control Industries disposal facility in Richmond, California. Copies of the waste manifests and tank destruction certificates are contained in the December 21, 1999 Accutite report.

2.0 EVALUATION OF INVESTIGATIVE METHODS

Soil borings advanced in October 1997 by Blymyer for the characterization of soil and groundwater appear to be in appropriate, representative locations. Regional topography, the proximity of the site to the Alameda/Oakland Estuary to the north, and a northerly groundwater gradient reported at nearby sites suggest the soil borings were advanced downgradient of the USTs. Soil samples were obtained at depths expected to provide optimal information on petroleum hydrocarbon impact to soil from the former USTs. Soil and grab groundwater samples were analyzed for appropriate constituents of concern based on the site history. Blymyer utilized methods and protocols ordinarily employed by environmental consulting professionals currently practicing under similar conditions in the area.

During UST removal, Accutite adhered to sampling guidelines issued by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and detailed in *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*. Soil samples obtained during UST removal appear to be representative and appropriate. Analyses performed included all potential constituents of concern typically associated with petroleum hydrocarbon leaks and spills. Reported concentrations of petroleum hydrocarbons in soil beneath the former USTs are consistent with a release resulting from failure resulting from corrosion. Based on the December 1999 Accutite report, ACC is not aware of tank monitoring or leak detection system in place prior to UST removal.

3.0 EXTENT OF SOIL AND GROUNDWATER IMPACT

Blymyer's placement of soil borings and sampling plan was designed to provide accurate, representative information on the magnitude and extent of a possible prior release from the onsite USTs. Tank removal activities by Accutite removed the source of impact and adequately characterized soil immediately beneath the tank. Soil sample analytical results obtained during the October 1997 soil boring investigation and during tank removal suggest a residual impact to soil remains within and immediately adjacent to the former UST excavation. However, based on documentation presented in Accutite's report, additional excavation following UST removal was not required by the ACHCSA.

Detectable concentrations of gasoline and diesel-range hydrocarbons were reported in grab groundwater samples obtained immediately adjacent to the former USTs during Blymyer's October 1997 investigation. Due to low BTEX concentrations, it appears that the hydrocarbons reported correspond to weathered gasoline and fuel oil. Furthermore, due to fine-grained soils observed at the site and the shallow regional groundwater gradient, the migration potential of petroleum hydrocarbons is estimated to be minimal. ACC believes that the work performed adequately characterized the vertical and horizontal extent of impact to soil and groundwater from

a past release of petroleum hydrocarbons at the subject site.

4.0 LOCAL AND REGIONAL HYDROGEOLOGY

The subject site is located approximately 2,200 feet southwest of the Alameda/Oakland Estuary and approximately 5,070 feet northeast of San Francisco Bay. Regional topography suggests a northeasterly groundwater gradient towards the estuary, and the low elevation of the subject site (approximately 25 feet above sea level) indicates a relatively shallow local groundwater gradient. Groundwater flow direction and gradient has been reported to be 0.007 foot/foot to the east at the BP Oil facility at 1541 Park Street, located approximately 220 feet west of the subject site. Groundwater flow direction and gradient have been reported to be 0.018 foot/foot to the north at the Good Chevrolet facility at 1630 Park Street, approximately 430 feet north of the subject site. This data suggests a northeasterly flow direction in the vicinity of the site, with a gradient on the order of 0.01.

During the subsurface investigation, Blymyer encountered silt and silty sand to depths of 12 to 14 feet below ground surface, fine-grained soils possessing minimal hydraulic conductivity. These semipermeable soil types combined with shallow local groundwater gradient offer minimal migration potential for petroleum hydrocarbons in shallow groundwater. Groundwater was encountered at approximately 10 feet below ground surface. Due to proximity to the estuary and resulting poor groundwater quality, it is highly unlikely that private or municipal wells are located downgradient of the subject site.

5.0 BENEFICIAL USES

According to the RWQCB's 1995 *Basin Plan* (Plan), the subject site is located within the East Bay Plain groundwater basin. The Plan identifies municipal, domestic, industrial process and service water supply, and agricultural water supply as existing beneficial uses of groundwater. In addition, unless otherwise noted in the Plan, the RWQCB considers all groundwater to be potentially suitable for municipal or domestic use. No well survey has been performed downgradient of the subject site. Due to the site's proximity to the bay and the shallow and poor-quality nature of the water-bearing unit investigated, ACC considers it highly unlikely that groundwater located in the vicinity of the former UST excavation will be utilized for beneficial uses, or that any water wells are present downgradient of the subject site.

As detailed in Blymyer's November 1997 subsurface investigation report, concentrations of aromatic hydrocarbons, often the most mobile petroleum hydrocarbon constituents, are low to nondetect. Furthermore, the shallow groundwater gradient and semipermeable nature of fine-grained native materials provide low potential for migration of constituents in shallow groundwater. These factors suggest that residual impact to groundwater is confined to the site and will continue to degrade naturally.

6.0 REMEDIAL ACTIVITIES

Onsite remediation consisted of removal and disposal of two USTs. Blymyer's November 1997 report indicated that additional investigation and remediation is not warranted.

7.0 REMEDIATION EFFECTIVENESS

Removal of two onsite USTs effectively removed the source of petroleum hydrocarbon impact to soil and groundwater. Residual impact to fine-grained soil remains in the vicinity of the former USTs, and concentrations of volatile and mobile constituents of concern are very low to nonexistent. These final concentrations are consistent with SWRCB Resolution 68-16, 'Statement of Policy with Respect to Maintaining High Quality of Waters in California'. No ongoing or verification sampling or monitoring is warranted, and existing or potential impact to beneficial uses of groundwater is minimal.

8.0 CONCLUSIONS

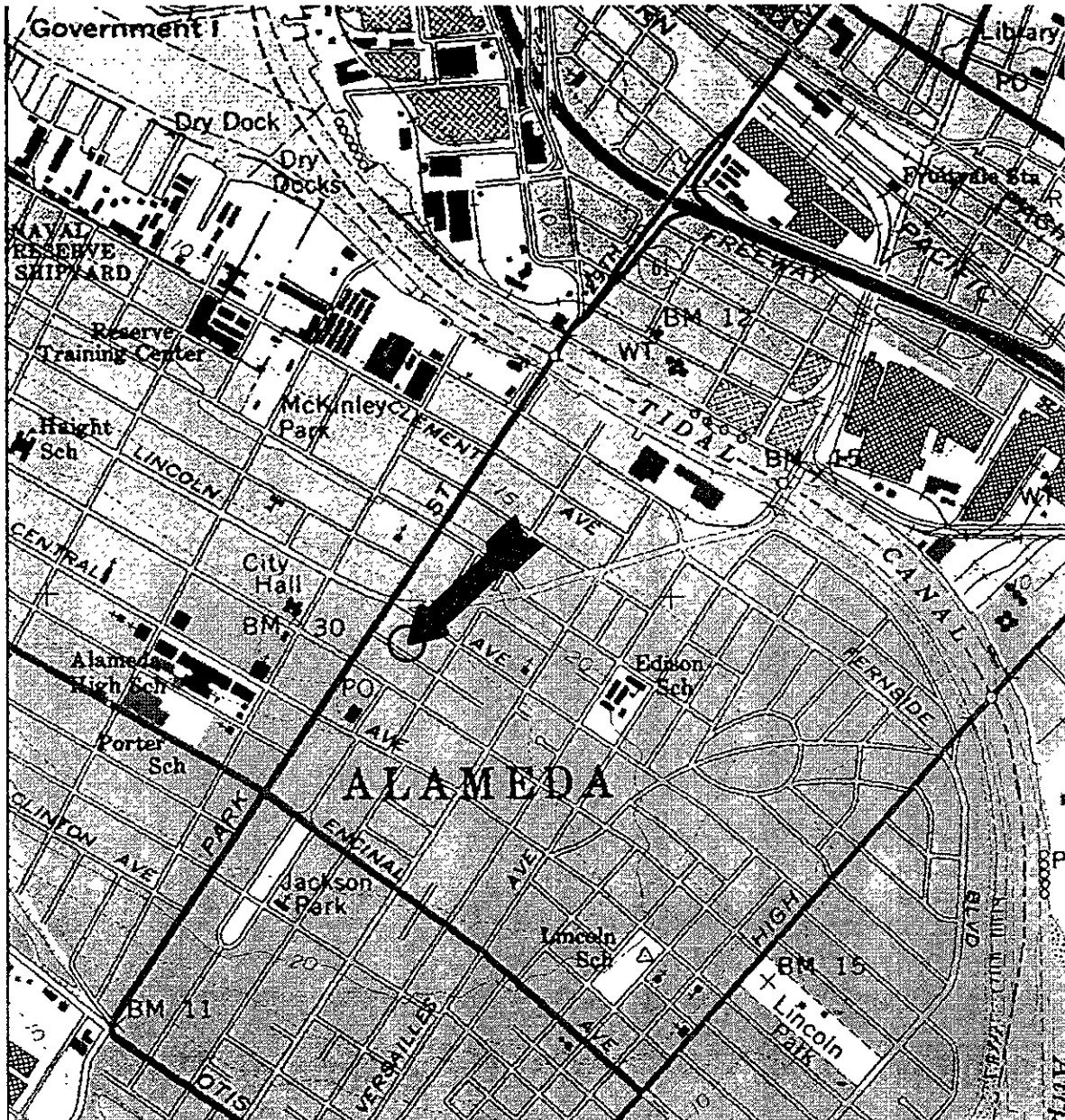
Based on review of available documentation and on previous experience with similar sites, ACC makes the following conclusions:

- Residual constituents of concern consist primarily of degraded diesel fuel;
- Residual petroleum hydrocarbons are degrading through natural attenuation processes;
- Benzene was not detected in any soil or grab groundwater samples;
- With the exception of residual diesel concentrations in soil from 8 to 12 feet bgs, no source of petroleum hydrocarbons exists at the site; and
- No MTBE was reported in groundwater.

9.0 REQUEST FOR REGULATORY CLOSURE

ACC recommends that the site be evaluated for regulatory closure. According to the RWQCB's 'Supplemental Instructions to State Water Board December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Fuel Sites', the subject site qualifies as a 'low risk groundwater case' based on the following:

- The leak has been stopped, and ongoing sources (i.e., the USTs) have been removed;
- The site has been adequately characterized. Volatile petroleum hydrocarbons were not detected in soil samples or grab groundwater samples collected from soil borings. Based on analytical results and field observations, the site does not pose a threat to human health or the environment, and no sensitive receptors have been identified;
- Based on the site's proximity to the Alameda/Oakland Estuary and to San Francisco Bay, no water wells or deeper drinking water aquifer are likely to be impacted. Due to the limited migration potential of petroleum hydrocarbons in groundwater, no surface waters are likely to be impacted;
- The low levels of petroleum hydrocarbons present in shallow groundwater and the lack of volatile constituents suggest that the site presents no significant risk to human health; and
- Based on the shallow, restricted nature of the impact to groundwater and the rapid degradation rate of petroleum hydrocarbons, the site poses no significant risk to the environment.



SOURCE: DeLorme TopoGuards, 1999

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Title: Location Map 2411 Webb Avenue Alameda, California | |
| Figure Number 1 | Scale 1" = 1/4 Mile |
| Project Number 6632-01.00 | Drawn By NHD |
| A·C·C ENVIRONMENTAL CONSULTANTS 1877 Chapel Drive, Suite 100 Oakland, California 94621 Tel: 415 5400 Fax: 415 536 0414 | |
| Date 6/8/00 | |

PARK STREET

WEBB AVENUE

500-Gallon Heating Oil UST

500-Gallon Gasoline UST

CS-1@8.0

| |
|------------|
| d - 8,300 |
| g - 450 |
| b - <0.125 |
| t - 0.56 |
| e - 0.75 |
| x - 4.6 |
| M - <0.125 |

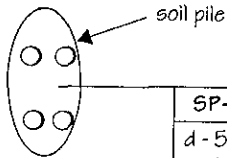
CS-2@8.0

| |
|------------|
| d - 5,300 |
| g - 300 |
| b - <0.125 |
| t - 0.76 |
| e - 0.80 |
| x - 2.2 |
| M - <0.01 |

SB-2

| soil | water |
|-----------|-------------|
| d - 4,300 | d - 9,400 |
| g - 320 | g - 1,400 |
| b - <0.5 | b - <0.0025 |
| t - <0.5 | t - <0.0025 |
| e - <0.5 | e - <0.0025 |
| x - 0.59 | x - <0.0025 |
| M - <2.5 | M - <0.012 |
| Pb - <5.0 | PB - <0.10 |

2411 Webb Avenue



SP-1,2,3,4

| |
|------------|
| d - 56 |
| g - 1.8 |
| b - <0.005 |
| t - <0.005 |
| e - <0.005 |
| x - 0.017 |
| M - <0.005 |

SB-1

| soil | water |
|-----------|------------|
| d - 3,300 | d - 4,300 |
| g - --- | g - --- |
| b - <0.5 | b - <0.005 |
| t - <0.5 | t - <0.005 |
| e - <0.5 | e - <0.005 |
| x - 0.64 | x - <0.005 |
| M - --- | M - --- |
| Pb - --- | PB - --- |

LEGEND

- - TEC/Accutite Sample Location
- - Blymyer Soil Boring Location

Soil / Grab Groundwater Sample Results

| CS-1@8.0 | - sample ID |
|------------|------------------|
| d - 8,300 | d - diesel |
| g - 450 | g - gasoline |
| b - <0.125 | b - benzene |
| t - 0.56 | t - toluene |
| e - 0.75 | e - ethylbenzene |
| x - 4.6 | x - xylenes |
| M - <0.125 | M - MTBE |
| Pb - <0.10 | Pb - lead |

Soil sample results reported in milligrams per kilogram (mg/kg), equivalent to parts per million

Groundwater results reported in micrograms per liter (µg/L), equivalent to parts per billion

Title: **Site Plan**
2411 Webb Avenue
Alameda, California

Figure Number: **2**

Scale: **1" = 20'**

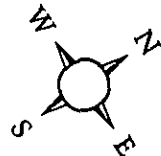
Project Number: **6632-01.00**

Drawn By: **NHD**

A·C·C
ENVIRONMENTAL
CONSULTANTS

Date: **6/18/00**

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APPROXIMATE SCALE

