Remediation Plan

Prepared for
Oxy USA

US 13 Federal # 2 Flowline Leak
Eddy County, NM

2RP# 726

Prepared by
Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
Rio Brazos Road, Aztec, NM 87410
IV
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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – Oxy USA	Contact – Kelton Beaird
Address – 1502 W. Commerce Carlsbad, NM 88220	Telephone No. – 575-628-4121
Facility Name – US 13 Fed #2 Flowline	Facility Type – Flowline from Well

Surface Owner - BLM	Mineral Owner	Lease No. 30-015-34272

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	13	22S	24E					Eddy

Latitude 32° 23.597' N **Longitude** 104° 27.393' W

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release – 80 bbls	Volume Recovered – 0 bbls
Source of Release – Steel Flowline	Date and Hour of Occurrence	Date and Hour of Discovery 2-6-10 @ 7:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Randy Dade – NMOCD, Bob Ballard – BLM	
By Whom? Rick Kerby (HES – Oxy)	Date and Hour -see above	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Steel flowline developed a hole. Area affected was on and off the location to the East approx. 600 feet. Site Ranking for this site is as follows: Wellhead Protection Area – 0 points, Surface Body of Water – 0 points and Groundwater (>100') – 0 points. Total ranking for the site is 0 points. The RAL's for the site are as follows: Chloride – 250ppm, TPH – 5,000ppm and BTEX – 100ppm (using field vapor headspace reading). A delineation was performed using a backhoe. During the delineation impenetrable rock by the backhoe was encountered at 6" at TP1, TP6, TP7 and TP8; impenetrable rock was encountered at 1' at TP5, TP9 and TP10; impenetrable rock was encountered at 2' at TP2, TP3 and TP4.

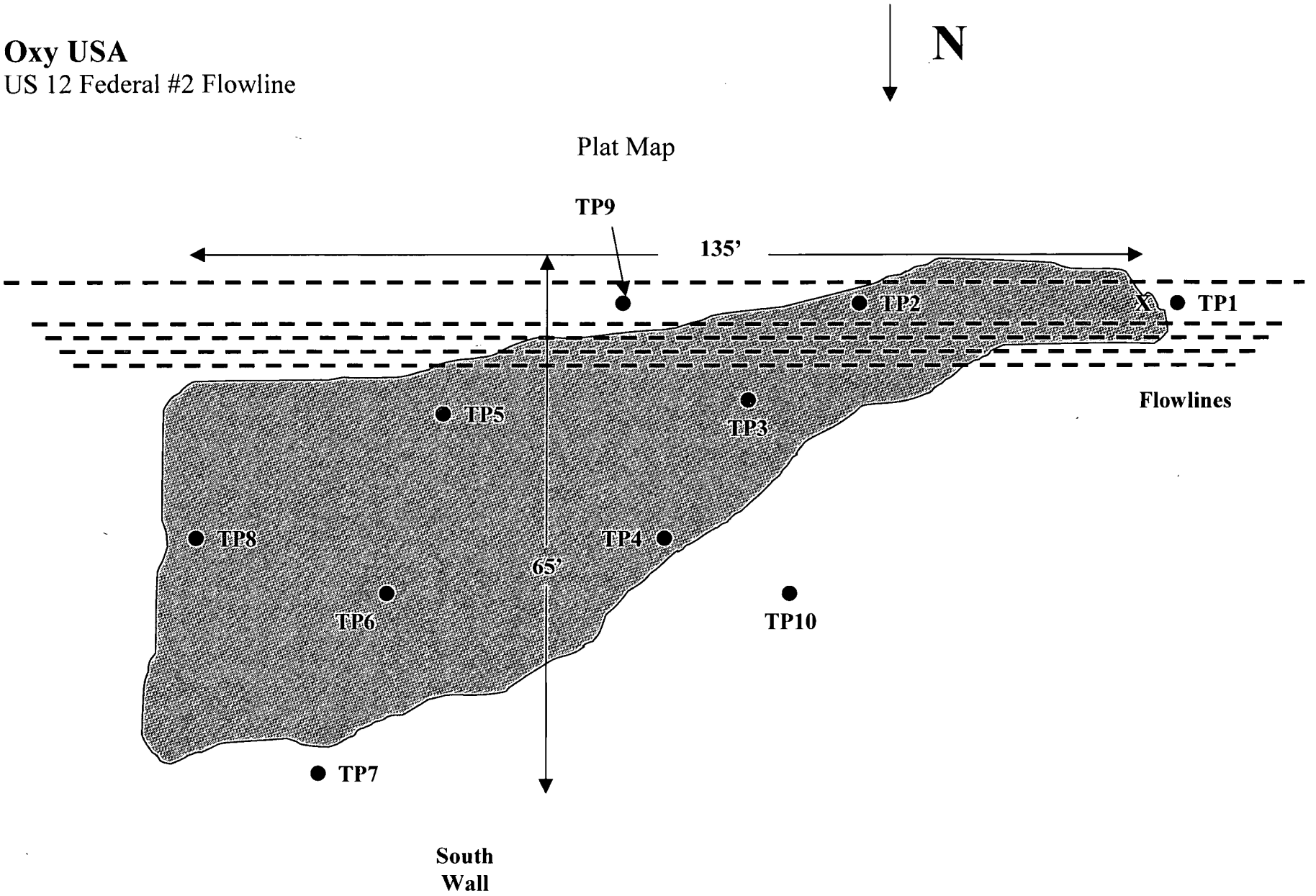
Describe Area Affected and Cleanup Action Taken.* Due to the deep depth of groundwater, impenetrable rock and the low levels of impacted soil Oxy USA proposes leave the spill area un-disturbed. This area will be monitored for growth to assure that the vegetation does not die off by this release.

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:	Expiration Date:
ail Address: kelton_beaird@oxy.com	Conditions of Approval:	Attached ☐
Date: 3-25-10 Phone: 575-628-4121		

* Attach Additional Sheets If Necessary

Oxy USA
US 12 Federal #2 Flowline



Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Bobby Steadham

Site US 13 Federal #2 Flowline

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	3/12/10	3"	18	217	11.3	32°23.597' N 104°27.393' W
TP1	3/12/10	6"	23	245	9.5	32°23.597' N 104°27.393' W
TP2	3/12/10	1'	11	532	13.6	32°23.594' N 104°27.384' W
TP2	3/12/10	2'	26	295	5.2	32°23.594' N 104°27.384' W
TP3	3/12/10	3"	16	171	7.2	32°23.589' N 104°27.369' W
TP3	3/12/10	1'		549	2.3	32°23.589' N 104°27.369' W
TP3	3/12/10	2'	7	279	0.9	32°23.589' N 104°27.369' W
TP4	3/12/10	3"	23	289	8.5	32°23.586' N 104°27.365' W
TP4	3/12/10	1'		532	5.2	32°23.586' N 104°27.365' W
TP4	3/12/10	2'	1	369	2.0	32°23.586' N 104°27.365' W
TP5	3/12/10	3"	11	297	1.9	32°23.586' N 104°27.365' W
TP5	3/12/10	6"		347	1.0	32°23.579' N 104°27.354' W
TP5	3/12/10	1'	4	486	0.4	32°23.579' N 104°27.354' W
TP6	3/12/10	3"	26	567	2.1	32°23.582' N 104°27.346' W
TP6	3/12/10	6"	14	262	1.0	32°23.582' N 104°27.346' W
TP7	3/12/10	3"	17	149	0.8	32°23.586' N 104°27.365' W
TP7	3/12/10	6"	8	209	1.2	32°23.586' N 104°27.365' W

Analyst Notes Test Points 1, 2 & 9, Delineated w/shovel, rock at approximately 1'
Test Points 5, 6 & 7 Encountered Rock between 6" and 1', dug w/backhoe

Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Bobby Steadham

Site US 13 Federal #2 Flowline

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP8	3/12/10	3"	27	409	3.6	32°23.579' N 104°27.340' W
TP8	3/12/10	6"	17	489		32°23.579' N 104°27.340' W
TP9	3/12/10	3"	31	269	7.1	32°23.594' N 104°27.360' W
TP9	3/12/10	6"		213	2.9	32°23.594' N 104°27.360' W
TP9	3/12/10	1'	6	189	1.3	32°23.594' N 104°27.360' W
TP10	3/12/10	3"	19	171	0.7	32°23.582' N 104°27.384' W
TP10	3/12/10	1'	8	109	0.2	32°23.582' N 104°27.384' W

Analyst Notes Test Points 8 & 10, Dug With backhoe, impenetrable rock at 1'

Analytical Report 366347

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

US 13 Fed # 2 Flow Line

25-MAR-10

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)

25-MAR-10

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
P.O. Box 14167
Odessa, TX 79768

Reference: XENCO Report No: **366347**
Oxy USA
Project Address: US 13 Fed # 2 Flow Line

Logan Anderson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 366347. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 366347 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 366347

Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 6"	S	Mar-12-10 12:30	6 In	366347-001
TP 2 @ 2'	S	Mar-12-10 13:00	2 ft	366347-002
TP 5 @ 1'	S	Mar-12-10 14:00	1 ft	366347-003
TP 8 @ 6"	S	Mar-12-10 14:30	6 In	366347-004
TP 6 @ 6"	S	Mar-12-10 13:45	6 In	366347-005

CASE NARRATIVE

Client Name: Elke Environmental, Inc.
Project Name: Oxy USA

Project ID:	*US 13 Fed # 2 Flow Line*	*Report Date:*	*25-MAR-10*
Work Order Number:	*366347*	*Date Received:*	*03/19/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-799362 Percent Moisture
None

Batch: LBA-799390 TPH By SW8015 Mod
None

Batch: LBA-799515 Inorganic Anions by EPA 300
None

Certificate of Analysis Summary 366347

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA

Project Id: US 13 Fed # 2 Flow Line
Contact: Logan Anderson
Project Location: US 13 Fed # 2 Flow Line

Date Received in Lab: Fri Mar-19-10 04:55 pm
Report Date: 25-MAR-10
Project Manager: Brent Barron, II

Analysis Requested																	
	Lab Id:	366347-001				366347-002				366347-003				366347-004				366347-005			
	Field Id:	TP 1 @ 6"				TP 2 @ 2'				TP 5 @ 1'				TP 8 @ 6"				TP 6 @ 6"			
	Depth:	6 In				2 ft				1 ft				6 In				6 In			
	Matrix:	SOIL				SOIL				SOIL				SOIL				SOIL			
	Sampled:	Mar-12-10 12:30				Mar-12-10 13:00				Mar-12-10 14:00				Mar-12-10 14:30				Mar-12-10 13:45			
Anions by E300	*Extracted:*																				
	Analyzed:	Mar-23-10 10:46				Mar-23-10 10:46				Mar-23-10 10:46				Mar-23-10 10:46				Mar-23-10 10:46			
	Units/RL:	mg/kg		RL		mg/kg		RL		mg/kg		RL		mg/kg		RL		mg/kg		RL	
Chloride		224		9.40		518		9.09		55.6		4.91		489		9.95		57.9		4.91	
Percent Moisture	*Extracted:*																				
	Analyzed:	Mar-22-10 15:10				Mar-22-10 15:10				Mar-22-10 15:10				Mar-22-10 15:10				Mar-22-10 15:10			
	Units/RL:	%		RL		%		RL		%		RL		%		RL		%		RL	
Percent Moisture		10.6		1.00		7.57		1.00		14.4		1.00		15.6		1.00		14.4		1.00	
TPH By SW8015 Mod	*Extracted:*	Mar-22-10 15:00				Mar-22-10 15:00				Mar-22-10 15:00				Mar-22-10 15:00				Mar-22-10 15:00			
	Analyzed:	Mar-23-10 13:26				Mar-23-10 13:57				Mar-23-10 14:28				Mar-23-10 14:58				Mar-23-10 15:28			
	Units/RL:	mg/kg		RL		mg/kg		RL		mg/kg		RL		mg/kg		RL		mg/kg		RL	
C6-C12 Gasoline Range Hydrocarbons		ND		16.7		ND		16.2		ND		17.5		ND		17.8		ND		17.5	
C12-C28 Diesel Range Hydrocarbons		ND		16.7		ND		16.2		ND		17.5		ND		17.8		ND		17.5	
C28-C35 Oil Range Hydrocarbons		ND		16.7		ND		16.2		ND		17.5		ND		17.8		ND		17.5	
Total TPH		ND		16.7		ND		16.2		ND		17.5		ND		17.8		ND		17.5	

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 366347, **Project ID:** US 13 Fed # 2 Flow Line

Lab Batch #: 799390 **Sample:** 558807-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/22/10 18:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 799390 **Sample:** 558807-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/22/10 18:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	50.8	50.2	101	70-135	

Lab Batch #: 799390 **Sample:** 558807-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/22/10 19:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.8	99.5	95	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

Lab Batch #: 799390 **Sample:** 366347-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 13:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.1	100		70-135	
o-Terphenyl	40.7	50.0		70-135	

Lab Batch #: 799390 **Sample:** 366347-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 13:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.5	100		70-135	
o-Terphenyl	37.7	50.0		70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 366347,

Project ID: US 13 Fed # 2 Flow Line

Lab Batch #: 799390 **Sample:** 366347-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 14:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100		70-135	
o-Terphenyl	53.5	50.0		70-135	

Lab Batch #: 799390 **Sample:** 366347-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 14:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.7	100		70-135	
o-Terphenyl	44.9	50.0		70-135	

Lab Batch #: 799390 **Sample:** 366347-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 15:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.8	100		70-135	
o-Terphenyl	50.7	50.0		70-135	

Lab Batch #: 799390 **Sample:** 366352-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.5	125	70-135	
o-Terphenyl	57.9	49.8	116	70-135	

Lab Batch #: 799390 **Sample:** 366352-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/23/10 17:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-135	
o-Terphenyl	51.6	49.9	103	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Blank Spike Recovery

Project Name: Oxy USA

/ork Order #: 366347 **Project ID:** US 13 Fed # 2 Flow Line

Lab Batch #: 799515 **Sample:** 799515-1-BKS **Matrix:** Solid

Date Analyzed: 03/23/2010 **Date Prepared:** 03/23/2010 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY						
Anions by E300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	10.7	107	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

XENCO Laboratories

BS / BSD Re

Project Name: Oxy USA

Work Order #: 366347

Analyst: BEV **Date Prepared:** 03/22/2010

Lab Batch ID: 799390 **Sample:** 558807-1-BKS **Batch #:** 1

Units: mg/kg **BLANK /BLANK SPIKE**

TPH By SW8015 Mod

Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1030	10
C12-C28 Diesel Range Hydrocarbons	ND	1000	722	7

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

coveries

Project ID: US 13 Fed # 2 Flow Line
Date Analyzed: 03/22/2010
Matrix: Solid

/ BLANK SPIKE DUPLICATE RECOVERY STUDY

	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	1000	1020	102	1	70-135	35	
	1000	725	73	0	70-135	35	

Form 3 - MS Recoveries

Project Name: Oxy USA

Work Order #: 366347

Lab Batch #: 799515

Project ID: US 13 Fed # 2 Flow Line

Date Analyzed: 03/23/2010

Date Prepared: 03/23/2010

Analyst: LATCOR

QC- Sample ID: 366170-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	105	114	109	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - / MSD Recoveries

Project Name: Oxy USA

Work Order # : 366347 **Project ID:** US 13 Fed # 2 Flow Line

Lab Batch ID: 799390 **QC- Sample ID:** 366352-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/23/2010 **Date Prepared:** 03/22/2010 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	ND	1120	1300	116	1120	1160	104	11	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1120	935	83	1120	818	73	13	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Oxy USA

Work Order #: 366347

Lab Batch #: 799515 **Project ID:** US 13 Fed # 2 Flow Line

Date Analyzed: 03/23/2010 **Date Prepared:** 03/23/2010 **Analyst:** LATCOR

QC- Sample ID: 366170-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	

Lab Batch #: 799362

Date Analyzed: 03/22/2010 **Date Prepared:** 03/22/2010 **Analyst:** WRU

QC- Sample ID: 366344-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.97	5.00	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

A Xenco Laboratories Company

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Logan Anderson
Company Name: Elke Environmental
Company Address: P O Box 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 432-366-0043 Fax No: 432-366-0884
Sampler Signature:
e-mail: la_elkeenv@yahoo.com

Project Name: Oxy USA
Project #:
Project Loc: US 13 Fed #2 Flow Line
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 360347

Analyze For:
TCLP:
TOTAL:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 (8015B)	TPH: TX 1005 (8015B) TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	TP1 @ 6"		6"	3/12/10	12:30PM		1	X								S	X			X											
02	TP2 @ 2'		2'	3/12/10	1:00PM		1	X								S	X			X											
03	TP 5 @ 1'		1'	3/12/10	2:00PM		1	X								S	X			X											
04	TP 8 @ 6"		6"	3/12/10	2:30PM		1	X								S	X			X											
05	TP 6 @ 6"		6"	3/12/10	1:45PM		1	X								S	X			X											

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	3/19/10	4:55PM			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Sam	3.19.10	16:55

Laboratory Comments:
Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered Y N
by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
4029955
Temperature Upon Receipt: .4 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.

Date/ Time: 3.19.10 16:55

Lab ID #: 366347

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	.4 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event