

RECEIVED DEC 21 2009

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

30-015-33973

Release Notification and Corrective Action

nMLB 0936526757

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company - OXY USA	16696	Contact - Kelton Beard
Address - 1502 W. Commerce		Telephone No. - (O) 575-628-4121 C) 575-390-1903
Facility Name - Lakewood 14 #2 Battery		Facility Type - Well with Battery
Surface Owner Private	Mineral Owner	Lease No. 30-015-33622

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	14	19S	26E					Eddy

Latitude 32° 39.740' N Longitude 104° 21.514' W

NATURE OF RELEASE

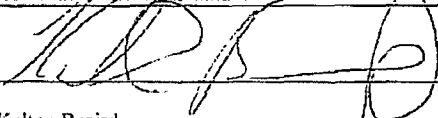
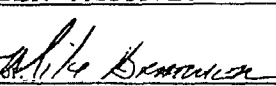
Type of Release - Produced Water	Volume of Release - 38 bbls	Volume Recovered - 0 bbls
Source of Release - Valve from the Load Line	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher (NMOCD)	
By Whom? Kelton Beard (HES Oxy)	Date and Hour See above	
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.* The valve leaving the tank into the flowline froze and broke. All fluid soaked into the ground. The valve was replaced. The site was delineated with a backhoe. The ranking criteria for this site is as follows: Surface Body of Water - 0 points; Wellhead Protection Area - 0 points; Groundwater Depth - 20 points (GW < 50'). The total ranking for the site is 20 points. RAL's for the site are Chloride - 250 ppm, TPH - 100 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.* Oxy USA proposes to excavate all impacted soil to clean bottoms and walls. The impacted soil will be disposed at an OCD approved disposal. Clean native soil will be backfilled into the excavation. A final report will be submitted at the completion of the job.

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 Beard	Approved by 	
Title: HES Specialist	Approval Date: DEC 31 2009	Expiration Date:
E-mail Address: kelton_beard@oxy.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 12-18-09		

* Attach Additional Sheets If Necessary

REMEDATION per OCD Rules and
Guidelines. SUBMIT REMEDIATION
PROPOSAL BY: REC'D 12/21/09

SEE Attached

2RP-378

nMLB 0936527145



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Oxy USA
1502 W. Commerce
Carlsbad NM 88220
ATTN: Kelton Beaird

December 31, 2009

Reference: Lakewood 14 # 2 Battery 30-015-33973 E-14-19-26 Eddy County, New Mexico

Mr. Beaird,

The New Mexico Oil Conservation Division District 2 Office (OCD) is in receipt of an Initial Report Form C-141 reporting a release of produced fluids at the above referenced site. The release reportedly occurred on December 7, 2009. Included with the C-141 was analytical data obtained from the site delineation, site ranking information, and, a remediation proposal. The remediation method proposed is to remove all impacted material, haul material to disposal, and backfill with clean material.

The remediation proposal is approved with the following conditions/stipulations:

- Notify OCD 48 hours prior to commencement of remedial activities.
- Notify OCD 48 hours prior to obtaining samples where analyses of samples obtained are to be submitted to OCD.
- Submit a Final Report Form C-141 and closure report upon satisfactory completion of project.
- Remedial activities including submission of final closure documentation to be completed not later than **February 28, 2010**.

Please be advised that this approval does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, this approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, please contact me.

Mike Bratcher
NMOCD District 2
1301 W. Grand Ave.
Artesia, NM 88210
575-748-1283 Ext.108
mike.bratcher@state.nm.us

Distribution via email: Kelton Beaird/Oxy

OCD Reference: **2RP-378**



Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Thursday, December 31, 2009 9:15 AM
To: 'Kelton_Beaird@oxy.com'
Subject: Lakewood 14 002 Battery
Attachments: OXY_Lakewood 14 #2_12.09.doc

Kelton,

Please find attached the approval letter for remediation at the Lakewood 14 # 2 site. In the event you are unable to open the attachment, please contact me.

Mike Bratcher

NMOCD DISTRICT 2
1301 W. GRAND AVE.
ARTESIA, NM 88210
575-748-1283 EXT.108
mike.bratcher@state.nm.us

"Democracy is two wolves and a lamb deciding what to have for dinner. Liberty is a well armed lamb." - Benjamin Franklin

Bratcher, Mike, EMNRD

From: postmaster@State.nm.us
Sent: Thursday, December 31, 2009 9:15 AM
To: Bratcher, Mike, EMNRD
Subject: Delivery Status Notification (Relay)
Attachments: ATT814533.txt; Lakewood 14 002 Battery

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

Kelton_Beaird@oxy.com

Bratcher, Mike, EMNRD

From: Logan Anderson [la_elkeenv@yahoo.com]
Sent: Monday, December 21, 2009 8:28 AM
To: Bratcher, Mike, EMNRD
Cc: Kelton Beaird
Subject: Oxy - Lakewood 14 #2 Battery
Attachments: Remediation Plan.pdf

Mike,

Attached is the Remediation Plan for the spill located at the Oxy USA - Lakewood 14 #2 Battery. If you have any questions feel free to contact me.

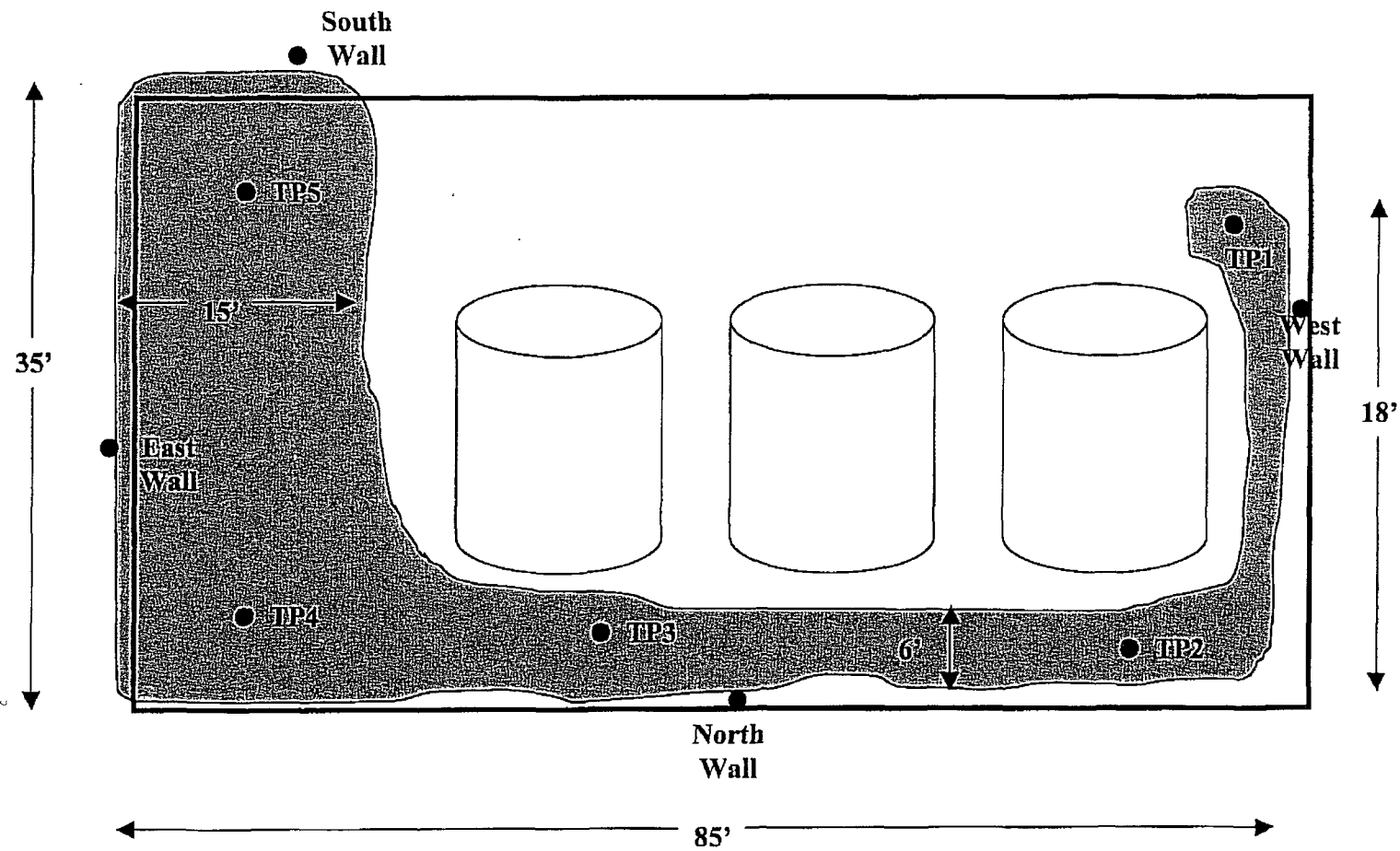
Thanks,
Logan Anderson

Project Manager
Elke Environmental, Inc.
off 432-366-0043
cell 432-664-1269
fax 432-366-0884

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.

Oxy USA
Lakewood 14 #2 Battery

Plat Map



Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form**Client** Oxy USA **Analyst** Bobby Steadham**Site** Lakewood 14 #2 Battery

Sample ID	Date	Depth	418.1 TPH / PPM	CI / PPM	PID / PPM	GPS
TP1	12-11-09	Surface	101	424	35.3	32° 39.740' N 104° 21.514' W
TP1	12-11-09	6"	56	208	63.3	32° 39.740' N 104° 21.514' W
TP2	12-11-09	Surface	1,622	926	104	32° 39.742' N 104° 21.510' W
TP2	12-11-09	6"	1,288	688	127	32° 39.742' N 104° 21.510' W
TP2	12-11-09	12"	149	547	103	32° 39.742' N 104° 21.510' W
TP2	12-11-09	24"	76	119	20.0	32° 39.742' N 104° 21.510' W
TP3	12-11-09	Surface	681	1,280	20.6	32° 39.742' N 104° 21.507' W
TP3	12-11-09	6"	208	479	18.1	32° 39.742' N 104° 21.507' W
TP3	12-11-09	12"	79	187	12.0	32° 39.742' N 104° 21.507' W
TP4	12-11-09	Surface	480	912	67.9	32° 39.740' N 104° 21.502' W
TP4	12-11-09	6"	179	179	80.1	32° 39.740' N 104° 21.502' W
TP5	12-11-09	Surface	1,428	1,819	73.1	32° 39.736' N 104° 21.501' W
TP5	12-11-09	6"	0	454	60.7	32° 39.736' N 104° 21.501' W
TP5	12-11-09	12"	18	209	21.6	32° 39.736' N 104° 21.501' W
North Wall	12-11-09	3"	13	189	10.3	32° 39.744' N 104° 21.509' W
East Wall	12-11-09	3"	14	209	7.8	32° 39.738' N 104° 21.498' W
South Wall	12-11-09	3"	11	158	9.1	32° 39.733' N 104° 21.509' W
West Wall	12-11-09	3"	19	119	12.7	32° 39.741' N 104° 21.517' W

Analytical Report 355463

for

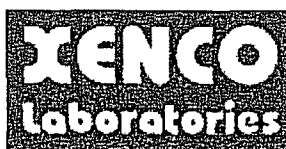
Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Lake Wood 14 # 2

16-DEC-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-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 (LAO00308), 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)

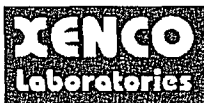
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



16-DEC-09

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

Reference: XENCO Report No: **355463**
Oxy USA
Project Address: Lake Wood 14 # 2

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 355463. 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. 355463 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

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Sample Cross Reference 355463

Elke Environmental, Inc., Odessa, TX

Oxy USA



Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 6"	S	Dec-11-09 09:45	6 In	355463-001
TP 2 @ 12"	S	Dec-11-09 11:40	12 In	355463-002
TP 4 @ 6"	S	Dec-11-09 12:45	6 In	355463-003
TP 5 @ 12"	S	Dec-11-09 14:45	12 In	355463-004
TP 3 @ 24"	S	Dec-11-09 13:45	24 In	355463-005



CASE NARRATIVE

Client Name: Elke Environmental, Inc.

Project Name: Oxy USA

Project ID: Lake Wood 14 # 2

Work Order Number: 355463

Report Date: 16-DEC-09

Date Received: 12/14/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-785673 Percent Moisture

None

Batch: LBA-785866 Inorganic Anions by EPA 300

None

Batch: LBA-785893 TPH By SW8015 Mod

None



Certificate of Analysis Summary 355463

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id: Lake Wood 14 # 2

Contact: Logan Anderson

Project Location: Lake Wood 14 # 2

Date Received in Lab: Mon Dec-14-09 09:00 am


Report Date: 16-DEC-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	355463-001	355463-002	355463-003	355463-004	355463-005	
	Field Id:	TP 1 @ 6"	TP 2 @ 12"	TP 4 @ 6"	TP 5 @ 12"	TP 3 @ 24"	
	Depth:	6 In	12 In	6 In	12 In	24 In	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Dec-11-09 09:45	Dec-11-09 11:40	Dec-11-09 12:45	Dec-11-09 14:45	Dec-11-09 13:45	
Anions by E300	Extracted:						
	Analyzed:	Dec-14-09 12:35	Dec-14-09 12:35	Dec-14-09 12:35	Dec-14-09 12:35	Dec-14-09 12:35	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		181 25.0	66.3 9.95	86.6 24.9	32.2 20.4	ND 9.58	
Percent Moisture	Extracted:						
	Analyzed:	Dec-14-09 17:00	Dec-14-09 17:00	Dec-14-09 17:00	Dec-14-09 17:00	Dec-14-09 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		16.1 1.00	15.6 1.00	15.6 1.00	17.6 1.00	12.3 1.00	
TPH By SW8015 Mod	Extracted:	Dec-14-09 11:00	Dec-14-09 11:00	Dec-14-09 11:00	Dec-14-09 11:00	Dec-14-09 11:00	
	Analyzed:	Dec-16-09 01:52	Dec-16-09 02:19	Dec-16-09 02:46	Dec-16-09 03:12	Dec-16-09 03:39	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		24.6 17.8	18.0 17.7	ND 17.7	ND 18.2	18.2 17.0	
C12-C28 Diesel Range Hydrocarbons		37.7 17.8	20.9 17.7	ND 17.7	ND 18.2	17.6 17.0	
C28-C35 Oil Range Hydrocarbons		ND 17.8	ND 17.7	ND 17.7	ND 18.2	ND 17.0	
Total TPH		62.3 17.8	38.9 17.7	ND 17.7	ND 18.2	35.8 17.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount involved for this work order unless otherwise agreed to in writing.

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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.

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5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 355463,

Project ID: Lake Wood 14 # 2

Lab Batch #: 785893

Sample: 545602-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/15/09 21:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	51.3	49.9	103	70-135	

Lab Batch #: 785893

Sample: 545602-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/15/09 22:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 785893

Sample: 545602-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/15/09 22:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	56.0	49.8	112	70-135	

Lab Batch #: 785893

Sample: 355463-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 01:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.7	104	70-135	
o-Terphenyl	53.7	49.9	108	70-135	

Lab Batch #: 785893

Sample: 355463-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 02:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.6	106	70-135	
o-Terphenyl	54.5	49.8	109	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 : 355463,

Project ID: Lake Wood 14 # 2

Lab Batch #: 785893

Sample: 355463-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 02:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	99.6	104	70-135	
o-Terphenyl	53.4	49.8	107	70-135	

Lab Batch #: 785893

Sample: 355463-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 03:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	54.1	50.0	108	70-135	

Lab Batch #: 785893

Sample: 355463-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 03:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	105	99.5	106	70-135	
o-Terphenyl	54.2	49.8	109	70-135	

Lab Batch #: 785893

Sample: 355462-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 06:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	114	99.6	114	70-135	
o-Terphenyl	49.4	49.8	99	70-135	

Lab Batch #: 785893

Sample: 355462-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/16/09 07:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	51.2	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

Work Order #: 355463

Project ID:

Lake Wood 14 # 2

Lab Batch #: 785866

Sample: 785866-1-BKS

Matrix: Solid

Date Analyzed: 12/14/2009

Date Prepared: 12/14/2009

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	10.9	109	75-125	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: Oxy USA

Work Order #: 355463

Analyst: BEV

Date Prepared: 12/14/2009

Project ID: Lake Wood 14 # 2

Date Analyzed: 12/15/2009

Lab Batch ID: 785893

Sample: 545602-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	997	881	88	1000	879	88	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	997	832	83	1000	823	82	1	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 #: 355463

Lab Batch #: 785866

Project ID: Lake Wood 14 # 2

Date Analyzed: 12/14/2009

Date Prepared: 12/14/2009

Analyst: LATCOR

QC- Sample ID: 355458-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	102	251	383	112	75-125	

Matrix Spike Percent Recovery [D] = $100 \cdot (C-A)/B$
Relative Percent Difference [E] = $200 \cdot (C-A)/(C+B)$
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 #: 355463

Project ID: Lake Wood 14 # 2

Lab Batch ID: 785893

QC- Sample ID: 355462-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/16/2009

Date Prepared: 12/14/2009

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	16.1	1050	902	84	1050	901	84	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1050	872	83	1050	861	82	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 355463

Lab Batch #: 785866

Date Analyzed: 12/14/2009

QC- Sample ID: 355458-001 D

Reporting Units: mg/kg

Date Prepared: 12/14/2009

Batch #: 1

Project ID: Lake Wood 14 # 2

Analyst: LATCOR

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	102	108	6	20	

Lab Batch #: 785673

Date Analyzed: 12/14/2009

QC- Sample ID: 355458-001 D

Reporting Units: %

Date Prepared: 12/14/2009

Batch #: 1

Analyst: WRU

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	12.5	13.2	6	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: 432-663-1800
Fax: 432-663-1713

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

Sampler Signature: [Signature]

Fax No: 432-366-0884

e-mail: la_elkeenv@yahoo.com

Project Name: OK USA

Project #:

Project Loc: LAKE WOOD 14 #2

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(Lab use only)

ORDER #:

355463

LAB # (Info use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ SO ₄	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater SC=Soil/Sediment N=Non-Potable Specify Other	TPH: 418.3 8015M 8015H TX 1005 TX 1008	Calcium (Ca, Mg, Na, K) Ammonia (NH ₃ , SO ₄ , Alkalinity) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles SemiVolatiles BTEX 8021B/5030 or BTEX 8280 RCI N.O.R.M.	RUSH TAT (Pre-Scheduling 24, 48, 72 hrs) Standard TAT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Special Instructions:

Laboratory Comments:

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by: ELDT

Date

Time

VOCs Free of Headspace?

Custody seals on container(s)

Sample Hand Delivered

by Sampler/Cient Rep.?

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:

Y N

Y N

Y N

Y N

40°C

6.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Eike Environmental
 Date/ Time: 12/14/09 9:00
 Lab ID #: 355463
 Initials: AS

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	0.1 °C
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Present
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#6	Sample Instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	ID written on Cont/ Lid
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> 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

Andrea Lam

From: "Logan Anderson" <la_elkeenv@yahoo.com>
To: "Andrea Lam" <andrea.lam@xenco.com>
Sent: Monday, December 14, 2009 10:28 AM
Subject: Re: WO 355458, 355460, 355462, 355463, 355465

Andrea,

Correct. Test for TPH 8015M not TPH 418.1

Thanks,
Logan Anderson

Project Manager
Elke Environmental, Inc.
off 432-366-0043
cell 432-664-1269
fax 432-366-0884

-- On Mon, 12/14/09, Andrea Lam <andrea.lam@xenco.com> wrote:

From: Andrea Lam <andrea.lam@xenco.com>
Subject: WO 355458, 355460, 355462, 355463, 355465
To: "Logan Anderson" <la_elkeenv@yahoo.com>
Date: Monday, December 14, 2009, 10:17 AM

Logan,

I would like to confirm our conversation that these five work orders are to be tested for 8015M not 418.1.

Thank You,
Andrea Lam
Sample Receiving / Project Assistant

Environmental Lab of Texas
A Xenco Company
12600 W I-20 E
Odessa, TX 79765
432-563-1800

12/14/2009