

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

NSE00829141208

OPERATOR Initial Report Final Report

Name of Company - OXY USA	Contact - Kelton Beaird
Address - P O Box 1988 / 102 South Main St., Carlsbad, NM	Telephone No. 575-887-8337
Facility Name: Harroun 15 #15	Facility Type: Battery
Surface Owner: <u>32015 33317</u>	Mineral Owner
	Lease No.

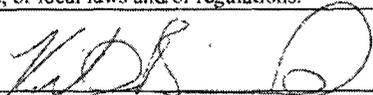
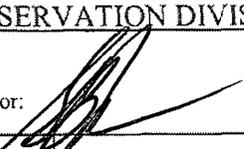
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	15	24S	29E					Eddy

Latitude 32° 13' 10.30" Longitude 103° 58' 40.24"

NATURE OF RELEASE

Type of Release: Condensate	Volume of Release: 50 bbls	Volume Recovered: 10 bbls
Source of Release: Hole in bottom of steel tank	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD; Jim Amos - BLM	
By Whom? Kelton Beaird	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.*		
Describe Area Affected and Cleanup Action Taken.* Spill from hole in tank inside battery. The spill was contained inside the berm. A limited soil assessment was conducted to determine area of impact. Following soil sampling and analysis a work plan was prepared detailing the limited soil assessment activities as well as outlining the proposed remedial activities. Following OCD approval, remedial excavation activities were initiated in the north section of the tank battery. Approximately 131 yards of petroleum hydrocarbon affected soil was excavated and disposed of at the Lea Land Inc landfill. Confirmation soil samples confirmed BTEX and TPH concentrations below action levels of 100 mg/kg for TPH, 10 mg/kg for Benzene, and 100 mg/kg for BTEX. Following OCD notification of results and subsequent approval, the excavation was backfilled with soil obtained from an off-site source. No additional soil cover was placed due to the continued use of the site as an active tank battery. All site remedial activities are documented in the <i>Site Closure Report</i> , dated March 18, 2009 prepared by Talon/LPE on behalf of Oxy USA.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Kelton Beaird	Approved by District Supervisor: 	
Title: HES Specialist	Approval Date: <u>4-28-09</u>	Expiration Date: <u>N/A</u>
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval: <u>N/A</u>	Attached <input type="checkbox"/> <u>N/A</u>
Date: 3-20-09	Phone: 575-887-8337	

* Attach Additional Sheets If Necessary

2RR 254



AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806 467.0607
Fax 806 467 0622

SITE CLOSURE REPORT

AUSTIN
3003 Tom Gary Cove
Building C-100
Round Rock, Texas 78664
Phone 512 989 3428
Fax 512 989 3487

HARROUN 15 #15 WELL SITE EDDY COUNTY, NEW MEXICO

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88241
Phone 505 393 4261
Fax 505 393 4658

MIDLAND
2901 State Highway 349
Midland, Texas 79706
Phone 432 522 2133
Fax 432 522 2180

SAN ANTONIO
17170 Jordan Road
Suite 102
Selma, Texas 78154
Phone 210 579 0235
Fax 210 568 2191

TULSA
9906 East 43rd Street
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Phone 918 742 0871
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PREPARED FOR:

OCCIDENTAL PERMIAN LTD.
6 DESTA.DRIVE, SUITE 6000
MIDLAND, TX 79705-5505

TYLER
719 West Front Street
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PREPARED BY:

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921 N. BIVINS
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ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
EMERGENCY RESPONSE

MARCH 18, 2009

Toll Free 866 742 0742
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SITE CLOSURE REPORT

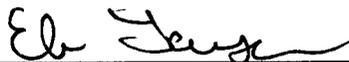
**HARROUN 15 #15 WELL SITE
EDDY COUNTY, NEW MEXICO**

PREPARED BY:

**TALON/LPE
921 N. BIVINS
AMARILLO, TEXAS 79107**



**J.T. Murrey
Senior Project Manager**



**Eb Taylor
Division Manager**

MARCH 18, 2009

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1.0 OBJECTIVES

1.1 SITE CLOSURE OBJECTIVES

This Site Closure Report (report) has been prepared for Oxy USA Inc. (Oxy) to provide details of site closure activities for affected soil located within the tank battery at the Oxy Harroun 15 #15 Well Site in Eddy County, New Mexico.

The site closure activities were proposed in the Site Closure Work Plan, dated January 20, 2009 and were approved by the New Mexico Oil Conservation Division (NMOCD) in a letter dated January 26, 2009. The objectives of the site closure activities were to excavate and haul off petroleum hydrocarbon affected soil identified during the limited site assessment conducted on November 18, 2009. Details of the limited site assessment activities were included in the Site Closure Work Plan.

2.0 SITE CLOSURE ACTIVITIES

2.1 EXCAVATION AND OFF-SITE DISPOSAL

Due to identified petroleum hydrocarbon affected soil near temporary monitoring well MW-2, remedial excavation activities were conducted in the northern portion of the tank battery.

2.1.1 Excavation Activities

An area of approximately 35 feet by 40 feet was excavated using a backhoe and trackhoe to approximately 10-feet below ground surface (bgs). No visible impact was observed at 10-foot bgs depth; therefore, confirmation samples were collected as outlined in Section 2.1.2 and the excavation was backfilled as outlined in Section 2.1.3. Due to the area of excavation, one (1) above ground storage tank was temporarily re-located so the excavation activities could be conducted in a safe and efficient manner. The location of the excavation area is presented on Figure 2.

Excavated soil was immediately loaded into dump trucks for transportation to Lea Land Inc. Landfill. Approximately 131 yards of affected soil was excavated, transported, and disposed of at the Lea Land Inc. Landfill. Copies of waste manifests are on file at Talon/LPE.

2.1.2 Confirmation Sampling

Once all visually impacted soil was removed, discrete confirmation soil samples were collected from the bottom and sidewalls of the excavation. Personnel wearing new disposable gloves collected soil samples and placed the samples in laboratory-supplied containers which were sealed with Teflon lined caps, labeled, and subsequently placed on ice in a covered, insulated cooler and chilled to 40°F. The soil samples were shipped to Trace Analysis Inc. in Midland, Texas for analysis. The collected soil samples were analyzed for BTEX by EPA Method SW846 8021B and TPH by EPA Method 418.1. The following NMOCD limits were used to determine whether additional investigation and/or excavation was required:

Constituent	Regulatory Limits (mg/Kg)
Total TPH	100
Benzene	10
BTEX	50.0

2.1.3 Analytical Results

Analytical results indicate BTEX concentrations in all soil samples were below the laboratory reporting limit of <0.0100 mg/Kg. TPH concentrations range from below laboratory reporting limits (<10.0 mg/Kg) to 35.8 mg/Kg (SW-3). A summary of the soil sample analytical results is presented on Table 1 – Appendix B. Certified copies of the laboratory analytical results and proper chain of custody documentation are presented in Appendix C.

2.1.4 Excavation Backfill

Following excavation of the visibly impacted soil and evaluation of analytical results from confirmation soil sampling, the excavation was backfilled and compacted. The soil cover consisted of approximately 440 yards of compacted non-waste containing, earthen material obtained from an off-site source. The area was compacted with heavy equipment so that the tank farm could be placed back into service.

3.0 CONCLUSIONS AND RECOMENDATIONS

Due to identified petroleum hydrocarbon affected soil near temporary monitoring well MW-2, remedial excavation activities were conducted in the northern portion of the tank battery. An area of approximately 35 feet by 40 feet by 10 feet deep was excavated to remove the affected soil. No visible impact was observed at 10-feet bgs depth; therefore, confirmation samples were collected and submitted for laboratory analysis. Analytical results indicated non-detectable concentrations of BTEX and TPH with the exception of one (1) sample (SW-3) which reported a TPH concentration of 35.8 mg/Kg. Approximately 131 yards of affected soil was excavated, transported, and disposed of at the Lea Land Inc. Landfill. Following excavation of the visibly impacted soil and evaluation of analytical results from confirmation soil sampling, the excavation was backfilled and compacted.

Based on analytical data from soil samples collected at the site, no further assessment and/or remediation is planned for the site and closure of the site soils should be requested from the NMOCD.

Appendix A

Figures

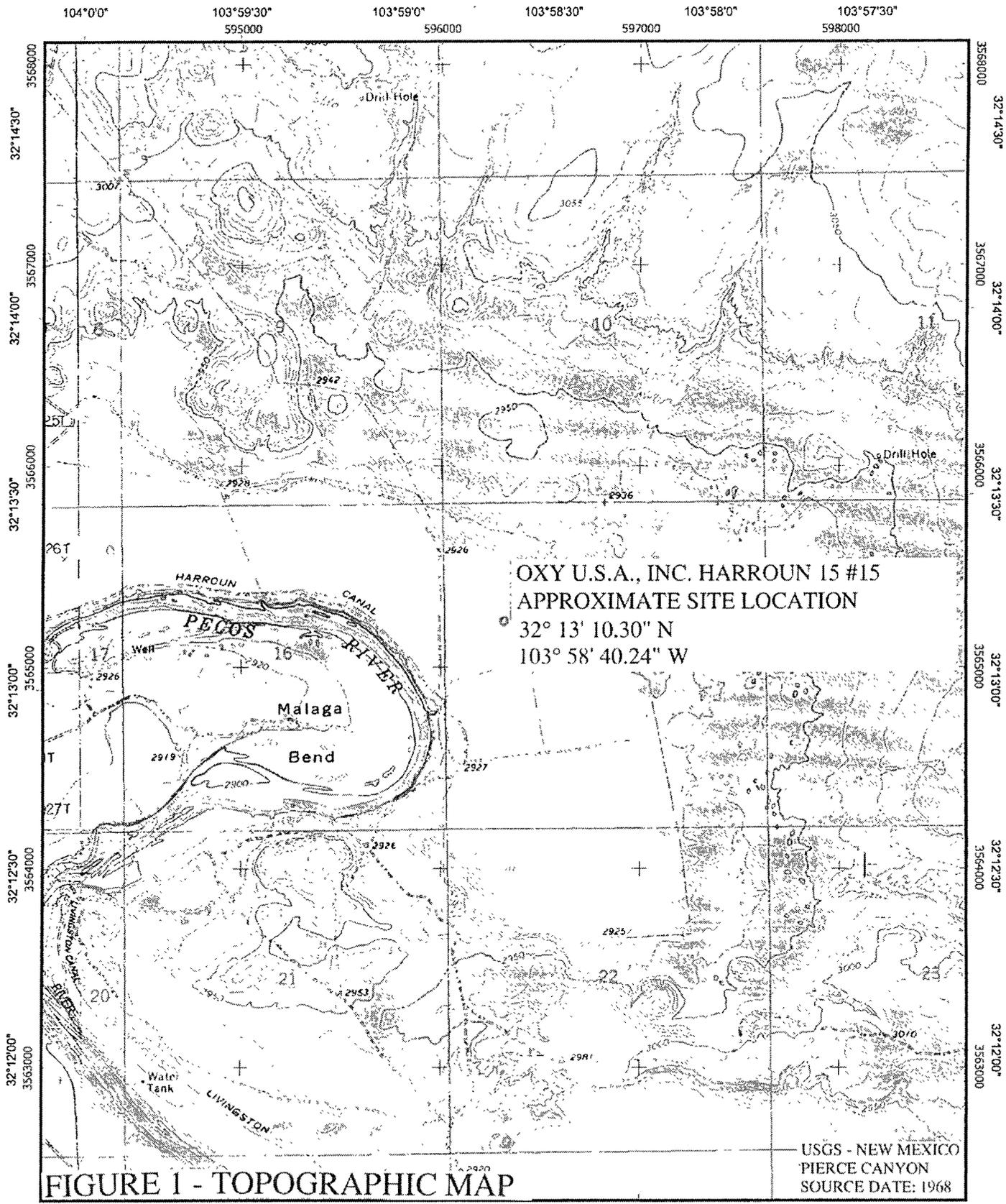
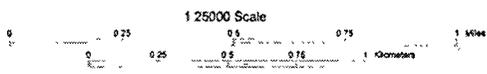


FIGURE 1 - TOPOGRAPHIC MAP

USGS - NEW MEXICO
 PIERCE CANYON
 SOURCE DATE: 1968

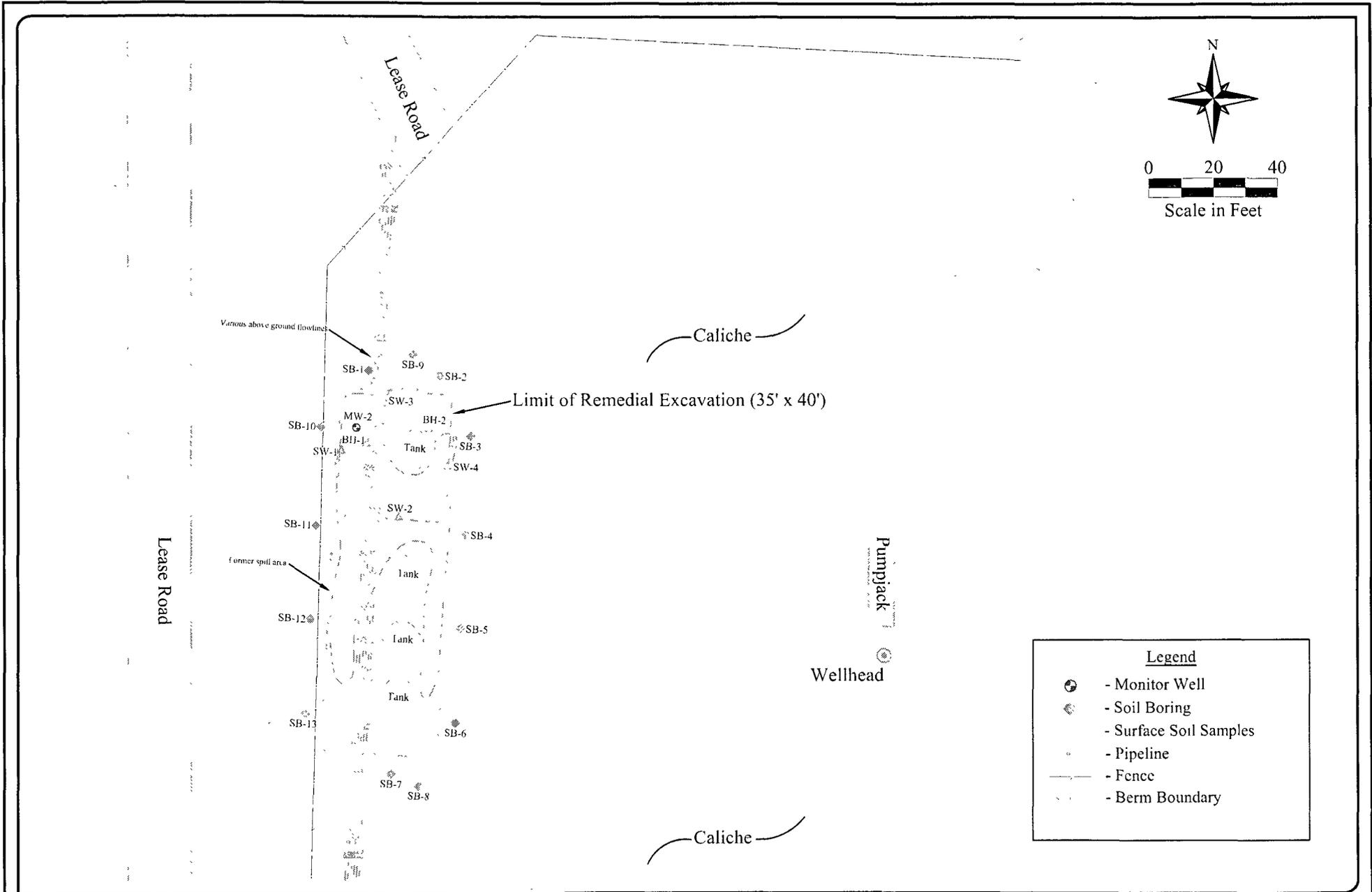
104°0'0" 103°59'30" 103°59'0" 103°58'30" 103°58'0" 103°57'30"



Universal Transverse Mercator (UTM) Projection Zone 13
 North American Datum of 1983 (NAD83)
 UTM Grid shown in Blue



Magnetic declination at center of map on
 March 18, 2009



Date: 03/18/2008

Scale: 1" = 40'

Drawn By: SJA

OXY U.S.A., Inc. (OXYUSA003REM)

Harron 15 # 15 Well Site

Eddy County, New Mexico

Figure 2 - Site Details Map and Excavation and Soil Sample Location

Appendix B

Analytical Summary Tables



TABLE 1
SUMMARY OF SOIL ANALYTICAL DATA - BTEX AND TPH
OXY USA INC.
HARROUN 15 # 15
EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	DATE SAMPLED	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	BTEX	TPH
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
SW-1	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<10.0
SW-2	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<10.0
SW-3	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	35.8
SW-4	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<10.0
BH-1	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<10.0
BH-2	2/20/2009	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<10.0

1 BTEX = Benzene, toluene, ethylbenzene and xylenes, analyzed by EPA Method SW 846 8021B

2. TPH = Total Petroleum Hydrocarbons by EPA Method 418.1.

Appendix C

Soil Sample Analytical Data Reports and Chain of Custody Documentation

Summary Report

Eb Taylor
 Talon LPE-Hobbs
 318 E Taylor
 Hobbs, NM 88240

Report Date: February 24, 2009

Work Order: 9022325



Project Location: Eddy Co., NM
 Project Name: HARROUN 15 Fed. #15
 Project Number: OXYUSA003REM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
188229	SW-1	soil	2009-02-20	07:15	2009-02-23
188230	SW-2	soil	2009-02-20	07:25	2009-02-23
188231	SW-3	soil	2009-02-20	07:30	2009-02-23
188232	SW-4	soil	2009-02-20	07:41	2009-02-23
188233	BH-1	soil	2009-02-20	08:00	2009-02-23
188234	BH-2	soil	2009-02-20	08:05	2009-02-23

Sample - Field Code	BTEX			
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)
188229 - SW-1	<0.0100	<0.0100	<0.0100	<0.0100
188230 - SW-2	<0.0100	<0.0100	<0.0100	<0.0100
188231 - SW-3	<0.0100	<0.0100	<0.0100	<0.0100
188232 - SW-4	<0.0100	<0.0100	<0.0100	<0.0100
188233 - BH-1	<0.0100	<0.0100	<0.0100	<0.0100
188234 - BH-2	<0.0100	<0.0100	<0.0100	<0.0100

TRACE ANALYSIS, INC.

17740 Taylor Avenue, Suite 500 Hobbs, NM 88240 P.O. Box 1000 Tel: 505-785-1234 Fax: 505-785-1234
 201 East Street, 2nd Floor, Dallas Dallas, Texas 75201 P.O. Box 38800 Tel: 214-741-1400 Fax: 214-741-1400
 8007 East Street, Suite 600 Midland, Texas 79701 P.O. Box 1000 Tel: 409-332-0000 Fax: 409-332-0000
 8070 Harris Parkway, Suite 100 Austin, Texas 78721 P.O. Box 1000 Tel: 512-331-0000 Fax: 512-331-0000

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFVB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX **El Paso:** T104704221-08-TX **Midland:** T104704392-08-TX
 LELAP-02003 LELAP-02002
 Kansas E-10317

Analytical and Quality Control Report

Eb Taylor
 Talon LPE-Hobbs
 318 E Taylor
 Hobbs, NM, 88240

Report Date: February 25, 2009

Work Order: 9022325



Project Location: Eddy Co., NM
 Project Name: Harroun 15 Fed. #15
 Project Number: OXYUSA003REM

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
188229	SW-1	soil	2009-02-20	07:15	2009-02-23
188230	SW-2	soil	2009-02-20	07:25	2009-02-23
188231	SW-3	soil	2009-02-20	07:30	2009-02-23
188232	SW-4	soil	2009-02-20	07:41	2009-02-23
188233	BH-1	soil	2009-02-20	08:00	2009-02-23
188234	BH-2	soil	2009-02-20	08:05	2009-02-23

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, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Harroun 15 Fed. #15 were received by TraceAnalysis, Inc. on 2009-02-23 and assigned to work order 9022325. Samples for work order 9022325 were received intact at a temperature of 4.8 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	48771	2009-02-23 at 17:00	57089	2009-02-23 at 17:00
TPH 418.1	E 418.1	48787	2009-02-24 at 12:00	57110	2009-02-24 at 14:39

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9022325 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 188229 - SW-1

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2009-02-23	Analyzed By: ME
QC Batch: 57089	Sample Preparation: 2009-02-23	Prepared By: ME
Prep Batch: 48771		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.964	mg/Kg	1	1.00	96	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.898	mg/Kg	1	1.00	90	45.2 - 144.3

Sample: 188229 - SW-1

Laboratory: Lubbock	Analytical Method: E 418.1	Prep Method: N/A
Analysis: TPH 418.1	Date Analyzed: 2009-02-24	Analyzed By: CM
QC Batch: 57110	Sample Preparation: 2009-02-24	Prepared By: CM
Prep Batch: 48787		

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188230 - SW-2

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2009-02-23	Analyzed By: ME
QC Batch: 57089	Sample Preparation: 2009-02-23	Prepared By: ME
Prep Batch: 48771		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.961	mg/Kg	1	1.00	96	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.884	mg/Kg	1	1.00	88	45.2 - 144.3

Sample: 188230 - SW-2

Laboratory: Lubbock
 Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
 QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188231 - SW-3

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 Sample Preparation: 2009-02-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.966	mg/Kg	1	1.00	97	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.857	mg/Kg	1	1.00	86	45.2 - 144.3

Sample: 188231 - SW-3

Laboratory: Lubbock
 Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
 QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		35.8	mg/Kg	1	10.0

Sample: 188232 - SW-4

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 Sample Preparation: 2009-02-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.963	mg/Kg	1	1.00	96	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.854	mg/Kg	1	1.00	85	45.2 - 144.3

Sample: 188232 - SW-4

Laboratory: Lubbock
 Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
 QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188233 - BH-1

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 Sample Preparation: 2009-02-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100

continued ...

sample 188233 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.966	mg/Kg	1	1.00	97	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	1	1.00	87	45.2 - 144.3

Sample: 188233 - BH-1

Laboratory: Lubbock
 Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
 QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188234 - BH-2

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 Sample Preparation: 2009-02-23 Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.955	mg/Kg	1	1.00	96	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.898	mg/Kg	1	1.00	90	45.2 - 144.3

Sample: 188234 - BH-2

Laboratory: Lubbock
 Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
 QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Method Blank (1) QC Batch: 57089

QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 QC Preparation: 2009-02-23 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00100	mg/Kg	0.01
Toluene		<0.00100	mg/Kg	0.01
Ethylbenzene		<0.00110	mg/Kg	0.01
Xylene		<0.00360	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.963	mg/Kg	1	1.00	96	65.6 - 130.6
4-Bromofluorobenzene (4-BFB)		0.802	mg/Kg	1	1.00	80	51.9 - 128.1

Method Blank (1) QC Batch: 57110

QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
 Prep Batch: 48787 QC Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	MDL Result	Units	RL
TRPHC		<5.28	mg/Kg	10

Laboratory Control Spike (LCS-1)

QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
 Prep Batch: 48771 QC Preparation: 2009-02-23 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.888	mg/Kg	1	1.00	<0.00100	89	72.7 - 129.8
Toluene	0.894	mg/Kg	1	1.00	<0.00100	89	71.6 - 129.6
Ethylbenzene	0.900	mg/Kg	1	1.00	<0.00110	90	70.8 - 129.7
Xylene	2.63	mg/Kg	1	3.00	<0.00360	88	70.9 - 129.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.879	mg/Kg	1	1.00	<0.00100	88	72.7 - 129.8	1	20
Toluene	0.884	mg/Kg	1	1.00	<0.00100	88	71.6 - 129.6	1	20
Ethylbenzene	0.901	mg/Kg	1	1.00	<0.00110	90	70.8 - 129.7	0	20
Xylene	2.64	mg/Kg	1	3.00	<0.00360	88	70.9 - 129.4	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.960	0.969	mg/Kg	1	1.00	96	97	65.9 - 132
4-Bromofluorobenzene (4-BFB)	0.824	0.834	mg/Kg	1	1.00	82	83	55.2 - 128.9

Laboratory Control Spike (LCS-1)

QC Batch: 57110
 Prep Batch: 48787

Date Analyzed: 2009-02-24
 QC Preparation: 2009-02-24

Analyzed By: CM
 Prepared By: CM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
TRPHC	260	mg/Kg	1	250	<5.28	104	75.5 - 136

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
TRPHC	265	mg/Kg	1	250	<5.28	106	75.5 - 136	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 188234

QC Batch: 57089
 Prep Batch: 48771

Date Analyzed: 2009-02-23
 QC Preparation: 2009-02-23

Analyzed By: ME
 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.758	mg/Kg	1	1.00	<0.00100	76	58.6 - 165.2

continued ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene	0.731	mg/Kg	1	1.00	<0.00100	73	64.2 - 153.8
Ethylbenzene	0.719	mg/Kg	1	1.00	<0.00110	72	61.6 - 159.4
Xylene	2.14	mg/Kg	1	3.00	<0.00360	71	64.4 - 155.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	¹ 0.961	mg/Kg	1	1.00	<0.00100	96	58.6 - 165.2	24	20
Toluene	² 0.952	mg/Kg	1	1.00	<0.00100	95	64.2 - 153.8	26	20
Ethylbenzene	³ 0.958	mg/Kg	1	1.00	<0.00110	96	61.6 - 159.4	28	20
Xylene	⁴ 2.86	mg/Kg	1	3.00	<0.00360	95	64.4 - 155.3	29	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.964	0.961	mg/Kg	1	1	96	96	76 - 127.9
4-Bromofluorobenzene (4-BFB)	1.00	1.01	mg/Kg	1	1	100	101	72 - 127.8

Matrix Spike (MS-1) Spiked Sample: 187705

QC Batch: 57110
 Prep Batch: 48787

Date Analyzed: 2009-02-24
 QC Preparation: 2009-02-24

Analyzed By: CM
 Prepared By: CM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
TRPHC	224	mg/Kg	1	250	<5.28	90	10 - 354

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
TRPHC	235	mg/Kg	1	250	<5.28	94	10 - 354	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 57089

Date Analyzed: 2009-02-23

Analyzed By: ME

¹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
²MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
³MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
⁴MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	87.5	88	80 - 120	2009-02-24
