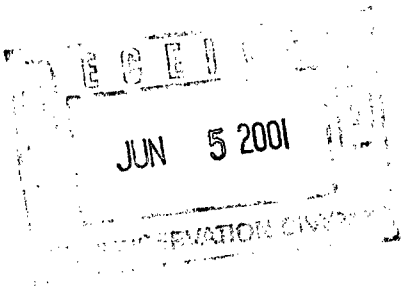
1R - 257

REPORTS

DATE:

2001

Larson & Associates, Inc.
Environmental Consultants



May 21, 2001

Mr. Wayne Price
Petroleum Engineer Specialist
Environmental Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Report of Additional Investigation and Remediation Plan, Former Emergency Pit, D. F. Fergason Lease, NE/4, NE/4, Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Dear Mr. Price:
This report is prepared on behalf of Texaco Exploration and Production Inc. (Texaco), and presents the findings of an additional investigation of two (2) closed emergency pits (Site) once associated with an active tank battery (D. F. Fergason) located west of the Site. The Site is located in the northeast quarter (NE/4) of the northeast quarter (NE/4), Section 30, Township 18 South, Range 39 East, Lea County, New Mexico. Texaco operated the Site until 1969 when it sold its interest in the property. The additional investigation consisted of drilling three soil borings, and collecting soil samples for field and laboratory analysis. The investigation was performed on March 6 & 7, 2001. Figure 1 presents a Site location and topographic map. Figure 2 and Figure 3 present Site drawings.

Background

Previous investigations were performed at the Site on behalf of Texaco in April 1997 and May 1999. The April 1997 investigation included collecting soil samples from six (6) auger-drilled borings advanced to approximately 2.5 feet below ground surface (BGS). The May 1999 investigation involved collecting soil samples from eleven (11) rotary-drilled borings advanced from 20 to 53 feet BGS. The results were reported to the NMOCD on June 3, 1999 ("Pit Closure Investigation Report, Texaco Exploration and Production Inc., D.F. Fergason Lease (J.C. Turner Property), Former Emergency Pit, Northeast Quarter, Section 30, Township 18 South, Range 39 East, Lea County, New Mexico").

On June 14, 2000, during a meeting with the NMOCD, Texaco was requested to conduct an additional investigation near the southwest corner of the Site. A work plan was prepared and submitted to the NMOCD. Additional information was requested by the NMOCD, and submitted on December 8, 2000.

Additional Investigation and Findings

On March 6 & 7, 2001, soil samples were collected from three (3) borings drilled near the southwest

OCD WORKING COPY

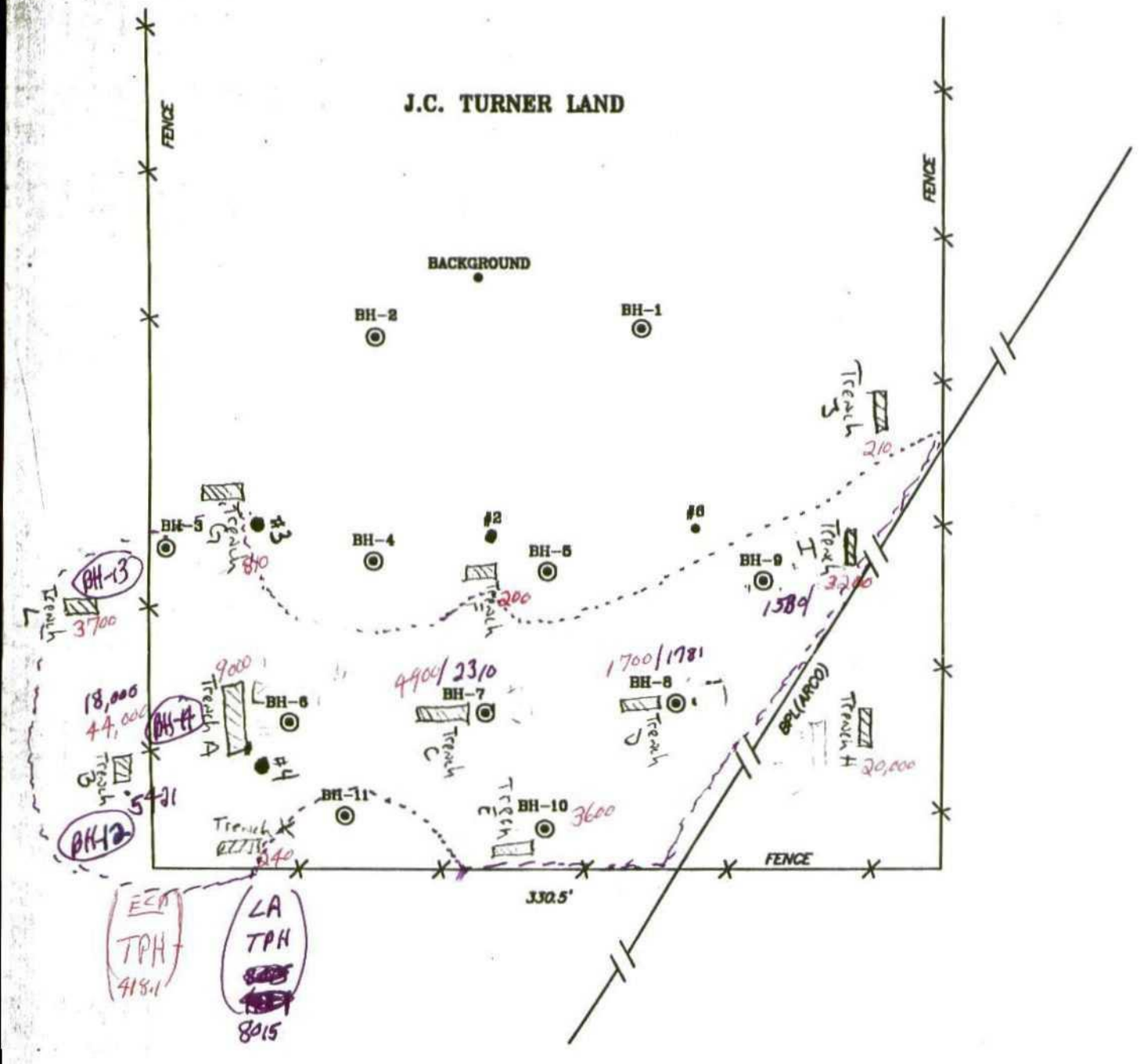
RECEIVED

FEB 04 2000

Environmental Bureau
Oil Conservation Division

BOREHOLE DATA

BOREHOLE NUMBER	GROUND ELEVATION FEET AMSL
BH-1	3593.1
BH-2	3593.9
BH-3	3594.7
BH-4	3594.7
BH-5	3594.3
BH-6	3595.1
BH-7	3594.7
BH-8	3594.8
BH-9	3594.0
BH-10	3595.3
BH-11	3595.6



SCALE (FEET)

50 0 50 100

• Soil samples ECD 1/27/99

LEGEND

#1 • HAND AUGER BOREHOLE LOCATION (4/10/97)

BH-1 ◉ ROTARY DRILLED BOREHOLE LOCATION (4/26-28/99)

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION & PRODUCTION, INC.

corner of the Site. Two borings (BH-12 and BH-13) were drilled on property owned by Ms. Sheri Lynn Pendleton, and one boring (BH-14) was drilled on property owned by J. C. and Donna Turner. Borings BH-12, BH-13 and BH-14 were staked after Piper Surveying Company located the corners of the former emergency pits based on aerial photographs, landmarks and property boundaries. Eades Drilling and Pump Service, Inc., drilled the borings using a truck-mounted air-rotary drilling rig. Borings BH-12 and BH-13 were drilled to approximately 20 feet BGS, and boring BH-14 was drilled to approximately 30 feet BGS. Soil samples were continuously at location BH-12 to about 10 feet BGS using a 5-foot long stainless steel split-barrel sampler. The 5-foot long split-barrel sampler was replaced with a 2-foot long stainless steel split-barrel sampler to continuously collect samples below approximately 10-feet BGS at location BH-12 due to poor sample recovery. The 2-foot long split-barrel sampler was also used to collect soil samples from approximately 0 to 6 feet BGS adjacent to boring BH-12 to replace samples lost with the 5-foot long split-barrel sampler. The 2-foot long split-barrel sampler was used to continuously collect soil samples from borings BH-13 and BH-14 below approximately 2-feet BGS. Soil samples were collected adjacent to borings BH-13 and BH-14 from approximately 0 to 2 feet BGS using a stainless steel hand auger since the 2-foot long core sampler could not be used until the boring was drilled to 2 feet BGS at these locations. Each core sample was photographed, and approximately one quarter of the core was used to fill a clean glass sample jar for laboratory analysis. Approximately one quarter of each core sample was split with representatives of J. C. and Donna Turner, and the remainder was placed in clean glass sample jars for headspace analysis, and retained in plastic sample bags. The laboratory sample jars were sealed with Teflon®-lined caps after filling, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Trace Analysis, Inc. (Trace). The headspace sample jars were sealed with aluminum foil before replacing the caps, set aside to warm up to ambient temperature, and analyzed using a RAE Instruments, Model 2000 photoionization detector (PID) that was calibrated to isobutylene. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil) after the samples had reached ambient temperature (approximately 15 minutes), and the concentrations of organic vapors were recorded in parts per million (ppm) on the lids of the sample jars, and on boring logs. Samples were selected for laboratory analysis based on PID readings and hydrocarbon staining. Table 1 presents a summary of the PID readings. Appendix A presents the boring logs.

The drilling rig, drilling rods and drill bit were washed between locations using a high-pressure washer. All soil sampling equipment (i.e., core samplers, hand auger, stainless steel sample trowels, etc.) were washed between events using potable water and laboratory-grade detergent, and rinsed with distilled water. The borings were plugged with cement grout, and Piper Surveying Company surveyed the locations of the borings.

Samples from boring BH-12 that recorded PID readings above 100 ppm included the following: 4.0 to 5.4 feet (473.8 ppm), 5.0 to 6.15 feet (150.3 ppm), 10.0 to 11.7 feet (233.6 ppm), 12.0 to 12.9 feet (275.0 ppm), and 14.0 to 15.2 feet (111.2 ppm). Trace analyzed these samples (excluding the sample from 5 to 6.15 feet) and the deepest sample from boring BH-12 (18.0 to 18.2 feet BGS) for benzene, toluene, ethylbenzene, xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH) and chloride using EPA methods 8260B, 8015B and 300, respectively. Soil samples collected

From boring BH-12, 2.0 to 2.9 feet BGS and 4.0 to 5.4 feet BGS were also analyzed for TPH using test method 418.1.

No samples from boring BH-13 recorded PID readings above 100 ppm, therefore, the sample from 12.0 to 13.4 feet BGS that exhibited the highest PID reading (5.1 ppm), and the deepest sample from the boring (18.0 to 19.5 feet BGS) were analyzed for BTEX, TPH and chloride.

Samples from boring BH-14 that recorded PID readings above 100 ppm included the following: 2.0 to 3.3 feet (274.2 ppm), 4.0 to 5.7 feet (463.3 ppm), 6.0 to 7.6 feet (463.6 ppm), 8.0 to 9.4 feet (397.3 ppm), 10.0 to 11.4 feet (433.4 ppm), 12.0 to 12.2 feet (394.3 ppm), 14.0 to 15.2 feet (427.2 ppm), 16.0 to 16.5 feet (539.4 ppm), 18.0 to 19.4 feet (938.3 ppm), 20.0 to 22.0 feet (1140 ppm), 22.0 to 23.7 feet (922.4 ppm), and 24.0 to 26.0 feet (875.9 ppm). Hydrocarbon staining soil and oil were observed in the sample from 2.0 to 3.3 feet BGS, suggesting that a discharge may have occurred since 1969. Table 1 presents a summary of the laboratory analysis. Appendix B presents the laboratory report.

Recommended remediation action levels (RRAL) for benzene, total BTEX and TPH were determined for soil in accordance with NMOCD guidelines ("Unlined Surface Impoundment Closure Guidelines, February 1993") using the following criteria:

Criteria	Result	Ranking Score
Depth-to-Groundwater	50 – 99 feet	10
Wellhead Protection Area	Yes	20
Distance to Surface Water Body	>1000 horizontal feet	0
		Total: 30

The RRAL for benzene, total BTEX and TPH, based on a total ranking score of 30, are as follows:

Benzene	**10 mg/kg**
Total BTEX	**50 mg/kg**
TPH	**100 mg/kg**

The highest benzene concentration reported was 325 micrograms per kilogram (µg/kg) or 0.325 mg/kg from boring BH-14, 4.0 to 5.7 feet BGS, and was below the RRAL. The highest total BTEX concentration reported was 49464 µg/kg or 49.464 mg/kg from boring BH-14, 8.0 to 9.4 feet BGS, and was below the RRAL. Concentrations of TPH in soil samples from boring BH-12 decreased below the RRAL at approximately 16 to 18 feet BGS. Concentration of TPH in soil samples from boring BH-14 decreased below the RRAL at approximately 26 to 28 feet BGS. Soil samples analyzed from boring BH-13 did not report TPH concentrations above the test method.

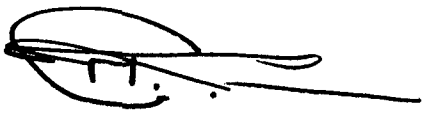
Soil samples collected during a previous investigation (April 1999) from borings BH-7, 0 to 2 feet BGS, BH-8, 0 to 1.6 feet BGS, and BH-9, 0 to 2 feet BGS also reported TPH concentrations above the RRAL. The laboratory results of soil samples collected during the current and previous investigations do not indicate that groundwater has been impacted. Based on the data from the current and previous investigations there is no need for installing monitoring wells, or conducting additional investigations other than that proposed in the remediation plan.

Remediation Plan

Texaco proposes to excavate soil in the vicinity of borings BH-12 and BH-14 to achieve the RRAL for TPH. The excavation is anticipated to extend to approximately 27 feet BGS near the west end of the southern pit near boring BH-14. A composite sample will be collected from each side of the excavation, and grab samples will be collected from the bottom of the excavation for confirmation. A portion of each sample will be analyzed with a PID, and samples exhibiting PID readings above 100 ppm will be analyzed for BTEX using EPA method SW-846-8260B. All samples will be analyzed for TPH using EPA method SW-846-8015. The excavated soil will be transported to Texaco's centralized landfarm located near Jal, New Mexico. Clean fill will be placed in the excavation to approximately 3 feet BGS. A layer of topsoil approximately 3 feet thick will be placed over the fill, and seeded. Soil in the vicinity of borings BH-7, BH-8 and BH-9 will be excavated to approximately 2 feet BGS to reduce TPH levels below the RRAL. Grab samples will be collected from the excavated areas for TPH analysis using EPA method SW-846-8015. The excavated areas will be filled with topsoil, and seeded. A final report will be submitted to the NMOCD upon completion of the project.

Please call Mr. Robert Patterson with Texaco at (915) 688-4836 or myself at (915) 687-0901 if you have questions.

Respectfully yours,
Larson & Associates, Inc.



Mark J. Larson, CPG, CGWP
President

Encl.

cc: Mr. Robert Patterson - Texaco
Mr. Chris Williams – NMOCD District I

TABLES

Table 1: Summary of Field and Laboratory Analysis of Soil Samples
Texaco Exploration and Production Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Depth (Feet BGS)	Sample Date	PID (ppm)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylene (ug/kg)	Total BTEX (ug/kg)	DRO (mg/kg)	GRO (mg/kg)	TPH (DRO + GRO) (mg/kg)	TRPHC (mg/kg)	Chloride (mg/kg)
BH-12	0.0 - 1.4	06-Mar-01	8.5	--	--	--	--	--	--	--	--	--	--
	2.0 - 2.9	06-Mar-01	6.1	<25.0	<25.0	<25.0	<25.0	100.0	104	<1.3	104	4930	150
	4.0 - 5.4	06-Mar-01	473.8	<100	<100	12984	10373	23357	4970	451.55	5421.55	19200	120
	5.0 - 6.15	06-Mar-01	150.3	--	--	--	--	--	--	--	--	--	--
	10.0 - 11.7	06-Mar-01	233.6	*<25.0	*<25.0	*28.6	*27.8	56.4	770	42.98	812.98	--	78
	12.0 - 12.9	06-Mar-01	275.0	*<25.0	*<25.0	*<25.0	*<25.0	<100.0	682	28.47	710.47	--	97
	14.0 - 15.2	06-Mar-01	111.2	*<25.0	*<25.0	*<25.0	*<25.0	<100.0	115	8.535	123.535	--	140
	16.0 - 17.0	06-Mar-01	23.6	--	--	--	--	--	--	--	--	--	--
	18.0 - 18.2	06-Mar-01	43.1	<25.0	<25.0	<25.0	<25.0	<100.0	<50	<2.5	<52.5	--	130
BH-13	0.0 - 2.0	07-Mar-01	3.6	--	--	--	--	--	--	--		--	--
	2.0 - 3.3	06-Mar-01	4.0	--	--	--	--	--	--	--	--	--	--
	4.0 - 5.3	06-Mar-01	3.8	--	--	--	--	--	--	--	--	--	--
	6.0 - 7.4	06-Mar-01	4.1	--	--	--	--	--	--	--	--	--	--
	8.0 - 94.	06-Mar-01	5.0	--	--	--	--	--	--	--	--	--	--
	10.0 - 11.4	06-Mar-01	3.6	--	--	--	--	--	--	--	--	--	--
	12.0 - 13.4	06-Mar-01	5.1	<25.0	<25.0	<25.0	<25.0	<100.0	<50	<1.3	<51.3	--	22
	14.0 - 15.7	06-Mar-01	4.3	--	--	--	--	--	--	--	--	--	--

Notes: Analyses performed by Trace Analysis, Inc. Lubbock, Texas

1. BGS: Below ground surface
2. ug/kg: Micrograms per kilogram
3. mg/kg: Milligrams per kilogram
4. <: Less than quantification limit
5. -: No data available
6. *: Out of holding time

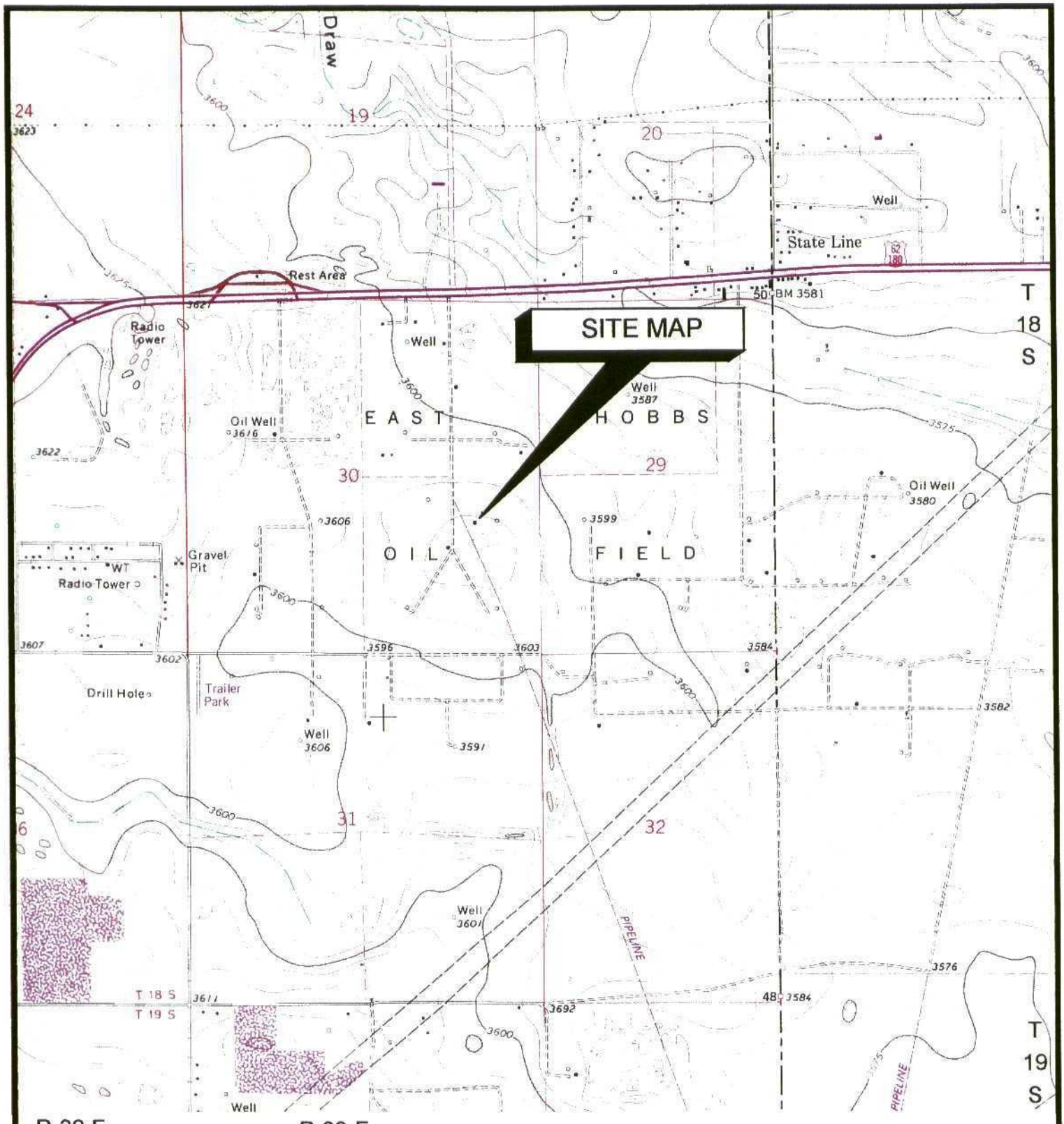
Table 1: Summary of Fieldand Laboraotry Analysis of Soil Samples
Texaco Exploration and Production Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Depth (Feet BGS)	Sample Date	PID (ppm)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylene (ug/kg)	Total BTEX (ug/kg)	DRO (mg/kg)	GRO (mg/kg)	TPH (DRO + GRO) (mg/kg)	TRPHC (mg/kg)	Chloride (mg/kg)
BH-13	16.0 - 17.9	06-Mar-01	4.2	--	--	--	--	--	--	--	--	--	--
	18.0 - 19.5	06-Mar-01	3.8	<25.0	<25.0	<25.0	<25.0	<100.0	<50	<1.3	<51.3	--	51
BH-14	0.0 - 2.0	07-Mar-01	6.6	<25.0	<25.0	<25.0	<25.0	<100.0	123	<1.3	123	999	61
	2.0 - 3.3	06-Mar-01	274.2	<50.0	<50.0	1923	9006	10929	18300	198.3	18498.3	--	53
	4.0 - 5.7	06-Mar-01	463.3	325	507	14815	18529	34176	5420	492	5912	--	63
	6.0 - 7.6	06-Mar-01	463.6	<250	646	18552	28862	48060	12000	824.6	12824.6	--	110
	8.0 - 9.4	06-Mar-01	397.3	<250	461	18740	30263	49464	2940	835.6	3775.6	--	200
	10.0 - 11.4	06-Mar-01	433.4	<250	<250	17381	29683	47064	2460	805.6	3265.6	--	320
	12.0 - 12.2	06-Mar-01	394.3	<100	<100	6507	12134	18641	1020	480.2	1500.2	--	390
	14.0 - 15.2	06-Mar-01	427.2	<250	<250	8808	15523	24331	764	216.5	980.5	--	320
	16.0 - 16.5	06-Mar-01	539.4	<250	<250	5167	9902	15069	824	344.1	1168.1	--	340
	18.0 - 19.4	06-Mar-01	938.3	<250	<250	2786	5324	8110	795	165	960	--	330
	20.0 - 22.0	06-Mar-01	1140	<100	<100	2241	4367	6608	645	148.6	793.6	--	320
	22.0 - 23.7	06-Mar-01	922.4	<250	<250	2234	4294	6528	655	163.3	818.3	--	340
	24.0 - 26.0	06-Mar-01	875.9	<100	<100	119	277	396	255	22.35	277.35	--	350
	26.0 - 27.5	06-Mar-01	79.5	<25.0	<25.0	<25.0	<25.0	<100.0	57.4	1.31	58.71	--	340
	28.0 - 29.0	06-Mar-01	32.7	<25.0	<25.0	<25.0	<25.0	<100.0	<50	1.59	1.59	--	240

Notes: Analyses performed by Trace Analysis, Inc. Lubbock, Texas

1. BGS: Below ground surface
2. ug/kg: Micrograms per kilogram
3. mg/kg: Milligrams per kilogram
4. <: Less than quantification limit
5. -: No data available
6. *: Out of holding time

FIGURES



TAKEN FROM U.S.G.S.
HOBBS EAST, TEX.-N. MEX. 1969
7.5' QUADRANGLES

SCALE: 1"=2000'

FIGURE #1

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

J.C. TURNER PROPERTY
SE/4, NE/4, SEC. 30, T18S, R39E

TOPOGRAPHIC MAP

DATE: 4/11/01
NAME:
FILE:

Aarson & Associates, Inc.
Environmental Consultants

U.S. HIGHWAY 62-180

Sheri Lynn Penleton

Sheri Lynn Penleton

Sheri Lynn Penleton

J.C. Turner & Donna Turner

Testers Inc.

Jerry G. Bush

Dagoberto Rodriguez

Lina Rodriguez

(Tank Battery Site)
Pendleton
Sheri Lynn

BH-1
BH-2
BH-3
BH-4
BH-5
BH-6
BH-7
BH-8
BH-9
BH-10
BH-11
BH-12
BH-13
BH-14

W.A. Breeding

Thomas G. &
Leah A. Pierce

Jimmy D. Roberts

Garnice Land

Leah A. Pierce

Jimmy D. Roberts

N

0 175 350

SCALE in FEET

LEGEND

BH-1
● SOIL BORING LOCATION (APRIL 1999)
BH-12
⊙ SOIL BORING LOCATION (MARCH 2001)

AFTER PIPER SURVEYING COMPANY (APRIL 2001)

FIGURE #2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

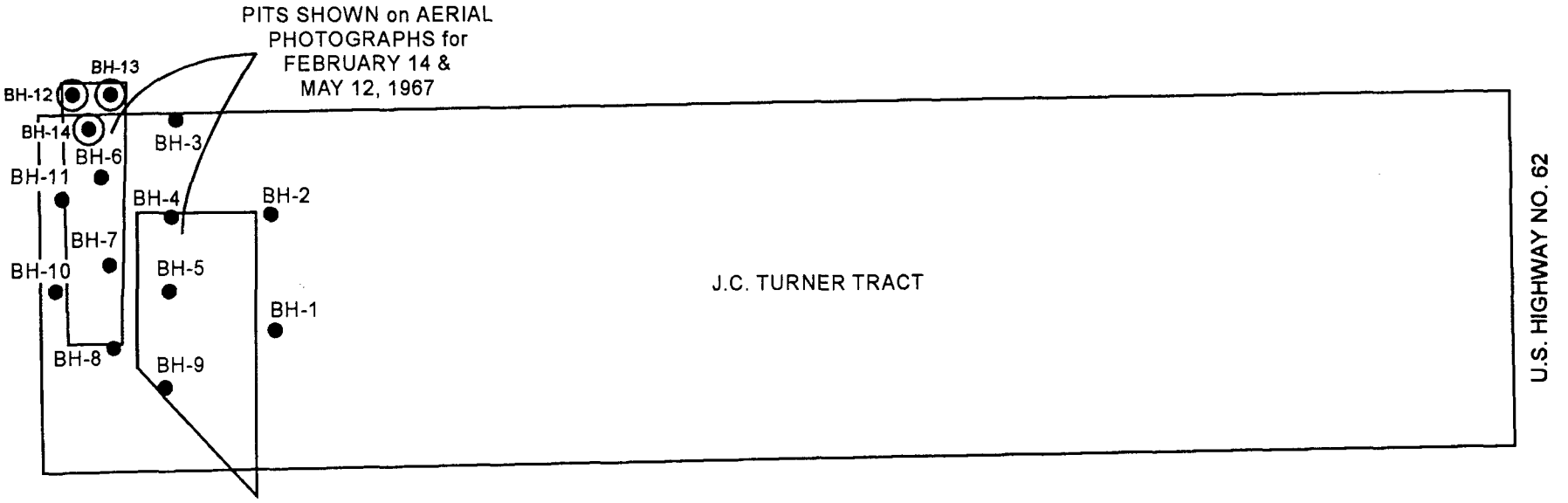
J.C. TURNER PROPERTY

SE/4, NE/4, SEC. 30, T18S, R39E

SITE LOCATION

DATE: 04/11/01
NAME:
FILE:

Larson & Associates, Inc.
Environmental Consultants



LEGEND

- SOIL BORING LOCATION (APRIL 1999)
- SOIL BORING LOCATION (MARCH 2001)

0 150 300

SCALE in FEET

AFTER PIPER SURVEYING CO. (APRIL 2001)

FIGURE #3

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION and PRODUCTION INC.

J.C. TURNER PROPERTY

SE/4, NE/4, SEC. 30, T18S, R39E

DETAILED SITE DRAWING

DATE: 04/11/01

NAME:

FILE:

Larson & Associates, Inc.
Environmental Consultants

APPENDIX A

BORING LOGS

Client: Texaco Exploration and Production Inc.

Project: J. C. Turner

Location: Lea County, New Mexico

Project No: # 00-0107

Log: BH-12

Geologist: M. J. Larson

SUBSURFACE PROFILE			SAMPLE			PID Readings (ppm)	
Depth	Symbol	Description	Number	Type	Recovery	200 400	Notes
		Sand 7.5YR 4/4 to 6/6, brow to reddish yellow, very fine to fine grained quartz sand, loose, dry	1		70	6.1	
		Caliche 7.5YR 3/4 to 7/2, dark brown to pink, sandy, very fine to medium grained quartz sand, moderately hard, hydrocarbon stain and odor at upper contact	2		45	473.8	
5			3		70	150.3	
		Sand 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, poorly sorted, dry, loost, some caliche, hydrocarbon odor	4		23	233.6	
10		***Caliche*** 7.5YR 8/2, pinkish white, sandy, very fine to fine grained quartz sand, hard, hydrocarbon odor near upper contact and decreasing with depth	5		85	275	
			6		45	111.2	
15			7		60	23.6	
			8		50	43.1	
			9		10		
20		TD: 20 Feet BGS Groundwater Not Observed					
25							

Drilling Method: Rotary (air)

Date Drilled: 06 - Mar - 01

Hole Diameter: 5"

Larson and Associates, Inc.
507 N. Marienfeld St., Suite 202
Midland, Texas 70701
(915) 687-0901

Datum: Ground Surface

Checked by: MJL

Drilled by: Eades Drilling

Client: Texaco Exploration and Production Inc.

Project: J. C. Turner

Location: Lea County, New Mexico

Project No: # 00-0107

Log: BH-13

Geologist: M. J. Larson

SUBSURFACE PROFILE			SAMPLE			PID Readings (ppm)	
Depth	Symbol	Description	Number	Type	Recovery	2 4 6	Notes
		Sand 7.5YR 6/6, reddish yellow, very fine grained quartz sand, loose, dry	1		100	4	
		Caliche 7.5YR 7/2, pink, sandy, very fine to fine grained quartz sand, moderately hard	2		65	3.8	
5			3		65	4.1	
		Sand 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, some caliche	4		70	5	
			5		70	3.6	
10		***Caliche*** 7.5YR 8/2, pinkish white, sandy, very fine to fine grained quartz sand, moderately hard	6		70	5.1	
			7		70	4.3	
15			8		85	4.2	
			9		95	3.8	
			18		75		
20		TD: 20 Feet BGS Groundwater Not Observed					
25							

Drilling Method: Rotary (air)

Date Drilled: 06 - Mar - 01

Hole Diameter: 5"

Larson and Associates, Inc.
507 N. Marienfeld St., Suite 202
Midland, Texas 70701
(915) 687-0901

Datum: Ground Surface

Checked by: MJL

Drilled by: Eades Drilling

Client: Texaco Exploration and Production Inc.

Project: J. C. Turner

Location: Lea County, New Mexico

Project No: # 00-0107

Log: BH-14

Geologist: M. J. Larson

SUBSURFACE PROFILE

Depth	Symbol	Description
0		***Sand*** 7.5YR 3/4 to 6/6, dark brown to reddish yellow, very fine to fine grained quartz sand, loose, dry, hydrocarbon staining and odor at lowere contact
5		***Caliche*** 7.5YR 3/4 to 7/2, dark brown to pink, sandy, very fine to medium grained quartz sand, moderately hard, hydrocarbon staining and odor at upper contact, some oil present
10		***Sand*** 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, poorly sorted, dry, loost, some caliche, hydrocarbon odor
15		***Caliche*** 7.5YR 8/2, pinkish white, sandy, very fine to fine grained quartz sand, hard, hydrocarbon odor near upper contact and decreasing with depth
20		***Sand*** 7.5YR 6/6, reddish yellow, very fine to fine grained quartz sand, poorly sorted, interbedded with thin units of sandstone and caliche, moderately hard, hydrocarbon odor decreases with depth,
25		
30		TD: 30 Feet BGS Groundwater Not Observed
35		

SAMPLE

Number	Type	Recovery
2		65
3		85
4		80
5		70
6		70
7		10
8		60
9		60
10		70
11		100
12		85
13		100
14		75
15		50

PID Readings (ppm)

400 800 1200

274.2
463.3
463.6
397.3
433.4
394.3
427.2
539.4
938.3
1140
922.4
875.9
79.5
32.7

Notes

Drilling Method: Rotary (air)

Date Drilled: 06 - Mar - 01

Hole Diameter: 5"

Larson and Associates, Inc.
507 N. Marienfeld St., Suite 202
Midland, Texas 70701
(915) 687-0901

Datum: Ground Surface

Checked by: MJL

Drilled by: Eades Drilling

APPENDIX B

LABORATORY REPORTS

507 North Marienfeld, Suite 202 ◆ Midland, Texas 79701 ◆ Ph. (915) 687-0901 ◆ Fax (915) 687-0456

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: March 19, 2001

Order ID Number: A01030925

Project Number: 00-0107
Project Name: J.C. Turner
Project Location: Lea County, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis. Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
166471	BH-12, 2-2.9'	Soil	3/6/01	11:59	3/9/01
166472	BH-12, 4-5.4'	Soil	3/6/01	12:12	3/9/01
166478	BH-12, 18-18.2'	Soil	3/6/01	11:20	3/9/01
166485	BH-13, 12-13.4'	Soil	3/6/01	14:53	3/9/01
166488	BH-13, 18-19.5'	Soil	3/6/01	15:20	3/9/01
166489	BH-14, 0-2'	Soil	3/7/01	9:20	3/9/01
166490	BH-14, 2-3.3'	Soil	3/6/01	15:50	3/9/01
166491	BH-14, 4-5.7'	Soil	3/6/01	15:55	3/9/01
166492	BH-14, 6-7.6'	Soil	3/6/01	16:02	3/9/01
166493	BH-14, 8-9.4'	Soil	3/6/01	16:09	3/9/01
166494	BH-14, 10-11.4'	Soil	3/6/01	16:17	3/9/01
166495	BH-14, 12-12.2'	Soil	3/6/01	16:23	3/9/01
166496	BH-14, 14-15.2	Soil	3/6/01	16:30	3/9/01
166497	BH-14, 16-16.5'	Soil	3/6/01	16:37	3/9/01
166498	BH-14, 18-19.4'	Soil	3/6/01	16:50	3/9/01
166499	BH-14, 20-22'	Soil	3/6/01	16:58	3/9/01
166500	BH-14, 22-23.7'	Soil	3/6/01	17:12	3/9/01
166501	BH-14, 24-26'	Soil	3/6/01	17:21	3/9/01
166502	BH-14, 26-27.5'	Soil	3/6/01	17:35	3/9/01
166503	BH-14, 28-29	Soil	3/6/01	17:43	3/9/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 166471 - BH-12, 2-2.9'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09800	Date Analyzed:	3/15/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08409	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.91	µg/Kg	1	50	97	89 - 110
Toluene-d8		47.86	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		48.91	µg/Kg	1	50	97	81 - 105

Sample: 166471 - BH-12, 2-2.9'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		150	mg/Kg	50	0.50

Sample: 166471 - BH-12, 2-2.9'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC09768	Date Analyzed:	3/16/01
Analyst:	BP	Preparation Method:	E 3550B	Prep Batch:	PB08383	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		4930	mg/Kg	1	10

Sample: 166471 - BH-12, 2-2.9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		104	mg/Kg	2	50

Sample: 166471 - BH-12, 2-2.9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09719	Date Analyzed:	3/12/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08343	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.3	mg/Kg	13	0.10

Sample: 166472 - BH-12, 4-5.4'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<100	µg/Kg	100	1
Toluene		<100	µg/Kg	100	1
Ethylbenzene		12984	µg/Kg	100	1
m,p-Xylene		9385	µg/Kg	100	1
o-Xylene		988	µg/Kg	100	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.60	µg/Kg	1	50	103	89 - 110
Toluene-d8		51.24	µg/Kg	1	50	102	95 - 107
4-Bromofluorobenzene		54.02	µg/Kg	1	50	108	81 - 105

Sample: 166472 - BH-12, 4-5.4'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		120	mg/Kg	10	0.50

Sample: 166472 - BH-12, 4-5.4'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		4970	mg/Kg	20	50

Sample: 166472 - BH-12, 4-5.4'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09719	Date Analyzed:	3/12/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08343	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
GRO		451.55	mg/Kg	500	0.10

Sample: 166478 - BH-12, 18-18.2'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09800	Date Analyzed:	3/15/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08409	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		44.60	µg/Kg	1	50	89	89 - 110
Toluene-d8		47.76	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		47.94	µg/Kg	1	50	95	81 - 105

Sample: 166478 - BH-12, 18-18.2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09776 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		130	mg/Kg	5	0.50

Sample: 166478 - BH-12, 18-18.2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 166478 - BH-12, 18-18.2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09719 Date Analyzed: 3/12/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08343 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<2.5	mg/Kg	25	0.10

Sample: 166485 - BH-13, 12-13.4'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09800 Date Analyzed: 3/15/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08409 Date Prepared: 3/15/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		44.29	µg/Kg	1	50	88	89 - 110
Toluene-d8		47.97	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		47.91	µg/Kg	1	50	95	81 - 105

Sample: 166485 - BH-13, 12-13.4'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09776 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		22	mg/Kg	10	0.50

Sample: 166485 - BH-13, 12-13.4'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 166485 - BH-13, 12-13.4'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09719	Date Analyzed:	3/12/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08343	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.3	mg/Kg	13	0.10

Sample: 166488 - BH-13, 18-19.5'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09800	Date Analyzed:	3/15/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08409	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		44.87	µg/Kg	1	50	89	89 - 110
Toluene-d8		47.78	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		47.62	µg/Kg	1	50	95	81 - 105

Sample: 166488 - BH-13, 18-19.5'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		51	mg/Kg	10	0.50

Sample: 166488 - BH-13, 18-19.5'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 166488 - BH-13, 18-19.5'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.3	mg/Kg	13	0.10

Sample: 166489 - BH-14, 0-2'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09800	Date Analyzed:	3/15/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08409	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		44.12	µg/Kg	1	50	88	89 - 110
Toluene-d8		48.48	µg/Kg	1	50	96	95 - 107
4-Bromofluorobenzene		48.06	µg/Kg	1	50	96	81 - 105

Sample: 166489 - BH-14, 0-2'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		61	mg/Kg	10	0.50

Sample: 166489 - BH-14, 0-2'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC09768	Date Analyzed:	3/16/01
Analyst:	BP	Preparation Method:	E 3550B	Prep Batch:	PB08383	Date Prepared:	3/15/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		999	mg/Kg	1	10

Sample: 166489 - BH-14, 0-2'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		123	mg/Kg	2	50

Sample: 166489 - BH-14, 0-2'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<1.3	mg/Kg	13	0.10

Sample: 166490 - BH-14, 2-3.3'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<50.0	µg/Kg	50	1
Toluene		<50.0	µg/Kg	50	1
Ethylbenzene		1923	µg/Kg	50	1
m,p-Xylene		7848	µg/Kg	50	1
o-Xylene		1158	µg/Kg	50	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.74	µg/Kg	1	50	99	89 - 110
Toluene-d8		54.53	µg/Kg	1	50	109	95 - 107
4-Bromofluorobenzene		53.82	µg/Kg	1	50	107	81 - 105

Sample: 166490 - BH-14, 2-3.3'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		53	mg/Kg	10	0.50

Sample: 166490 - BH-14, 2-3.3'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		18300	mg/Kg	50	50

Sample: 166490 - BH-14, 2-3.3'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		198.3	mg/Kg	100	0.10

Sample: 166491 - BH-14, 4-5.7'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		325	µg/Kg	100	1
Toluene		507	µg/Kg	100	1
Ethylbenzene		14815	µg/Kg	100	1
m,p-Xylene		16443	µg/Kg	100	1
o-Xylene		2086	µg/Kg	100	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.99	µg/Kg	1	50	99	89 - 110
Toluene-d8		53.56	µg/Kg	1	50	107	95 - 107
4-Bromofluorobenzene		50.98	µg/Kg	1	50	101	81 - 105

Sample: 166491 - BH-14, 4-5.7'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09776	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		63	mg/Kg	10	0.50

Sample: 166491 - BH-14, 4-5.7'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		5420	mg/Kg	20	50

Sample: 166491 - BH-14, 4-5.7'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		492	mg/Kg	200	0.10

Sample: 166492 - BH-14, 6-7.6'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		646	µg/Kg	250	1
Ethylbenzene		18552	µg/Kg	250	1
m,p-Xylene		25189	µg/Kg	250	1
o-Xylene		3673	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.60	µg/Kg	1	50	99	89 - 110
Toluene-d8		51.12	µg/Kg	1	50	102	95 - 107
4-Bromofluorobenzene		49.67	µg/Kg	1	50	99	81 - 105

Sample: 166492 - BH-14, 6-7.6'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09776 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		110	mg/Kg	10	0.50

Sample: 166492 - BH-14, 6-7.6'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		12000	mg/Kg	25	50

Sample: 166492 - BH-14, 6-7.6'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09757 Date Analyzed: 3/13/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08375 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		824.6	mg/Kg	200	0.10

Sample: 166493 - BH-14, 8-9.4'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09805 Date Analyzed: 3/17/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08412 Date Prepared: 3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		461	µg/Kg	250	1
Ethylbenzene		18740	µg/Kg	250	1
m,p-Xylene		26465	µg/Kg	250	1
o-Xylene		3798	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.80	µg/Kg	1	50	95	89 - 110
Toluene-d8		51.08	µg/Kg	1	50	102	95 - 107
4-Bromofluorobenzene		49.97	µg/Kg	1	50	99	81 - 105

Sample: 166493 - BH-14, 8-9.4'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09776 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		200	mg/Kg	10	0.50

Sample: 166493 - BH-14, 8-9.4'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		2940	mg/Kg	10	50

Sample: 166493 - BH-14, 8-9.4'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09757 Date Analyzed: 3/13/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08375 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		835.6	mg/Kg	200	0.10

Sample: 166494 - BH-14, 10-11.4'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09805 Date Analyzed: 3/17/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08412 Date Prepared: 3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		<250	µg/Kg	250	1
Ethylbenzene		17381	µg/Kg	250	1
m,p-Xylene		25948	µg/Kg	250	1
o-Xylene		3735	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.95	µg/Kg	1	50	97	89 - 110
Toluene-d8		50.15	µg/Kg	1	50	100	95 - 107
4-Bromofluorobenzene		49.85	µg/Kg	1	50	99	81 - 105

Sample: 166494 - BH-14, 10-11.4'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09778 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		320	mg/Kg	10	0.50

Sample: 166494 - BH-14, 10-11.4'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		2460	mg/Kg	5	50

Sample: 166494 - BH-14, 10-11.4'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		805.6	mg/Kg	200	0.10

Sample: 166495 - BH-14, 12-12.2'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<100	µg/Kg	100	1
Toluene		<100	µg/Kg	100	1
Ethylbenzene		6507	µg/Kg	100	1
m,p-Xylene		10553	µg/Kg	100	1
o-Xylene		1581	µg/Kg	100	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		46.18	µg/Kg	1	50	92	89 - 110
Toluene-d8		52.66	µg/Kg	1	50	105	95 - 107
4-Bromofluorobenzene		50.40	µg/Kg	1	50	100	81 - 105

Sample: 166495 - BH-14, 12-12.2'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09778	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		390	mg/Kg	10	0.50

Sample: 166495 - BH-14, 12-12.2'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		1020	mg/Kg	2	50

Sample: 166495 - BH-14, 12-12.2'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		480.2	mg/Kg	200	0.10

Sample: 166496 - BH-14, 14-15.2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		<250	µg/Kg	250	1
Ethylbenzene		8808	µg/Kg	250	1
m,p-Xylene		13628	µg/Kg	250	1
o-Xylene		1895	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		46.51	µg/Kg	1	50	93	89 - 110
Toluene-d8		52.24	µg/Kg	1	50	104	95 - 107
4-Bromofluorobenzene		49.22	µg/Kg	1	50	98	81 - 105

Sample: 166496 - BH-14, 14-15.2

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09778	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		320	mg/Kg	10	0.50

Sample: 166496 - BH-14, 14-15.2

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		764	mg/Kg	2	50

Sample: 166496 - BH-14, 14-15.2

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		216.5	mg/Kg	100	0.10

Sample: 166497 - BH-14, 16-16.5'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		<250	µg/Kg	250	1
Ethylbenzene		5167	µg/Kg	250	1
m,p-Xylene		8630	µg/Kg	250	1
o-Xylene		1272	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		46.41	µg/Kg	1	50	92	89 - 110
Toluene-d8		52.46	µg/Kg	1	50	104	95 - 107
4-Bromofluorobenzene		48.69	µg/Kg	1	50	97	81 - 105

Sample: 166497 - BH-14, 16-16.5'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09778	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		340	mg/Kg	10	0.50

Sample: 166497 - BH-14, 16-16.5'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		824	mg/Kg	2	50

Sample: 166497 - BH-14, 16-16.5'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		344.1	mg/Kg	200	0.10

Sample: 166498 - BH-14, 18-19.4'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		<250	µg/Kg	250	1
Ethylbenzene		2786	µg/Kg	250	1
m,p-Xylene		4663	µg/Kg	250	1
o-Xylene		661	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.23	µg/Kg	1	50	94	89 - 110
Toluene-d8		52.21	µg/Kg	1	50	104	95 - 107
4-Bromofluorobenzene		48.34	µg/Kg	1	50	96	81 - 105

Sample: 166498 - BH-14, 18-19.4'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09778 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		330	mg/Kg	10	0.50

Sample: 166498 - BH-14, 18-19.4'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		795	mg/Kg	2	50

Sample: 166498 - BH-14, 18-19.4'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09757 Date Analyzed: 3/13/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08375 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		165	mg/Kg	100	0.10

Sample: 166499 - BH-14, 20-22'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09805 Date Analyzed: 3/17/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08412 Date Prepared: 3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<100	µg/Kg	100	1
Toluene		<100	µg/Kg	100	1
Ethylbenzene		2241	µg/Kg	100	1
m,p-Xylene		3837	µg/Kg	100	1
o-Xylene		530	µg/Kg	100	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.22	µg/Kg	1	50	94	89 - 110
Toluene-d8		51.64	µg/Kg	1	50	103	95 - 107
4-Bromofluorobenzene		49.10	µg/Kg	1	50	98	81 - 105

Sample: 166499 - BH-14, 20-22'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09778 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		320	mg/Kg	10	0.50

Sample: 166499 - BH-14, 20-22'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		645	mg/Kg	2	50

Sample: 166499 - BH-14, 20-22'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09757 Date Analyzed: 3/13/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08375 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		148.6	mg/Kg	100	0.10

Sample: 166500 - BH-14, 22-23.7'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09805 Date Analyzed: 3/17/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08412 Date Prepared: 3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<250	µg/Kg	250	1
Toluene		<250	µg/Kg	250	1
Ethylbenzene		2234	µg/Kg	250	1
m,p-Xylene		3780	µg/Kg	250	1
o-Xylene		514	µg/Kg	250	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		46.71	µg/Kg	1	50	93	89 - 110
Toluene-d8		51.97	µg/Kg	1	50	103	95 - 107
4-Bromofluorobenzene		47.63	µg/Kg	1	50	95	81 - 105

Sample: 166500 - BH-14, 22-23.7'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09778 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		340	mg/Kg	10	0.50

Sample: 166500 - BH-14, 22-23.7'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		655	mg/Kg	2	50

Sample: 166500 - BH-14, 22-23.7'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09757 Date Analyzed: 3/13/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08375 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		163.3	mg/Kg	100	0.10

Sample: 166501 - BH-14, 24-26'

Analysis: 8260 Analytical Method: S 8260B QC Batch: QC09805 Date Analyzed: 3/17/01
Analyst: JG Preparation Method: E 5035 Prep Batch: PB08412 Date Prepared: 3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<100	µg/Kg	100	1
Toluene		<100	µg/Kg	100	1
Ethylbenzene		119	µg/Kg	100	1
m,p-Xylene		277	µg/Kg	100	1
o-Xylene		<100	µg/Kg	100	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		45.83	µg/Kg	1	50	91	89 - 110
Toluene-d8		51.80	µg/Kg	1	50	103	95 - 107
4-Bromofluorobenzene		48.63	µg/Kg	1	50	97	81 - 105

Sample: 166501 - BH-14, 24-26'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC09778 Date Analyzed: 3/13/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08388 Date Prepared: 3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		350	mg/Kg	10	0.50

Sample: 166501 - BH-14, 24-26'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC09723 Date Analyzed: 3/13/01
Analyst: BP Preparation Method: N/A Prep Batch: PB08346 Date Prepared: 3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		255	mg/Kg	1	50

Sample: 166501 - BH-14, 24-26'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		22.35	mg/Kg	25	0.10

Sample: 166502 - BH-14, 26-27.5'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.79	µg/Kg	1	50	95	89 - 110
Toluene-d8		51.61	µg/Kg	1	50	103	95 - 107
4-Bromofluorobenzene		48.80	µg/Kg	1	50	97	81 - 105

Sample: 166502 - BH-14, 26-27.5'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09778	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		340	mg/Kg	10	0.50

Sample: 166502 - BH-14, 26-27.5'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		57.4	mg/Kg	1	50

Sample: 166502 - BH-14, 26-27.5'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		1.31	mg/Kg	13	0.10

Sample: 166503 - BH-14, 28-29

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09805	Date Analyzed:	3/17/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08412	Date Prepared:	3/17/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.46	µg/Kg	1	50	94	89 - 110
Toluene-d8		51.73	µg/Kg	1	50	103	95 - 107
4-Bromofluorobenzene		49.01	µg/Kg	1	50	98	81 - 105

Sample: 166503 - BH-14, 28-29

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC09778	Date Analyzed:	3/13/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08388	Date Prepared:	3/12/01

Param	Flag	Result	Units	Dilution	RDL
CL		240	mg/Kg	10	0.50

Sample: 166503 - BH-14, 28-29

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC09723	Date Analyzed:	3/13/01
Analyst:	BP	Preparation Method:	N/A	Prep Batch:	PB08346	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<50	mg/Kg	1	50

Sample: 166503 - BH-14, 28-29

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09757	Date Analyzed:	3/13/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08375	Date Prepared:	3/13/01

Param	Flag	Result	Units	Dilution	RDL
GRO		1.59	mg/Kg	13	0.10

Quality Control Report
Method Blank

Method Blank

QCBatch: QC09719

Param	Flag	Results	Units	Reporting Limit
GRO		<1.3	mg/Kg	0.10

Method Blank

QCBatch: QC09723

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Method Blank

QCBatch: QC09757

Param	Flag	Results	Units	Reporting Limit
GRO		<1.3	mg/Kg	0.10

Method Blank

QCBatch: QC09768

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank

QCBatch: QC09776

Param	Flag	Results	Units	Reporting Limit
CL		4.59	mg/Kg	0.50

Method Blank

QCBatch: QC09778

Param	Flag	Results	Units	Reporting Limit
CL		4.68	mg/Kg	0.50

Method Blank

QCBatch: QC09800

Param	Flag	Results	Units	Reporting Limit
Benzene		<25.0	µg/Kg	1
Toluene		<25.0	µg/Kg	1
Ethylbenzene		<25.0	µg/Kg	1
m,p-Xylene		<25.0	µg/Kg	1
o-Xylene		<25.0	µg/Kg	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		50.17	µg/Kg	50	100	89 - 110
Toluene-d8		47.44	µg/Kg	50	94	95 - 107
4-Bromofluorobenzene		48.11	µg/Kg	50	96	81 - 105

Method Blank

QCBatch: QC09805

Param	Flag	Results	Units	Reporting Limit
Benzene		<25.0	µg/Kg	1
Toluene		<25.0	µg/Kg	1
Ethylbenzene		<25.0	µg/Kg	1
m,p-Xylene		<25.0	µg/Kg	1
o-Xylene		<25.0	µg/Kg	1

Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limit
Dibromofluoromethane		50.30	µg/Kg	50	100	89 - 110
Toluene-d8		48.77	µg/Kg	50	97	95 - 107
4-Bromofluorobenzene		49.89	µg/Kg	50	99	81 - 105

Quality Control Report
Lab Control Spikes and Duplicate Spikes

LCS

QC Batch: QC09719

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.875	mg/Kg	1	1	<1.3	87		70 - 130	20

LCSD

QC Batch: QC09719

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.855	mg/Kg	1	1	<1.3	85	2	70 - 130	20

LCS

QC Batch: QC09723

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		216	mg/Kg	1	250	<50	86		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		235	mg/Kg	1	250	94	70 - 130

LCSD

QC Batch: QC09723

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		205	mg/Kg	1	250	<50	82	5	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		225	mg/Kg	1	250	90	70 - 130

LCS

QC Batch: QC09757

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.88	mg/Kg	1	1	<1.3	88		70 - 130	20

LCSD

QC Batch: QC09757

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
GRO		0.875	mg/Kg	1	1	<1.3	87	0	70 - 130	20

LCS

QC Batch: QC09768

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		233	mg/Kg	1	250	<10.0	93		70 - 130	20

LCSD

QC Batch: QC09768

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC		252	mg/Kg	1	250	<10.0	100	8	70 - 130	20

LCS QC Batch: QC09776

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[1]	16.26	mg/Kg	1	12.50	4.59	130		80 - 120	25

LCSD QC Batch: QC09776

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[2]	16.32	mg/Kg	1	12.50	4.59	130	0	80 - 120	25

LCS QC Batch: QC09778

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[3]	16.64	mg/Kg	1	12.50	4.68	133		80 - 120	25

LCSD QC Batch: QC09778

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL	[4]	16.56	mg/Kg	1	12.50	4.68	132	0	80 - 120	25

LCS QC Batch: QC09800

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		103	µg/Kg	1	100	<25.0	103		67 - 131	20
Benzene		103	µg/Kg	1	100	<25.0	103		74 - 120	20
Trichloroethene (TCE)		92	µg/Kg	1	100	<25.0	92		74 - 115	20
Toluene		101	µg/Kg	1	100	<25.0	101		74 - 117	20
Chlorobenzene		97	µg/Kg	1	100	<25.0	97		81 - 116	20

[1]Sample master doesn't subtract the blank from the spikes. The correct %EA = 93.
[2]Sample master doesn't subtract the blank from the spikes. The correct %EA = 94.
[3]Sample master doesn't subtract the blank from the blank spikes. The correct %EA = 96.
[4]Sample master doesn't subtract the blank from the blank spikes. The correct %EA = 95.

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		50.68	µg/Kg	1	50	101	89 - 110
Toluene-d8		48.64	µg/Kg	1	50	97	95 - 107
4-Bromofluorobenzene		47.14	µg/Kg	1	50	94	81 - 105

LCSD

QC Batch: QC09800

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		102	µg/Kg	1	100	<25.0	102	1	67 - 131	20
Benzene		102	µg/Kg	1	100	<25.0	102	1	74 - 120	20
Benzene		102	µg/Kg	1	100	<25.0	102	1	81 - 114	20
Trichloroethene (TCE)		91	µg/Kg	1	100	<25.0	91	1	74 - 115	20
Toluene		100	µg/Kg	1	100	<25.0	100	1	74 - 117	20
Chlorobenzene		97	µg/Kg	1	100	<25.0	97	0	80 - 120	20
Chlorobenzene		97	µg/Kg	1	100	<25.0	97	0	81 - 116	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		51.57	µg/Kg	1	50	103	89 - 110
Toluene-d8		48.99	µg/Kg	1	50	97	95 - 107
4-Bromofluorobenzene		46.00	µg/Kg	1	50	92	81 - 105

LCS

QC Batch: QC09805

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		91	µg/Kg	1	100	<25.0	91		67 - 131	20
Benzene		98	µg/Kg	1	100	<25.0	98		74 - 120	20
Trichloroethene (TCE)		86	µg/Kg	1	100	<25.0	86		74 - 115	20
Toluene		95	µg/Kg	1	100	<25.0	95		74 - 117	20
Chlorobenzene		94	µg/Kg	1	100	<25.0	94		81 - 116	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		54.82	µg/Kg	1	50	109	89 - 110
Toluene-d8		49.55	µg/Kg	1	50	99	95 - 107
4-Bromofluorobenzene		47.12	µg/Kg	1	50	94	81 - 105

LCSD

QC Batch: QC09805

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
1,1-Dichloroethene		89	µg/Kg	1	100	<25.0	89	2	67 - 131	20

Continued ...

... *Continued*

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		96	µg/Kg	1	100	<25.0	96	2	74 - 120	20
Benzene		96	µg/Kg	1	100	<25.0	96	2	81 - 114	20
Trichloroethene (TCE)		82	µg/Kg	1	100	<25.0	82	5	74 - 115	20
Toluene		91	µg/Kg	1	100	<25.0	91	4	74 - 117	20
Chlorobenzene		92	µg/Kg	1	100	<25.0	92	2	80 - 120	20
Chlorobenzene		92	µg/Kg	1	100	<25.0	92	2	81 - 116	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		53.43	µg/Kg	1	50	106	89 - 110
Toluene-d8		49.96	µg/Kg	1	50	99	95 - 107
4-Bromofluorobenzene		47.29	µg/Kg	1	50	94	81 - 105

Quality Control Report
Matrix Spikes and Duplicate Spikes

MS

QC Batch: QC09723

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		202	mg/Kg	1	250	<50	80		70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		232	mg/Kg	1	250	92	70 - 130

MSD

QC Batch: QC09723

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
DRO		214	mg/Kg	1	250	<50	85	6	70 - 130	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
n-Octane		245	mg/Kg	1	250	98	70 - 130

MS

QC Batch: QC09768

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC	[5]	5620	mg/Kg	1	250	4990	252		70 - 130	20

MSD

QC Batch: QC09768

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
TRPHC	[6]	5960	mg/Kg	1	250	4990	388	42	70 - 130	20

MS

QC Batch: QC09776

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		728.71	mg/Kg	1	625	150	92		75 - 106	25

MSD

QC Batch: QC09776

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		729.94	mg/Kg	1	625	150	92	0	75 - 106	25

MS

QC Batch: QC09778

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		354.43	mg/Kg	1	125	240	91		75 - 106	25

MSD

QC Batch: QC09778

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
CL		357.69	mg/Kg	1	125	240	94	3	75 - 106	25

MS

QC Batch: QC09800

[5]LCS AND LCSD WERE WITHIN SAMPLING PARAMETERS, MS AND MSD WERE NOT
[6]LCS AND LCSD WERE WITHIN SAMPLING PARAMETERS, MS AND MSD WERE NOT

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		105	µg/Kg	1	100	<25.0	105		74 - 125	20
Toluene		102	µg/Kg	1	100	<25.0	102		72 - 120	20
Toluene		102	µg/Kg	1	100	<25.0	102		72 - 134	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		42.82	µg/Kg	1	50	85	89 - 110
Toluene-d8		47.90	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		48.89	µg/Kg	1	50	97	81 - 105

MSD

QC Batch: QC09800

Param	Flag	Sample Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec.	RPD	% Rec. Limit	RPD Limit
Benzene		99	µg/Kg	1	100	<25.0	99	6	74 - 125	20
Toluene		96	µg/Kg	1	100	<25.0	96	6	72 - 120	20

Surrogate	Flag	Result	Units	Dil.	Spike Amount	% Rec.	% Rec. Limit
Dibromofluoromethane		42.75	µg/Kg	1	50	85	89 - 110
Toluene-d8		47.77	µg/Kg	1	50	95	95 - 107
4-Bromofluorobenzene		47.71	µg/Kg	1	50	95	81 - 105

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QC Batch: QC09719

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.92	92	75 - 125	3/12/01

ICV (1)

QC Batch: QC09719

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.927	92	75 - 125	3/12/01

CCV (1)

QC Batch: QC09723

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	225	90	75 - 125	3/13/01
n-Octane		mg/Kg	250	253	101	75 - 125	3/13/01

CCV (2)

QC Batch: QC09723

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	219	87	75 - 125	3/13/01
n-Octane		mg/Kg	250	237	94	75 - 125	3/13/01

CCV (3)

QC Batch: QC09723

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	215	86	75 - 125	3/13/01
n-Octane		mg/Kg	250	250	100	75 - 125	3/13/01

ICV (1)

QC Batch: QC09723

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	224	89	75 - 125	3/13/01
n-Octane		mg/Kg	250	243	97	75 - 125	3/13/01

CCV (1)

QC Batch: QC09757

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.91	91	75 - 125	3/13/01

ICV (1)

QC Batch: QC09757

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.86	86	75 - 125	3/13/01

CCV (1)

QC Batch: QC09768

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	103	103	75 - 125	3/16/01

CCV (2)

QC Batch: QC09768

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	104	104	75 - 125	3/16/01

ICV (1)

QC Batch: QC09768

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	103	103	75 - 125	3/16/01

CCV (1)

QC Batch: QC09776

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.53	101	80 - 120	3/13/01
CL		mg/L	12.50	11.97	95	80 - 120	3/13/01
Fluoride		mg/L	2.50	2.43	97	80 - 120	3/13/01
Nitrate-N		mg/L	2.50	2.63	105	80 - 120	3/13/01
Sulfate		mg/L	12.50	12.47	99	80 - 120	3/13/01

ICV (1)

QC Batch: QC09776

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.59	103	80 - 120	3/13/01
CL		mg/L	12.50	11.98	95	80 - 120	3/13/01
Fluoride		mg/L	2.50	2.42	96	80 - 120	3/13/01
Nitrate-N		mg/L	2.50	2.60	104	80 - 120	3/13/01
Sulfate		mg/L	12.50	12.49	99	80 - 120	3/13/01

CCV (1)

QC Batch: QC09778

Continued . .

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.50	100	80 - 120	3/13/01
CL		mg/L	12.50	12.05	96	80 - 120	3/13/01
Fluoride		mg/L	2.50	2.48	99	80 - 120	3/13/01
Nitrate-N		mg/L	2.50	2.67	106	80 - 120	3/13/01
Sulfate		mg/L	12.50	12.66	101	80 - 120	3/13/01

ICV (1)

QC Batch: QC09778

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.53	101	80 - 120	3/13/01
CL		mg/L	12.50	11.97	95	80 - 120	3/13/01
Fluoride		mg/L	2.50	2.43	97	80 - 120	3/13/01
Nitrate-N		mg/L	2.50	2.63	105	80 - 120	3/13/01
Sulfate		mg/L	12.50	12.47	99	80 - 120	3/13/01

CCV (1)

QC Batch: QC09800

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/Kg	100	103	103	80 - 120	3/15/01
1,1-Dichloroethene		µg/Kg	100	98	98	80 - 120	3/15/01
Chloroform		µg/Kg	100	112	112	80 - 120	3/15/01
1,2-Dichloropropane		µg/Kg	100	106	106	80 - 120	3/15/01
Toluene		µg/Kg	100	106	106	80 - 120	3/15/01
Chlorobenzene		µg/Kg	100	100	100	80 - 120	3/15/01
Ethylbenzene		µg/Kg	100	104	104	80 - 120	3/15/01
Dibromofluoromethane		µg/Kg	50	51.83	103	80 - 120	3/15/01
Toluene-d8		µg/Kg	50	47.40	94	80 - 120	3/15/01
4-Bromofluorobenzene		µg/Kg	50	52.17	104	80 - 120	3/15/01

CCV (1)

QC Batch: QC09805

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/Kg	100	99	99	80 - 120	3/17/01
1,1-Dichloroethene		µg/Kg	100	99	99	80 - 120	3/17/01
Chloroform		µg/Kg	100	110	110	80 - 120	3/17/01
1,2-Dichloropropane		µg/Kg	100	99	99	80 - 120	3/17/01

Continued ...

... *Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Toluene		µg/Kg	100	98	98	80 - 120	3/17/01
Chlorobenzene		µg/Kg	100	98	98	80 - 120	3/17/01
Ethylbenzene		µg/Kg	100	100	100	80 - 120	3/17/01
Dibromofluoromethane		µg/Kg	50	52.70	105	80 - 120	3/17/01
Toluene-d8		µg/Kg	50	48.24	96	80 - 120	3/17/01
4-Bromofluorobenzene		µg/Kg	50	51.82	103	80 - 120	3/17/01

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Larson & Associates, Inc.
P.O. Box 50685
Midland, Tx. 79710

Report Date: March 30, 2001

Order ID Number: A01030925

Project Number: 00-0107
Project Name: J.C. Turner
Project Location: Lea County, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis. Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
166472	BH-12, 4-5.4'	Soil	3/6/01	12:12	3/9/01
166474	BH-12, 10-11.7'	Soil	3/6/01	10:38	3/9/01
166475	BH-12, 12-12.9'	Soil	3/6/01	10:45	3/9/01
166476	BH-12, 14-15.2'	Soil	3/6/01	10:53	3/9/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 166472 - BH-12, 4-5.4'

Analysis:	TPH	Analytical Method:	E 418.1	QC Batch:	QC09844	Date Analyzed:	3/20/01
Analyst:	BP	Preparation Method:	E 3550B	Prep Batch:	PB08446	Date Prepared:	3/20/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		19200	mg/Kg	1	10

Sample: 166474 - BH-12, 10-11.7'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09977	Date Analyzed:	3/23/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08569	Date Prepared:	3/23/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		28.6	µg/Kg	25	1
m,p-Xylene		27.8	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
Test Comments	[1]	note:	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.80	µg/Kg	1	50	101	89 - 110
Toluene-d8		49.63	µg/Kg	1	50	99	91 - 114
4-Bromofluorobenzene		50.74	µg/Kg	1	50	101	-

Sample: 166474 - BH-12, 10-11.7'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC10015	Date Analyzed:	3/23/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08606	Date Prepared:	3/21/01

Param	Flag	Result	Units	Dilution	RDL
CL		78	mg/Kg	5	0.50

Sample: 166474 - BH-12, 10-11.7'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC10080	Date Analyzed:	3/29/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB08663	Date Prepared:	3/23/01

Param	Flag	Result	Units	Dilution	RDL
DRO		770	mg/Kg	5	50

Sample: 166474 - BH-12, 10-11.7'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09906	Date Analyzed:	3/20/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08483	Date Prepared:	3/19/01

[1] sample ran out of hold time

Param	Flag	Result	Units	Dilution	RDL
GRO		42.98	mg/Kg	25	0.10

Sample: 166475 - BH-12, 12-12.9'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09977	Date Analyzed:	3/23/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08569	Date Prepared:	3/23/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
Test Comments	[2]	note:	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.29	µg/Kg	1	50	94	89 - 110
Toluene-d8		49.88	µg/Kg	1	50	99	91 - 114
4-Bromofluorobenzene		50.48	µg/Kg	1	50	100	-

Sample: 166475 - BH-12, 12-12.9'

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC10015	Date Analyzed:	3/23/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB08606	Date Prepared:	3/21/01

Param	Flag	Result	Units	Dilution	RDL
CL		97	mg/Kg	5	0.50

Sample: 166475 - BH-12, 12-12.9'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC10080	Date Analyzed:	3/29/01
Analyst:	BP	Preparation Method:	3550 B	Prep Batch:	PB08663	Date Prepared:	3/23/01

Param	Flag	Result	Units	Dilution	RDL
DRO		682	mg/Kg	5	50

Sample: 166475 - BH-12, 12-12.9'

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC09906	Date Analyzed:	3/20/01
Analyst:	JW	Preparation Method:	5035	Prep Batch:	PB08483	Date Prepared:	3/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		28.47	mg/Kg	25	0.10

Sample: 166476 - BH-12, 14-15.2'

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC09977	Date Analyzed:	3/23/01
Analyst:	JG	Preparation Method:	E 5035	Prep Batch:	PB08569	Date Prepared:	3/23/01

[2]sample ran out of hold time

Param	Flag	Result	Units	Dilution	RDL
Benzene		<25.0	µg/Kg	25	1
Toluene		<25.0	µg/Kg	25	1
Ethylbenzene		<25.0	µg/Kg	25	1
m,p-Xylene		<25.0	µg/Kg	25	1
o-Xylene		<25.0	µg/Kg	25	1
Test Comments	[3]	note:	µg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		45.77	µg/Kg	1	50	91	89 - 110
Toluene-d8		49.51	µg/Kg	1	50	99	91 - 114
4-Bromofluorobenzene		49.10	µg/Kg	1	50	98	-

Sample: 166476 - BH-12, 14-15.2'

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC10015 Date Analyzed: 3/23/01
Analyst: JS Preparation Method: N/A Prep Batch: PB08606 Date Prepared: 3/21/01

Param	Flag	Result	Units	Dilution	RDL
CL		140	mg/Kg	5	0.50

Sample: 166476 - BH-12, 14-15.2'

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC10080 Date Analyzed: 3/29/01
Analyst: BP Preparation Method: 3550 B Prep Batch: PB08663 Date Prepared: 3/23/01

Param	Flag	Result	Units	Dilution	RDL
DRO		115	mg/Kg	1	50

Sample: 166476 - BH-12, 14-15.2'

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC09906 Date Analyzed: 3/20/01
Analyst: JW Preparation Method: 5035 Prep Batch: PB08483 Date Prepared: 3/19/01

Param	Flag	Result	Units	Dilution	RDL
GRO		8.535	mg/Kg	25	0.10

[3]sample ran out of hold time

Quality Control Report
Method Blank

Method Blank

QCBatch: QC09844

Param	Flag	Results	Units	Reporting Limit
TRPHC		<10.0	mg/Kg	10

Method Blank

QCBatch: QC09906

Param	Flag	Results	Units	Reporting Limit
GRO		<1.3	mg/Kg	0.10

Method Blank

QCBatch: QC09977

Param	Flag	Results	Units	Reporting Limit
Benzene		<25.0	µg/Kg	1
Toluene		<25.0	µg/Kg	1
Ethylbenzene		<25.0	µg/Kg	1
m,p-Xylene		<25.0	µg/Kg	1
o-Xylene		<25.0	µg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.95	µg/Kg	1	50	101	89 - 110
Toluene-d8		49.77	µg/Kg	1	50	99	91 - 114
4-Bromofluorobenzene		49.16	µg/Kg	1	50	98	-

Method Blank

QCBatch: QC10015

Param	Flag	Results	Units	Reporting Limit
CL		87.51	mg/Kg	0.50

Method Blank

QCBatch: QC10080

Param	Flag	Results	Units	Reporting Limit
DRO		<50	mg/Kg	50

Quality Control Report

Lab Control Spikes and Duplicate Spikes

LCS QCBatch: QC09844

Param	Flag	LCS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
TRPHC		217	mg/Kg	1	250	<10.0	86	70 - 130

LCSD QCBatch: QC09844

Param	Flag	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
TRPHC		212	mg/Kg	1	250	<10.0	2	20

LCS QCBatch: QC09906

Param	Flag	LCS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
GRO		0.86	mg/Kg	1	1	<1.3	86	70 - 130

LCSD QCBatch: QC09906

Param	Flag	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
GRO		0.96	mg/Kg	1	1	<1.3	10	20

LCS QCBatch: QC09977

Param	Flag	LCS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
1,1-Dichloroethene		109	µg/Kg	1	100	<25.0	109	67 - 131
Benzene		100	µg/Kg	1	100	<25.0	100	74 - 120
Trichloroethene (TCE)		92	µg/Kg	1	100	<25.0	92	74 - 115
Toluene		99	µg/Kg	1	100	<25.0	99	74 - 117
Chlorobenzene		101	µg/Kg	1	100	<25.0	101	81 - 116

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.95	µg/Kg	1	50	101	89 - 110
Toluene-d8		50.79	µg/Kg	1	50	101	91 - 114
4-Bromofluorobenzene		45.37	µg/Kg	1	50	90	-

LCSD QCBatch: QC09977

Param	Flag	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
1,1-Dichloroethene		110	µg/Kg	1	100	<25.0	0	20
Benzene		100	µg/Kg	1	100	<25.0	0	20
Benzene		100	µg/Kg	1	100	<25.0	0	20
Trichloroethene (TCE)		94	µg/Kg	1	100	<25.0	2	20
Toluene		102	µg/Kg	1	100	<25.0	2	20
Chlorobenzene		102	µg/Kg	1	100	<25.0	0	20
Chlorobenzene		102	µg/Kg	1	100	<25.0	0	20

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.43	µg/Kg	1	50	104	89 - 110
Toluene-d8		50.18	µg/Kg	1	50	100	91 - 114
4-Bromofluorobenzene		45.45	µg/Kg	1	50	90	-

LCS QCBatch: QC10015

Param	Flag	LCS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
CL	[4]	110.04	mg/Kg	1	25	87.51	440	90 - 110

LCSD QCBatch: QC10015

Param	Flag	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
CL	[5]	110.26	mg/Kg	1	6.25	87.51	0	20

LCS QCBatch: QC10080

Param	Flag	LCS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
DRO		270	mg/Kg	1	250	<50	108	70 - 130

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		205	mg/Kg	1	250	82	70 - 130

LCSD QCBatch: QC10080

[4]Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.
[5]Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.

Param	Flag	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
DRO		282	mg/Kg	1	250	<50	4	20

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		214	mg/Kg	1	250	85	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

MS

QCBatch: QC09844

Param	Flag	MS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
TRPHC		217	mg/Kg	1	250	<10.0	86	70 - 130

MSD

QCBatch: QC09844

Param	Flag	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
TRPHC		227	mg/Kg	1	250	<10.0	4	20

MS

QCBatch: QC09977

Param	Flag	MS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
Benzene		98	µg/Kg	1	100	<25.0	98	74 - 125
Toluene		96	µg/Kg	1	100	<25.0	96	72 - 120

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		45.55	µg/Kg	1	50	91	89 - 110
Toluene-d8		50.11	µg/Kg	1	50	100	91 - 114
4-Bromofluorobenzene		47.70	µg/Kg	1	50	95	-

MSD

QCBatch: QC09977

Param	Flag	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
Benzene		93	µg/Kg	1	100	<25.0	5	20
Toluene		91	µg/Kg	1	100	<25.0	5	20

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		45.21	µg/Kg	1	50	90	89 - 110
Toluene-d8		50.30	µg/Kg	1	50	100	91 - 114
4-Bromofluorobenzene		47.65	µg/Kg	1	50	95	-

MS QCBatch: QC10015

Param	Flag	MS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
CL		192.99	mg/Kg	1	62.50	140	84	70 - 115

MSD QCBatch: QC10015

Param	Flag	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
CL		194.75	mg/Kg	1	6.25	140	3	20

MS QCBatch: QC10080

Param	Flag	MS Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	% Rec Limit
DRO		343	mg/Kg	1	250	115	91	70 - 130

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		202	mg/Kg	1	250	80	70 - 130

MSD QCBatch: QC10080

Param	Flag	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	RPD	RPD Limit
DRO		353	mg/Kg	1	250	115	4	20

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		207	mg/Kg	1	250	82	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC09844

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	75 - 125	3/20/01

CCV (2)

QCBatch: QC09844

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	75 - 125	3/20/01

ICV (1)

QCBatch: QC09844

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	107	107	75 - 125	3/20/01

CCV (1)

QCBatch: QC09906

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.89	89	75 - 125	3/20/01

ICV (1)

QCBatch: QC09906

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1	0.97	97	75 - 125	3/20/01

CCV (1)

QCBatch: QC09977

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/Kg	100	104	104	-	3/23/01
1,1-Dichloroethene		µg/Kg	100	110	110	80 - 120	3/23/01
Chloroform		µg/Kg	100	108	108	80 - 120	3/23/01
1,2-Dichloropropane		µg/Kg	100	100	100	-	3/23/01
Toluene		µg/Kg	100	99	99	80 - 120	3/23/01
Chlorobenzene		µg/Kg	100	100	100	80 - 120	3/23/01
Ethylbenzene		µg/Kg	100	102	102	80 - 120	3/23/01
Dibromofluoromethane		µg/Kg	50	52.02	104	80 - 120	3/23/01
Toluene-d8		µg/Kg	50	49.76	99	80 - 120	3/23/01
4-Bromofluorobenzene		µg/Kg	50	52.71	105	-	3/23/01

CCV (1) QCBatch: QC10015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.45	98	90 - 110	3/23/01
CL		mg/L	12.50	11.93	95	90 - 110	3/23/01
Fluoride		mg/L	2.50	2.42	96	90 - 110	3/23/01
Nitrate-N		mg/L	2.50	2.51	100	90 - 110	3/23/01
Sulfate		mg/L	12.50	12.24	97	90 - 110	3/23/01

ICV (1) QCBatch: QC10015

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.46	98	90 - 110	3/23/01
CL		mg/L	12.50	11.92	95	90 - 110	3/23/01
Fluoride		mg/L	2.50	2.42	96	90 - 110	3/23/01
Nitrate-N		mg/L	2.50	2.50	100	90 - 110	3/23/01
Sulfate		mg/L	12.50	12.25	98	90 - 110	3/23/01

CCV (1) QCBatch: QC10080

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	224	89	75 - 125	3/29/01
n-Octane		mg/Kg	250	202	80	75 - 125	3/29/01

ICV (1) QCBatch: QC10080

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	274	109	75 - 125	3/29/01
n-Octane		mg/Kg	250	224	89	75 - 125	3/29/01

701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01030925

Company Name: Larson and Associates, Inc. Phone #: (915) 687-0901

Address: (Street, City, Zip) 507 N. Marienfield, Ste 202 79701 Fax #: (915) 687-0456

Contact Person: Mark Larson

Invoice to: (if different from above) P.O. Box 50685, Midland, TX 79710-0685

Project #: 00-0107 Project Name: JC Turner

Project Location: Lea County, NM Sampler Signature:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
6470	BH-12, 0-1.4'	1	250g	✓							✓			3/6/01	1155
71	" 2-2.9'	1		✓							✓				1159
72	" 4-5.4'	1		✓							✓				1212
73	" 5-6.15'	1		✓							✓				1225
74	" 10-11.7'	1		✓							✓				1238
75	" 12-12.9'	1		✓							✓				1245
76	" 14-15.2'	1		✓							✓				1253
77	" 16-17.0'	1		✓							✓				1303
78	" 18-18.2'	1		✓							✓				1120
79	BH-13 0-2'	1		✓							✓			3/7/01	0945
80	" 2-3.3'	1		✓							✓			3/6/01	1400

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	BTEX (8260)	TPH (8015B) GRO + DRO	Chloride	Turn Around Time if different from standard (Days)	Hold
		✓												✓	✓	✓	✓	7	
		X												✓	✓	✓	✓	7	
														✓	X	X	X		✓
		X	8270											✓	X	X	X		✓
														✓	X	X	X		✓
														✓	X	X	X		✓
														✓	✓	✓	✓	7	
																			✓
																			✓

Relinquished by: Date: Time: 3/8/01 1000

Received by: Helen Shelton 3/08/01 1000

Relinquished by: Helen Shelton 3/08/01 1830

Received by: Date: Time:

Relinquished by: Date: Time:

Received at Laboratory by: Date: Time:
Nell Green 3-9-01

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review

REMARKS:
add
1/2

☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. (1 sample-HC)

Carrier # Three D Ground

701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01030925

Company Name: Larson and Associates, Inc. Phone #: (915) 687-0901

Address: (Street, City, Zip) 507 N. Marienfield, Ste 202, 79701 Fax #: (915) 687-0456

Contact Person: Mark Larson

Invoice to: (If different from above) P.O. Box 50685, Midland, Tx 79710-0685

Project #: 00-0107 Project Name: JC Turner

Project Location: Lea County, NM Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
6481	BH-13, 4-5.3'	1	250g	✓							✓			3/6/01	1405
82	" 6-7.4'	1		✓							✓				1410
83	" 8-9.4'	1		✓							✓				1420
84	" 10-11.4'	1		✓							✓				1428
85	" 12-13.4'	1		✓							✓				1453
86	" 14-15.7'	1		✓							✓				1504
87	" 16-17.9'	1		✓							✓				1510
88	" 18-19.5'	1		✓							✓				1520
89	BH-14, 0-2'	1		✓							✓			3/7/01	0825
90	" 2-3.3'	1		✓							✓			3/6/01	1555
91	" 4-5.7'	1		✓							✓				1555

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	BTEX (8260)	TPH (8015B) GRO + DRO	Chloride			Turn Around Time if different from standard (Days)	Hold
		✓																			
														✓	✓	✓	✓			7	✓
														✓	✓	✓	✓			7	✓
														✓	✓	✓	✓			7	✓

Relinquished by: Date: 3/8/01 Time: 1000 Received by: Date: Time:

Relinquished by: Date: 3/08/01 Time: 1830 Received by: Date: Time:

Relinquished by: Date: Time: Received at Laboratory by: Date: Time:

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier #

701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A010 30925

Company Name: Larson and Associates, Inc. Phone #: (915) 687-0901

Address: (Street, City, Zip) 507 N. Marienfeld, Ste 202, 79701 Fax #: (915) 687-0456

Contact Person: Mark Larson

Invoice to: (If different from above) P.O. Box 50685, Midland, TX 79710-0685

Project #: 00-0107 Project Name: JC Turner

Project Location: Lea County, NM Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
6492	BH-14, 6-7.6'	1	250 S	✓							✓			3/6/01	1602
93	" 8-9.4'	1		✓							✓				1609
94	" 10-11.4'	1		✓							✓				1617
95	" 12-12.2'	1		✓							✓				1623
96	" 14-15.2'	1		✓							✓				1630
97	" 16-16.5'	1		✓							✓				1637
98	" 18-19.4'	1		✓							✓				1650
99	" 20-22'	1		✓							✓				1658
500	" 22-23.7'	1		✓							✓				1712
501	" 24-26'	1		✓							✓				1721
502	" 26-27.5'	1	↓	✓							✓			↓	1735

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	BTEX (8260)	TPH (8015B) GRO+DRO	Chlorides			Turn Around Time if different from standard (Days)	Hold
														✓	✓	✓	✓			7	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	3/8/01	1000	Helen Shelton	3/8/01	1000
Helen Shelton	3/08/01	1830			
			Received at Laboratory by:	Date:	Time:
			Nell Green	3-9-01	

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 11 samples-11

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # Allen Brand

701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01030925

Company Name: Larson and Associates, Inc. Phone #: (915) 687-0901

Address: (Street, City, Zip) 507 N. Marienfeld, Ste. 202 79701 Fax #: (915) 687-0456

Contact Person: Mark Larson

Invoice to: (If different from above) P.O. Box 50685 Midland, TX 79710-0685

Project #: 00-0107 Project Name: JC Turner

Project Location: Lea County, NM Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
6503	BH-14, 28-29	1	250g		✓							✓		3/6/01	1743

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	BTEX (8260)	TPH (8015B) GRO + DRO	Chlorides	Turn Around Time if different from standard (Days)	Hold
														✓	✓	✓	✓	7	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	3/8/01	1000	Helen Shelton	3/08/01	1000
Helen Shelton	3/08/01	1830			
			Received at Laboratory by:	Date:	Time:
			Nell Green	3-9-01	

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 1 sample-HS

Carrier # Greyhound