Remediation Plan

Prepared for
Oxy USA

Indian Hills # 9
Eddy County, NM

2RP -

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

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

February 23, 2010

New Mexico Oil Conservation Division
Mr. Mike Bratcher
1301 West Grand Ave.
Artesia, New Mexico 88210

Re: Remediation Plan for Spill
Oxy USA – Indian Hills #9
UL'B' Sec. 33 T21S R24E Eddy County
2RP-____

Mr. Mike Bratcher,

Elke Environmental was contracted by Oxy USA to complete the delineation of the spill at the Indian Hills #9. The following is the site ranking criteria for the site: Wellhead Protection Area – 0 points, Surface Body of Water – 0 points and Groundwater (>100') – 0 points. The total ranking for the site is 0 points. The RAL's for the site are 5,000 ppm – TPH 8015M, 100 ppm - BTEX (using field vapor headspace measurement) and 250 ppm – Chlorides. Enclosed is a description of delineation activities including a plat map, field samples and laboratory.

A delineation of the site was completed using a backhoe. TP5 could only be delineated to 3' bgs where impenetrable rock by backhoe was encountered. Due to the ranking criteria being 0 points and all TPH levels being below 5000 ppm, Oxy USA proposes to perform a cosmetic clean-up using a disc, and perforating the affected area. After the area is perforated using a disc, a conformation sample will be taken to assure that the BTEX level at TP1 has dissipated to <100 ppm. Due to the depth of groundwater being well over 100' bgs, all chloride levels being below 800 ppm, and a layer of impenetrable rock, Oxy feels that there is no threat to future contamination of the groundwater. Therefore we propose to leave the chlorides in place. After we disc the area we will apply a combination of BLM Seed Mixture #3 and #4 and monitor for re-growth. A final report will be submitted at the completion of the project. If you have any questions about the enclosed report please contact me at the office.

Sincerely,

Logan Anderson

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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – Oxy USA	Contact – Kelton Beaird
Address – 1502 W Commerce	Telephone No. – (O) 575-628-4121 (C) 575-390-1903
Facility Name – Indian Hills #9 (Trunk Line)	Facility Type – Tank Battery

Surface Owner – BLM	Mineral Owner	Lease No. 30-015-28754

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	33	21S	24E					Eddy

Latitude 32°26.449 **Longitude** 104°30.036

NATURE OF RELEASE

Type of Release – Crude Oil & Produced Water	Volume of Release – 5000 bbls Water / 60 bbls Oil	Volume Recovered - 0
Source of Release – Truck Line	Date and Hour of Occurrence	Date and Hour of Discovery 12-9-09 12:00 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – NMOCD Jim Amos BLM	
By Whom? Kelton Beaird HES - Oxy	Date and Hour - See Above	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The Truck line corroded spilling produced water and oil onto the surrounding surface area and the site was delineated using a backhoe. The ranking criteria for the site is as follows: Surface Body of Water – 0 points; Wellhead Protection Area – 0 points; Groundwater Depth – 0 points (GW>100') The total ranking for this site is 0 points. RAL's for the site is Chloride 250 ppm, TPH – 5,000 ppm and BTEX – 100 ppm (using field vapor headspace measurement). Attached are a plat map, field analytical and lab confirmations.

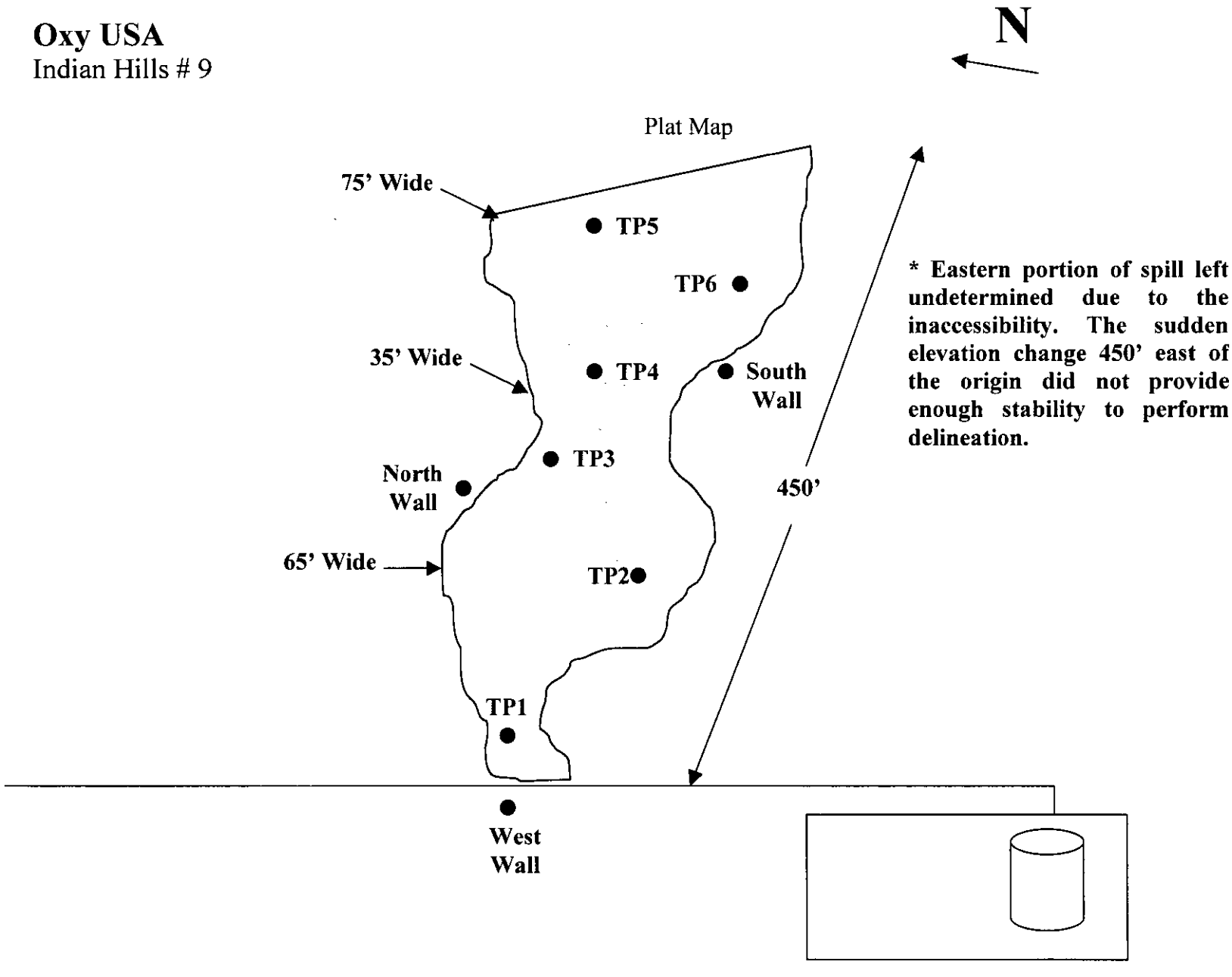
Describe Area Affected and Cleanup Action Taken.* A delineation of the site was completed using a backhoe. TP5 could only be delineated to 3' bgs where impenetrable rock by backhoe was encountered. Due to the ranking criteria being 0 points and all TPH levels being below 5000 ppm, Oxy USA proposes to perform a cosmetic clean-up using a disc, and perforating the affected area. After the area is perforated using a disc, a conformation sample will be taken to assure that the BTEX level at TP1 has dissipated to <100 ppm. Due to the depth of groundwater being well over 100' bgs, all chloride levels being below 800 ppm, and a layer of impenetrable rock, Oxy feels that there is no threat to future contamination of the groundwater. Therefore we propose to leave the chlorides in place. After we disc the area we will apply a combination of BLM Seed Mixture #3 and #4 and monitor for re-growth. A final report will be submitted at the completion of the project.

NMOCD and BLM will be notified 48 hours in advance of any remediation.

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:
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval: ☐ Attached
Date: 3-24-10 Phone: 575-628-4121	

Oxy USA
Indian Hills # 9



*** Eastern portion of spill left undetermined due to the inaccessibility. The sudden elevation change 450' east of the origin did not provide enough stability to perform delineation.**

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

Field Analytical Report Form

Client Oxy USA **Analyst** Bobby Steadham

Site Indian Hills #9

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	2-2-10	3"	3,350	307	213	32° 26.449' N 104° 30.036' W
TP1	2-2-10	1'		792	161	32° 26.449' N 104° 30.036' W
TP1	2-2-10	2'		603	89.8	32° 26.449' N 104° 30.036' W
TP1	2-2-10	3'		585	34.8	32° 26.449' N 104° 30.036' W
TP1	2-2-10	4'	360	275	28.7	32° 26.449' N 104° 30.036' W
TP2	2-2-10	3"		329	119	32° 26.462' N 104° 30.026' W
TP2	2-2-10	1'		302	54.0	32° 26.462' N 104° 30.026' W
TP2	2-2-10	2'	1,482	209	16.3	32° 26.462' N 104° 30.026' W
TP3	2-2-10	3"		359	134	32° 26.472' N 104° 30.024' W
TP3	2-2-10	6"		422	35.7	32° 26.472' N 104° 30.024' W
TP3	2-2-10	1'	3,485	151	6.0	32° 26.472' N 104° 30.024' W
TP4	2-8-10	3"		331	89.9	32° 26.485' N 104° 30.024' W
TP4	2-8-10	1'	170	179	5.4	32° 26.485' N 104° 30.024' W
TP5	2-8-10	3"		329	141	32° 26.497' N 104° 30.997' W
TP5	2-8-10	1'		491	64.9	32° 26.497' N 104° 30.997' W
TP5	2-8-10	2'		418	19.6	32° 26.497' N 104° 30.997' W
TP5	2-8-10	3'	761	735	12.5	32° 26.497' N 104° 30.997' W

Analyst Notes

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

Field Analytical Report Form

Client Oxy USA **Analyst** Bobby Steadham

Site Indian Hills #9

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP6	2-9-10	3"		329	68.9	32° 26.484' N 104° 30.014' N
TP6	2-9-10	1'	761	118	7.8	32° 26.484' N 104° 30.014' N
North Wall	2-9-10	1'	N/D	149	2.3	32° 26.487' N 104° 30.025' N
South Wall	2-9-10	1'	71	109	1.7	32° 26.480' N 104° 30.016' N
West Wall	2-9-10	1'	3	237	6.8	32° 26.449' N 104° 30.030' N

Analyst Notes

Analytical Report 362216

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Indian Hills # 9

16-FEB-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)

16-FEB-10

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

Reference: XENCO Report No: **362216**
Oxy USA
Project Address: Indian Hills # 9

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 362216. 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. 362216 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 362216

Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 4'	S	Feb-08-10 15:00	4 ft	362216-001
TP 2 @ 2'	S	Feb-08-10 16:45	2 ft	362216-002
TP 3 @ 1'	S	Feb-08-10 14:30	1 ft	362216-003
TP 4 @ 1'	S	Feb-08-10 15:30	1 ft	362216-004
TP 5 @ 2'	S	Feb-08-10 17:00	2 ft	362216-005

CASE NARRATIVE

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

Project ID: *Indian Hills # 9* *Report Date:* *16-FEB-10*
Work Order Number: *362216* *Date Received:* *02/12/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-793759 Percent Moisture
None

Batch: LBA-793823 Inorganic Anions by EPA 300
None

Batch: LBA-793895 TPH By SW8015 Mod
None

Certificate of Analysis Summary 362216

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA

Project Id: Indian Hills # 9
Contact: Logan Anderson
Project Location: Indian Hills # 9

Date Received in Lab: Fri Feb-12-10 05:00 pm
Report Date: 16-FEB-10
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	362216-001		362216-002		362216-003		362216-004		362216-005	
	Field Id:	TP 1 @ 4'		TP 2 @ 2'		TP 3 @ 1'		TP 4 @ 1'		TP 5 @ 2'	
	Depth:	4 ft		2 ft		1 ft		1 ft		2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-08-10 15:00		Feb-08-10 16:45		Feb-08-10 14:30		Feb-08-10 15:30		Feb-08-10 17:00	
Anions by E300	*Extracted:*										
	Analyzed:	Feb-15-10 08:40		Feb-15-10 08:40		Feb-15-10 08:40		Feb-15-10 08:40		Feb-15-10 08:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		165	9.33	116	9.53	36.0	4.38	47.4	4.35	373	9.12
Percent Moisture	*Extracted:*										
	Analyzed:	Feb-15-10 08:00		Feb-15-10 08:00		Feb-15-10 08:00		Feb-15-10 08:00		Feb-15-10 08:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.92	1.00	11.8	1.00	4.05	1.00	3.44	1.00	7.89	1.00
TPH By SW8015 Mod	*Extracted:*	Feb-15-10 09:00		Feb-15-10 09:00		Feb-15-10 09:00		Feb-15-10 09:00		Feb-15-10 09:00	
	Analyzed:	Feb-15-10 17:18		Feb-15-10 17:44		Feb-15-10 18:11		Feb-15-10 18:38		Feb-15-10 19:05	
	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	17.0	ND	15.6	ND	15.5	ND	16.3
C12-C28 Diesel Range Hydrocarbons		ND	16.7	89.0	17.0	163	15.6	69.5	15.5	23.4	16.3
C28-C35 Oil Range Hydrocarbons		ND	16.7	ND	17.0	ND	15.6	ND	15.5	ND	16.3
Total TPH		ND	16.7	89.0	17.0	163	15.6	69.5	15.5	23.4	16.3

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 : 362216, **Project ID:** Indian Hills # 9

Lab Batch #: 793895 **Sample:** 550395-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/15/10 14:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	100	90	70-135	
o-Terphenyl	56.8	50.0	114	70-135	

Lab Batch #: 793895 **Sample:** 550395-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/15/10 14:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	36.9	50.0	74	70-135	

Lab Batch #: 793895 **Sample:** 550395-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/15/10 15:03

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	71	70-135	
o-Terphenyl	40.2	50.0	80	70-135	

Lab Batch #: 793895 **Sample:** 362216-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 17:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.5	100	76	70-135	
o-Terphenyl	44.2	50.0	88	70-135	

Lab Batch #: 793895 **Sample:** 362216-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 17:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.9	100	71	70-135	
o-Terphenyl	40.3	50.0	81	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 : 362216, **Project ID:** Indian Hills # 9

Lab Batch #: 793895 **Sample:** 362216-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 18:11

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.1	100	70	70-135	
o-Terphenyl	36.8	50.0	74	70-135	

Lab Batch #: 793895 **Sample:** 362216-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 18:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.8	100	71	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

Lab Batch #: 793895 **Sample:** 362216-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 19:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.0	100	77	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 793895 **Sample:** 362217-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 19:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.2	100	82	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

Lab Batch #: 793895 **Sample:** 362217-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/15/10 20:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.9	100	84	70-135	
o-Terphenyl	39.0	50.0	78	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

Work Order #: 362216 **Project ID:** Indian Hills # 9

Lab Batch #: 793823 **Sample:** 793823-1-BKS **Matrix:** Solid

Date Analyzed: 02/15/2010 **Date Prepared:** 02/15/2010 **Analyst:** LATCOR

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

Anions by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
Chloride	ND	10.0	9.60	96	75-125	

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

BS / BSD Recoveries

Project Name: Oxy USA

Work Order #: 362216
Analyst: BEV
Lab Batch ID: 793895 **Sample:** 550395-1-BKS
Units: mg/kg

Date Prepared: 02/15/2010 **Batch #:** 1

Project ID: Indian Hills # 9
Date Analyzed: 02/15/2010
Matrix: Solid

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	ND	1000	926	93	1000	840	84	10	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	886	89	1000	853	85	4	70-135	35	

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

Form 3 - MS Recoveries

Project Name: Oxy USA

Work Order #: 362216
Lab Batch #: 793823
Project ID: Indian Hills # 9
Date Analyzed: 02/15/2010
Date Prepared: 02/15/2010
Analyst: LATCOR
QC- Sample ID: 362205-001 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	133	215	317	86	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 - MS / MSD Recoveries

Project Name: Oxy USA

Work Order # : 362216 **Project ID:** Indian Hills # 9

Lab Batch ID: 793895 **QC- Sample ID:** 362217-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/15/2010 **Date Prepared:** 02/15/2010 **Analyst:** BEV

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	957	85	1120	942	84	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1120	985	88	1120	984	88	0	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 #: 362216

Lab Batch #: 793823 **Project ID:** Indian Hills # 9

Date Analyzed: 02/15/2010 **Date Prepared:** 02/15/2010 **Analyst:** LATCOR

QC- Sample ID: 362205-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	133	126	5	20	

Lab Batch #: 793759

Date Analyzed: 02/15/2010 **Date Prepared:** 02/15/2010 **Analyst:** WRU

QC- Sample ID: 362205-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.16	7.28	2	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: Indian Hills #9
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 362216

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	Analyze For: TCLP: TPH: 8015M	TOTAL: TPH: 8015M	TPH: TX 1005	TPH: TX 1005	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/8030 or BTEX 8260	RCI	N.O.R.M.					RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	TP 1 @ 4'		4'	2/8/10	300 PM		1	X								S	X				X													X
02	TP 2 @ 2'		2'	2/8/10	445 PM		1	X								S	X				X													X
03	TP 3 @ 1'		1'	2/8/10	230 PM		1	X								S	X				X													X
04	TP 4 @ 1		1'	2/8/10	330 PM		1	X								S	X				X													X
05	TP 5 @ 2'		2'	2/8/10	500 PM		1	X								S	X				X													2R

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	2/12/10	5:00			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Fenn	2.12.10	17:00

Laboratory Comments:
VOCs Free of Headspace? Y N
Custody seals on container(s) N
Sample Hand Delivered by Sampler/Client Rep. ? N
by Courier? UPS DHL FedEx Lone Star
4 oz glass
Temperature Upon Receipt: -1.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.

Date/ Time: 7.12.10 17:00

Lab ID # : 362216

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	-1.1 °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