



Uriah Inc.

An Environmental Services Company

Interim Report
of
Remedial Activities
at

1435 Webster Street
Alameda, CA

October, 1991



Uriah Inc.

An Environmental Services Company

October 31, 1991

Ms. Pamela Evans
Alameda County Health Care Services Agency
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

RE: Interim Report of Remedial Activities at 1435 Webster
Street, Alameda, CA.

Dear Ms. Evans:

Assessment and remediation activities at the above referenced site have resulted in the excavation and biological detoxification of all significant hydrocarbon contamination. With regard to the recent telephone conversation between Mr. Constantinescu of Uriah and yourself, this interim report has been prepared for your review and comment.

OVERVIEW OF RELEVANT ENVIRONMENTAL COMPLIANCE ACTIVITIES

On October 11, 1988, CHIPS Environmental Consultants, Inc. performed a soil gas analyses at the site at the request of Accutite Tank Testing and Maintenance Services, a division of Olympian Oil Company. The CHIPS study was specific to the area occupied by two 10,000 gallon underground gasoline storage tanks, one 7,500 gallon underground diesel storage tank, and one 500 gallon waste oil tank. High soil gas readings were obtained on the east side of one of two gasoline pump islands, between the islands, and from the backfill between the two gasoline storage tanks at both eight and eleven feet below ground surface. Soil gas concentrations on the west side of the tank pits were relatively low.

All underground storage tanks were removed during September of 1989. Soil samples acquired for certified laboratory analyses attendant to the removal of the tanks contained concentrations of Total Petroleum Hydrocarbons as Gasoline (TPH-G) to 220 parts per million (ppm), Total Petroleum Hydrocarbons as Diesel (TPH-D) to 430 ppm, and 650 ppm Total Oil and Grease (TOG).

1.

On January 11, 15, and 23, 1991, a Uriah staff geologist and employees of AAA Tank Removal/Forcade Excavation Services (California licensed contractors) undertook the exploratory/remedial excavation of the fuel hydrocarbon contaminated soil in accordance with a workplan previously submitted to, and approved by, the Alameda County Health Care Services Agency.

Approximately 550 cubic yards of contaminated soil was removed from the area of the pit(s) previously occupied by the underground storage tanks. At such time as the excavation measured 34' (W) x 40' (L) x 18' (D), discrete soil samples for certified analyses were acquired from the western wall, northern wall, and floor. Each of the samples was obtained from an undisturbed block of soil brought to grade within the excavator bucket. After removing the upper 1"-2" of soil from the bucket, a clean brass sample tube 1.9 inches in diameter by 6.0 inches in length was driven into the soil until such time as it was completely filled with consolidated material. The tube was then removed from the soil and its ends were covered with teflon sheeting, fitted with plastic caps, and wrapped with black electrical/duct tape. Each tube was then marked and placed on blue ice for transport to a State-certified hazardous waste analytical laboratory under chain of custody where it was analyzed for TPHD, TPH-G, BTX&E, and TOG using EPA Methods 3550/8015, 5030/8015-8020, and SM 5520F, respectively.

No further excavation was undertaken at this time as the surface of the site was fully occupied by treatment beds constructed for biological detoxification of previously excavated soil.

On September 23, 24, and 25, 1991 (following the bioremediation of the previously excavated soil), a Uriah staff hydrogeologist and employees of W.A. Craig, Inc. (a California licensed contractor) resumed excavation activities. The excavation was expanded to 34' (W) x 55' (L) x 18' (D) with an additional 300 cubic yards of contaminated soil removed. During the course of the expanded excavation, contamination was observed to be confined to sandy clay lenses which were present at various depths along the south wall of the pit.

On September 27, 1991, four discrete soil samples were acquired from the expanded excavation in the manner described above. These samples (designated WEB1, WEB2, WEB3, and WEB4) were acquired from native soil at points approximately 15 feet below ground surface (i.e. at the depth appropriate to site lithology) and submitted for certified analyses for TPH-D, TPH-G, BTX&E, and TOG. These samples were free of detectable concentrations of TPH-G, BTX&E, and TOG but contained 21-24 ppm TPH in the diesel range. The "non-standard diesel pattern" reported by the laboratory was previously compared to a tar wrap fabric by running comparative chromatographic standards. This

1st Sampling - Phase II

Uriah's file
10/1/91
10/1/91

comparative study appeared to confirm the hypothesis that the "non-standard" TPH-D range material detected was composed of partially-degraded, extractable hydrocarbons which comprise a portion of the tar wrap material. *So the soil isn't contaminated? what's this doing in native soil from a 2nd set of samples after overexcavation?*

The results of certified analyses performed on excavation boundary samples acquired from the locations illustrated in Figure 2 are summarized in Table I.

Table I- Analytical Results of Excavation Boundary Samples*

Sample Number	Sample Location	TPH-D (ppm)	TPH-G (ppm)	B	T (ppb)	X	E
WEB1	S. Wall	23	N.D.	N.D.	N.D.	N.D.	N.D.
WEB2	E. Wall	21	N.D.	N.D.	N.D.	N.D.	N.D.
WEB3	N. Wall	23	N.D.	N.D.	N.D.	N.D.	N.D.
WEB4	W. Wall	24	N.D.	N.D.	N.D.	N.D.	N.D.
FS-18	Floor	N.D.	N.D.	120	16	23	N.D.
Detection Limits		10 ppm	1 ppm	3 ppb	3 ppb	3 ppb	3 ppb

look at these levels!

what is this at this site?

N.D....Below the limits of laboratory detection
 ppm...Parts per million
 ppb...Parts per billion
 TPH-D...Total Petroleum Hydrocarbons as Diesel
 TPH-G...Total Petroleum Hydrocarbons as Gasoline
 BTX&E...Benzene, toluene, total xylenes, ethylbenzene

*All boundary samples were also submitted for certified analysis for Total Oil and Grease (TOG) using SM 5520F. None of the samples contained detectable concentrations of TOG (detection limit: 50 ppm)

OVERVIEW OF THE BIOREMEDIATION PROCESS

Following the excavation of approximately 550 cubic yards of contaminated soil during January, 1991, this material and about 50 cubic yards of stockpiled soil remaining from the underground storage tank excavation was configured in quadrilateral beds atop bermed, hydrocarbon resistant liners in accordance with protocol set forth within an approved workplan. The treatment beds were inoculated with a bio-nutrient solution containing common, non-pathogenic, hydrocarbon-utilizing soil bacteria

Bioremediation

and a dilute commercial fertilizer solution. During the course of treatment, the soil was monitored to determine rates of degradation, soil temperature, moisture, pH, and nutrient levels.

On September 20, 1991, soil samples were acquired and submitted for uncertified analyses. Levels of TPH-G were found to be below the detection limit of 10 ppm, while concentrations of TPH-Oil had been reduced to below the detection limit of 50 ppm. Based upon the results of the uncertified analyses, 12 discrete samples, one for every 50 cubic yards of soil under treatment, were obtained for certified analyses. Each of these samples was acquired within a clean brass tube 1.9 inches in diameter by 6.0 inches in length driven into the soil at various depths at randomly selected points as illustrated in Figure 2. The ends of each tube were promptly covered with teflon sheeting, fitted with plastic caps, and sealed with duct tape. Each tube was then marked and placed on dry ice for transportation under chain of custody to State-certified hazardous waste analytical laboratory for analyses for TPH-D, TPH-G, BTX&E, and TOG. All samples were free of detectable concentrations of TPH-G, BTX&E, and TOG. 10 of the 12 samples were free of detectable concentrations of TPH-D, with the two remaining samples containing 16 ppm TPH-D and 44 ppm TPH-D, respectively. As previously discussed, these concentrations were not represented by a chromatographic pattern typical of diesel fuel and represent partially degraded tar wrap.

What was total soil volume?

CONCLUSIONS AND RECOMMENDATIONS

Soils containing detectable concentrations of fuel hydrocarbons have been excavated. The majority of the excavated soil has been biologically detoxified and it is recommended that confirmation be obtained from the Alameda County Health Care Services Agency that this material may be used to backfill a portion of the on-site excavation.

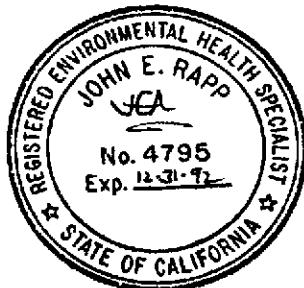
what soil to be used - how many some not not holes clay soil of rock

It is further proposed that the more recently excavated soils presently undergoing bioremediation also be used as backfill at such time as certified analyses confirms the soil to be free of significant concentrations of fuel hydrocarbons.

Should you have any questions, or if we may otherwise be of assistance, please contact Uriah at (510) 455-4991.

Sincerely,

John E. Rapp
John E. Rapp
Microbiologist



Valentin Constantinescu

Valentin Constantinescu, M.Sc.
Hydrogeologist
and

Robert Oldham

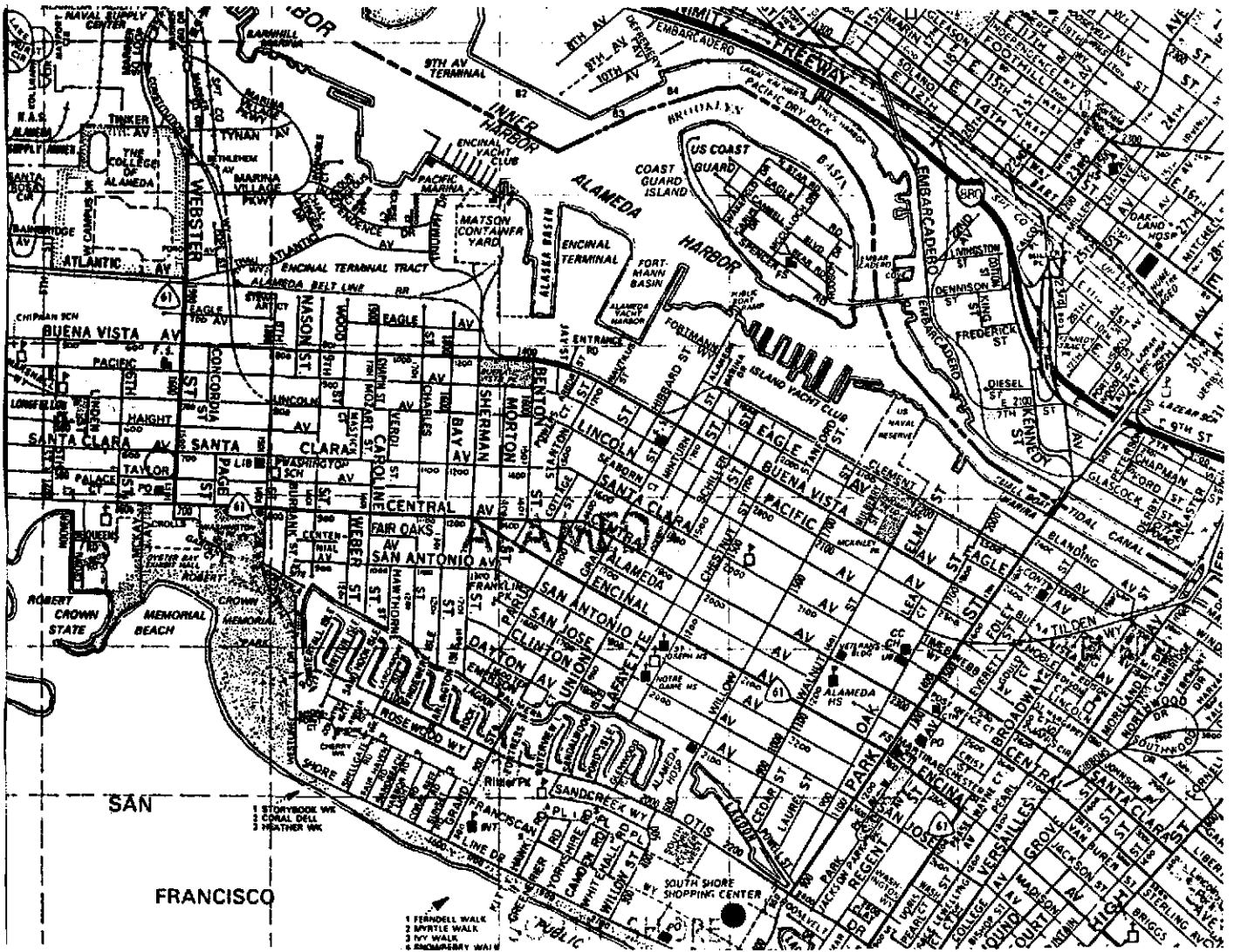
Robert Oldham, P.E.
Registered Civil Engineer



JR/VC/RO:dr

enc. Figures 1-2
Appendix "A"...Reports of Laboratory Analyses

cc: Mr. John E. Ferrar
Mr. John Trump



Colored Dot Denotes Site Location
 Scale 1" : 1/2 mile



LOCATION MAP

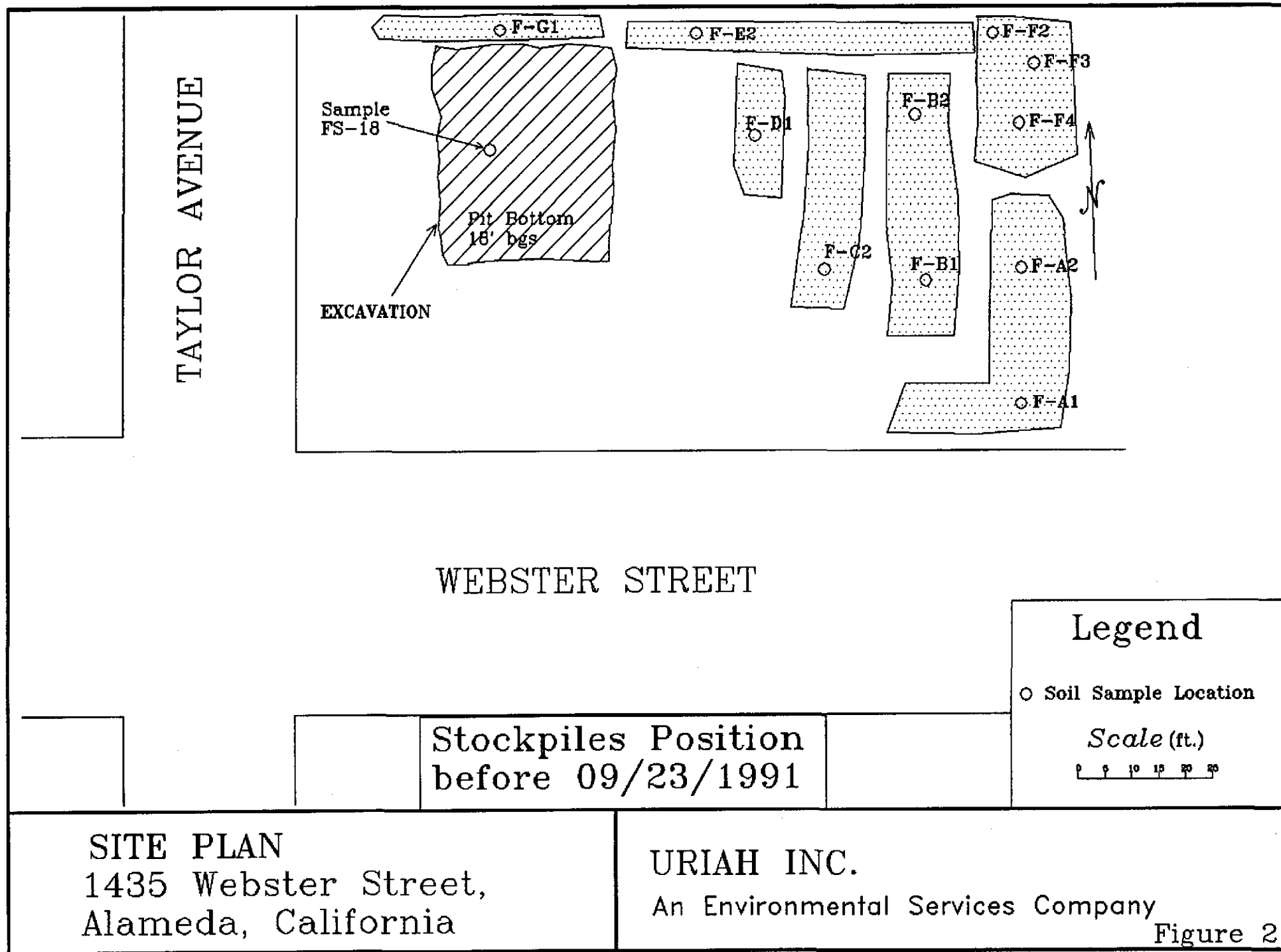
1435 WEBSTER STREET
 ALAMEDA,
 CALIFORNIA

Uriah, Inc.

An Environmental Services Co.

Figure 1

Figure 2a



TAYLOR AVENUE

Sample FS-18

F-G1

F-E2

F-F2

F-F3

F-D1

F-B2

F-F4

Pit Bottom
18' bgs

F-C2

F-B1

F-A2

EXCAVATION

F-A1

WEBSTER STREET

Legend

○ Soil Sample Location

Scale (ft.)

0 5 10 15 20 25

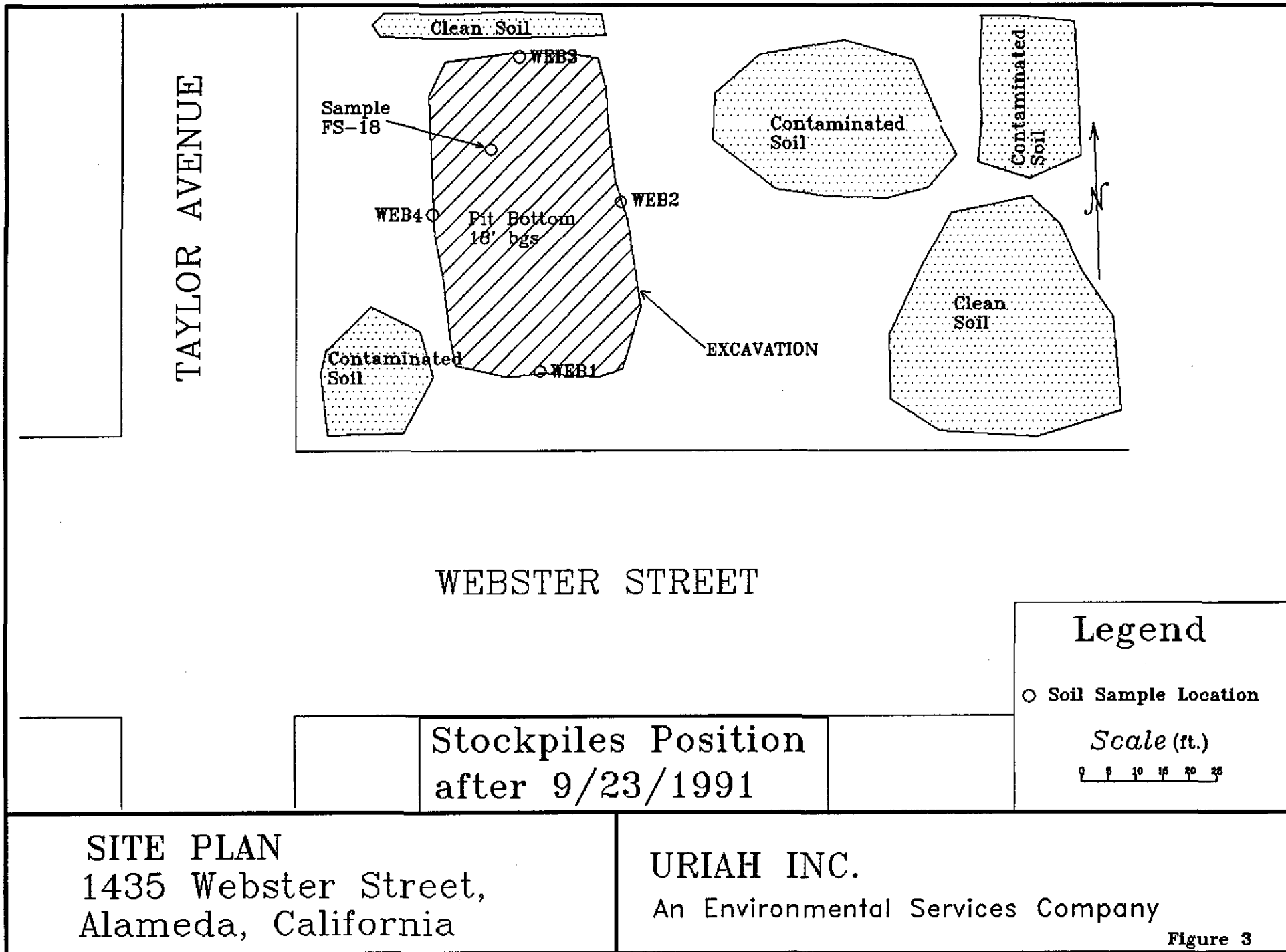
Stockpiles Position
before 09/23/1991

SITE PLAN
1435 Webster Street,
Alameda, California

URIAH INC.
An Environmental Services Company

Figure 2

Figure 2b



TAYLOR AVENUE

Clean Soil

Sample FS-18

WEB4

WEB3

Pit Bottom 18' bgs

WEB2

Contaminated Soil

Contaminated Soil

N

Clean Soil

EXCAVATION

Contaminated Soil

WEB1

WEBSTER STREET

Legend

○ Soil Sample Location

Scale (ft.)

0 5 10 15 20 25

Stockpiles Position after 9/23/1991

SITE PLAN
1435 Webster Street,
Alameda, California

URIAH INC.
An Environmental Services Company

Figure 3

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319
DOHS #220

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82346
CLIENT: Uriah Environmental, Inc.
CLIENT JCB NO.: ED FERRAR

DATE RECEIVED: 01/24/91
DATE REPORTED: 01/31/91
DATE EXTRACTED: 01/30/91

ANALYSIS FOR TOTAL OIL AND GREASE by Standard Method 5520F

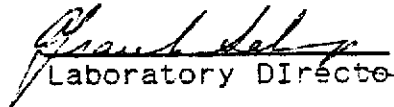
LAB #	Sample Identification	Concentration (mg/Kg) Oil & Grease
1	FERRAR FS-18	NDK50

mg/kg - parts per million (ppm)

Method Detection Limit for Oil and Grease in Soil: 50mg/Kg

QAQC Summary: Duplicate RPD : 6

Richard Srna, Ph.D.


Laboratory Director

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DOHS #319
DOHS #220

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82346
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ED FERRAR

DATE RECEIVED: 01/24/91
DATE REPORTED: 01/31/91
DATE EXTRACTED: 01/30/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/Kg) Diesel Range
1	FERRAR FS-18	ND<10

mg/Kg - parts per million (ppm)

Method Detection Limit for Diesel in Soil: 10 mg/Kg

QAQC Summary:

Daily Standard run at 200mg/L: RPD Diesel = 4
MS/MSD Average Recovery = 88%: Duplicate RPD = 3

Richard Srna, Ph.D.


Laboratory Manager

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DOHS #319
DOHS #220

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82346
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ED FERRAR

DATE RECEIVED: 01/24/91
DATE REPORTED: 01/31/91
DATE EXTRACTED: 01/29/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8030 and 8015

LAB #	Sample Identification	Concentration (mg/Kg) Gasoline Range
1	FERRAR FS-18	ND<1

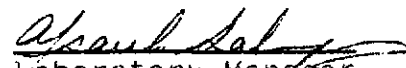
mg/Kg - parts per million (ppm)

Method Detection Limit for Gasoline in Soil: 1 mg/Kg

QAQC Summary:

Daily Standard run at 2mg/L: RPD Gasoline = <15
MS/MSD Average Recovery = 90%: Duplicate RPD = 7

Richard Srna, Ph.D.


Laboratory Manager

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82346

DATE RECEIVED: 01/24/91

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DOHS #319
DOHS #220

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 82346
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ED FERRAR

DATE RECEIVED: 01/24/91
DATE REPORTED: 01/31/91
DATE EXTRACTED: 01/29/91

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 8030 and 8020

LAB #	Sample Identification	Concentration(ug./kg)			
		Benzene	Toluene	Ethyl Benzene	Xylenes
1	FERRAR FS-18	120	16	NDK3	23

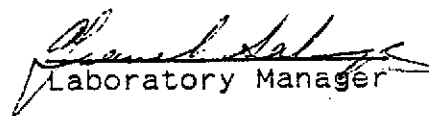
ug/Kg - parts per billion (ppb)

Method Detection Limit in Soil: 3 ug/Kg

QAQC Summary:

Daily Standard run at 20ug/L: RPD = <15%
MS/MSD Average Recovery = 98%: Duplicate RPD = <8

Richard Srna, Ph.D.


Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE. UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 53877
CLIENT: URIAH, INC
CLIENT JOB NO.: FERRAR SITE

DATE RECEIVED: 07/15/91
DATE REPORTED: 07/23/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

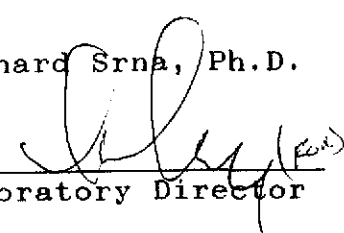
LAB #	Sample Identification	Concentration ()	Diesel Range
-----	-----		-----
1	TAR-1		*2800

* DOES NOT MATCH TYPICAL DIESEL PATTERN
Minimum Detection Limit for Diesel in Soil: 10mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: RPD Diesel =<15%
MS/MSD Average Recovery = 104%: Duplicate RPD = 4%

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 53909
CLIENT: URIAH, INC
CLIENT JOB NO.: FERRAR

DATE RECEIVED: 07/22/91
DATE REPORTED: 07/30/91

ANALYSIS FOR TOTAL PETROLEUM OIL AND GREASE by Method 5520F (formerly 503E)

LAB #	Sample Identification	Concentration (mg/kg) Total oil & grease
2	F-F4	ND<50
3	F-F3	ND<50
4	F-F2	100

mg/kg - parts per million (ppm)

Minimum Detection Limit for oil & grease in Soil: 50mg/kg

QAQC Summary:
MS/MSD average recovery = 75%
Duplicate RPD = 8%

Richard Srna, Ph.D.

Cecilia G. Jansz (for)
Laboratory Director

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 53909
CLIENT: URIAH, INC
CLIENT JOB NO.: FERRAR

DATE RECEIVED: 07/22/91
DATE REPORTED: 07/30/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/kg) Diesel Range
1	F-A2	16*
2	F-F4	44*
3	F-F3	ND<10
4	F-F2	ND<10
5	F-B2	ND<10
7	F-B1	ND<10
8	F-C2	ND<10
9	F-D1	ND<10
10	F-H1	ND<10
11	F-G1	ND<10
12	F-E2	ND<10

* Does not match typical Diesel pattern.

Minimum Detection Limit for Diesel in Soil: 10mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: %Diff Diesel= <15
MS/MSD Average Recovery = 120%: Duplicate RPD = 12%

Richard Srna, Ph.D.

Cecilia G. Jorgensen (for)
Laboratory Director

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SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 53909
CLIENT: URIAH, INC
CLIENT JOB NO.: FERRAR

DATE RECEIVED: 07/22/91
DATE REPORTED: 07/30/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration (mg/kg) Gasoline Range
1	F-A2	ND<1
2	F-F4	ND<1
3	F-F3	ND<1
4	F-F2	ND<1
5	F-B2	ND<1
7	F-B1	ND<1
8	F-C2	ND<1
9	F-D1	ND<1
10	F-H1	ND<1
11	F-G1	ND<1
12	F-E2	ND<1

mg/kg - parts per million (ppm)

Minimum Detection Limit for Gasoline in Soil: 1mg/kg

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15

MS/MSD Average Recovery = 80%: Duplicate RPD = 2%

Richard Srna, Ph.D.

Cecilia J. Sauer (for)
Laboratory Director

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SUPERIOR ANALYTICAL LABORATORY, INC.

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DOHS #1332

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 53909
CLIENT: URIAH, INC
CLIENT JOB NO.: FERRAR

DATE RECEIVED: 07/22/91
DATE REPORTED: 07/30/91

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration(ug/kg)			
		Benzene	Toluene	Ethyl Benzene	Xylenes
1	F-A2	ND<3	ND<3	ND<3	ND<3
2	F-F4	ND<3	ND<3	ND<3	ND<3
3	F-F3	ND<3	ND<3	ND<3	ND<3
4	F-F2	ND<3	ND<3	ND<3	ND<3
5	F-B2	ND<3	ND<3	ND<3	ND<3
7	F-B1	ND<3	ND<3	ND<3	ND<3
8	F-C2	ND<3	ND<3	ND<3	ND<3
9	F-D1	ND<3	ND<3	ND<3	ND<3
10	F-H1	ND<3	ND<3	ND<3	ND<3
11	F-G1	ND<3	ND<3	ND<3	ND<3
12	F-E2	ND<3	ND<3	ND<3	ND<3

ug/kg - parts per billion (ppb)

Minimum Detection Limit in Soil: 3.0ug/kg

QAQC Summary:

Daily Standard run at 20ug/ %Diff 8020 = <15

MS/MSD Average Recovery = 86% : Duplicate RPD = 7.7%

Richard Srna, Ph.D.

Cecilia G. Joaquin (for)
Laboratory Director

OUTSTANDING QUALITY AND SERVICE



Superior Precision Analytical, Inc.

P.O. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84018
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ALAMEDA

DATE RECEIVED: 09/27/91
DATE REPORTED: 10/04/91
DATE SAMPLED : 09/27/91

ANALYSIS FOR TOTAL OIL AND GREASE by STANDARD METHODS 5520F

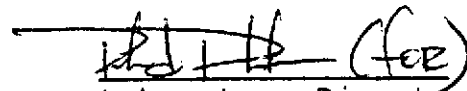
LAB #	Sample Identification	Concentration(mg/Kg) Oil & Grease
1	WEB1	ND<50
2	WEB2	ND<50
3	WEB3	ND<50
4	WEB4	ND<50

mg/kg - parts per million (ppm)

Method Detection Limit for Oil and Grease in Soil: 50mg/Kg

QAQC Summary: MS/MSD Average Recovery: 92/89 %
Duplicate RPD : 3

Richard Srna, Ph.D.


Laboratory Director



Superior Precision Analytical, Inc.

PO. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84018
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ALAMEDA

DATE RECEIVED: 09/27/91
DATE REPORTED: 10/04/91
DATE SAMPLED : 09/27/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/Kg) Diesel Range
1	WEB1	* 23
2	WEB2	* 21
3	WEB3	* 23
4	WEB4	* 24

mg/Kg - parts per million (ppm)

* Diesel range concentration reported. A non-standard diesel pattern was observed in the chromatogram.

Method Detection Limit for Diesel in Soil: 10 mg/Kg

QAQC Summary:

Daily Standard run at 200mg/L: RPD Gasoline = NA
RPD Diesel = 8

MS/MSD Average Recovery = 92/93%: Duplicate RPD = 1

Richard Srna, Ph.D.


Laboratory Director



Superior Precision Analytical, Inc.

P.O. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84018
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ALAMEDA

DATE RECEIVED: 09/27/91
DATE REPORTED: 10/04/91
DATE SAMPLED : 09/27/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by MODIFIED EPA SW-846 METHOD 5030 and 8015

LAB #	Sample Identification	Concentration (mg/Kg) Gasoline Range
1	WEB1	ND<1
2	WEB2	ND<1
3	WEB3	ND<1
4	WEB4	ND<1

mg/Kg - parts per million (ppm)

Method Detection Limit for Gasoline in Soil: 1 mg/Kg

QAQC Summary:

Daily Standard run at 2mg/L: RPD Gasoline = <15
MS/MSD Average Recovery =84/84 %: Duplicate RPD = 0

Richard Srna, Ph.D.


Laboratory Director



Superior Precision Analytical, Inc.

P.O. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84018
CLIENT: Uriah Environmental, Inc.
CLIENT JOB NO.: ALAMEDA

DATE RECEIVED: 09/27/91
DATE REPORTED: 10/04/91
DATE SAMPLED : 09/27/91

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration(ug/Kg)			
		Benzene	Toluene	Ethyl Benzene	Xylenes
1	WEB1	ND<3	ND<3	ND<3	ND<3
2	WEB2	ND<3	ND<3	ND<3	ND<3
3	WEB3	ND<3	ND<3	ND<3	ND<3
4	WEB4	ND<3	ND<3	ND<3	ND<3

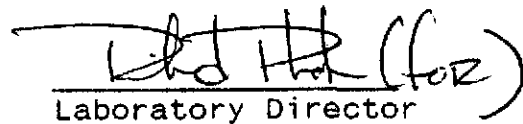
ug/Kg - parts per billion (ppb)

Method Detection Limit in Soil: 3 ug/Kg

QAQC Summary:

Daily Standard run at 20ug/L: RPD = <15%
MS/MSD Average Recovery =90%: Duplicate RPD = <10

Richard Srna, Ph.D.


Laboratory Director

Uriah, Inc.

An Environmental Services Company

484 Lindbergh Avenue
Livermore, CA 94550
(415) 455-4991 Office
(415) 455-4995 FAX

~~XXXXXXXXXX~~
82346

Chain of Custody

DATE 1-24-91 PAGE 1 OF 1

PROJ. MGR. KEVIN McNAMARA
COMPANY URIAH INC.
ADDRESS 464 LINDBERGH AVE.
LIVERMORE, CA 94550

ANALYSIS REQUEST

SAMPLERS (SIGNATURE) Kevin McNamara (PHONE NO.) (415) 455-4991

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	TPH - Gasoline (EPA 5030)	TPH - Gasoline (5030) w/TEX (EPA 602, 8020)	TPH - Diesel (EPA 3510, 3550)	PURGEABLE AROMATICS BITEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRAL, ACIDS (EPA 624/827, 8270)	TOTAL OIL & GREASE (EPA 5030EE)	PESTICIDES/PCS (EPA 608, 8080)	PHENOLS (EPA 604, 8040)	METALS: Cd, Cr, Pb, Zn	CAR METALS (18) w/CP VI	PRIORITY POLLUTANT METALS (15)
FERRAR FS-18	1-23-91	12:54	SOIL			✓	✓					✓					

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY 1.		RELINQUISHED BY 2.		RELINQUISHED BY 3.	
PROJECT: <u>ED FERRAR</u>	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS		Signature: <u>Kevin McNamara</u> (Time) <u>10:22</u>		Signature: <u>[Signature]</u> (Time) <u>[Time]</u>		Signature: <u>[Signature]</u> (Time) <u>[Time]</u>	
PO NO.	REC'D GOOD CONDITION/COLD	CONFORMS TO RECORD		Printed Name: <u>KEVIN McNAMARA</u> (Date) <u>1-23-91</u>		Printed Name: <u>[Name]</u> (Date) <u>[Date]</u>		Printed Name: <u>[Name]</u> (Date) <u>[Date]</u>	
SHIPPING ID. NO.	LAB NO.	VIA:		Company: <u>URIAH INC.</u>		Company: <u>S. MANNKILLER-749</u>		Company: <u>[Company]</u>	
SPECIAL INSTRUCTIONS/COMMENTS: <u>I NEED THE DATE THAT THE SAMPLES ARE EXTRACTED TO BE PUT ON REPORT.</u>		RECEIVED BY 1.		RECEIVED BY 2.		RECEIVED BY (LABORATORY) 3.			
		Signature: <u>[Signature]</u> (Time) <u>[Time]</u>		Signature: <u>[Signature]</u> (Time) <u>[Time]</u>		Signature: <u>[Signature]</u> (Time) <u>[Time]</u>			
		Printed Name: <u>[Name]</u> (Date) <u>[Date]</u>		Printed Name: <u>[Name]</u> (Date) <u>[Date]</u>		Printed Name: <u>[Name]</u> (Date) <u>[Date]</u>			
VIA:		LAB NO.		Company: <u>EXPRESS IT</u>		Company: <u>EXPRESS IT</u>		Company: <u>EXPRESS IT</u>	

Uriah, Inc.

An Environmental Services Company

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 (415) 455-4991 Office
 (415) 455-4995 FAX

SF # 53709

Chain of Custody

DATE 7-22-91 PAGE 1 OF 2

PROJ. MGR. KEVIN MCNAMARA
 COMPANY URIAH INC
 ADDRESS 484 LINDBERGH AVE
LIVERMORE CA 94550

ANALYSIS REQUEST

SAMPLERS (SIGNATURE) Kevin Mc Namara (PHONE NO.) (415) 455-4991

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	ANALYSIS REQUEST													NUMBER OF CONTAINERS						
					TPH - Gasol (m) (EPA 5030)	TPH - Gasol (m) (5030) W/TEX (EPA 602, 8020)	TPH - Diesel (EPA 3510, 3550)	MURGEABLE AROMATICS (EPA 602, 8020)	MURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 824, 8240)	BASE/NEUTRALS, ACIDS (EPA 624/627, 8270)	PESTICIDES/PCB (EPA 605, 8060)	PHENOLS (EPA 604, 8040)	Oil & GREASE 5510 PAF	METALS: Cd, Cr, Pb, Zn	CAN METALS (18) W/CP VI	PRIORITY POLLUTANT METALS (13)							
F-A2	7-22-91	12:50	SOIL		X	X																		
F-F4	7-22-91	13:00	SOIL		X	X																		
F-F3	7-22-91	13:05	SOIL		X	X																		
F-F2	7-22-91	13:10	SOIL		X	X																		
F-B2	7-22-91	13:16	SOIL		X	X																		
F-B1	7-22-91	13:19	SOIL		X	X																		
F-C2	7-22-91	13:22	SOIL		X	X																		
F-D1	7-22-91	13:24	SOIL		X	X																		
F-H1	7-22-91	13:30	SOIL		X	X																		

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
PROJECT:	NO.	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS	1.	2.	1.	2.	1.	2.
<u>FERRAR</u>				<u>Kevin Mc Namara</u> 5:05	<u>Paul Stewart</u> 1740				
				(Signature) (Time)	(Signature) (Time)				
				<u>KEVIN MCNAMARA</u> 7-22-91	<u>Paul Stewart</u> 7-22-91				
				(Printed Name) (Date)	(Printed Name) (Date)				
				<u>URIAH INC.</u>	<u>EXPRESS-IT</u>				
				(Company)	(Company)				
SPECIAL INSTRUCTIONS/COMMENTS: - NORMAL FURNACE - BIOMEDIATED SOIL - PLEASE USE TAR-1 AS A STANDARD.				RECEIVED BY		RECEIVED BY		RECEIVED BY (LABORATORY)	
				1.		2.		3.	
				<u>Paul Stewart</u> 1705	<u>Paul Stewart</u> 7-22-91	<u>Paul Stewart</u> 7-22-91	<u>Paul Stewart</u> 7-22-91	<u>Paul Stewart</u> 7-22-91	<u>Paul Stewart</u> 7-22-91
				(Signature) (Time)	(Signature) (Time)	(Signature) (Time)	(Signature) (Time)	(Signature) (Time)	(Signature) (Time)
				<u>Paul Stewart</u>	<u>Paul Stewart</u>	<u>Paul Stewart</u>	<u>Paul Stewart</u>	<u>Paul Stewart</u>	<u>Paul Stewart</u>
				(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)
				<u>EXPRESS-IT</u>	<u>EXPRESS-IT</u>	<u>EXPRESS-IT</u>	<u>EXPRESS-IT</u>	<u>EXPRESS-IT</u>	<u>EXPRESS-IT</u>
				(Company)	(Company)	(Company)	(Company)	(Company)	(Company)

SALS

Uriah, Inc.

An Environmental Services Company

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Chain of Custody

DATE 7-22-91 PAGE 2 OF 2

PROJ. MGR. KEVIN McNAMARA
COMPANY URIAH INC.
ADDRESS 484 LINDBERGH AVE.
LIVERMORE CA 94550

ANALYSIS REQUEST

SAMPLERS (SIGNATURE) Kevin Mc Namara (PHONE NO.) (415) 455-4991

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	TPH - Gasoline (EPA 5030)	TPH - Gasoline (5030) w/PTX (EPA 602, 8020)	TPH - Diesel (EPA 3510, 3550)	PURGEABLE AROMATICS (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRAL, ACIDS (EPA 624/827, 8270)	TOTAL OIL & GREASE (EPA 5030LE)	PESTICIDES/PCS (EPA 608, 8080)	PCB/CLS (EPA 604, 8040)	METALS: Cd, Cr, Pb, Zn	CAR METALS (18) w/CP VI	PRIORITY POLLUTANT METALS (13)	NUMBER OF CONTAINERS	
F-E1	7-22-91	13:35	SOIL		X	X													
F-E2	7-22-91	13:40	SOIL		X	X													
<p>Samples stored in coolers. Samples preserved. VOA's without headspace.</p>																			

PROJECT INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY 1.		RELINQUISHED BY 2.		RELINQUISHED BY 3.	
PROJECT: <u>FERRAR</u>	TOTAL NO. OF CONTAINERS	CHAIN OF CUSTODY SEALS		<u>Kevin Mc Namara</u> 5:05 (Signature) (Time) <u>KEVIN McNAMARA</u> 7/22/91 (Printed Name) (Date) <u>URIAH INC.</u> (Company)		<u>Yasha Stewart</u> 17:10 (Signature) (Time) <u>Yasha STEWART</u> (Printed Name) (Date) <u>EXPRESS-IT</u> (Company)		<u>DeAndre Jones</u> 7-22-91 (Signature) (Time) <u>DeAndre Jones</u> 7-22-91 (Printed Name) (Date) (Company)	
NO.:	REC'D GOOD CONDITION/COLD	CONFORMS TO RECORD		RECEIVED BY 1. <u>Yasha Stewart</u> 17:45 (Signature) (Time) <u>Yasha Stewart</u> 7-22-91 (Printed Name) (Date) <u>EXPRESS-IT</u> (Company)		RECEIVED BY 2. <u>DeAndre Jones</u> 17:45 (Signature) (Time) <u>DeAndre Jones</u> 7-22-91 (Printed Name) (Date) (Company)		RECEIVED BY (LABORATORY) 3. <u>Mark's Lab</u> (Signature) (Time) <u>Mark's Lab</u> (Printed Name) (Date) (LAB) <u>SAL</u>	
IPPING ID. NO.	LAB NO.	SPECIAL INSTRUCTIONS/COMMENTS:							
NA:		- NORMAL TURNAROUND - BIKEREMEDIATED SOIL - PLEASE USE TAR-1 AS A STANDARD.							

Uriah, Inc.

An Environmental Services Company

84018

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(415) 455-4995 FAX

CHAIN OF CUSTODY

DATE: 9/27/91 PAGE: 1 OF 1

PROJ. MGR. <u>VALENTIN CONSTANTINESCU</u>				ANALYSIS REQUEST												CONTAINERS								
COMPANY <u>Uriah, Inc.</u>				TPHG	TPHG & BTEX	TPHD	BTEX	O & G	METALS <small>Cd, Cr Pb, Zn</small>	HALO CARBONS PURGEABLE	VOLATILES	ORGANICS	ORGANIC LEAD	TOTAL DISSOLVED SOLIDS	ETHYLENE		DIBROMIDE							
ADDRESS <u>464 Lindbergh Ave.</u> <u>Livermore, CA 94550</u>																								
SAMPLER'S SIGNATURE <u>Valentin</u>																								
PHONE NO. <u>415-455-4991</u>																								
SAMPLE I.D.	DATE	TIME	MATRIX																					
WEB 1	9/27/91	10:35	SOIL WATER		X	X		X																
WEB 2	9/27/91	10:45	SOIL WATER		X	X		X																
WEB 3	9/27/91	11:20	SOIL WATER		X	X		X																
WEB 4	9/27/91	11:55	SOIL WATER		X	X		X																
			SOIL / WATER																					
			SOIL / WATER																					
			SOIL / WATER																					

Please Initial:

Samples Stored in ice:

Appropriate containers:

Samples preserved:

VOA's without headspace:

Comments:

PROJECT INFORMATION:
ALAMEDA

SPECIAL INSTRUCTIONS/COMMENTS:
Turn Around Time (Circle One)
Same Day 24 Hrs 48 Hrs
72 Hrs Normal

5 DAYS
TURNAROUND
TIME!

RELINQUISHED BY:
Valentin
Signature
VALENTIN CONSTANTINESCU
Printed Name
URIAH, INC
Company
Time 15:40 Date 9/27/91

RECEIVED BY:
J. M. C. X677
Signature
J. M. C. X677
Printed Name
Express-it
Company
Time 15:10 Date 9/27/91

RELINQUISHED BY:
J. M. C. X677
Signature
J. M. C. X677
Printed Name
Express-it
Company
Time 16:45 Date 9/27/91

RECEIVED BY:
Superior M. H. Watson
Signature
Superior M. H. Watson
Printed Name
Express-it
Company
Time 19:00 Date 9/27/91

RELINQUISHED BY:

Signature

Printed Name

Company
Time _____ Date _____

RECEIVED BY:

Signature

Printed Name

Company
Time _____ Date _____