GROUND WATER SAMPLING REPORT
FOR
AMERICAN CITY TRUCK STOP
6310 HOUSTON PLACE
DUBLIN, CALIFORNIA

BY

ENVIRONMENTAL EXPERTS, INC.

9-17-90

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1.0 INTRODUCTION

This report summarizes the results of Environmental Experts, Inc. (EEI) ground water sampling of the shallow ground water at the American City Truck Stop facility located at 6310 Houston Place in Dublin, California.

Chemical analysis of the collected ground water samples from the four existing monitoring wells (MW-1 through MW-4) were conducted by Chromalab, Inc. at thier certified environmental laboratory in San Ramon, California. All ground water samples were analysed for benzene, toluene, ethylebenzene, and exylenes (BTEX), high boiling point hydrocarbons (diesel), and total oil and grease (TOG).

The purpose of this investigation was to evaluate the presence of petroleum hydrocarbons, due to excavated underground tanks, in the ground water beneath the site.

2.0 FIELD PROCEDURES

2.1 WELLS MONITORING PROCEDURES

The ground water level in each monitoring well (MW-1 through MW-4) was measured by using a clean stainless steel graduated tape, with attached sounding device. Water levels were recorded in the wells from the top of the casing to the nearest 0.01 foot. Table 1, attached, lists water table levels for each well.

A clean, dedicated, and clear (Lucite) bailer was used to detect the presence of free floating products in each well, if any. Then a 3.75-inch diameter, 3.5 feet long stainless steel bailer was used to purge the wells. Water discharge from each monitoring well was stored individually in sealed 55-gallon open head DOT-approved drums. Field parameters, such as pH, conductivity, temperature, color, and visual turbidity, were observed. Field parameters and notes for each well are included in Appendix A.

2.2 WELLS SAMPLING PROCEDURES

Purging was terminated after more than 5 casing volumes of ground water were removed from each well, and stabilization of pH, conductivity, and temperature was achieved. Depth to ground water in each well was then allowed to reach the original level; i.e., before pumping.

Water samples were collected using a stainless steel bailer cleaned with a trisodium phosphate (TSP) solution with triple rinse with deionized water. Samples were collected in a 40-milliliter Volatile Organic Analysis (VOA) bottles fillted with teflon-

lined screw type caps, and in one-liter amber bottles. The sample containers complied with the appropriate preservation techniques in reference to the LUFT manual, dated October 18, 1989. The samples were labeled, then placed in a cooler with ice, and transported to a State-certified laboratory, accompanied by the chain-of-custody records.

3.0 LABORATORY ANALYSIS

All ground water samples (MW-1, MW-2, MW-3, and MW-4) were sampled on August 30, 1990, and transported on the same day to the laboratory to be analysed for BTEX, Total Petroleum Hydrocarbons as diesel (TPH-D), and TOG by following EPA Test Methods 3510/602, 3510/8015, and 503 A&E.

4.0 RESULTS

A hard copy of the analytical results as recieved from the laboratory is attached along with the chain-of-custody documentation.

BTEX concentrations in all water samples were below the instrument detection limit. Samples MW-1, MW-2, and MW-4 showed TOG concentration of 20, 2.5, and 2.4 parts per million (PPM); while sample MW-3 did not present any TOG concntrations. All ground water samples indicated contamination due to diesel in concentrations of 15, 1.8, 0.087, and 0.560 ppm for MW-1, MW-2, MW-3, and MW-4; respectively.

Table 2 summarizes the levels of contamination in each well along with previous sampling events.

5.0 DISCUSSION AND CONCLUSION

A comparison table, Table 2, is prepared to compare previous sampling results with this sampling event. The results indicate that BTEX compounds were not detected three consecative times. It is recommended then, for future sampling events to analyse the water samples for diesel and TOG only.

The results also show that the contamination plume is contained within the site. The higest concentrations for the plume could be detected near MW-1 (15 and 20 ppm for diesel and TOG; respectively) which could be pumped to the sanitary sewer system directly without any treatment.

6.0 CERTIFICATION

I declare, under the penalty of the perjury, to the best of my knowledge, all the ststements and information above, are true and correct.

Rasmi El-Jurf, MSCE, REA
Senior Project Engineer

9-17-90
DATE

TABLES

TABLE 1

Monitoring Well to Ground Water No.	*Depth (Ft)*
June 11, 1990	
MW-1	8.84
MW-2	8.82
MW-3	8.57
MW-4	8.06
August 30, 1990	
MW-1	8.83
MW-2	8.82
MW-3	8.58
MW-4	8.07

TABLE 2

Well NO.	TPH-D	TOG	B	T	E	X
	(All Concentrations in Parts Per Million (ppm))					
August 15, 1989						
MW-1	10.6	N/A.	0.016	N.D	0.0024	0.0031
MW-2	47.0	50.0	N.D.	N.D.	N.D	N.D.
MW-3	2.0	N/A.	N.D.	N.D.	N.D	N.D.
December 13, 1989						
MW-1	60.0	N/A.	N.D.	N.D.	N.D.	N.D.
MW-2	34.0	95.0	N.D.	N.D.	N.D.	N.D.
MW-3	1.7	N/A.	N.D.	N.D.	N.D.	N.D.
June 20, 1990						
MW-1	4.3	7.2	N.D.	N.D.	N.D.	N.D.
MW-2	1.2	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	22.0	8.6	N.D.	N.D.	N.D.	N.D.

(Continue TABLE 2)..

Augyst 30, 1990

MW-1	15.0	20.0	N.D.	N.D.	N.D.	N.D.
MW-2	1.8	2.5	N.D.	N.D.	N.D.	N.D.
MW-3	0.087	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	0.560	2.4	N.D.	N.D.	N.D.	N.D.

FIGURES

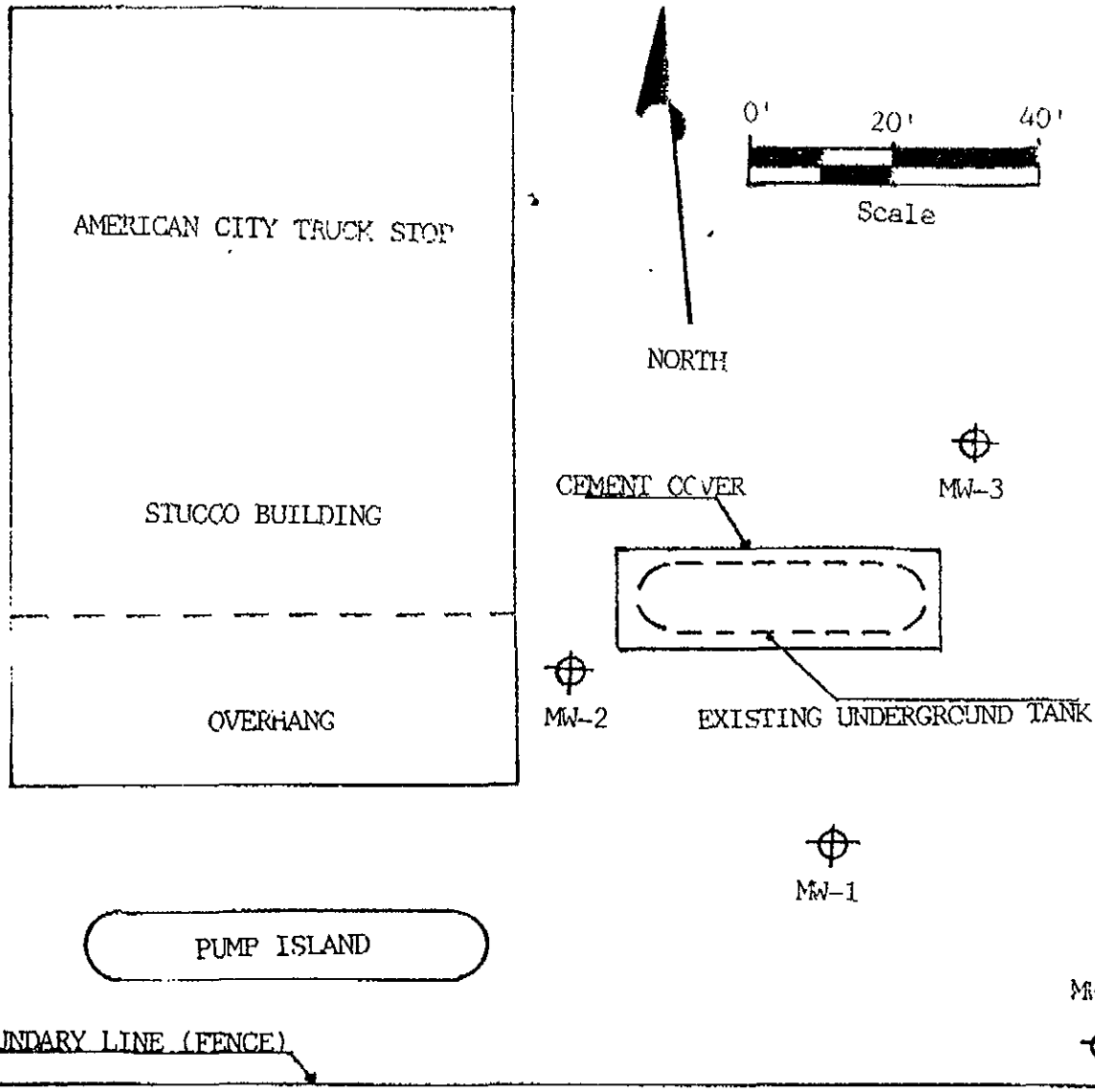

FIGURE 1: Site Plan

EEI ENVIRONMENTAL EXPERTS, INC.

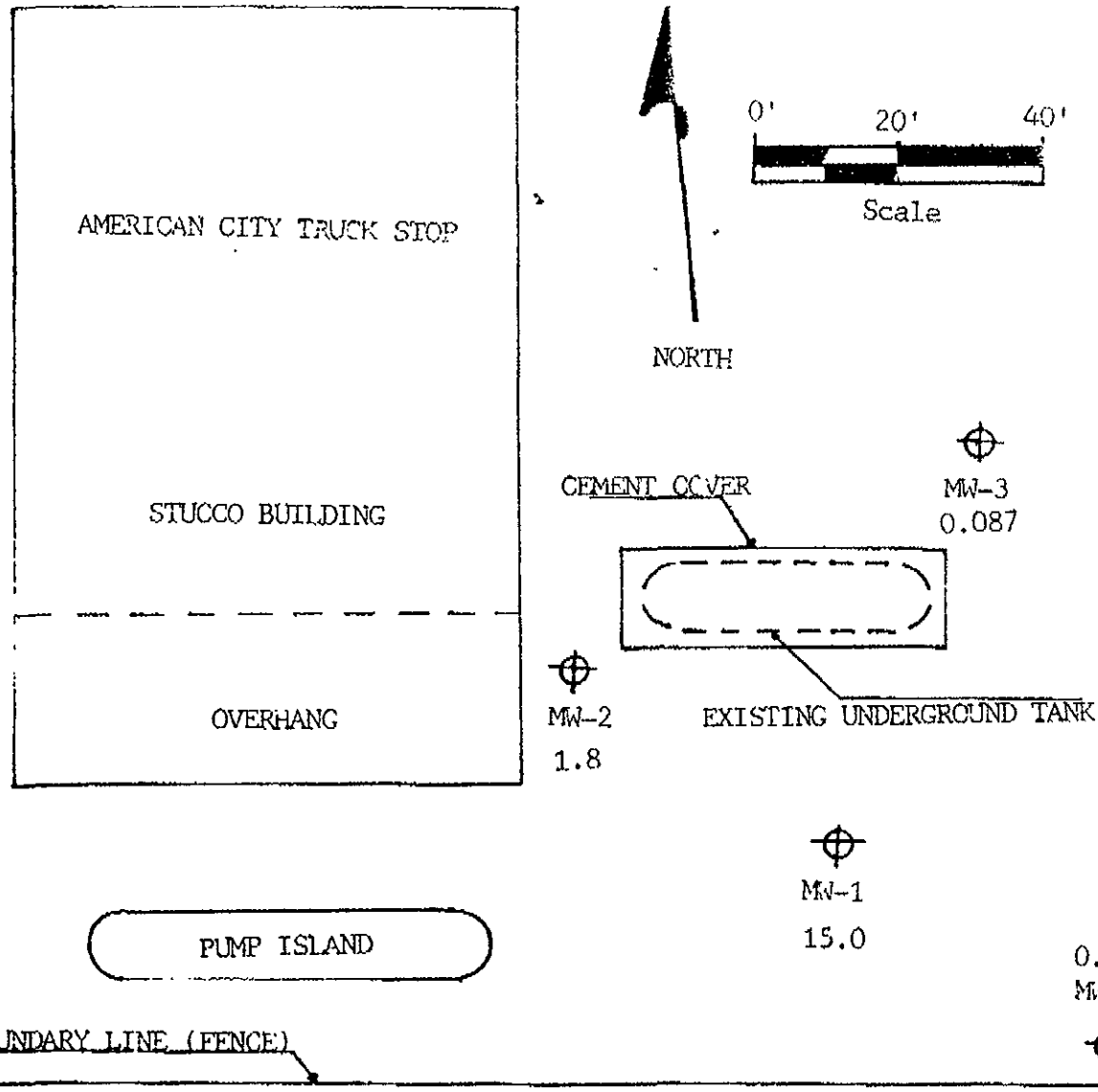

FIGURE 2:
Diesel Concentrations in the Ground Water

EEI ENVIRONMENTAL EXPERTS, INC.

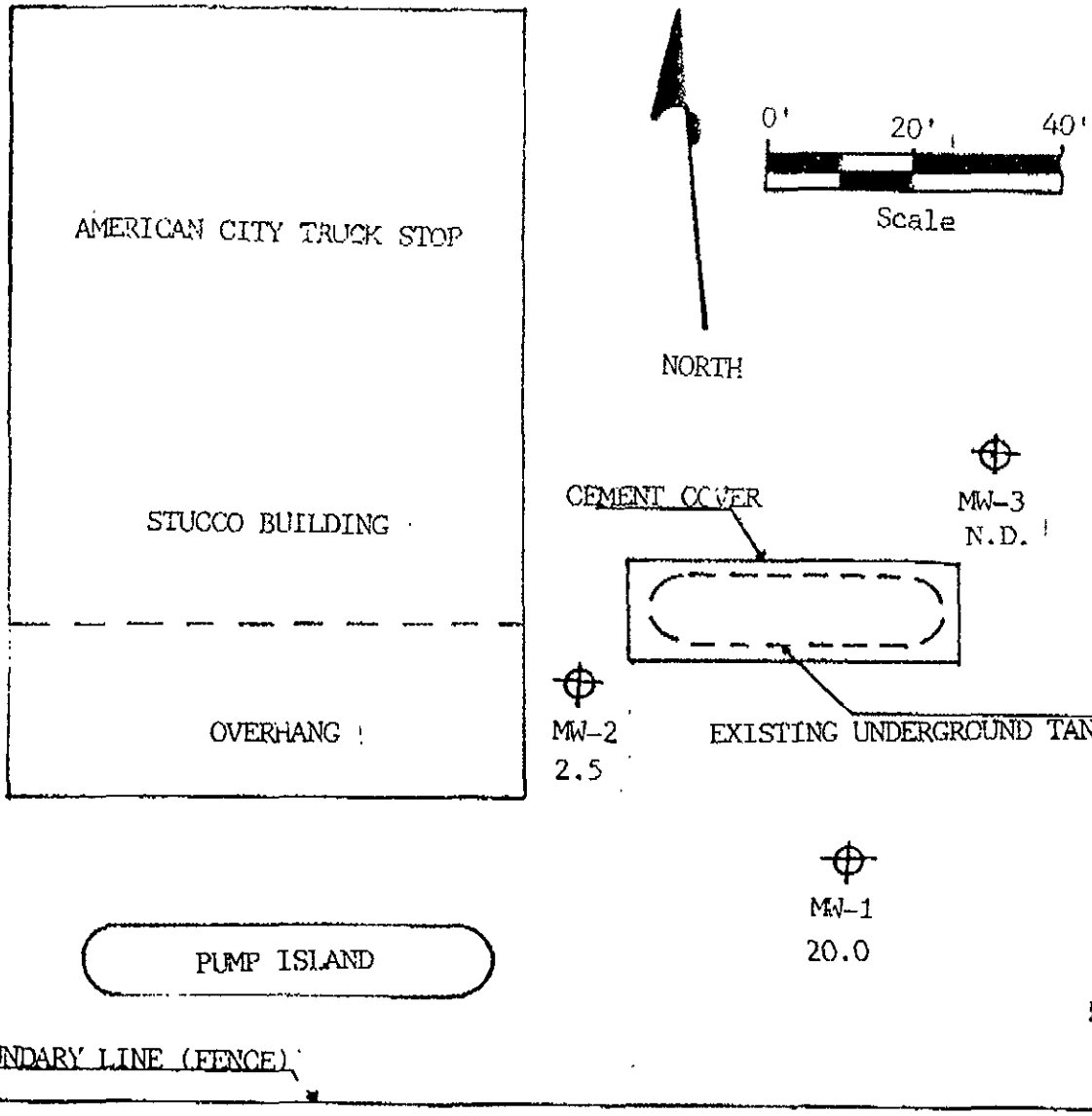

FIGURE 3:
Oil Concentrations
in the Ground Water

EEI ENVIRONMENTAL EXPERTS, INC.

APPENDIX A

ENVIRONMENTAL EXPERTS, INC.

Well Development and Water Sampling Field Survey

Project: Fred Houston Sampler: RA-SMI Date: 8/30/90

Well: MW-1 Site Name & Address: 6310 / Houston Place, Dublin, CA

Sampling Method: Hand Bailer

Decontamination Procedures: Tripple Rinse with TSP.

Well Development / Well Sampling Data

Well Depth: 20 *Time:* AM *Water Level Before Purging:* 8.84'

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.59 feet X	0.16	(0.65)	7.53	5	38 Gallons

Free Product Description: N/A.
Water Level Before Sampling: 9.34'

Elapsed Time (min)	Volume (gal)	pH	Conductivity (µ-Siemens)	Temperature (°C)	Notes
START	0	6.7	3×10^3	27.6	Silts (grey), Surge odor
5	10	6.65	32×10^3	23.2	"
10	20	6.8	41×10^3	22.1	"
7	30	6.8	45×10^3	22.1	"
7	40	6.8	45×10^3	22.1	"

ENVIRONMENTAL EXPERTS, INC.

Well Development and Water Sampling Field Survey

Project: Fred Houston Sampler: RA Smith Date: 8/30/90

Well: MW-2 Site Name & Address: 6310 Houston Place, Dublin

Sampling Method: Hand Bailer

Decontamination Procedures: Tripple Rinse w/ TSP.

Well Development / Well Sampling Data

Well Depth: 20' Time: AM Water Level Before Purging: 8.82'

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.18	feet X	0.16	(0.65)	7.27	5	36

Free Product Description: N/A

Water Level Before Sampling: 9.2'

Elapsed Time (min)	Volume (gal)	pH	Conductivity (µ-Siemens)	Temperature (°C)	Notes
START	0	6.7	13 X 10³	28.0	Clear & Gray color + Sewer Smell
5	10	6.88	20 X10³	26.7	"
10	20	6.7	25 X10³	24.3	No Sheen
10	30	6.7	25 X10³	23.0	"
12	40	6.7	25. X10³	23.0	"

ENVIRONMENTAL EXPERTS, INC.

Well Development and Water Sampling Field Survey

Project: Fred Houston Sampler: RASmi Date: 8/30/90

Well: MW3 Site Name & Address: 6310 Houston Place, Dublin

Sampling Method: Hand Bailer

Decontamination Procedures: Tripple Rinse w/ TSP

Well Development / Well Sampling Data

Well Depth: 20 Time: PM Water Level Before Purging: 8.57'

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.43 feet X	0.16	(0.65)	7.43	5	37

Free Product Description:

Water Level Before Sampling:

Elapsed Time (min)	Volume (gal)	pH	Conductivity (µ-Siemens)	Temperature (°C)	Notes
Start	0	6.7	9×10^3	26.6	Silt-No odor
5	10	6.57	17×10^3	25.0	"
10	20	6.56	24×10^3	24.2	"
10	30	6.56	30×10^3	23.1	"
12	40	6.56	30×10^3	23.1	"

ENVIRONMENTAL EXPERTS, INC.

Well Development and Water Sampling Field Survey

Project: Fred Houston Sampler: RASmi Date: 8/30/90

Well: MW-4 Site Name & Address: 6310 Houston Place, Dublin

Sampling Method: T and Bailer

Decontamination Procedures: Tripple Rinse w/ TSP

Well Development / Well Sampling Data

Well Depth: 20 Time: PM Water Level Before Purging: 8.05

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.95 feet X	0.16	(0.65)	7.76	5	39

Free Product Description: N/A

Water Level Before Sampling: 9.60

Elapsed Time (min)	Volume (gal)	pH	Conductivity (µ-Siemens)	Temperature (°C)	Notes
start	0	6.85	16×10^3	30.2	Clear watery
10	10	6.93	7×10^3	27.1	"
10	20	7.05	4×10^3	24.3	"
12	30	7.05	4×10^3	23.2	"
13	40	7.05	4×10^3	23.2	"

APPENDIX B

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

September 7, 1990

ChromaLab File No.: 0890258

ENVIRONMENTAL EXPERTS, INC.

Attn: Rasmi

Re: Four water samples for BTEX, Diesel , Oil & Grease analyses

Date Sampled: 8/30/90
Date Extracted: 8/31 - 9/6/90

Date Submitted: 8/30/90
Date Analyzed: 8/31 - 9/6/90

RESULTS:

Sample No.	Diesel (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	Oil & Grease (mg/L)
MW-1	15000	N.D.	N.D.	N.D.	N.D.	20
MW-2	1800	N.D.	N.D.	N.D.	N.D.	2.5
MW-3	87	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	560	N.D.	N.D.	N.D.	N.D.	2.4
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	100.5%	92.5%	107.9%	102.5%	89.1%	----
DUPLICATED SPIKE RECOVERY	98.9%	86.1%	92.5%	94.4%	93.5%	----
DETECTION LIMIT	50	0.5	0.5	0.5	0.5	1.0
METHOD OF ANALYSIS	3510/ 8015	602	602	602	602	503 A&E

CHROMALAB, INC.

David Duong
Senior Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
415/831-1788 • Facsimile 415/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

2239 Omega R
415/831-

CHROMALAB FILE # 890258

Chain of Custody

DATE 08/30/90 PAGE 01 OF 01

PROJ. MGR. RASMI
COMPANY Env. Experts Inc.
ADDRESS 2038 ADMIRAL PL.
San Jose, CA 95133
SAMPLERS (SIGNATURE) (PHONE NO.)

ANALYSIS REQUEST

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	TPH - Gasoline (EPA 5030)	TPH - Gasoline (5030) w/BTEX (EPA 602, 8020)	TPH - Diesel + BTEX (EPA 3510, 3550)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240)	BASE/NEUTRALS, ACIDS (EPA 624/627, 8270)	TOTAL OIL & GREASE (EPA 5030&E)	PESTICIDES/PCB (EPA 608, 8080)	PHENOLS (EPA 604, 8040)			METALS: Cd, Cr, Pb, Zn	CAM METALS (18) w/Cr VI	PRIORITY POLLUTANT METALS (13)						NUMBER OF CONTAINERS
MW-1	8-30	PM	Water				X					X													
MW-2	"	"	"				X					X													
MW-3	"	"	"				X					X													
MW-4	"	"	"				X					X													

PROJECT INFORMATION
PROJECT:
PO NO.
SHIPPING ID. NO.
VIA:

SAMPLE RECEIPT
TOTAL NO. OF CONTAINERS
CHAIN OF CUSTODY SEALS
REC'D GOOD CONDITION/COLD
CONFORMS TO RECORD
LAB NO.

SPECIAL INSTRUCTIONS/COMMENTS:
Extract & Hold MW-4 for 8270
Normal TAT

RELINQUISHED BY 1.	RELINQUISHED BY 2.	RELINQUISHED BY 3.
1:00 PM		
(Signature) (Time)	(Signature) (Time)	(Signature) (Time)
RASMI EL-Jurf 8-30 (Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)
Env. Experts Inc. (Company)	(Company)	(Company)
RECEIVED BY 1.	RECEIVED BY 2.	RECEIVED BY (LABORATORY) 3.
(Signature) (Time)	(Signature) (Time)	12:20 PM (Signature) (Time)
(Printed Name) (Date)	(Printed Name) (Date)	DAVID DUONG 08/30/90 (Printed Name) (DATE)
(Company)	(Company)	(LAB) Chromalab, Inc.