



**Touchstone
Developments**

Environmental Management

ENVIRONMENTAL
SECTION
7/10/97 PM 2:22

June 20, 1997

Alameda County Health Agency,
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Attention: Don Hwang

Reference: Chevron Station No. 9-2142
4150 Redwood Road
Oakland, California

Mr. Hwang:

Enclosed is Touchstone Developments' PRODUCT PIPING REMOVAL
SOIL SAMPLING REPORT dated May 28, 1997 for the above
referenced site.

Please do not hesitate to call if you have any questions or
comments.

Sincerely,

Jeff Monroe
Project Manager

JLM/jlm

enclosures

602-00

cc: Ken Betts - Ken Betts, Inc. Owner
Ken Wendt - Wendt Construction



**Touchstone
Developments**
Environmental Management

DATE RECEIVED
15 JUN 1997
15 JUN 1997

Product Piping Removal Soil Sampling Report

Chevron Service Station No. 9-2142

4150

~~4984~~ Redwood Road
Oakland, California

prepared for

Ken Betts, Inc.
770 Wesley Way
Oakland, California 94610

prepared by

Touchstone Developments

Jeff Monroe
Project Manager

May 28, 1997

INTRODUCTION

This report prepared by Touchstone Developments (Touchstone) documents the removal of product dispensers with associated piping and compliance sampling at Chevron Station number 9-2142 located on 4150 Redwood Road, Oakland, California (Figure 1). In addition, this report documents the disposal of soil generated at this location during product dispenser and piping replacement activities. Soil samples collected from beneath the dispensers, piping trenches, and soil stockpiles were performed on May 22 and 27, 1997.

SITE CONDITIONS

The site is located at the junction of Redwood Road and Highway 13 in Oakland, California. The site is adjacent to commercial properties to the west and north, and residential properties to the east and south. Facilities at this service station site consist of three 10,000-gallon fiberglass gasoline underground storage tanks (USTs), associated product piping, three dispenser islands, and a service station building.

Groundwater was not encountered in the piping trench excavations.

SERVICE STATION FIELD ACTIVITIES

Product piping/dispenser removal and replacement, excavation, and backfill were performed by Wendt Construction of Stockton, California. A Touchstone representative was on-site to collect soil samples from the product piping trench excavations and soil stockpiles. Product piping removal and trench sampling were observed and directed by Don Hwang, a representative of Alameda County Health Agency, Department of Environmental Health, and Hernan Gomez with the City of Oakland Fire Department. Transportation and disposal of product piping was accomplished by Erickson, Inc. of Richmond, California.

Product Piping Sampling

After single walled fiberglass piping was removed, soil samples were then collected from the bottom of the trenches. Soil samples designated P1 through P8 were collected from beneath the dispensers and product piping trenches at depths of approximately 2.5 to 5 feet below grade surface (bgs). Soil sample locations are shown on Figure 2. Soil sample depths and analytical results are summarized in Table A.

On May 27, 1997 two test pits were dug to approximately 8 feet bgs beneath the two dispenser islands represented by the initial samples P3 and P4. This was performed to collect additional vertical analytical data. Groundwater was encountered at approximately 7.5 to 8 feet bgs, a sheen was also observed as

groundwater seeped into the test pits. A soil sample was then collected above the encountered water table at 7 to 7.5 feet bgs from each test pit. Soil samples collected from test pits were designated NTP-7' and STP-7.5, locations are shown in Figure 3. Analytical summary and depths are found in Table A.

STOCKPILE SAMPLING AND DISPOSAL

Soil stockpile samples PSP-1(a-d) represent approximately 40 cubic yards (cy) of soil and peagravel excavated to remove product piping and dispensers on-site. A soil sample was collected for approximately every 10 cy of excavated material. Four samples were then composited in the laboratory and analyzed as one to represent the stockpile of approximately 40 cy. The stockpiles were transported by Wendt Construction during June 1997 to Browning-Ferris Industries (BFI) Landfill located in Livermore, California. Soil stockpile location and samples are shown on Figure 3 and soil stockpile sample analytical results are summarized in Table A.

SAMPLING PROTOCOL

Soil samples were collected by pushing a clean, three-inch-long, two-inch diameter, brass sample tube into the soil until completely full. The ends of the sample tubes were covered with aluminum foil and sealed with plastic end caps. The samples were then labeled, placed in a cooler with ice, entered on a Chain-of-Custody form and transported to Analytical Sciences, a State-certified environmental laboratory located in Petaluma, California.

Stockpile Sampling

Soil samples were collected for approximately every 10 cy of material generated at the site. The stockpile sample was collected by removing the top 6 to 12 inches of soil, then pushing a sample tube into the soil until completely full. The sample was sealed, labeled and handled as described above.

SAMPLE ANALYSIS

Soil samples collected from the product piping trenches and associated stockpiles were analyzed for Total Petroleum Hydrocarbons (TPH) calculated as gasoline according to EPA Method 8015 (Modified), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Methyl t-Butyl Ether (MTBE) according to EPA Method 8020, Total Lead according to EPA SW-846 6010. The stockpile sample was additionally analyzed for Volatile Organic Compounds according to EPA Method 8010. Copies of the analytical laboratory reports and Chain-of-Custody forms are presented in Appendix A.

List of Attachments

Table A: Sample Analytical Data Summary

Figure 1: Site Plan

Figure 2: Site Plan with Sample Locations

Appendix A: Certified Analytical Reports and Chain-of-Custody forms

TABLE A
Sample Analytical Summary
Results in mg/Kg (ppm) unless noted

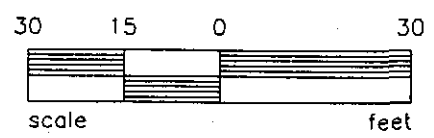
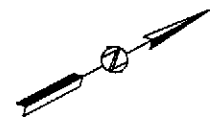
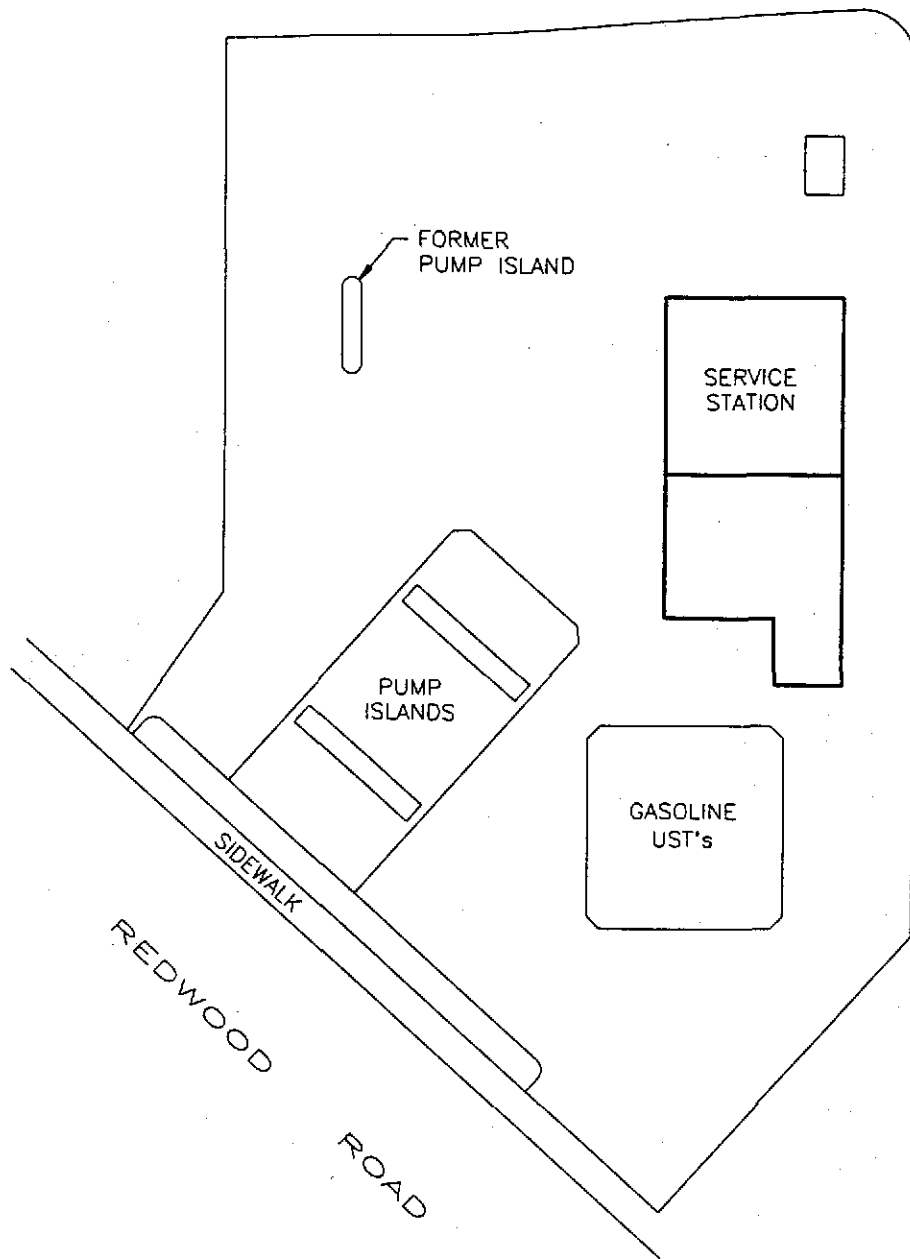
PRODUCT DISPENSER & PIPING TRENCH SAMPLES

Sample ID	Date Sampled	Depth (ft.)	TPH-Gas	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Lead
P1	5-22-97	3.5	ND	ND	ND	ND	ND	0.032	ND
P2	5-22-97	2.5	ND	ND	ND	ND	ND	0.020	ND
P3	5-22-97	5	88	0.014	0.052	0.024	0.250	1.30	ND
P4	5-22-97	4.5	600	3.0	4.6	6.7	32	3.1	ND
P5	5-22-97	2.5	2.1	ND	0.005	ND	ND	0.160	ND
P6	5-22-97	2.5	ND	0.005	0.010	0.005	0.031	0.033	ND
P7	5-22-97	4	ND	0.005	0.008	ND	ND	0.035	ND
P8	5-22-97	3	3.1	ND	0.010	ND	0.048	0.36	5.25

TEST PIT & STOCKPILE SAMPLES

Sample ID	Date Sampled	Depth (ft.)	TPH-Gas	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	8010	Lead
NTP	5-27-97	7	3800	ND<5	12	7	46	ND<20	NA	NA
STP	5-27-97	7.5	940	ND<2	28	18	130	ND<8	NA	NA
PSP-1 (a-d)	5-27-97	Stock-pile	730	1.5	20	11	75	ND<4	ND	5.92

MTBE = Methyl-tert-butyl-ether
 TPH = Total Petroleum Hydrocarbons
 ND = Not Detected at or above lab detection limits
 NA = Not Analyzed
 ppm = Parts per million



**Touchstone
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Environmental Management

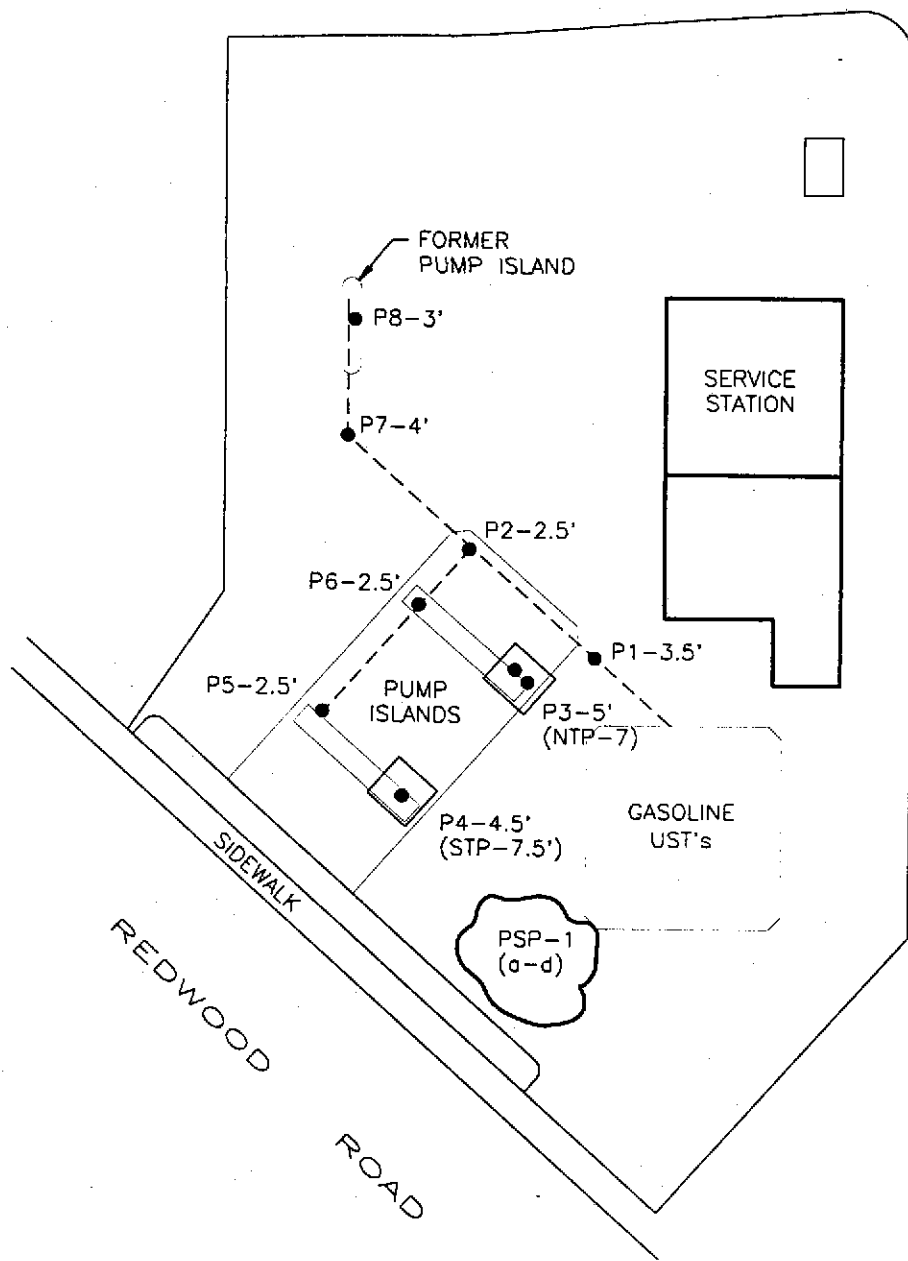
Job. No: 97-2142
 Appr:
 Drwn: CD
 Date: JUN 1997

SITE PLAN

Ken Betts Chevron 9-2142
 4150 Redwood Rd.
 Oakland, California

FIGURE

1

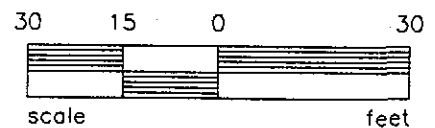
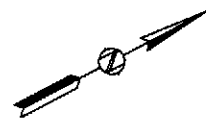


EXPLANATION

● P1 SAMPLE ID & LOCATION

☞ STOCKPILE

- - - PRODUCT PIPING



**Touchstone
Developments**
Environmental Management

Job. No: 97-2142
Appr:
Drwn: CD
Date: JUN 1997

SITE PLAN

Ken Betts Chevron 9-2142
4150 Redwood Rd.
Oakland, California

FIGURE

2

APPENDIX A

Chemical Analytical Reports and Chain-of-Custody forms



Report Date: June 5, 1997

Touchstone Developments
P.O. Box 2554
Santa Rosa, CA 95405
ATTN: Jeff Monroe

Project Name: WT-002-97

Lab Project Number: 7052401
CA Lab Accreditation #: 2118

LABORATORY REPORT

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1023	P1 - 3.5	TPH/Gasoline	ND	1.0
		MTBE	0.032	0.020
		Benzene	ND	0.005
		Toluene	ND	0.005
		Ethyl Benzene	ND	0.005
		Xylenes	ND	0.015

Date Sampled: <u>05/22/97</u>	Date Analyzed: <u>06/05/97</u>	QC Batch #: <u>273</u>
Date Received: <u>05/24/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		



<u>Lab #</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Result (mg/kg)</u>	<u>RDL (mg/kg)</u>
1024	P2 - 2.5	TPH/Gasoline	ND	1.0
		MTBE	0.020	0.020
		Benzene	ND	0.005
		Toluene	ND	0.005
		Ethyl Benzene	ND	0.005
		Xylenes	ND	0.015

Date Sampled: <u>05/22/97</u>	Date Analyzed: <u>06/05/97</u>	QC Batch #: <u>273</u>
Date Received: <u>05/24/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

<u>Lab #</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Result (mg/kg)</u>	<u>RDL (mg/kg)</u>
1025	P3 - 5	TPH/Gasoline	88	2.0
		MTBE	1.30	0.020
		Benzene	0.014	0.005
		Toluene	0.052	0.005
		Ethyl Benzene	0.024	0.005
		Xylenes	0.250	0.015

Date Sampled: <u>05/22/97</u>	Date Analyzed: <u>06/05/97</u>	QC Batch #: <u>273</u>
Date Received: <u>05/24/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

<u>Lab #</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Result (mg/kg)</u>	<u>RDL (mg/kg)</u>
1026	P4 - 4.5	TPH/Gasoline	600	50
		MTBE	3.1	2.0
		Benzene	3.0	0.5
		Toluene	4.6	0.5
		Ethyl Benzene	6.7	0.5
		Xylenes	32	1.5

Date Sampled: <u>05/22/97</u>	Date Analyzed: <u>06/05/97</u>	QC Batch #: <u>273</u>
Date Received: <u>05/24/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		



Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1027	P5 - 2.5	TPH/Gasoline	2.1	1.0
		MTBE	0.160	0.020
		Benzene	ND	0.005
		Toluene	0.005	0.005
		Ethyl Benzene	ND	0.005
		Xylenes	ND	0.015

Date Sampled: 05/22/97 Date Analyzed: 06/05/97 QC Batch #: 273
Date Received: 05/24/97 Method: EPA 5030/8015M/8020
Holding Time Met: Yes No

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1028	P6 - 2.5	TPH/Gasoline	ND	1.0
		MTBE	0.033	0.020
		Benzene	0.005	0.005
		Toluene	0.010	0.005
		Ethyl Benzene	0.005	0.005
		Xylenes	0.031	0.015

Date Sampled: 05/22/97 Date Analyzed: 06/05/97 QC Batch #: 273
Date Received: 05/24/97 Method: EPA 5030/8015M/8020
Holding Time Met: Yes No

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1029	P7 - 4	TPH/Gasoline	ND	1.0
		MTBE	0.035	0.020
		Benzene	0.005	0.005
		Toluene	0.008	0.005
		Ethyl Benzene	ND	0.005
		Xylenes	ND	0.015


Date Sampled: 05/22/97 Date Analyzed: 06/05/97 QC Batch #: 273
Date Received: 05/24/97 Method: EPA 5030/8015M/8020
Holding Time Met: Yes No



<u>Lab #</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Result (mg/kg)</u>	<u>RDL (mg/kg)</u>
1030	P8 - 3	TPH/Gasoline	3.1	1.0
		MTBE	0.360	0.020
		Benzene	ND	0.005
		Toluene	0.010	0.005
		Ethyl Benzene	ND	0.005
		Xylenes	0.048	0.015

Date Sampled: <u>05/22/97</u>	Date Analyzed: <u>06/05/97</u>	QC Batch #: <u>273</u>
Date Received: <u>05/24/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Approved for Release



Mark A. Valentini, Ph.D.
Laboratory Director



LABORATORY QA/QC REPORT

QC Batch #: 273

Lab Project #: 7052401

Sample ID	Compound	Result (mg/kg)
MB	TPH/Gas	ND
MB	MTBE	ND
MB	Benzene	ND
MB	Toluene	ND
MB	Ethyl Benzene	ND
MB	Xylenes	ND

Sample #	Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.
1024	CMS	TPH/Gas		NS	
	CMS	Benzene	0.0212	0.0223	95.1
	CMS	Toluene	0.0236	0.0223	106
	CMS	Ethyl Benzene	0.0234	0.0223	105
	CMS	Xylenes	0.0700	0.0670	104

Sample #	Sample ID	Compound	Result (mg/kg)	Spike Level	% Recv.	RPD
1024	CMSD	TPH/Gas		NS		
	CMSD	Benzene	0.0216	0.0223	96.9	1.9
	CMSD	Toluene	0.0391	0.0223	**	**
	CMSD	Ethyl Benzene	0.0227	0.0223	102	3.0
	CMSD	Xylenes	0.0670	0.0670	100	4.4

** Not calculated. Chromatographic interference resulted in falsely high result.

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range



Analytical Sciences
 P.O. Box 750336
 Petaluma, CA 94975-0336
 (707) 769-3128
 Fax (707) 769-8093

Chain of Custody

Lab Job Number: 7052401

Client's Project Name: WT-02-91

CLIENT INFORMATION	
Company Name:	<u>TruStone Developments</u>
Address:	<u>PO Box 354, S. CA</u>
Contact:	<u>Jeff Monroe</u>
Phone #:	<u>707 538 8818</u>
Fax #:	<u>707 538 8812</u>

TURNAROUND TIME (check)	
Same Day _____	24 Hours _____
48 Hours _____	72 Hours _____
5 Days <u>X</u>	Normal _____

Cooler Temperature 4 °C
 COC _____
 Page 1 of 1

W/MTBE ANALYSES

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	# CONT.	PRESERVED YES/NO	TPH GAS/BTEX EPA 8015/8020	TPH DIESEL EPA 8015	EPA 8010	Total Lead	COMMENTS	LAB SAMPLE #
1	<u>P1-3.5</u>	<u>5-22-97</u>	<u>1</u>	<u>Ice</u>	<u>X</u>			<u>X</u>		<u>1023</u>
2	<u>P2-2.5</u>	↓	↓	↓	↓			↓		<u>1024</u>
3	<u>P3-5</u>	↓	↓	↓	↓			↓	<u>← strong</u>	<u>1025</u>
4	<u>P4-4.5</u>	↓	↓	↓	↓			↓	<u>← strong</u>	<u>1026</u>
5	<u>P5-2.5</u>	↓	↓	↓	↓			↓		<u>1027</u>
6	<u>P6-2.5</u>	↓	↓	↓	↓			↓		<u>1028</u>
7	<u>P7-4</u>	↓	↓	↓	↓			↓		<u>1029</u>
8	<u>P8-3</u>	↓	↓	↓	↓			↓	<u>← mill</u>	<u>1030</u>
9										
10										

SIGNATURES

Relinquished By:

Received By:

Received By Laboratory:

Signature

Date/Time

Signature

Date/Time

Signature

Date/Time

5-24-97

Mark A. Valentin
5/24/97 11:05 AM

June 02, 1997

Mr. Mark Valentini
Analytical Sciences
P.O. Box 750336
Petaluma, CA 94975

RE: Pace Project Number: 708449
Client Project ID: WT002 (7052401-2802)

Dear Mr. Valentini:

Enclosed are the results of analyses for sample(s) received by the laboratory on May 29, 1997. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Ron Chew
Project Manager

CA ELAP Certificate Number I2245

Enclosures

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954

Tel: 707-792-1865

Fax: 707-792-0342

DATE: 06/02/97

PAGE: 1

Analytical Sciences
P.O. Box 750336
Petaluma, CA 94975

Pace Project Number: 708449
Client Project ID: WT002 (7052401-2802)

Attn: Mr. Mark Valentini
Phone: (707)769-3128

Solid results are reported on a wet weight basis

Pace Sample No: 70985254 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P1-3.5 (1023) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.85	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

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Petaluma, CA 94954

Tel: 707-792-1865
Fax: 707-792-0342

DATE: 06/02/97

PAGE: 2

Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985262 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P2-2.5 (1024) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals. ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.85	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985270 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P3-5 (1025) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes

Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.63	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Analytical

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1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954

Tel: 707-792-1865
Fax: 707-792-0342

DATE: 06/02/97

PAGE: 4

Pace Project Number: 708449
Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985288 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P4-4.5 (1026) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.59	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954

Tel: 707-792-1865
Fax: 707-792-0342

DATE: 06/02/97

PAGE: 5

Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985296 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P5-2.5 (1027) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
------------	---------	-------	-----	----------	---------	------	-----------

Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.81	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Analytical

Pace Analytical Services, Inc.
1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954

Tel: 707-792-1865

Fax: 707-792-0342

DATE: 06/02/97

PAGE: 6

Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985304 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P6-2.5 (1028) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
------------	---------	-------	-----	----------	---------	------	-----------

Metals

Metals. ICP

Method: EPA 6010

Prep Method: EPA 3050

Lead

ND

mg/kg

4.9

05/30/97

ADMM 7439-92-1

Date Digested

05/30/97

REPORT OF LABORATORY ANALYSIS

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Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985312 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P7-4 (1029) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	ND	mg/kg	4.95	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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1455 McDowell Blvd. North, Suite D
Petaluma, CA 94954

Tel: 707-792-1865

Fax: 707-792-0342

DATE: 06/02/97

PAGE: 8

Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985320 Date Collected: 05/22/97 Matrix: Soil
Client Sample ID: P8-3 (1030) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
------------	---------	-------	-----	----------	---------	------	-----------

Metals

Metals, ICP

Method: EPA 6010

Prep Method: EPA 3050

Lead	5.25	mg/kg	4.59	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Project Number: 708449
Client Project ID: WT002 (7052401-2802)

Pace Sample No: 70985338 Date Collected: 05/07/97 Matrix: Soil
Client Sample ID: PSP1 (A/B) COMP (1084) Date Received: 05/29/97

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
<hr/>							
Metals							
Metals, ICP		Method: EPA 6010				Prep Method: EPA 3050	
Lead	5.92	mg/kg	4.9	05/30/97	ADMM	7439-92-1	
Date Digested				05/30/97			

REPORT OF LABORATORY ANALYSIS

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Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

PARAMETER FOOTNOTES

ND Not Detected
NC Not Calculable
PRL Pace Reporting Limit

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

DATE: 06/02/97

PAGE: 11

Analytical Sciences
 P.O. Box 750336
 Petaluma, CA 94975

Pace Project Number: 708449
 Client Project ID: WT002 (7052401-2802)

Attn: Mr. Mark Valentini
 Phone: (707)769-3128

QC Batch ID: 24031

QC Batch Method: EPA 3050

Analysis Method: EPA 6010

Analysis Description: Metals, ICP

Associated Pace Samples:	70985254	70985262	70985270	70985288	70985296
	70985304	70985312	70985320	70985338	

METHOD BLANK: 70985163

Associated Pace Samples:

	70985254	70985262	70985270	70985288	70985296	70985304	70985312
	70985320	70985338					
Parameter	Units	Method Blank Result	PRL	Footnotes			
Lead	mg/kg	ND	5				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 70985239 70985247

Parameter	Units	70980651	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Lead	mg/kg	41.15	185.2	206.7	89.4	211.7	89.5	0	

LABORATORY CONTROL SAMPLE & LCSD: 70985213

Parameter	Units	70985221	Spike Conc.	LCS Result	Spike % Rec	LCSD Result	Spike Dup % Rec	RPD	Footnotes
Lead	mg/kg	200	185.2	92.6	187.7	93.9	1		

REPORT OF LABORATORY ANALYSIS

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Pace Project Number: 708449

Client Project ID: WT002 (7052401-2802)

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	Pace Reporting Limit
RPD	Relative Percent Difference

REPORT OF LABORATORY ANALYSIS

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Analytical Sciences
 P.O. Box 750336
 Petaluma, CA 94975-0336
 (707) 769-3128
 Fax (707) 769-8093

Chain of Custody

708449

CLIENT INFORMATION	
Company Name:	_____
Address:	SAME
Contact:	MARK VALENTINI
Phone #:	707 769-3128
Fax #:	_____

Lab Job Number: _____

Client's Project Name: WT002 (7052401-2802)

TURNAROUND TIME (check)	
Mobile Lab	_____
Same Day	24 Hours _____
48 Hours _____	72 Hours _____
5 Days <u>X</u>	Normal <u>X</u>

Cooler Temperature
ICED °C
 (COLD)
 COC
 Page 1 of 1

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	# CONT.	PRESERVED YES / NO	ANALYSES					COMMENTS	LAB SAMPLE #
					TPH GAS/BTEX EPA 8015/8020	TPH DIESEL EPA 8015	EPA 8010	TRPH	TOTAL Pb (EPA 600)		
1	P1-3.5 (1023)	5/22/97	1						X		70985254
2	P2-2.5 (1024)	5/22	1						X		70985262
3	P3-5 (1025)	5/22	1						X		70985270
4	P4-4.5 (1026)	5/22	1						X		70985288
5	P5-2.5 (1027)	5/22	1						X		70985296
6	P6-2.5 (1028)	5/22	1						X	70985304	COOLER CUSTODY SEALS INTACT <input checked="" type="checkbox"/> NOT INTACT <input type="checkbox"/> COOLER TEMPERATURE: <u>5</u> °C
7	P7-4 (1029)	5/22	1						X	70985312	
8	P8-3 (1030)	5/22	1						X		70985320
9											
10	PSP1 (a/b) Comp (1084)	5/7/97	1						X	← Composed by Analytical Sciences	70985338

SIGNATURES

Relinquished By: Mark A. Valentini 5/29/97
 Signature Date/Time

Received By: _____
 Signature Date/Time

Received By Laboratory: [Signature] 5/29/97
 Signature Date/Time

3:18pm



Report Date: June 10, 1997

Touchstone Developments
P.O. Box 2554
Santa Rosa, CA 95405
ATTN: Jeff Monroe

Project Name: WT-002-97

Lab Project Number: 7052802
CA Lab Accreditation #: 2118

LABORATORY REPORT

TPH Gasoline in Soil

Table with 5 columns: Lab #, Sample ID, Analysis, Result (mg/kg), RDL (mg/kg). Rows include TPH/Gasoline (3800), MTBE (ND), Benzene (ND), Toluene (12), Ethyl Benzene (7), and Xylenes (46).

Form containing: Date Sampled: 05/27/97, Date Analyzed: 06/09/97, QC Batch #: 279, Date Received: 05/28/97, Method: EPA 5030/8015M/8020, Holding Time Met: Yes [checked] No []



Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1083	STP-7.5 ft	TPH/Gasoline	940	200
		MTBE	ND	8.0
		Benzene	ND	2.0
		Toluene	28	2.0
		Ethyl Benzene	18	2.0
		Xylenes	130	6.0

Date Sampled: <u>05/27/97</u>	Date Analyzed: <u>06/09/97</u>	QC Batch #: <u>279</u>
Date Received: <u>05/28/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

TPH Gasoline in Soil Composites

Lab #	Sample ID	Analysis	Result (mg/kg)	RDL (mg/kg)
1084	PSP1 (a-b) composite	TPH/Gasoline	730	100
		MTBE	ND	4.0
		Benzene	1.5	1.0
		Toluene	20	1.0
		Ethyl Benzene	11	1.0
		Xylenes	75	3.0

Date Sampled: <u>05/27/97</u>	Date Analyzed: <u>06/09/97</u>	QC Batch #: <u>279</u>
Date Received: <u>05/28/97</u>	Method: <u>EPA 5030/8015M/8020</u>	
Holding Time Met: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		



Chlorinated Solvents in Soil

Lab #	Sample ID	Compound Name	Result (µg/kg)	RDL (µg/kg)
1084	PSP1 (a-b) composite	dichlorodifluoromethane	ND	50
		chloromethane	ND	50
		vinyl chloride	ND	50
		bromomethane	ND	50
		chloroethane	ND	50
		trichlorofluoromethane	ND	50
		1,1-dichloroethene	ND	50
		methylene chloride	ND	50
		trans-1,2-dichloroethene	ND	50
		1,1-dichloroethane	ND	50
		2,2-dichloropropane	ND	50
		cis-1,2-dichloroethene	ND	50
		chloroform	ND	50
		bromochloromethane	ND	50
		1,1,1-trichloroethane	ND	50
		1,1-dichloropropene	ND	50
		carbon tetrachloride	ND	50
		1,2-dichloroethane	ND	50
		trichloroethene	ND	50
		1,2-dichloropropane	ND	50
		bromodichloromethane	ND	50
		dibromomethane	ND	50
		cis-1,3-dichloropropene	ND	50
		trans-1,3-dichloropropene	ND	50
		1,1,2-trichloroethane	ND	50
		1,3-dichloropropane	ND	50
		tetrachloroethene	ND	50
		dibromochloromethane	ND	50
		1,2-dibromoethane	ND	50
		chlorobenzene	ND	50
		1,1,1,2-tetrachloroethane	ND	50
		bromoform	ND	50
		1,1,2,2-tetrachloroethane	ND	50
		1,2,3-trichloropropane	ND	50



Lab #	Sample ID	Compound Name	Result ($\mu\text{g}/\text{kg}$)	RDL ($\mu\text{g}/\text{kg}$)
1084	PSP1 (a-b) composite (cont'd)	bromobenzene	ND	50
		2-chlorotoluene	ND	50
		4-chlorotoluene	ND	50
		1,3-dichlorobenzene	ND	50
		1,4-dichlorobenzene	ND	50
		1,2-dichlorobenzene	ND	50
		1,2-dibromo-3-chloropropane	ND	50
		1,2,4-trichlorobenzene	ND	50
		hexachlorobutadiene	ND	50
		1,2,3-trichlorobenzene	ND	50

Date Sampled: 05/27/97 Date Analyzed: 06/09/97 QC Batch #: 280
Date Received: 05/28/97 Method: EPA 5030/8010
Holding Time Met: Yes No Diluted due to High level of hydrocarbons

Approved for Release

Mark A. Valentini, Ph.D.
Laboratory Director



LABORATORY QA/QC REPORT

QC Batch #: 279

Lab Project #: 7052802

<u>Sample ID</u>	<u>Compound</u>	<u>Result (mg/kg)</u>
MB	TPH/Gas	ND
MB	MTBE	ND
MB	Benzene	ND
MB	Toluene	ND
MB	Ethyl Benzene	ND
MB	Xylenes	ND

<u>Sample ID</u>	<u>Compound</u>	<u>Result (mg/kg)</u>	<u>Spike Level</u>	<u>% Recv.</u>
LCS	TPH/Gas		NS	
LCS	Benzene	0.0219	0.0200	110
LCS	Toluene	0.0214	0.0200	107
LCS	Ethyl Benzene	0.0209	0.0200	105
LCS	Xylenes	0.0658	0.0600	110

<u>Sample ID</u>	<u>Compound</u>	<u>Result (mg/kg)</u>	<u>Spike Level</u>	<u>% Recv.</u>	<u>RPD</u>
LCSD	TPH/Gas		NS		
LCSD	Benzene	0.0218	0.0200	109	0.46
LCSD	Toluene	0.0213	0.0200	107	0.47
LCSD	Ethyl Benzene	0.0204	0.0200	102	2.4
LCSD	Xylenes	0.0661	0.0600	110	0.45

MB = Method Blank; LCS = Laboratory Control Sample; CMS = Client Matrix Spike; CMSD = Client Matrix Spike Duplicate
NS = Not Spiked; OR = Over Calibration Range



QC Batch #: 280

Lab Project #: 7052802

<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (µg/kg)</u>
MB	dichlorodifluoromethane	ND
	chloromethane	ND
	vinyl chloride	ND
	bromomethane	ND
	chloroethane	ND
	trichlorofluoromethane	ND
	1,1-dichloroethene	ND
	methylene chloride	ND
	trans-1,2-dichloroethene	ND
	1,1-dichloroethane	ND
	2,2-dichloropropane	ND
	cis-1,2-dichloroethene	ND
	chloroform	ND
	bromochloromethane	ND
	1,1,1-trichloroethane	ND
	1,1-dichloropropene	ND
	carbon tetrachloride	ND
	1,2-dichloroethane	ND
	trichloroethene	ND
	1,2-dichloropropane	ND
	bromodichloromethane	ND
	dibromomethane	ND
	cis-1,3-dichloropropene	ND
	trans-1,3-dichloropropene	ND
	1,1,2-trichloroethane	ND
	1,3-dichloropropane	ND
	tetrachloroethene	ND
	dibromochloromethane	ND
	1,2-dibromoethane	ND
	chlorobenzene	ND
	1,1,1,2-tetrachloroethane	ND
	bromoform	ND
	1,1,2,2-tetrachloroethane	ND
	1,2,3-trichloropropane	ND



<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (µg/kg)</u>
MB (cont'd)	bromobenzene	ND
	2-chlorotoluene	ND
	4-chlorotoluene	ND
	1,3-dichlorobenzene	ND
	1,4-dichlorobenzene	ND
	1,2-dichlorobenzene	ND
	1,2-dibromo-3-chloropropane	ND
	1,2,4-trichlorobenzene	ND
	hexachlorobutadiene	ND
	1,2,3-trichlorobenzene	ND

<u>Sample</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (µg/kg)</u>	<u>Spike Level</u>	<u>% Recv.</u>
	LCS	dichlorodifluoromethane	ND		
		chloromethane	ND		
		vinyl chloride	ND		
		bromomethane	ND		
		chloroethane	ND		
		trichlorofluoromethane	ND		
		1,1-dichloroethene	ND		
		methylene chloride	ND		
		trans-1,2-dichloroethene	ND		
		1,1-dichloroethane	39.4	40	98.5
		2,2-dichloropropane	ND		
		cis-1,2-dichloroethene	ND		
		chloroform	ND		
		bromochloromethane	ND		
		1,1,1-trichloroethane	32.6	40	81.5
		1,1-dichloropropene	ND		
		carbon tetrachloride	ND		
		1,2-dichloroethane	ND		
		trichloroethene	ND		
		1,2-dichloropropane	ND		
		bromodichloromethane	ND		
		dibromomethane	ND		
		cis-1,3-dichloropropene	ND		



<u>Sample</u>	<u>Sample ID</u>	<u>Compound Name</u>	<u>Result (µg/kg)</u>	<u>Spike Level</u>	<u>% Recv.</u>
	LCS	trans-1,3-dichloropropene	ND		
	(cont'd)	1,1,2-trichloroethane	34.9	40	87.2
		1,3-dichloropropane	ND		
		tetrachloroethene	37.7	40	94.2
		dibromochloromethane	ND		
		1,2-dibromoethane	ND		
		chlorobenzene	ND		
		1,1,1,2-tetrachloroethane	ND		
		bromoform	ND		
		1,1,2,2-tetrachloroethane	37.0	40	92.5
		1,2,3-trichloropropane	ND		
		bromobenzene	ND		
		2-chlorotoluene	ND		
		4-chlorotoluene	ND		
		1,3-dichlorobenzene	38.2	40	95.5
		1,4-dichlorobenzene	ND		
		1,2-dichlorobenzene	ND		
		1,2-dibromo-3-chloropropane	ND		
		1,2,4-trichlorobenzene	ND		
		hexachlorobutadiene	ND		
		1,2,3-trichlorobenzene	ND		



Analytical Sciences
 P.O. Box 750336
 Petaluma, CA 94975-0336
 (707) 769-3128
 Fax (707) 769-8093

Chain of Custody

CLIENT INFORMATION

Company Name: Touchstone Dev.

Address: Box 2534
San Francisco, CA

Contact: Jeff Monroe

Phone #: 707 538-8818

Fax #: 707 538-8812

Lab Job Number: 7052802

Client's Project Name: WT002-97

TURNAROUND TIME (check)

Mobile Lab _____

Same Day _____ 24 Hours _____

48 Hours _____ 72 Hours _____

5 Days Normal _____

Cooler Temperature ICED °C

COC

Page 1 of 1

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	# CONT.	PRESERVED YES/NO	W/MTBE ANALYSES						COMMENTS	LAB SAMPLE #
					TPH GAS/TEL EPA 8015/8020	TPH DIESEL EPA 8015	EPA 8010	TRPH	Lead	0100		
1	NTP-7.0A	5-27-97	1	Ice	X							1082
2	STP-7.5A	↓	1	↓	↓							1083
3												
4	PSP1(a-b) Composite	↓	2	↓	↓				X	X	Composite 2to1	1084
5												
6												
7												
8												
9												
10												

SIGNATURES

Relinquished By: [Signature] Date/Time: 5-28-97

Received By: _____ Date/Time: _____

Received By Laboratory: [Signature] Date/Time: 5/28/97 4pm