



KAPREALIAN ENGINEERING, INC.
Consulting Engineers

PO. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

11104

KEI-J90-0910.R1
October 16, 1990

BP Oil Company
Aetna Building, Suite 360
2868 Prospect Park Drive
Rancho Cordova, CA 95670

Attention: Mr. Peter J. DeSantis

RE: Soil Sampling Report
BP Service Station
1716 Webster Street
Alameda, California

Dear Mr. DeSantis:

This report summarizes the soil sampling performed by Kaprealian Engineering, Inc. (KEI) at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and the Alameda County Health Agency.

The scope of the work performed by KEI consisted of the following:

Coordination with regulatory agencies.

Collection of soil samples from the pipe trenches, from beneath the dispensers, and from the pump island area excavation sidewalls.

Collection of a water sample from the pump island excavated area.

Delivery of samples, including proper Chain of Custody documentation, to a certified analytical laboratory.

Preparation of this report.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. A Location Map and Site Plans are attached to this report.

FIELD ACTIVITIES

On September 19, 1990, KEI collected five soil samples from beneath the pump islands during a routine dispenser modification. Three samples, labeled D1, D2 and D3, were collected from beneath the dispensers and two samples, labeled P1 and P2, were collected

from the product pipe trenches at a depth of approximately 3 feet below grade. Ms. Katherine Chesick of the Alameda County Health Agency was present during soil sampling. The undisturbed samples were collected from bulk material excavated by backhoe. The samples were placed in clean, two-inch diameter brass tubes, sealed with aluminum foil, plastic caps and tape, and stored in a cooled ice chest for delivery to a certified laboratory. Sample point locations are as shown on the attached Site Plan, Figure 1.

Per the direction of Ms. Katherine Chesick, and due to the levels of contamination found in the soil, KEI returned to the site on September 26, 1990 in order to collect additional soil samples following additional excavation in the pump island area. One sample, labeled B1, was collected at a depth of about 7 feet, and six samples, labeled B1(8.5) and B2 through B6, were collected at a depth of about 8.5 feet below grade. Three additional samples, labeled SW1, SW2 and SW3, were collected from the pump island area excavation sidewalls at depths ranging from 4 to 5 feet below grade. Samples were collected and handled as described above. Sample point locations are as shown on the attached Site Plan, Figure 1. During excavation, ground water was observed at a depth of about 9 feet below grade.

1st over ref

At Ms. Chesick's request, KEI returned to the site on October 2, 1990 in order to collect one water sample from the pump island excavated area. Approximately 1,000 gallons of ground water were pumped from the pump island excavated area. One water sample, labeled W1, was collected from the pump island excavation in six clean glass VOA vials with Teflon screw caps. The water sample was stored and delivered as described above. In addition, one soil sample, labeled B6(9.25) was collected from beneath sample location B6 at a depth of 9.25 feet. This sample was also handled as described above.

In order to define the lateral extent of the existing soil contamination in the sidewall adjacent to sample point SW1, Ms. Katherine Chesick requested additional excavation and sampling. On October 4, 1990, KEI collected four sidewall samples, labeled SW1(S), SW1(N), SW1(E) and SW1(W), at a depth of about 5 feet below grade. In addition, one soil sample, labeled SW1-B, was collected at a depth of approximately 8.5 feet. These samples were also collected and handled as described above. Ms. Katherine Chesick was present during the excavation and sampling activities. Sample point locations are as shown on the attached Site Plan, Figure 2.

2nd over ref

KEI returned to the site on October 8, 1990 in order to observe additional soil excavation laterally in the area of sample point SW1(E). Soil was excavated 3.5 feet laterally to a depth of about 8.5 feet in the vicinity of sample point SW1(E). One

3rd over ref

additional soil sample, labeled SW1(E2), was collected from bulk material excavated by backhoe at a depth of approximately 5 feet. Sample point locations are as shown on the attached Site Plan, Figure 2.

SUBSURFACE CONDITIONS

The subsurface soils exposed in the pump island excavation appeared to consist primarily of sandy silt to a depth of about 7 feet, which are in turn underlain by silty clay to the maximum depth explored (approximately 9 feet). Ground water was encountered at a depth of approximately 9 feet below grade.

ANALYTICAL RESULTS

All samples were analyzed by Sequoia Analytical Laboratory in Concord, California and were accompanied by properly executed Chain of Custody documentation. All soil and water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020, and total lead, except for samples SW1(S), SW1(N), SW1(E), SW1(E2), SW1(W), and SW1-B, which were only analyzed for TPH as gasoline and BTX&E.

Analytical results of the initial soil samples (D1, D2 and D3), collected from beneath the dispensers at a depth of 3 feet, indicate levels of TPH as gasoline ranging from 1,800 ppm to 3,000 ppm. Samples P1 and P2, collected from the product pipe trenches, showed levels of TPH as gasoline at 3,500 ppm and 4.0 ppm, respectively. Analyses of soil samples (B1 through B6), collected from the bottom of the pump island excavation, show levels of TPH as gasoline ranging from 1.7 ppm to 25 ppm, except for samples B1 and B6, which show 110 ppm and 280 ppm, respectively. However, after additional excavation, analyses of the soil samples B1(8.5) and B6(9.25), collected beneath the samples B1 and B6, indicated levels of TPH as gasoline at 3.7 ppm and 1.7 ppm, respectively. Total lead was non-detectable for samples B1 through B6.

Analytical results of the sidewall samples SW1, SW1(S), SW2 and SW3, indicate levels of TPH as gasoline at 7,500 ppm, 2,100 ppm, 73 ppm and non-detectable, respectively. Due to the level of contamination found in the area of sample point SW1(S), additional area was excavated as shown on the attached Site Plan, Figure 3. The additional sidewall samples, SW1(N) and SW1(W), showed levels of TPH as gasoline at 9.3 ppm and non-detectable, respectively, with non-detectable levels of benzene, while sample SW1(E) showed 3,400 ppm of TPH as gasoline, with 0.18 ppm of benzene. However, after further excavation (about 3.5 feet

laterally** in the area of sample point SW1(E), analyses of the soil sample SW1(E2) showed non-detectable levels of TPH as gasoline and BTX&E. The additional sample SW1-B, collected from the bottom of the new excavated area at a depth of approximately 8.5 feet, showed non-detectable levels of TPH as gasoline with 0.006 ppm of benzene.

Final soil sample locations with levels of TPH are shown on the attached Site Plan, Figure 3.

Analytical results of the water sample (W1), collected from the pump island excavated area, indicated 38,000 ppb of TPH as gasoline, and 4,900 ppb of benzene. Total lead was 0.16 ppm. The results of the soil samples are summarized in Table 1, and water analyses in Table 2. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISTRIBUTION

A copy of this report should be sent to Ms. Katherine Chesick of the Alameda County Health Agency, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.


The results of this study are based on the data obtained from the field work and laboratory analyses. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

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October 16, 1990
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Should you have any questions regarding this report, please feel free to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Hagop Kevork
Civil Engineer



Don R. Braun
Certified Engineering Geologist

License No. 1310
Exp. Date 6/30/92



Mardo Kaprealian
President

jad

Attachments: Tables 1 & 2
Location Map
Site Plans - Figures 1 & 2 & 3
Laboratory Analyses
Chain of Custody documentation

KEI-J90-0910.R1
 October 16, 1990

TABLE 1

SUMMARY OF LABORATORY ANALYSES
 SOIL

(Collected on September 19 & 26, and
 October 2, 4 & 8, 1990)

<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl- benzene</u>	<u>Total Lead</u>
P1	3	3,500	3.9	120	340	55	7.5
P2	3	4.0	ND	0.040	0.19	0.029	4.0
D1	3	3,000	0.60	32	75	35	4.5
D2	3	1,800	0.27	3.5	110	4.6	30
D3	3	3,000	0.63	17	170	20	21
B1	7	110	1.9	3.7	10	2.3	ND
B1(8.5)	8.5	3.7	0.38	0.048	0.19	0.10	ND
B2	8.5	6	0.22	0.027	0.73	0.15	ND
B3	8.5	1.7	0.24	0.21	0.17	0.030	ND
B4	8.5	25	1.6	1.8	2.8	0.57	ND
B5	8.5	6.7	0.25	0.21	0.45	0.14	ND
B6	8.5	280	0.63	8.0	26	5.1	ND
B6(9.25)	9.25	1.7	0.41	0.23	0.11	0.065	9
SW1	5	7,500	9.9	82	560	98	45
SW1(S)	5	2,100	4.3	24	190	36	--
SW1(N)	5	9.3	ND	0.073	0.32	0.056	--
SW1(E)	5	3,400	0.18	17	130	19	--
SW1(E2)	5	ND	ND	ND	ND	ND	--
SW1(W)	5	ND	ND	0.010	ND	ND	--
SW1-B	8.5	ND	0.006	0.022	0.018	0.016	--
SW2	4	73	ND	0.016	0.46	0.030	ND
SW3	5	ND	ND	ND	ND	ND	ND
Detection Limits		1.0	0.0050	0.0050	0.0050	0.0050	0.25

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

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October 16, 1990

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on October 2, 1990 from
Pump Island Excavation)

<u>Sample #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
W1*	38,000	4,900	2,200	5,300	940
Detection Limits	30.0	0.3	0.3	0.3	0.3

* Total lead was 0.16 ppm.

Results in parts per billion (ppb), unless otherwise indicated.

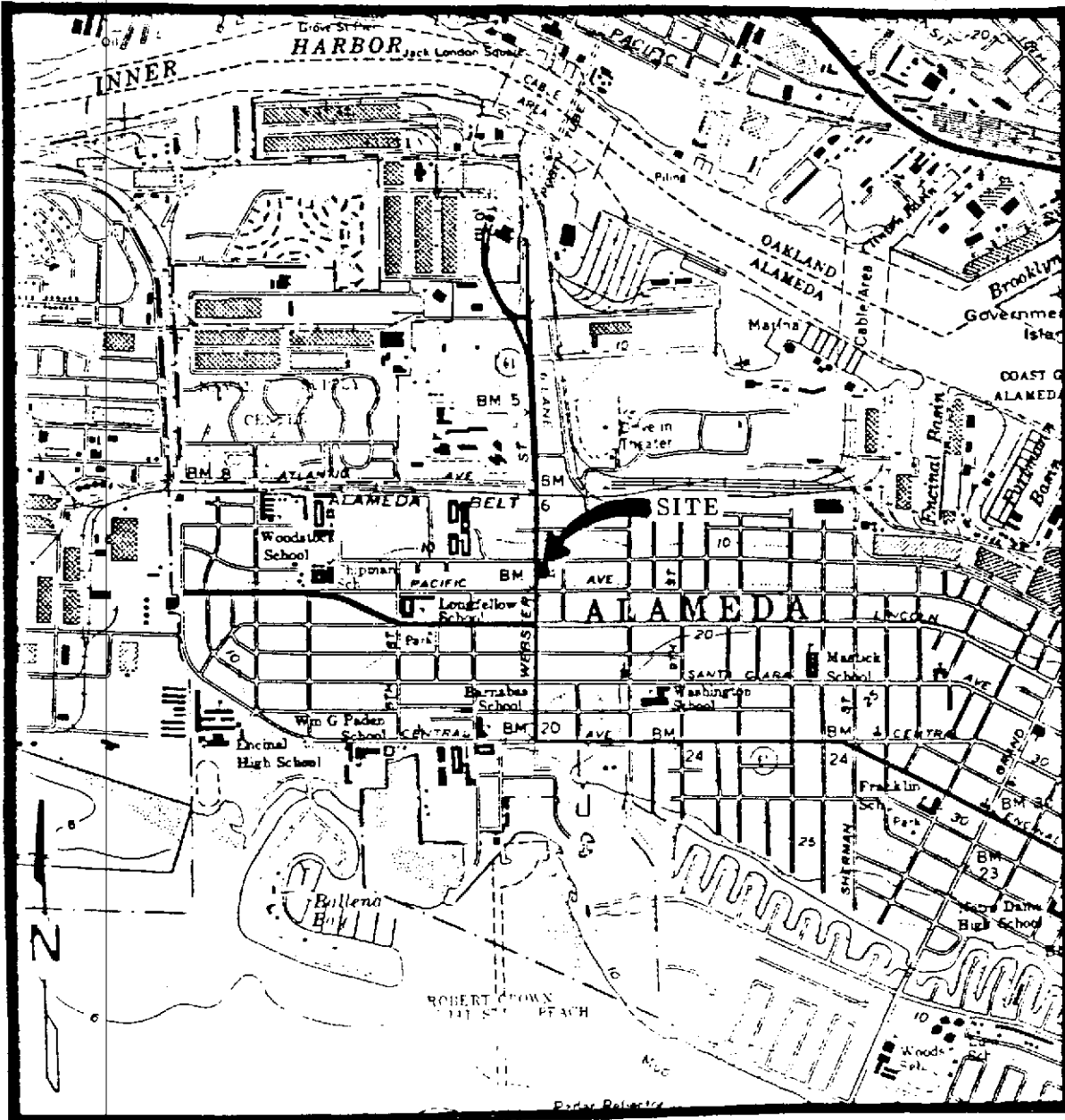


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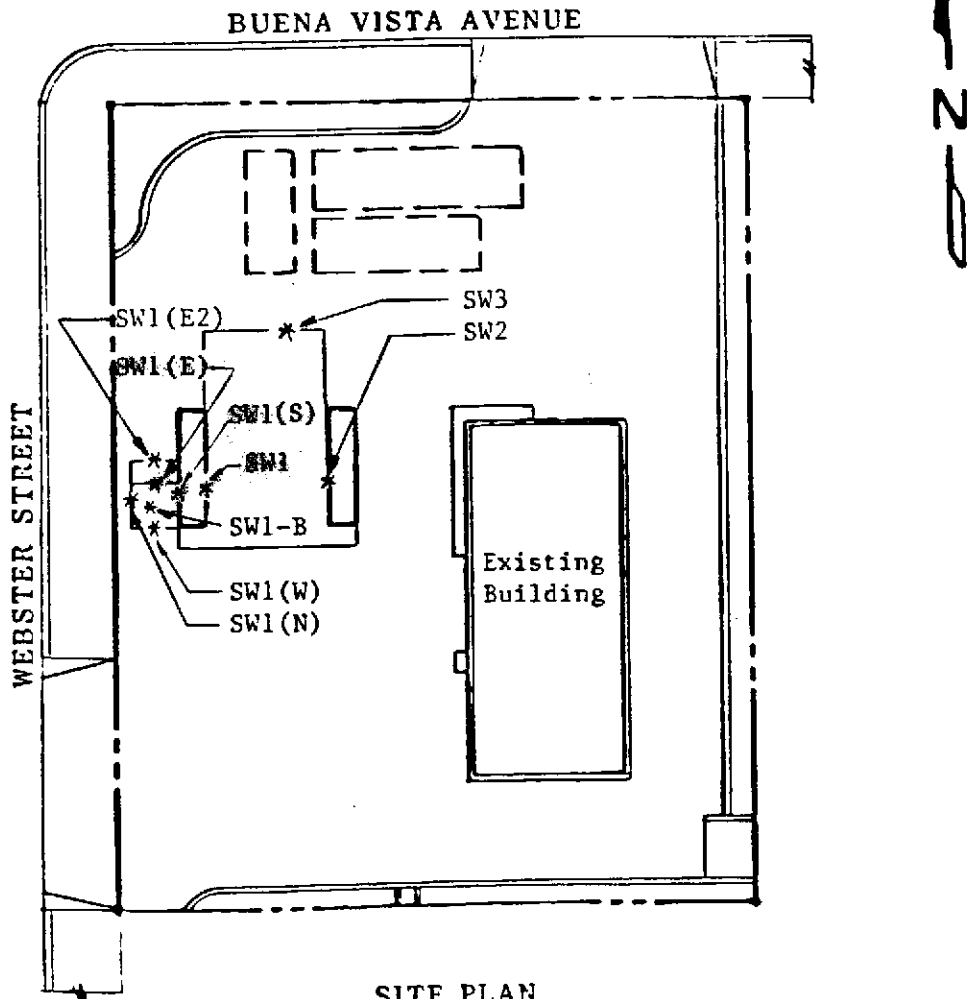
LOCATION MAP

BP Service Station
1716 Webster Street
Alameda, CA



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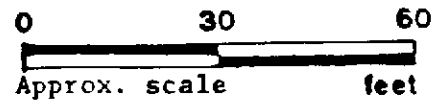
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SITE PLAN
Figure 2

LEGEND

* Sample Point Location

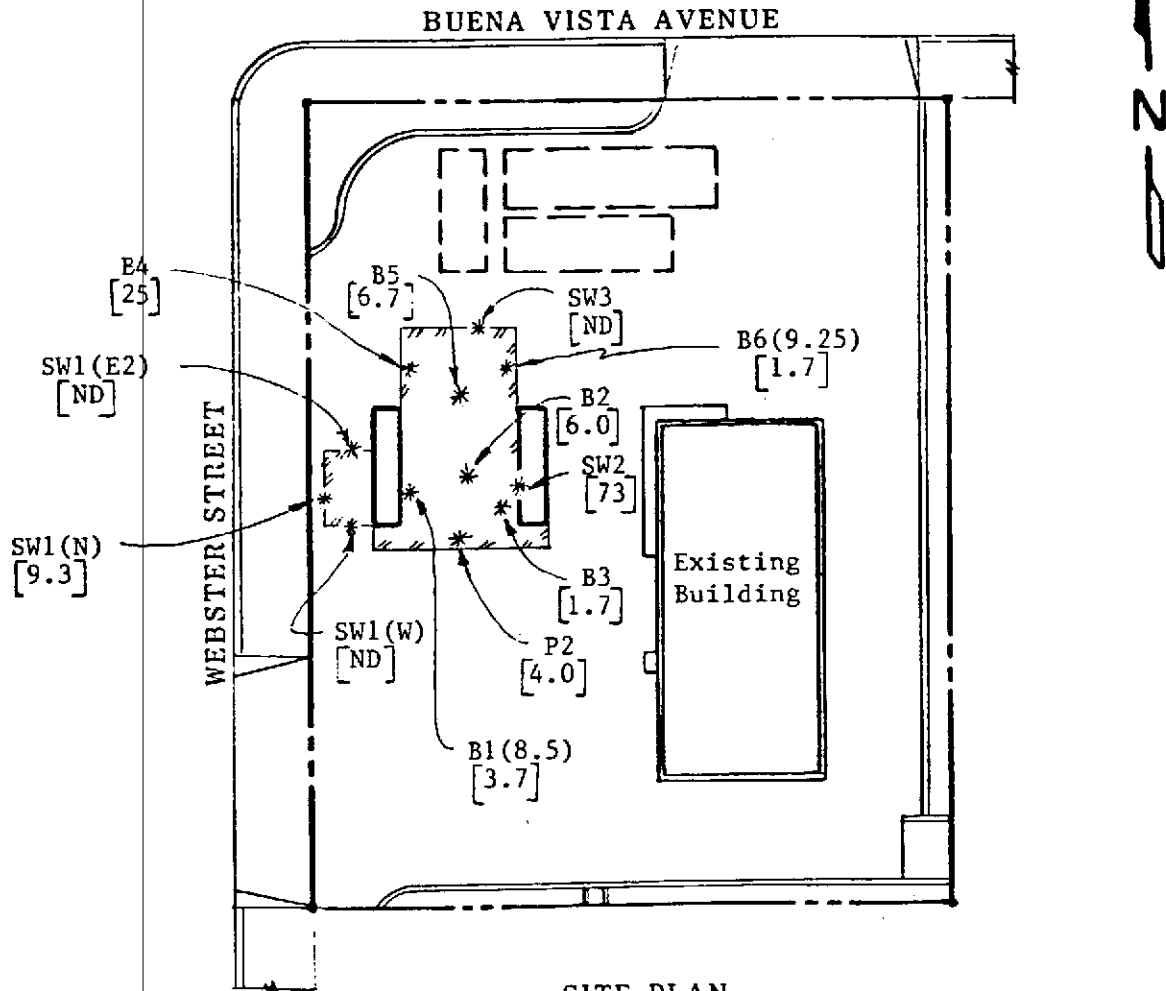


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1716 Webster Street
Alameda, CA



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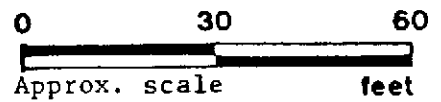
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SITE PLAN
Figure 3

LEGEND

- * Soil sample location
- [] TPH as gasoline in PPM
- ▨ Area excavated to a depth of 9 feet.



BP Service Station
1716 Webster Street
Alameda, CA



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP Station, 1716 Webster St., Alameda Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 009-0378	Sampled: Sep 19, 1990 Received: Sep 20, 1990 Analyzed: Sep 20, 1990 Reported: Sep 21, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
009-0378	P1	3,500	3.9	120	55	340
009-0379	P2	4.0	N.D.	0.040	0.029	0.19
009-0380	D1	3,000	0.60	32	35	75
009-0381	D2	1,800	0.27	3.5	4.6	110
009-0382	D3	3,000	0.63	17	20	170

Detection Limits:

1.0

0.0050

0.0050

0.0050

0.0050

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

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Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: BP Station, 1716 Webster St., Alameda
Sample Descript: Soil
Analysis for: Total Lead
First Sample #: 009-0378

Sampled: Sep 19, 1990
Received: Sep 20, 1990
Extracted: Sep 20, 1990
Analyzed: Sep 20, 1990
Reported: Sep 21, 1990

LABORATORY ANALYSIS FOR: Total Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
009-0378	P1	0.25	7.5
009-0379	P2	0.25	4.0
009-0380	D1	0.25	4.5
009-0381	D2	0.25	30
009-0382	D3	0.25	21

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>Hardy</i>		SITE NAME & ADDRESS BP station - ALAMEDA 1716 WEBSTER STREET							ANALYSES REQUESTED TPH-G BTXE Total Lead			TURN AROUND TIME: <u>24 Hrs</u> Priority
WITNESSING AGENCY												REMARKS
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTXE	Total Lead	
P1	9/19/90		✓		✓		1	Pipe Trench	✓	✓	✓	380 the rest 380 381 382
P2	9/19/90		✓		✓		1	Pipe Trench	✓	✓	✓	
D1	9/19/90		✓		✓		1	Beneath Dispenser	✓	✓	✓	
D2	9/19/90		✓		✓		1	Beneath Dispenser	✓	✓	✓	
D3	9/19/90		✓		✓		1	Beneath Dispenser	✓	✓	✓	

Relinquished by: (Signature) <i>Hardy</i>	Date/Time 9-20-90 8:35	Received by: (Signature) <i>[Signature]</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)

The following MUST BE completed by the laboratory accepting samples for analysis:

- Have all samples received for analysis been stored in ice?
- Will samples remain refrigerated until analyzed?
- Did any samples received for analysis have head space? NO
- Were samples in appropriate containers and properly packaged?

Signature: [Signature] Title: SR Date: 9/20



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: BP Station, 1716 Webster St., Alameda Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 009-0779	Sampled: Sep 26, 1990 Received: Sep 27, 1990 Analyzed: Sep 27, 1990 Reported: Sep 28, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
009-0779	B1	110	1.9	3.7	2.3	10
009-0780	B1(B5)	3.7	0.38	0.048	0.10	0.19
009-0781	B2	6.0	0.22	0.027	0.15	0.73
009-0782	B3	1.7	0.24	0.21	0.030	0.17
009-0783	B4	25	1.6	1.8	0.57	2.8
009-0784	B5	6.7	0.25	0.21	0.14	0.45
009-0785	B6	280	0.63	8.0	5.1	26

Detection Limits:

1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Belinda C. Vega
Laboratory Director



SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: BP Station, 1716 Webster St., Alameda
Sample Descript: Soil
Analysis for: Total Lead
First Sample #: 009-0779

Sampled: Sep 26, 1990
Received: Sep 27, 1990
Extracted: Sep 27, 1990
Analyzed: Sep 27, 1990
Reported: Sep 28, 1990

LABORATORY ANALYSIS FOR: Total Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
009-0779	B1	0.25	N.D.
009-0780	B1(8.5)	0.25	N.D.
009-0781	B2	0.25	N.D.
009-0782	B3	0.25	N.D.
009-0783	B4	0.25	N.D.
009-0784	B5	0.25	N.D.
009-0785	B6	0.25	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED			TURN AROUND TIME:	
Haig		BP Station - ALAMEDA 1716 WEBSTER STREET							TPH-G	BTXE	Total Lead		24 Hrs
WITNESSING AGENCY												REMARKS	
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTXE	Total Lead		
1.	B1	9/26	✓	✓			1	Pipe Trench (Bottom)	✓	✓	✓	0090779	Please Fax the results
2.	B1(8.5)	9/26	✓	✓			1		✓	✓	✓	0090780	
3.	B2	9/26	✓	✓			1		✓	✓	✓	0090781	
4.	B3	9/26	✓	✓			1		✓	✓	✓	0090782	
5.	B4	9/26	✓	✓			1		✓	✓	✓	0090783	
6.	B5	9/26	✓	✓			1		✓	✓	✓	0090784	
7.	B6	9/26	✓	✓			1		✓	✓	✓	0090785	

Relinquished by: (Signature) <i>Haig</i>	Date/Time 9/27/90 8:25	Received by: (Signature) <i>Tim McLean</i>
Relinquished by: (Signature) <i>Tim McLean</i>	Date/Time 9/27/90 9:00	Received by: (Signature) <i>B.D.V.</i>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

- Have all samples received for analysis been stored in ice?
Yes
- Will samples remain refrigerated until analyzed?
Yes
- Did any samples received for analysis have head space?
No
- Were samples in appropriate containers and properly packaged?
Yes

Signature: B.D.V. Title: Lab Director Date: 9/27/90



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID: BP Station, 1716 Webster St., Alameda	Sampled: Oct 2, 1990
P.O. Box 996	Sample Descript.: Soil, B6 (9.25)	Received: Oct 3, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Oct 3, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number: 010-0083	Reported: Oct 4, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons.....	1.0	1.7
Benzene.....	0.0050	0.41
Toluene.....	0.0050	0.23
Ethyl Benzene.....	0.0050	0.065
Xylenes.....	0.0050	0.11

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director



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Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: BP Station, 1716 Webster St., Alameda
Sample Descript: Soil, B6 (9.25)
Lab Number: 010-0083

Sampled: Oct 2, 1990
Received: Oct 3, 1990
Extracted: Oct 4, 1990
Analyzed: Oct 4, 1990
Reported: Oct 4, 1990

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Total Lead	0.25	9.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>Hardy</i>		SITE NAME & ADDRESS <i>BP Station - ALAMEDA 1716 WEBSTER ST.</i>						ANALYSES REQUESTED				TURN AROUND TIME: <i>24 Hrs</i>																																																																																																																																																																					
WITNESSING AGENCY		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">SAMPLE ID NO.</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">TIME</th> <th style="width: 10%;">SOIL</th> <th style="width: 10%;">WATER</th> <th style="width: 10%;">GRAB</th> <th style="width: 10%;">COMP</th> <th style="width: 10%;">NO. OF CONT.</th> <th style="width: 20%;">SAMPLING LOCATION</th> <th style="width: 10%;">TPH-<i>C</i></th> <th style="width: 10%;">BTXE</th> <th style="width: 10%;">Total Lead</th> </tr> </thead> <tbody> <tr> <td><i>B6(9.25)</i></td> <td><i>10/2</i></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><i>1</i></td> <td><i>Pipe Trench</i></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH- <i>C</i>	BTXE	Total Lead	<i>B6(9.25)</i>	<i>10/2</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>Pipe Trench</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																																																																	REMARKS <i>Done the results</i>	
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SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP Station, 1716 Webster St., Alameda Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 009-0761	Sampled: Sep 26, 1990 Received: Sep 27, 1990 Analyzed: Sep 27, 1990 Reported: Sep 28, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
009-0761	SW1	7,500	9.9	82	98	560
009-0762	SW2	73	N.D.	0.016	0.030	0.46
009-0763	SW3	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director



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Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: BP Station, 1716 Webster St., Alameda
Sample Descript: Soil
Analysis for: Total Lead
First Sample #: 009-0761

Sampled: Sep 26, 1990
Received: Sep 27, 1990
Extracted: Sep 27, 1990
Analyzed: Sep 27, 1990
Reported: Sep 28, 1990

LABORATORY ANALYSIS FOR: Total Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
009-0761	SW1	0.25	45
009-0762	SW2	0.25	N.D.
009-0763	SW3	0.25	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER Handy		SITE NAME & ADDRESS BP Station - ALAMEDA 1716 WEBSTER STREET					ANALYSES REQUESTED TPH-G BTXE Total lead			TURN AROUND TIME: 24 Hrs Priority
WITNESSING AGENCY										REMARKS Please Fax the results
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	CONT.	NO. OF	SAMPLING LOCATION	
SW1	9/26		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				1	pipe Trench/Sidewalk	
SW2	9/26		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				1	↓	
SW3	9/26		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				1	↓	

Relinquished by: (Signature) Handy Revork	Date/Time 9/27/00 8:25	Received by: (Signature) Tom McLean
Relinquished by: (Signature) Tom McLean	Date/Time 9/27/00 9:00	Received by: (Signature) B.W.
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

- Have all samples received for analysis been stored in ice?
Yes
- Will samples remain refrigerated until analyzed?
Yes
- Did any samples received for analysis have head space?
No
- Were samples in appropriate containers and properly packaged?
Yes

Signature: **93.12** Title: **Lab Director** Date: **9/27/00**



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Kaprealian Engineering, Inc.	Client Project ID: BP, 1716 Webster St. Alameda	Sampled: Oct 8, 1990
P.O. Box 996	Sample Descript.: Soil, SW1 (E-2)	Received: Oct 8, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Oct 8, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number: 010-0262	Reported: Oct 9, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons.....	1.0	N.D.
Benzene.....	0.0050	N.D.
Toluene.....	0.0050	N.D.
Ethyl Benzene.....	0.0050	N.D.
Xylenes.....	0.0050	N.D.

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>Houig</i>		SITE NAME & ADDRESS <i>BP Station - ALAMEDA 1716 Webster Street</i>				ANALYSES REQUESTED <i>TPH-G BTXE</i>		TURN AROUND TIME: <i>24 Hrs</i>				
WITNESSING AGENCY								REMARKS				
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	CONT.	SAMPLING LOCATION				
<i>SW1(E-2)</i>	<i>10/8/90</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>Pump Island Sidewalk</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>0100262</i>	<i>Please Fax the results</i>

Relinquished by: (Signature) <i>Houig</i>	Date/Time <i>10-8-90 5:17</i>	Received by: (Signature) <i>Arnold C. Fuent</i>
Relinquished by: (Signature) <i>Arnold C. Fuent</i>	Date/Time <i>10-8-90 5:20</i>	Received by: (Signature) <i>Ed Henriquez</i>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

- Have all samples received for analysis been stored in ice?
YES
- Will samples remain refrigerated until analyzed?
YES
- Did any samples received for analysis have head space?
N/A
- Were samples in appropriate containers and properly packaged?
YES

Signature: *EH* Title: _____ Date: *10-4-90*



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Kaprealian Engineering, Inc.	Client Project ID: BP Station, 1716 Webster St., Alameda	Sampled: Oct 2, 1990
P.O. Box 996	Sample Descript.: Water, W-1	Received: Oct 3, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/ 8015/8020	Analyzed: Oct 3, 1990
Attention: Mardo Kapreallan, P.E.	Lab Number: 010-0084 A-B	Reported: Oct 4, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Low to Medium Boiling Point Hydrocarbons.....	30	38,000
Benzene.....	0.30	4,900
Toluene.....	0.30	2,200
Ethyl Benzene.....	0.30	940
Xylenes.....	0.30	5,300

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Laboratory Director



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP Station, 1716 Webster St., Alameda Sample Descript: Water, W-1 Lab Number: 010-0084 C-F	Sampled: Oct 2, 1990 Received: Oct 3, 1990 Analyzed: Oct 4, 1990 Reported: Oct 4, 1990
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LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Total Lead	0.0050	0.16

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Laboratory Director



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>Hand</i>		SITE NAME & ADDRESS BP Station - ALAMEDA 1716 WEBSTER ST.					ANALYSES REQUESTED TPH-G BTX-E Total Lead			TURN AROUND TIME: 24 Hrs
WITNESSING AGENCY										REMARKS
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION		
W1	10/2		✓	✓	✓	✓	6 VOAs	Pipe Trench	✓	✓

~~Protect~~
the results

Relinquished by: (Signature) <i>Hand</i>	Date/Time 10/2/90 500	Received by: (Signature) <i>Tom McLean</i>
Relinquished by: (Signature) <i>Tom McLean</i>	Date/Time 10/2/90 530	Received by: (Signature) <i>Nikolai D. Ditt</i>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

- Have all samples received for analysis been stored in ice?
- Will samples remain refrigerated until analyzed?
- Did any samples received for analysis have head space? NO
- Were samples in appropriate containers and properly packaged?

Signature: *Hand* Title: SR Date: 10/3