



Texaco Refining
and Marketing Inc

3400 188th Street SW
Suite 630
Lynnwood WA 98037

September 9, 1996

RECEIVED
SEP 11 1996
DEPT. OF ECOLOGY

ENV - SERVICE STATIONS

Soil Sampling Report
8701 Greenwood Avenue North
Seattle, Washington (Texaco Facility #63-232-0037)

Mr. Roger Nye
Washington Department of Ecology- Northwest Region
3190 - 160th Avenue Southeast
Bellevue, Washington 98008-5452

Dear Mr. Nye:

Enclosed is the report documenting results of additional soil sampling conducted adjacent to the former Texaco service station site located at 8701 Greenwood North, Seattle, Washington. The sampling was conducted by Environmental Resolutions, Inc. (ERI), at the request of Texaco Refining and Marketing, Inc. Soil samples were collected from two locations in the alley west of the referenced site and two locations at the property located at 8712 Palantine North, also west of the site (plate P-1 of enclosed report). The samples were collected from between 0.5 to 4.5 feet below grade (fbg) at each location, and were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), diesel (TPH-D) and oil (TPH-O), and benzene, toluene, ethylbenzene and total xylenes (BTEX).

The soil samples collected from the two locations on the Palantine property were non-detect for TPH-G and BTEX. TPH-O was detected at concentrations below the MTCA Method A Cleanup level.

The soil samples collected from the two locations in the adjacent alley were non-detect for TPH-G and BTEX. TPH-O was detected at concentrations up to 460 ppm, exceeding the MTCA Method A Cleanup level at 1.5 to 2 fbg and 2 to 2.5 fbg at respective location. At each location the TPH-O concentration decreased with depth such that the bottom samples (at 3.5 to 4.5 fbg) were below the Method A Cleanup level. The source of these hydrocarbons is not known. As these samples were collected at shallow depths from alley fill material there are numerous potential contributing sources, such as alley surface runoff and leakage from subsurface utilities. Texaco does not plan to conduct any further assessment and/or remediation in these areas.

If you have any questions please contact me at (206) 774-6090, extension 224.

Sincerely,

Theresa A. Geijer
Project Coordinator
Texaco Environment, Health & Safety

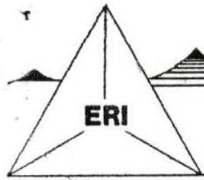
TAG:tag
p:tag@greenwallyrpt.cov

Enclosure

RLLane-File (w/enclosure)

cc: Mr. R. Isackson (w/enclosure)
Mr. M. Nesteroff (w/enclosure)
Ms. D. Knezovich (w/enclosure)

PR:



TEXACO STATION #63-232-0037
LUST # 2298
KING/Seattle

RECEIVED

SEP 11 1996

DEPT. OF ECOLOGY

ENVIRONMENTAL RESOLUTIONS, INC.

August 27, 1996
ERI 31001.R03

Ms. Theresa Geijer
Texaco Refining and Marketing Inc.
Environment, Health & Safety
3400 188th Street SW, Suite 630
Lynnwood, Washington 98037

Subject: Hand Auger Soil Sampling, Former Texaco Facility 63-232-0037, 8701 Greenwood Avenue North, Seattle, Washington.

Dear Ms. Geijer:

This letter report presents results of hand auger soil sampling and assessment activities conducted by Environmental Resolutions, Inc. (ERI) at property located adjacent to former Texaco Facility 63-232-0037, in Seattle, Washington. Soil sampling activities were conducted across the alley immediately west of the site and on private property to the west and north. Soil sampling locations are shown on Plate P-1.

FIELD ACTIVITIES

Based on a request by Texaco Refining and Marketing Inc., Environment, Health & Safety (TRMI-EH&S), ERI visited the area adjacent to the former Texaco facility to collect soil samples for laboratory analysis. On July 16 and 31, 1996 hand auger borings HA1 through HA4 were advanced along the western shoulder of the alley and on private property at the rear of an adjacent residence located at 8712 Palatine Avenue North (Plate P-1). Soil borings were advanced using a hand auger and samples collected in laboratory-supplied glass jars using a clean stainless steel sampling spoon and immediately placed into an iced cooler for transport to the laboratory.

Soil samples were collected at depths ranging between approximately 0.5 and 4.5 feet below ground surface (bgs). Soil sampling depths are shown in Table T-1. Soil encountered in HA1 and HA2 along the shoulder of the alley consisted of approximately 1.5 feet of sandy fill with rock and construction debris underlain by silt and clay, grading to peat. Soil encountered in borings HA3 and HA4 at the rear of the residence consisted of approximately 0.5 feet of organic soil underlain by silt, clay, and peat similar to that encountered in HA1 and HA2. Field measurements indicate that the surface elevation at the rear of the residence is approximately two feet below the adjoining alley.

LABORATORY ANALYSIS AND RESULTS

Soil samples were submitted to North Creek Analytical, Inc. and analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Washington State Department of Ecology (Ecology) Method WTPH-G/EPA Method 8020, and total petroleum hydrocarbons as diesel (TPH-D) and as oil (TPH-O) using Ecology Method WTPH-D (extended). In addition to the soil samples, ERI prepared an equipment trip blank by rubbing the hand

auger and sampling equipment with a sterile gauze and submitting the sample for laboratory analysis using Ecology Method WTPH-D (extended).

Laboratory results indicate that samples collected approximately 1.5 to 2.5 feet bgs in HA1 and HA2 contained TPH-O concentrations up to 460 parts per million (ppm), exceeding the Model Toxics Control Act (MTCA)¹ Method A Cleanup Level of 200 parts per million. No other soil sample collected from any boring contained TPH-D or TPH-O concentrations exceeding MTCA Method A Cleanup Levels. No TPH-G or BTEX compounds were detected in any sample. Hydrocarbons were not detected in the gauze swab sample. The analytical results are shown in Table T-1 and on the attached laboratory reports.

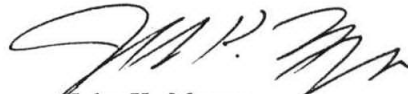
CONCLUSIONS

Concentrations of TPH-O in soil samples collected 1.5 to 2.5 feet bgs in HA1 and HA2 along the shoulder of the alley exceeded the MTCA Method A Cleanup of 200 ppm. The source of these hydrocarbons is not known. Possible sources include road construction, runoff from the alley, historic surface spills or discharges, prior use of hydrocarbon-impacted fill, leakage from subsurface utilities or septic systems, or other unknown mechanisms.

Soil samples collected at the rear of the residence at 8712 Palatine Avenue North contained analyte concentrations below MTCA Method A Cleanup Levels. No TPH-G or BTEX compounds were detected in any sample.

Please call if you have any questions regarding this report.

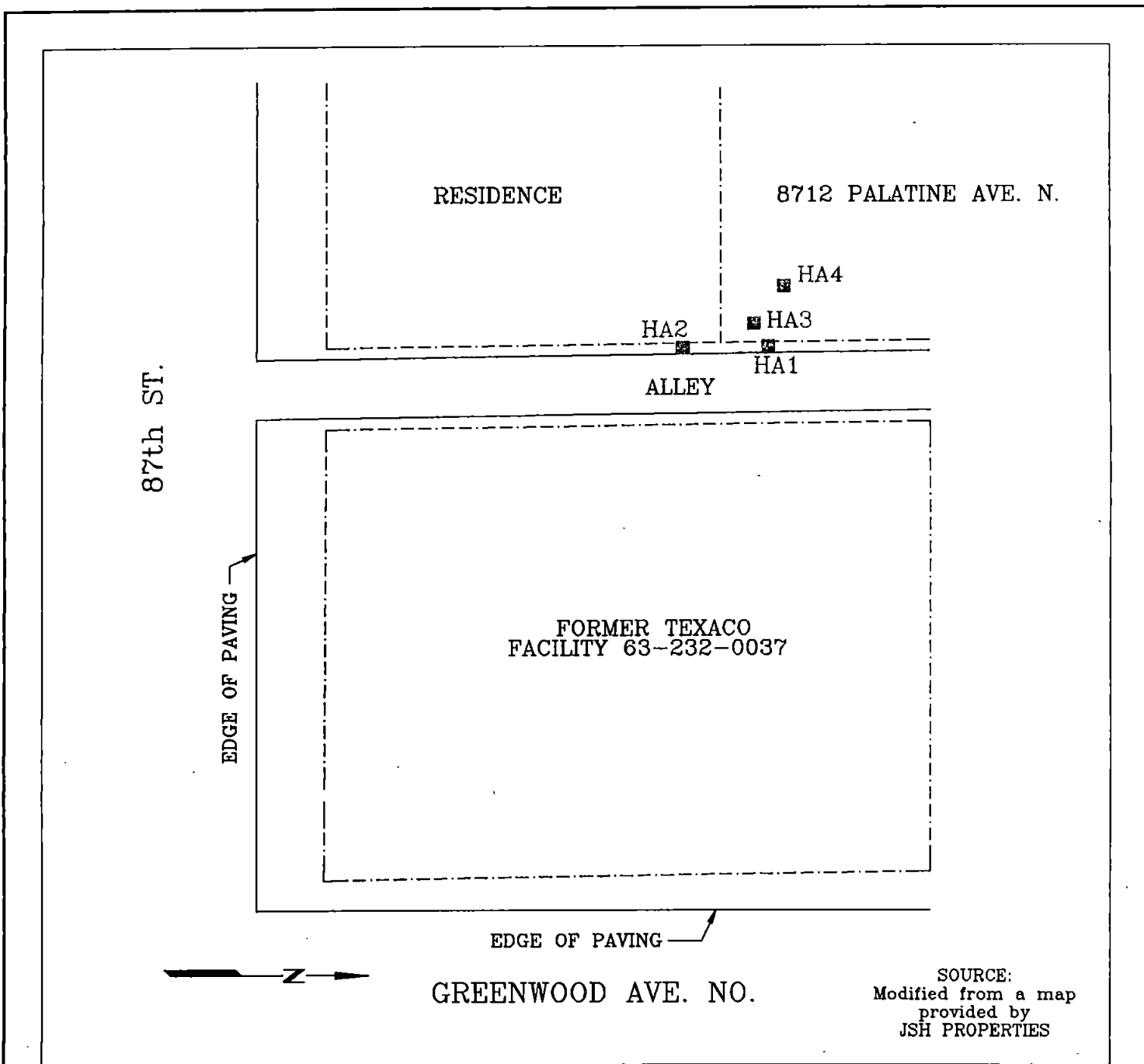
Sincerely,
Environmental Resolutions, Inc.


John K. Meyer
Branch Manager

Attachments: Plate P-1
Table T-1
Laboratory Reports

DEPARTMENT OF ECOLOGY NWRO/TCP TANK UNIT	
INTERIM CLEANUP REPORT	<input checked="" type="checkbox"/>
SITE CHARACTERIZATION	<input type="checkbox"/>
FINAL CLEANUP REPORT	<input type="checkbox"/>
OTHER <u>Sampling of soil offsite</u>	<input checked="" type="checkbox"/>
AFFECTED MEDIA: SOIL	<input checked="" type="checkbox"/>
OTHER _____ GW	<input checked="" type="checkbox"/>
INSPECTOR (INIT.) <u>RW</u> DATE <u>8/25/92</u>	

¹Chapter 173-340 WAC, The Model Toxics Control Act Cleanup Regulations, Method A Cleanup Levels. Amended December 1993.

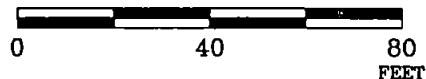


FN 31001004

EXPLANATION

■ HA4 Hand Auger Boring

APPROXIMATE SCALE



**HAND AUGER
BORING LOCATIONS**
FORMER TEXACO FACILITY 63-232-0037
8701 Greenwood Avenue North
Seattle, Washington

PROJECT NO.

31001

PLATE

P-1

DATE: 8/5/98

TABLE T-1
SOIL ANALYTICAL RESULTS
Former Texaco Facility 63-232-0037
8701 Greenwood Avenue North
Seattle, Washington
Page 1 of 1

Sample Name	Date	Depth*	TPH-G	TPH-D	TPH-O	B	T	E	X
<u>Hand Auger Soil Samples</u>									
S-1.5-HA1	7/16/96	1.5	<5.0	13.5	56.3	<0.05	<0.05	<0.05	<0.10
S-2-HA1	7/16/96	2	<5.0	33.0	250	<0.05	<0.05	<0.05	<0.10
S-2.5-HA1	7/16/96	2.5	<5.0	41.2	216	<0.05	<0.05	<0.05	<0.10
S-4.5-HA1	7/16/96	4.5	<5.0	39.6	152	<0.05	<0.05	<0.05	<0.10
S-1.5-HA2	7/16/96	1.5	<5.0	59.1	460	<0.05	<0.05	<0.05	<0.10
S-2-HA2	7/16/96	2	<5.0	59.6	297	<0.05	<0.05	<0.05	<0.10
S-3.5-HA2	7/16/96	3.5	NA	34.4	111	NA	NA	NA	NA
S-0.5-HA3	7/31/96	0.5	<5.0	15.9	98.8	<0.05	<0.05	<0.05	<0.10
S-1-HA3	7/31/96	1	<5.0	17.3	66.2	<0.05	<0.05	<0.05	<0.10
S-2-HA3	7/31/96	2	<10.0	14.0	<25.0	<0.10	<0.10	<0.10	<0.20
S-0.5-HA4	7/31/96	0.5	<5.0	19.9	149	<0.05	<0.05	<0.05	<0.10
S-1-HA4	7/31/96	1	<5.0	16.3	74.2	<0.05	<0.05	<0.05	<0.10
S-2-HA4	7/31/96	2	<10.0	<10.0	46.2	<0.10	<0.10	<0.10	<0.20
MTCA Method A Cleanup Level			100	200	200	0.5	40	20	20
<u>Trip Blank Swab Sample</u>									
SWAB	7/24/96	None	NA	<5.0	<10.0	NA	NA	NA	NA

EXPLANATION:

All concentrations in mg/kg (ppm).

* Depths are in feet below ground surface. Surface elevations at HA3 and HA4 are approximately two feet below that at HA1 and HA2.

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method WTPH-G.

TPH-D and TPH-O = Total Petroleum Hydrocarbons as Diesel and Oil, respectively, by Ecology Method WTPH-D (extended).

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes.

BTEX = Aromatic compounds by EPA Method 8020.

< = Less than the stated laboratory reporting limit.

NA = Not analyzed.

Shaded values exceed MTCA Method A Cleanup Levels.



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
S-1.5-HA1	B607245-01	Soil	7/16/96
S-1.5-HA2	B607245-05	Soil	7/16/96


Matthew Essig, Project Manager



ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B607245-01</u>			<u>Soil, dry wt.</u>	
Gasoline Range Hydrocarbons	6070429	7/16/96	7/17/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		83.9	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		92.1	"	
				<u>B607245-05</u>			<u>Soil, dry wt.</u>	
Gasoline Range Hydrocarbons	6070429	7/16/96	7/17/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		80.0	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		82.9	"	



ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B607245-01</u>				
<u>S-1.5-HA1</u>							<u>Soil, dry wt.</u>	
Diesel Range Hydrocarbons	6070473	7/17/96	7/18/96		10.0	13.5	mg/kg (ppm)	1
Heavy Oil Range Hydrocarbons	"	"	"		25.0	56.3	"	
Surrogate: 2-FBP	"	"	"	50.0-150		68.5	%	
				<u>B607245-05</u>				
<u>S-1.5-HA2</u>							<u>Soil, dry wt.</u>	
Diesel Range Hydrocarbons	6070473	7/17/96	7/18/96		10.0	59.1	mg/kg (ppm)	1
Heavy Oil Range Hydrocarbons	"	"	"		25.0	460	"	
Surrogate: 2-FBP	"	"	"	50.0-150		76.4	%	



ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Dry Weight Determination

Sample Name	Lab ID	Matrix	Result	Units
S-1.5-HA1	B607245-01	Soil	88.1	%
S-1.5-HA2	B607245-05	Soil	79.3	%



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 PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A Quality Control

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070429		Date Prepared: 7/16/96							
Blank		6070429-BLK1			Soil, dry wt.				
Gasoline Range Hydrocarbons	7/16/96			ND	mg/kg (ppm)	5.00			
Benzene	"			ND	"	0.0500			
Toluene	"			ND	"	0.0500			
Ethylbenzene	"			ND	"	0.0500			
Xylenes (total)	"			ND	"	0.100			
Surrogate: 4-BFB (FID)	"	4.00		3.68	"	50.0-150	92.0		
Surrogate: 4-BFB (PID)	"	4.00		3.84	"	49.0-142	96.0		
Blank Spike		6070429-BS1			Soil, dry wt.				
Gasoline Range Hydrocarbons	7/16/96	25.0		23.2	mg/kg (ppm)	37.0-119	92.8		
Surrogate: 4-BFB (FID)	"	4.00		4.08	"	50.0-150	102		
Duplicate		6070429-DUP1		B607231-08	Soil, dry wt.				
Gasoline Range Hydrocarbons	7/16/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	4.48		4.07	"	50.0-150	90.8		
Duplicate		6070429-DUP2		B607245-05	Soil, dry wt.				
Gasoline Range Hydrocarbons	7/17/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	5.04		3.98	"	50.0-150	79.0		
Matrix Spike		6070429-MS1		B607231-02	Soil, dry wt.				
Benzene	7/16/96	0.551	ND	0.476	mg/kg (ppm)	58.0-114	86.4		
Toluene	"	0.551	ND	0.494	"	59.0-113	89.7		
Ethylbenzene	"	0.551	ND	0.520	"	58.0-118	94.4		
Xylenes (total)	"	1.65	ND	1.59	"	61.0-119	96.4		
Surrogate: 4-BFB (PID)	"	4.41		4.41	"	49.0-142	100		
Matrix Spike Dup		6070429-MSD1		B607231-02	Soil, dry wt.				
Benzene	7/16/96	0.551	ND	0.440	mg/kg (ppm)	58.0-114	79.9	17.4	7.82
Toluene	"	0.551	ND	0.448	"	59.0-113	81.3	16.5	9.82
Ethylbenzene	"	0.551	ND	0.465	"	58.0-118	84.4	16.9	11.2
Xylenes (total)	"	1.65	ND	1.41	"	61.0-119	85.5	18.3	12.0
Surrogate: 4-BFB (PID)	"	4.41		4.19	"	49.0-142	95.0		



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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up
 Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070473		Date Prepared: 7/17/96								
Blank		6070473-BLK1			Soil, dry wt.					
Diesel Range Hydrocarbons	7/18/96			ND	mg/kg (ppm)	10.0				
Heavy Oil Range Hydrocarbons	"			ND	"	25.0				
Surrogate: 2-FBP	"	11.5		7.99	"	50.0-150	69.5			
Blank Spike		6070473-BS1			Soil, dry wt.					
Diesel Range Hydrocarbons	7/18/96	68.1		66.3	mg/kg (ppm)	66.0-131	97.4			
Surrogate: 2-FBP	"	11.5		9.21	"	50.0-150	80.1			
Duplicate		6070473-DUP1		B607245-05	Soil, dry wt.					
Diesel Range Hydrocarbons	7/18/96		59.1	44.7	mg/kg (ppm)			48.0	27.7	
Surrogate: 2-FBP	"	14.4		11.0	"	50.0-150	76.4			


 Matthew Essig, Project Manager



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BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 7/19/96
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Notes

#	Note
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1 The sample chromatographic pattern does not resemble the fuel standard used for quantitation. A fuel fingerprint is advised.

North Creek Analytical, Inc.


Matthew Essig, Project Manager

TEXACO CHAIN OF CUSTODY REPORT

Work Order #:

CONSULTANT: <i>ERI</i>			TEXACO INFORMATION				TURNAROUND REQUEST in Business Days					
PROJECT MANAGER: <i>John Meyer</i>			TEXACO PROJECT MANAGER: <i>T. Geijer</i>				Organic & Inorganic Analyses *					
ADDRESS: <i>1921 Edmonds Pt SE Renton, WA 98055</i>			TEXACO FACILITY NUMBER:				<input type="checkbox"/> 10 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 1					
PHONE: <i>(206) 227-0280</i> FAX: <i>(206) 227-0225</i>			SITE ADDRESS: <i>4701 Greenwood AVE N</i>				Air Analyses *					
PROJECT NAME: <i>Greenwood L</i>			State Hydrocarbon Methods (please circle): WA OR AK ID				<input type="checkbox"/> 3 <input type="checkbox"/> 1					
PROJECT NUMBER: <i>31001-14T2</i>			Analysis Request: TPH-G/BI/TEX TPH-D TPH-D Extended TPH-418.1 TPH-HCID Tot/Diss Lead				OTHER Specify: _____					
SAMPLED BY: <i>Meyer</i>							* Standard Turnaround for Organic & Inorganic Analyses is 10 Days					
			* Standard Turnaround for Air Analyses is 3 Days									
NCA SAMPLE NUMBER	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G/BI/TEX	TPH-D	TPH-D Extended	TPH-418.1	TPH-HCID	Tot/Diss Lead	MATRIX (W, S, O)	# OF CONTAINERS	COMMENTS & PRESERVATIVES USED	
<i>B607245-01</i>	<i>1. S-1.5-HA2</i>	<i>7/16/96</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<i>S*</i>	<i>1</i>	<i>3-day T/A</i>	
<i>-02</i>	<i>2. S-2-HA2</i>									<i>1</i>	<i>H/L</i>	
<i>-03</i>	<i>3. S-2.5-HA2</i>									<i>1</i>	<i>H/L</i>	
<i>-04</i>	<i>4. S-4.5-HA2</i>									<i>1</i>	<i>H/L</i>	
<i>-05</i>	<i>5. S-1.5-HA2</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<i>S*</i>	<i>1</i>	<i>3-Day T/A</i>	
<i>-06</i>	<i>6. S-2-HA2</i>									<i>1</i>	<i>H/L</i>	
<i>-07</i>	<i>7. S-3.5-HA2</i>									<i>1</i>	<i>H/L</i>	
	<i>8.</i>											
	<i>9.</i>											
	<i>10.</i>											
RELINQUISHED BY: <i>[Signature]</i>			DATE: <i>7/16/96</i>				RECEIVED BY: <i>[Signature]</i>			DATE: <i>7/16/96</i>		
PRINT NAME: <i>John Meyer</i> FIRM: <i>ERI</i>			TIME: <i>11:55</i>				PRINT NAME: <i>Richelle M Rose</i> FIRM: <i>NCA</i>			TIME: <i>11:55</i>		
RELINQUISHED BY:			DATE:				RECEIVED BY:			DATE:		
PRINT NAME:			TIME:				PRINT NAME:			TIME:		
ADDITIONAL REMARKS: <i>Fax results ASAP to Meyer @ ERI to Geijer @ TRM/</i> <i>* Please run silica gel cleanup @ 7/16</i>												



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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 SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
 PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco Greenwood Project Number: 31001 Project Manager: John Meyer	Sampled: 7/24/96 Received: 7/24/96 Reported: 7/26/96
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Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SWAB	B607399-01	Wipe	7/24/96


 Matthew Essig, Project Manager



**NORTH
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Environmental Laboratory Services

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco Greenwood Project Number: 31001 Project Manager: John Meyer	Sampled: 7/24/96 Received: 7/24/96 Reported: 7/26/96
--	---	--

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SWAB				<u>B607399-01</u>			<u>Wipe</u>	<u>1</u>
Diesel Range Hydrocarbons	6070651	7/25/96	7/25/96		5.00	ND	mg/Wipe	
Heavy Oil Range Hydrocarbons	"	"	"		10.0	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		95.1	%	



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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco Greenwood Project Number: 31001 Project Manager: John Meyer	Sampled: 7/24/96 Received: 7/24/96 Reported: 7/26/96
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)
Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070651		Date Prepared: 7/25/96								
Blank		6070651-BLK1			Wipe					
Diesel Range Hydrocarbons	7/25/96			ND	mg/Wipe	5.00				
Heavy Oil Range Hydrocarbons	"			ND	"	10.0				
Surrogate: 2-FBP	"	3.44		3.41	"	50.0-150	99.1			
Blank Spike		6070651-BS1			Wipe					
Diesel Range Hydrocarbons	7/25/96	20.4		19.2	mg/Wipe	50.0-150	94.1			
Surrogate: 2-FBP	"	3.44		3.29	"	50.0-150	95.6			
Blank Spike Dup		6070651-BSD1			Wipe					
Diesel Range Hydrocarbons	7/25/96	20.4		19.8	mg/Wipe	50.0-150	97.1	50.0	3.14	
Surrogate: 2-FBP	"	3.44		3.35	"	50.0-150	97.4			


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ERI
1921 Edmonds Drive SE
Renton, WA 98055

Project: Texaco Greenwood
Project Number: 31001
Project Manager: John Meyer

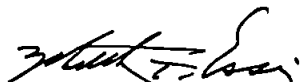
Sampled: 7/24/96
Received: 7/24/96
Reported: 7/26/96

Notes

Note

1 This value is preliminary pending ELM reporting changes. MMJ

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CHAIN OF CUSTODY REPORT

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 (206) 481-9200 FAX 485-2992
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

Work Order # **B607399**

REPORT TO: **John Meyer**
 ATTENTION: **ERI**
 ADDRESS: **1921 Edmonds Dr SE**
Renton, WA 98055
 PHONE: **(206) 227-0280** FAX: **(206) 227-0225**
 PROJECT NAME: **Texaco Greenway**
 PROJECT NUMBER: **71001**
 SAMPLED BY: **J. Meyer**

INVOICE TO: **TRMI**
 ATTENTION: **T. Geizer**
 ADDRESS: **3400 188th St SW**
Lynden, WA
 P.O. NUMBER: _____ NCA QUOTE #: _____

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses

10	7	5	4	3	2	<input checked="" type="checkbox"/>	Same Day
Standard							

Fuels & Hydrocarbon Analyses

5	3-4	2	1	Same Day
Standard				

OTHER Specify: _____

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request: TPH-6/1374 TPH-D (Exempt)																	
1. SWAB	7/24/96	B607399-01																		
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

MATRIX (W. S. A. O)	# OF CONTAINERS	COMMENTS
69022	1	Exp SWAB

RELINQUISHED BY (Signature): **[Signature]** DATE: **7/24/96**
 PRINT NAME: **John Meyer** FIRM: **ERI** TIME: _____

RELINQUISHED BY (Signature): _____ DATE: **7/24/96**
 PRINT NAME: **Marco G** FIRM: **NEA** TIME: **12:42pm**

RECEIVED BY (Signature): _____ DATE: **7/24/96**
 PRINT NAME: **Marco G** FIRM: **UCA** TIME: **11:25am**

RECEIVED BY (Signature): **[Signature]** DATE: **7/24/96**
 PRINT NAME: **R G Kelley** FIRM: **NCA** TIME: **1242**

ADDITIONAL REMARKS: _____

PAGE _____ OF _____



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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
S-0.5-HA3	B607546-01	Soil	7/31/96
S-1-HA3	B607546-02	Soil	7/31/96
S-2-HA3	B607546-03	Soil	7/31/96
S-0.5-HA4	B607546-04	Soil	7/31/96
S-1-HA4	B607546-05	Soil	7/31/96
S-2-HA4	B607546-06	Soil	7/31/96

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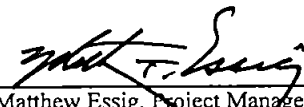
Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
S-0.5-HA3				B607546-01		Soil, dry wt.		
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		74.1	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		68.9	"	
S-1-HA3				B607546-02		Soil, dry wt.		
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		46.0	%	1
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		46.0	"	1
S-2-HA3				B607546-03		Soil, dry wt.		
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		10.0	ND	mg/kg (ppm)	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.200	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		66.2	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		63.9	"	
S-0.5-HA4				B607546-04		Soil, dry wt.		
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		59.0	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		57.0	"	
S-1-HA4				B607546-05		Soil, dry wt.		
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	

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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
--	---	---

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
S-1-HA4 (continued)				B607546-05			Soil, dry wt.	
Ethylbenzene	6080053	8/1/96	8/1/96		0.0500	ND	mg/kg (ppm)	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		44.0	%	1
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		41.0	"	1
S-2-HA4				B607546-06			Soil, dry wt.	
Gasoline Range Hydrocarbons	6080053	8/1/96	8/1/96		10.0	ND	mg/kg (ppm)	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.200	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		56.7	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		60.1	"	

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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B607546-01</u>				
<u>S-0.5-HA3</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	15.9	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	98.8	"	
Surrogate: 2-FBP	"	"	"	50.0-150		118	%	
				<u>B607546-02</u>				
<u>S-1-HA3</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	17.3	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	66.2	"	
Surrogate: 2-FBP	"	"	"	50.0-150		109	%	
				<u>B607546-03</u>				
<u>S-2-HA3</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	14.0	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		110	%	
				<u>B607546-04</u>				
<u>S-0.5-HA4</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	19.9	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	149	"	
Surrogate: 2-FBP	"	"	"	50.0-150		106	%	
				<u>B607546-05</u>				
<u>S-1-HA4</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	16.3	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	74.2	"	
Surrogate: 2-FBP	"	"	"	50.0-150		110	%	
				<u>B607546-06</u>				
<u>S-2-HA4</u>								<u>Soil, dry wt.</u>
Diesel Range Hydrocarbons	6070802	7/31/96	7/31/96		10.0	ND	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	46.2	"	
Surrogate: 2-FBP	"	"	"	50.0-150		96.7	%	

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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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Dry Weight Determination

Sample Name	Lab ID	Matrix	Result	Units
S-0.5-HA3	B607546-01	Soil	68.3	%
S-1-HA3	B607546-02	Soil	33.3	%
S-2-HA3	B607546-03	Soil	14.9	%
S-0.5-HA4	B607546-04	Soil	51.6	%
S-1-HA4	B607546-05	Soil	40.2	%
S-2-HA4	B607546-06	Soil	19.8	%


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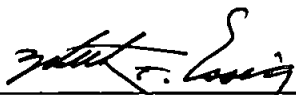
Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A
 Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6080053		Date Prepared: 8/1/96								
Blank		6080053-BLK1			Soil, dry wt.					
Gasoline Range Hydrocarbons	8/1/96			ND	mg/kg (ppm)	5.00				
Benzene	"			ND	"	0.0500				
Toluene	"			ND	"	0.0500				
Ethylbenzene	"			ND	"	0.0500				
Xylenes (total)	"			ND	"	0.100				
Surrogate: 4-BFB (FID)	"	4.00		3.92	"	50.0-150	98.0			
Surrogate: 4-BFB (PID)	"	4.00		3.64	"	49.0-142	91.0			
Blank Spike		6080053-BS1			Soil, dry wt.					
Gasoline Range Hydrocarbons	8/1/96	25.0		26.0	mg/kg (ppm)	37.0-119	104			
Surrogate: 4-BFB (FID)	"	4.00		4.16	"	50.0-150	104			
Duplicate		6080053-DUP1		B607491-09	Soil, dry wt.					
Gasoline Range Hydrocarbons	8/1/96		ND	5.13	mg/kg (ppm)			53.0		2
Surrogate: 4-BFB (FID)	"	4.39		105	"	50.0-150	2390			
Duplicate		6080053-DUP2		B607533-03	Soil, dry wt.					
Gasoline Range Hydrocarbons	8/1/96		ND	ND	mg/kg (ppm)			53.0		
Surrogate: 4-BFB (FID)	"	4.97		ND	"	50.0-150	ND			
Matrix Spike		6080053-MS1		B607533-03	Soil, dry wt.					
Benzene	8/1/96	0.622	ND	ND	mg/kg (ppm)	58.0-114	0			
Toluene	"	0.622	ND	ND	"	59.0-113	0			
Ethylbenzene	"	0.622	ND	ND	"	58.0-118	0			
Xylenes (total)	"	1.87	ND	ND	"	61.0-119	0			
Surrogate: 4-BFB (PID)	"	4.97		ND	"	49.0-142	ND			
Matrix Spike Dup		6080053-MSD1		B607533-03	Soil, dry wt.					
Benzene	8/1/96	0.622	ND	ND	mg/kg (ppm)	58.0-114	0	17.4		
Toluene	"	0.622	ND	ND	"	59.0-113	0	16.5		
Ethylbenzene	"	0.622	ND	ND	"	58.0-118	0	16.9		
Xylenes (total)	"	1.87	ND	ND	"	61.0-119	0	18.3		
Surrogate: 4-BFB (PID)	"	4.97		ND	"	49.0-142	ND			

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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco #63-232-0037 Project Number: Not Provided Project Manager: John Meyer	Sampled: 7/31/96 Received: 7/31/96 Reported: 8/5/96
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up
Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070802		Date Prepared: 7/31/96								
Blank		6070802-BLK1			Soil, dry wt.					
Diesel Range Hydrocarbons	7/31/96			ND	mg/kg (ppm)	10.0				
Heavy Oil Range Hydrocarbons	"			ND	"	25.0				
Surrogate: 2-FBP	"	11.5		12.4	"	50.0-150	108			
Blank Spike		6070802-BS1			Soil, dry wt.					
Diesel Range Hydrocarbons	7/31/96	68.1		51.9	mg/kg (ppm)	66.0-131	76.2			
Surrogate: 2-FBP	"	11.5		14.0	"	50.0-150	122			
Duplicate		6070802-DUP1		B607546-01	Soil, dry wt.					
Diesel Range Hydrocarbons	7/31/96		15.9	22.7	mg/kg (ppm)			48.0	35.2	2
Surrogate: 2-FBP	"	16.8		19.3	"	50.0-150	115			

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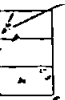
Notes

#	Note
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- 1 Low surrogate recovery due to matrix effect.
- 2 RPD values are not reported at sample concentrations less than 10 times the reporting limit.



 Matthew Essig, Project Manager



TEXACO CHAIN OF CUSTODY REPORT

Work Order #: **B607546**

CONSULTANT: ERI			TEXACO INFORMATION						TURNAROUND REQUEST in Business Days						
PROJECT MANAGER: John Meyer			TEXACO PROJECT MANAGER: T. Geijer						Organic & Inorganic Analyses *						
ADDRESS: 1921 Edmonds Dr SE Renton, WA 98055			TEXACO FACILITY NUMBER: 63-232-0037						<table border="1" style="margin: auto;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">10</td> <td style="width: 20px; height: 20px; text-align: center;">5</td> <td style="width: 20px; height: 20px; text-align: center;">3</td> <td style="width: 20px; height: 20px; text-align: center; border: 2px solid black;">1</td> </tr> </table>			10	5	3	1
10	5	3	1												
PHONE: (206) 227-0280 FAX: (206) 227-0225			SITE ADDRESS: 8701 Greenwood Seattle, WA						Air Analyses *						
PROJECT NAME:			State Hydrocarbon Methods (please circle): WA OR AK ID						<table border="1" style="margin: auto;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">3</td> <td style="width: 20px; height: 20px; text-align: center;">1</td> </tr> </table>			3	1		
3	1														
PROJECT NUMBER:			Analysis Request:						OTHER Specify: _____						
SAMPLED BY:									* Standard Turnaround for Organic & Inorganic Analyses is 10 Days			* Standard Turnaround for Air Analyses is 3 Days			
NCA SAMPLE NUMBER	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	IPH-GBTEX	IPH-D	IPH-D Extended	IPH-418.1	IPH-HCID	Tox/Diss Lead			MATRIX (W, S, O)	# OF CONTAINERS	COMMENTS & PRESERVATIVES USED		
B607546-01	1. S-0.5-HA3	7/2/96	X	X							S	1			
-02	2. S-1-HA3	↓	X	X							↓	↓			
-03	3. S-2-HA3		X	X											
-04	4. S-0.5-HA4		X	X											
-05	5. S-1-HA4		X	X											
-06	6. S-2-HA4		X	X											
	7.														
	8.														
	9.														
	10.														
RELINQUISHED BY: [Signature]			DATE: 7/2/96			RECEIVED BY: R D Kelley			DATE: 7/31/96						
PRINT NAME: John Meyer FIRM: ERI			TIME: 5:42			PRINT NAME: R G Kelley FIRM: NCA			TIME: 1742						
RELINQUISHED BY:			DATE:			RECEIVED BY:			DATE:						
PRINT NAME:			FIRM:			PRINT NAME:			FIRM:						
ADDITIONAL REMARKS: Silica Gel Clean-up															



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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco Greenwood Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 8/21/96
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Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
S-2-HA1	B607340-01	Soil	7/16/96
S-2-HA2	B607340-02	Soil	7/16/96
S-2.5-HA1	B607340-03	Soil	7/16/96
S-4.5-HA1	B607340-04	Soil	7/16/96
S-3.5-HA2	B607340-05	Soil	7/16/96

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Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B607340-01</u>				
						<u>Soil, dry wt.</u>		
Gasoline Range Hydrocarbons	6070559	7/22/96	7/22/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		75.0	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		75.0	"	
				<u>B607340-02</u>				
						<u>Soil, dry wt.</u>		
Gasoline Range Hydrocarbons	6070559	7/22/96	7/22/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		63.1	%	
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		64.1	"	
				<u>B607340-03</u>				
						<u>Soil, dry wt.</u>		
Gasoline Range Hydrocarbons	6070631	7/24/96	7/24/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		57.0	%	1
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		59.0	"	1
				<u>B607340-04</u>				
						<u>Soil, dry wt.</u>		
Gasoline Range Hydrocarbons	6070631	7/24/96	7/24/96		5.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		38.0	%	1
Surrogate: 4-BFB (PID)	"	"	"	49.0-142		39.8	"	1

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Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B607340-01</u>		<u>Soil, dry wt.</u>		
Diesel Range Hydrocarbons	6070569	7/22/96	7/23/96		10.0	33.0	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	250	"	
Surrogate: 2-FBP	"	"	"	50.0-150		76.8	%	
				<u>B607340-02</u>		<u>Soil, dry wt.</u>		
Diesel Range Hydrocarbons	6070569	7/22/96	7/23/96		10.0	59.6	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	297	"	
Surrogate: 2-FBP	"	"	"	50.0-150		73.0	%	
				<u>B607340-03</u>		<u>Soil, dry wt.</u>		
Diesel Range Hydrocarbons	6070643	7/24/96	7/24/96		10.0	41.2	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	216	"	
Surrogate: 2-FBP	"	"	"	50.0-150		72.3	%	
				<u>B607340-04</u>		<u>Soil, dry wt.</u>		
Diesel Range Hydrocarbons	6070643	7/24/96	7/24/96		10.0	39.6	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	152	"	
Surrogate: 2-FBP	"	"	"	50.0-150		60.9	%	
				<u>B607340-05</u>		<u>Soil, dry wt.</u>		
Diesel Range Hydrocarbons	6070737	7/29/96	7/29/96		10.0	34.4	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	111	"	
Surrogate: 2-FBP	"	"	"	50.0-150		62.2	%	

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Dry Weight Determination

Sample Name	Lab ID	Matrix	Result	Units
S-2-HA1	B607340-01	Soil	68.0	%
S-2-HA2	B607340-02	Soil	32.2	%
S-2.5-HA1	B607340-03	Soil	40.1	%
S-4.5-HA1	B607340-04	Soil	10.6	%
S-3.5-HA2	B607340-05	Soil	17.0	%



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**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A
 Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070559		Date Prepared: 7/22/96							
Blank		6070559-BLK1			Soil, dry wt.				
Gasoline Range Hydrocarbons	7/22/96			ND	mg/kg (ppm)	5.00			
Benzene	"			ND	"	0.0500			
Toluene	"			ND	"	0.0500			
Ethylbenzene	"			ND	"	0.0500			
Xylenes (total)	"			ND	"	0.100			
Surrogate: 4-BFB (FID)	"	4.00		3.96	"	50.0-150	99.0		
Surrogate: 4-BFB (PID)	"	4.00		3.96	"	49.0-142	99.0		
Blank Spike		6070559-BS1			Soil, dry wt.				
Gasoline Range Hydrocarbons	7/22/96	25.0		27.2	mg/kg (ppm)	37.0-119	109		
Surrogate: 4-BFB (FID)	"	4.00		4.44	"	50.0-150	111		
Duplicate		6070559-DUP1		B607337-04	Soil, dry wt.				
Gasoline Range Hydrocarbons	7/22/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	4.60		4.05	"	50.0-150	88.0		
Duplicate		6070559-DUP2		B607285-01	Soil, dry wt.				
Gasoline Range Hydrocarbons	7/22/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	4.81		4.04	"	50.0-150	84.0		
Matrix Spike		6070559-MS1		B607337-04	Soil, dry wt.				
Benzene	7/22/96	0.575	ND	0.518	mg/kg (ppm)	58.0-114	90.1		
Toluene	"	0.575	ND	0.510	"	59.0-113	88.7		
Ethylbenzene	"	0.575	ND	0.520	"	58.0-118	90.4		
Xylenes (total)	"	1.73	ND	1.59	"	61.0-119	91.9		
Surrogate: 4-BFB (PID)	"	4.60		4.14	"	49.0-142	90.0		
Matrix Spike Dup		6070559-MSD1		B607337-04	Soil, dry wt.				
Benzene	7/22/96	0.575	ND	0.529	mg/kg (ppm)	58.0-114	92.0	17.4	2.09
Toluene	"	0.575	ND	0.528	"	59.0-113	91.8	16.5	3.43
Ethylbenzene	"	0.575	ND	0.540	"	58.0-118	93.9	16.9	3.80
Xylenes (total)	"	1.73	ND	1.65	"	61.0-119	95.4	18.3	3.74
Surrogate: 4-BFB (PID)	"	4.60		4.19	"	49.0-142	91.1		
Batch: 6070631		Date Prepared: 7/24/96							
Blank		6070631-BLK1			Soil, dry wt.				
Gasoline Range Hydrocarbons	7/24/96			ND	mg/kg (ppm)	5.00			

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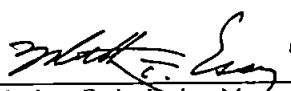
Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: Texaco Greenwood Project Number: 31001.14T2 Project Manager: John Meyer	Sampled: 7/16/96 Received: 7/16/96 Reported: 8/21/96
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**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8020A
 Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)									
	6070631-BLK1				Soil, dry wt.				
Benzene	7/24/96			ND	mg/kg (ppm)	0.0500			
Toluene	"			ND	"	0.0500			
Ethylbenzene	"			ND	"	0.0500			
Xylenes (total)	"			ND	"	0.100			
Surrogate: 4-BFB (FID)	"	4.00		3.80	"	50.0-150	95.0		
Surrogate: 4-BFB (PID)	"	4.00		3.84	"	49.0-142	96.0		
Blank Spike									
	6070631-BS1				Soil, dry wt.				
Gasoline Range Hydrocarbons	7/24/96	25.0		24.9	mg/kg (ppm)	37.0-119	99.6		
Surrogate: 4-BFB (FID)	"	4.00		3.68	"	50.0-150	92.0		
Duplicate									
	6070631-DUP1		B607391-16		Soil, dry wt.				
Gasoline Range Hydrocarbons	7/24/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	4.13		3.51	"	50.0-150	85.0		
Duplicate									
	6070631-DUP2		B607340-03		Soil, dry wt.				
Gasoline Range Hydrocarbons	7/24/96		ND	ND	mg/kg (ppm)			53.0	
Surrogate: 4-BFB (FID)	"	9.96		5.38	"	50.0-150	54.0		
Matrix Spike									
	6070631-MS1		B607391-16		Soil, dry wt.				
Benzene	7/24/96	0.516	ND	0.430	mg/kg (ppm)	58.0-114	83.3		
Toluene	"	0.516	ND	0.498	"	59.0-113	96.5		
Ethylbenzene	"	0.516	ND	0.495	"	58.0-118	95.9		
Xylenes (total)	"	1.55	ND	1.53	"	61.0-119	98.7		
Surrogate: 4-BFB (PID)	"	4.13		4.09	"	49.0-142	99.0		
Matrix Spike Dup									
	6070631-MSD1		B607391-16		Soil, dry wt.				
Benzene	7/24/96	0.516	ND	0.436	mg/kg (ppm)	58.0-114	84.5	17.4	1.43
Toluene	"	0.516	ND	0.458	"	59.0-113	88.8	16.5	8.31
Ethylbenzene	"	0.516	ND	0.465	"	58.0-118	90.1	16.9	6.24
Xylenes (total)	"	1.55	ND	1.43	"	61.0-119	92.3	18.3	6.70
Surrogate: 4-BFB (PID)	"	4.13		4.00	"	49.0-142	96.9		

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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up
 Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070569									
Blank									
Date Prepared: 7/22/96									
6070569-BLK1									
Diesel Range Hydrocarbons	7/23/96			ND	mg/kg (ppm)	10.0			
Heavy Oil Range Hydrocarbons	"			ND	"	25.0			
Surrogate: 2-FBP	"	11.5		9.01	"	50.0-150	78.3		
Blank Spike									
6070569-BS1									
Diesel Range Hydrocarbons	7/23/96	68.1		60.8	mg/kg (ppm)	66.0-131	89.3		
Surrogate: 2-FBP	"	11.5		8.75	"	50.0-150	76.1		
Duplicate									
6070569-DUP1 B607340-02									
Diesel Range Hydrocarbons	7/23/96		59.6	51.5	mg/kg (ppm)			48.0	14.6
Surrogate: 2-FBP	"	35.6		26.2	"	50.0-150	73.6		
Batch: 6070643									
Blank									
Date Prepared: 7/24/96									
6070643-BLK1									
Diesel Range Hydrocarbons	7/24/96			ND	mg/kg (ppm)	10.0			
Heavy Oil Range Hydrocarbons	"			ND	"	25.0			
Surrogate: 2-FBP	"	11.5		7.19	"	50.0-150	62.5		
Blank Spike									
6070643-BS1									
Diesel Range Hydrocarbons	7/24/96	68.1		50.1	mg/kg (ppm)	66.0-131	73.6		
Surrogate: 2-FBP	"	11.5		7.55	"	50.0-150	65.7		
Duplicate									
6070643-DUP1 B607340-03									
Diesel Range Hydrocarbons	7/24/96		41.2	36.3	mg/kg (ppm)			48.0	12.6
Surrogate: 2-FBP	"	28.5		19.7	"	50.0-150	69.1		
Batch: 6070737									
Blank									
Date Prepared: 7/29/96									
6070737-BLK1									
Diesel Range Hydrocarbons	7/29/96			ND	mg/kg (ppm)	10.0			
Heavy Oil Range Hydrocarbons	"			ND	"	25.0			
Surrogate: 2-FBP	"	11.5		7.20	"	50.0-150	62.6		
Blank Spike									
6070737-BS1									
Diesel Range Hydrocarbons	7/29/96	68.1		46.2	mg/kg (ppm)	66.0-131	67.8		
Surrogate: 2-FBP	"	11.5		6.93	"	50.0-150	60.3		

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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) with Silica Gel Clean-up
Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
<u>Duplicate</u>	<u>6070737-DUP1</u>		<u>B607340-05</u>		<u>Soil, dry wt.</u>				<u>2</u>
Diesel Range Hydrocarbons	7/29/96		34.4	20.0	mg/kg (ppm)		48.0	52.9	
Surrogate: 2-FBP	"	67.4		34.6	"	50.0-150	51.3		

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Notes

#	Note
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- 1 carbon interference
- 2 RPD values are not reported at sample concentrations less than 10 times the reporting limit.