

Closure Report

Prepared for
Oxy USA

SEP 16 2009

Roaring Springs 14 Fed Com #1 Battery

Eddy County, NM

2RP-263

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

August 31, 2009

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

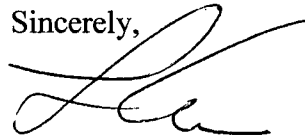
Re: Oxy USA – Roaring Springs 14 Fed #1 Battery
UL 'E' Sec. 14 T21S R23E Eddy County
2RP-263

Mr. Mike Bratcher,

Elke Environmental was contracted by Oxy USA to complete the remediation of the leak at the Roaring Springs 14 Fed #1 Battery. A delineation of the site was completed using an air rotary rig. A borehole was drilled at the Roaring Springs 13 Fed #4 Battery in UL 'C' Sec. 13 T21S R23E. The borehole was drilled to 96' deep and encountered a rock formation that was impenetrable by the drill rig at the site. No water bearing formations were encountered within the 96' borehole. Attached is a plat map, field analytical, lab confirmation and a driller's log for the site.

As per the approved plan the areas of SB1 and SB2 were excavated 1' bgs and the area of SB3 was to be excavated 5' bgs. Hard rock was encountered at 3' 6" at SB3. A lab confirmation was taken at that depth. AS per the approval by Mike Bratcher on July 16th the soil below 3' 6" was left in place. 150 cubic yards of the excavated soil was removed from the pile. The remaining soil was blended with clean caliche to below the Recommended Action Levels of 1,000 ppm TPH, 100 ppm BTEX using a field head vapor space measurement and 250 ppm Chlorides. The remediated soil was backfilled into the excavation. If you have any questions about the enclosed report please contact me at the office.

Sincerely,



Logan Anderson

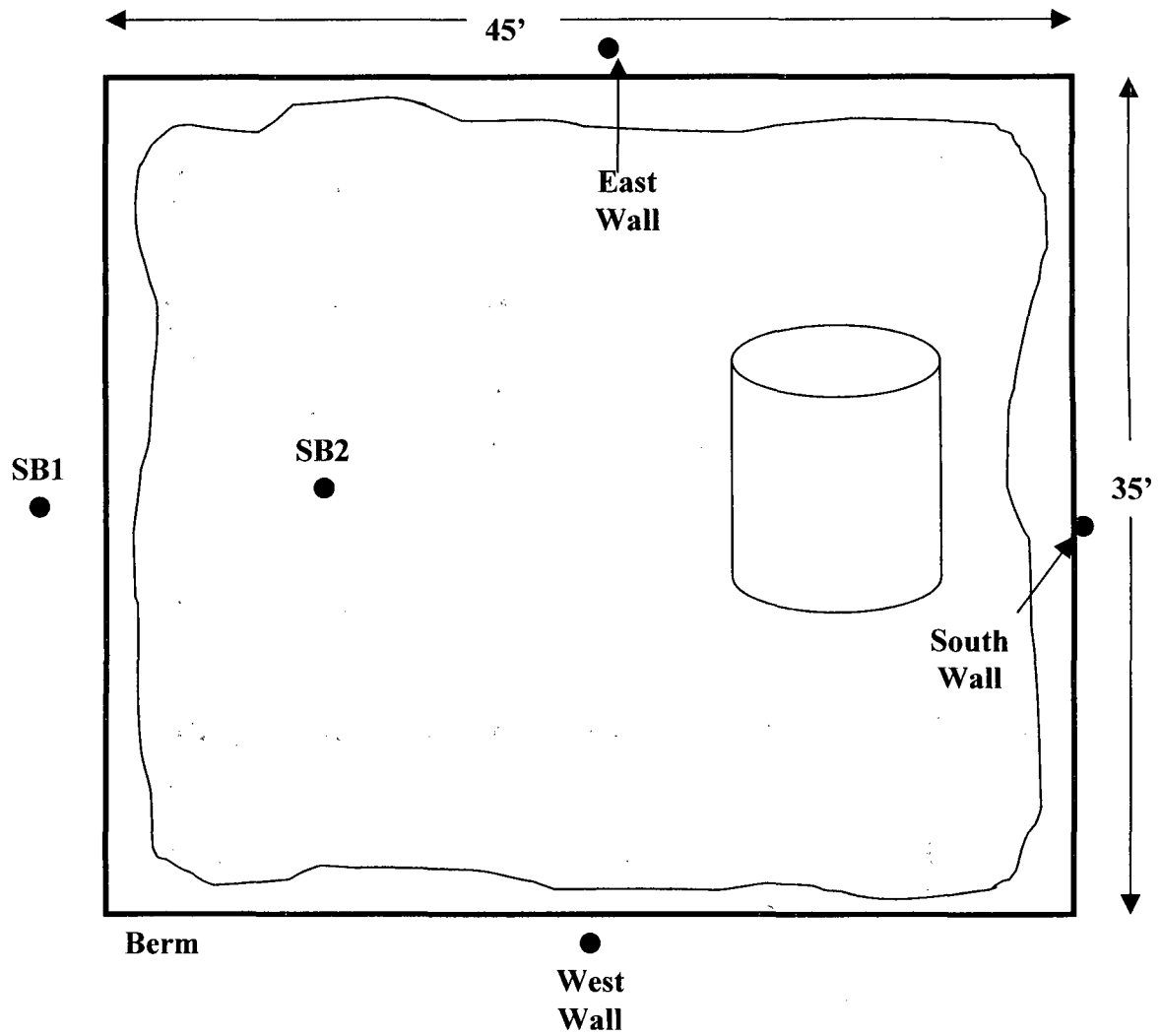
Oxy USA

Roaring Springs 13 Fed #4 Battery

UL 'C' Sec. 13 T21S R23E

Eddy County, NM

Plat Map



Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA Analyst Logan Anderson

Site Roaring Springs 14 Fed Com #1 Battery

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
SB1	1-7-09	Surface	7,285	700	19.8	32° 28.865' N 104° 34.705' W
SB1	1-7-09	5'	443	176	27.6	32° 28.865' N 104° 34.705' W
SB1	1-7-09	10'	121	122	20.6	32° 28.865' N 104° 34.705' W
SB2	1-7-09	Surface	1,318	299	639	32° 28.868' N 104° 34.729' W
SB2	1-7-09	5'	1,000	134	96.0	32° 28.868' N 104° 34.729' W
SB2	1-7-09	10'	357	94	32.5	32° 28.868' N 104° 34.729' W
SB2	1-7-09	15'	154	121	1.0	32° 28.868' N 104° 34.729' W
SB3	1-7-09	Surface	4,144	277	124	32° 28.865' N 104° 34.730' W
SB3	1-7-09	5'	4,607	134	102	32° 28.865' N 104° 34.730' W
SB3	1-7-09	10'	500	121	87.3	32° 28.865' N 104° 34.730' W
SB3	1-7-09	15'	128	105	3.0	32° 28.865' N 104° 34.730' W
North Wall	1-7-09	Surface	77	171	0.0	32° 28.868' N 104° 34.718' W
South Wall	1-7-09	Surface	64	184	0.0	32° 28.864' N 104° 34.720' W
East Wall	1-7-09	Surface	53	99	0.0	32° 28.866' N 104° 34.704' W
West Wall	1-7-09	Surface	69	121	0.0	32° 28.866' N 104° 34.732' W

Analyst Notes _____

P.O. Box 14167 Odessa, TX 79768

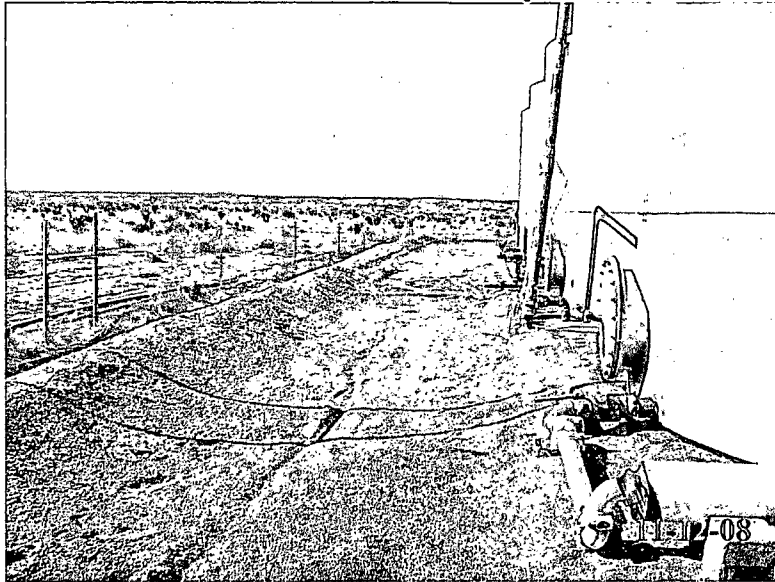
Client Oxy USA **Analyst** Logan Anderson

Site Roaring Springs 14 Fed Com #1 Battery

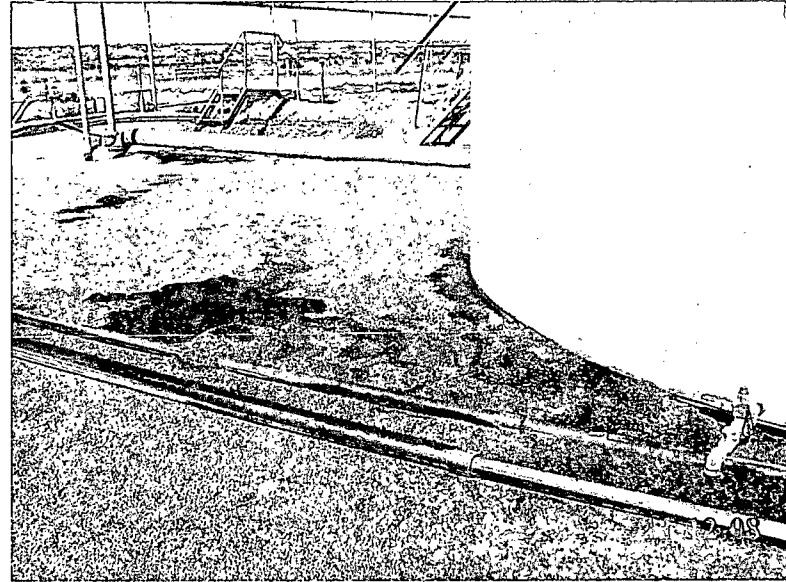
[illegible]

Analyst Notes Pile samples are 5 point composites.

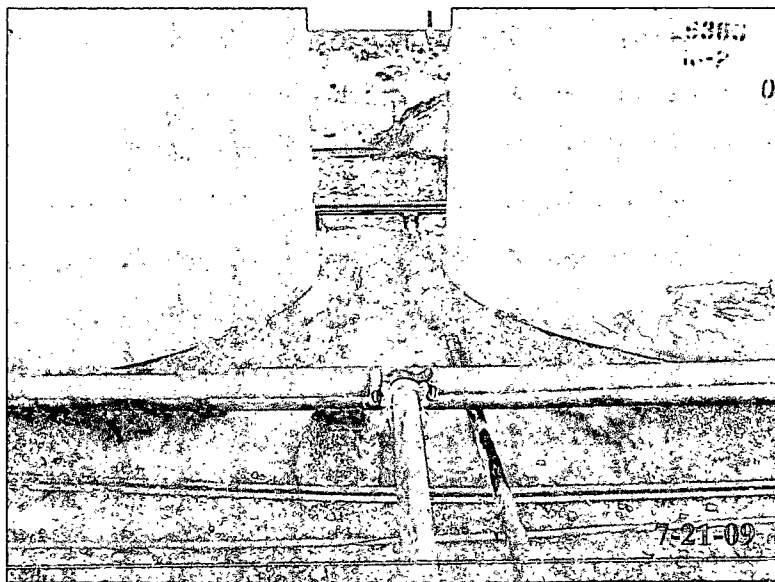
Oxy USA – Roaring Springs 14 Fed Com #1



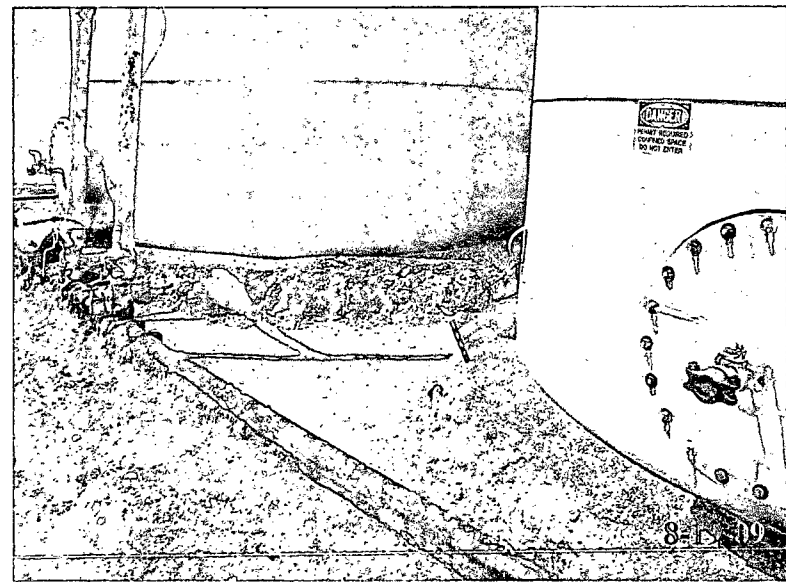
South end of battery before remediation of spill.



West end of battery before remediation of spill.

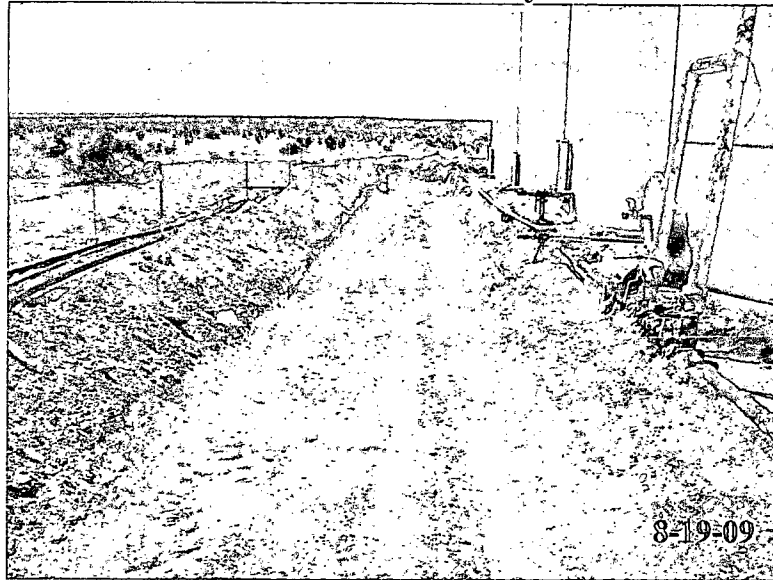


Inside battery after excavation of impacted soil.

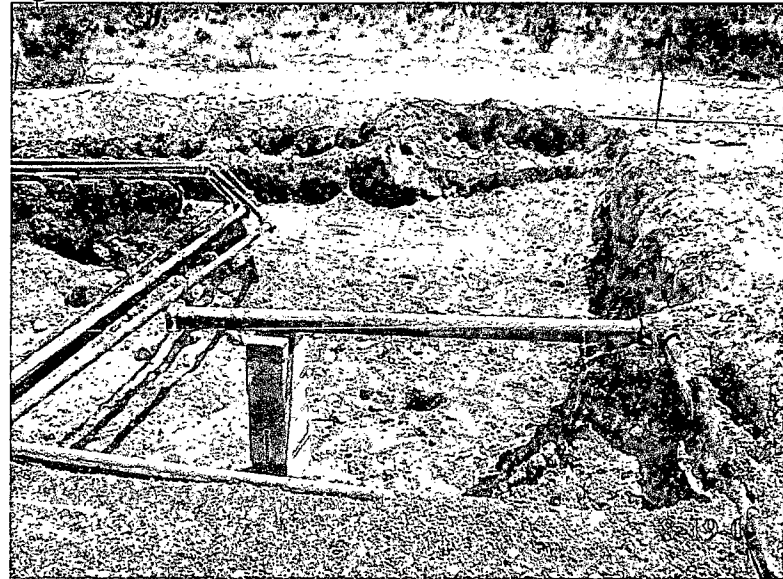


Inside battery after excavation of impacted soil.

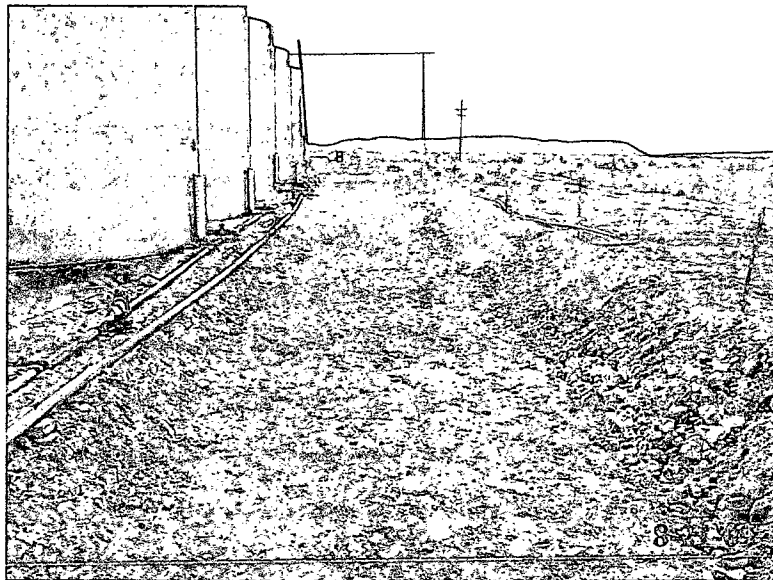
Oxy USA – Roaring Springs 14 Fed Com #1



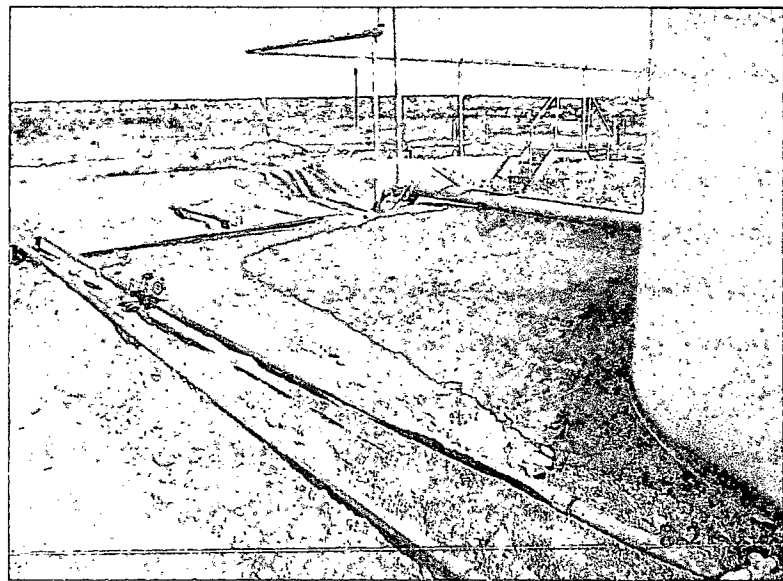
South end of battery after excavation of impacted soil.



West end of battery after excavation of impacted soil.



South end of battery after backfill of remediated soil.



West end of battery after backfill of remediated soil.



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) ROARING SPRINGS 13 FED #4 - SB-1				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) OXY USA				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS PO BOX 1988				CITY CARLSBAD		STATE NM	ZIP 88221
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 29	SECONDS 2.00 N	* ACCURACY REQUIRED, ONE TENTH OF A SECOND			
		LONGITUDE 104	33	31.00 W	* DATUM REQUIRED WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS UL "C" EDDY COUNTY, NEW MEXICO								
2. OPTIONAL	(.25 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION 13	TOWNSHIP 215 <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE 25 <input checked="" type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER		TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER WD1478		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 1/6/09		DRILLING ENDED 1/6/09		DEPTH OF COMPLETED WELL (FT) 96	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY							
	DEPTH (FT) FROM TO		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	0 96							
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA						TOTAL ESTIMATED WELL YIELD (GPM)		

FOR OSE INTERNAL USE

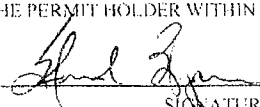
WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

5. SEAL AND PUMP	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				

6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
	0	2	2	TAN FINE SAND/CALICHE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	2	5	3	TAN FINE SAND/SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	5	11	6	TAN FINE SAND/DARK GRAY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	11	12	1	DARK GRAY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	12	17	5	TAN SILTY CLAY/SILTY SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	17	20	3	GRAY LIMESTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	20	31	11	DARK GRAY SILTY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	31	39	8	GRAY LIMESTONE/GRAY CLAY LAYERS	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	39	41	2	GRAY LIMESTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	41	43	2	TAN SANDY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	43	47	4	TAN VERY FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	47	51	4	GRAY SANDY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	51	64	13	TAN FINE SAND/SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	64	65	1	TAN FINE SAND/SANDSTONE/CALICHE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	65	87	22	TAN FINE SAND/SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
87	90	3	TAN VERY FINE SAND/DARK BROWN SANDY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
90	93	3	GRAY FINE SAND/GRAY SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL.					

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.	
	ADDITIONAL STATEMENTS OR EXPLANATIONS: SOIL BORING ONLY. PLUGGED WITH PELLETIZED BENTONITE UPON COMPLETION OF SAMPLING.	

8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 _____ SIGNATURE OF DRILLER	1/12/09 _____ DATE

FOR USE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION			PAGE 2 OF 2

5. SEAL AND PUMP	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				

6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
	93	96	3	DENSE SUPER HARD SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO
					<input type="checkbox"/> YES <input type="checkbox"/> NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL.

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> OTHER - SPECIFY:
	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.	
	ADDITIONAL STATEMENTS OR EXPLANATIONS: SOIL BORING ONLY. PLUGGED WITH PELLETIZED BENTONITE UPON COMPLETION OF SAMPLING.	

8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING.	
	 _____ SIGNATURE OF DRILLER	1/12/08 _____ DATE

FOR OSE INTERNAL USE:

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER

POD NUMBER

TRN NUMBER

LOCATION

PAGE 2 OF 2

Analytical Report 322203

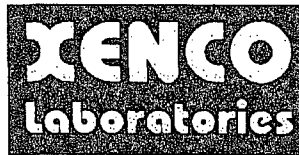
for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

13-JAN-09



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta



13-JAN-09

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
4817 Andrews Hwy
P.O. Box 14167 Odessa, tx 79768
Odessa, TX 79762

Reference: XENCO Report No: **322203**
Oxy USA
Project Address: Roaring Springs 14 # 1 Batt

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 322203. 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. 322203 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 322203



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 10'	S	Jan-07-09 11:47	10 ft	322203-001
SB-2 @ 15'	S	Jan-07-09 12:23	15 ft	322203-002
SB-3 @ 15'	S	Jan-07-09 12:42	15 ft	322203-003



Certificate of Analysis Summary 322203

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id:

Contact: Logan Anderson

Project Location: Roaring Springs 14 # 1 Batt

Date Received in Lab: Fri Jan-09-09 05:02 pm


Report Date: 13-JAN-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	322203-001	322203-002	322203-003			
	<i>Field Id:</i>	SB-1 @ 10'	SB-2 @ 15'	SB-3 @ 15'			
	<i>Depth:</i>	10 ft	15 ft	15 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jan-07-09 11:47	Jan-07-09 12:23	Jan-07-09 12:42			
Anions by EPA 300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-12-09 16:19	Jan-12-09 16:19	Jan-12-09 16:19			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		ND 22.8	ND 22.5	ND 26.2			
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-12-09 11:30	Jan-12-09 11:30	Jan-12-09 11:30			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		12.26 1.00	10.99 1.00	23.75 1.00			
TPH By SW8015 Mod	<i>Extracted:</i>	Jan-12-09 13:00	Jan-12-09 13:00	Jan-12-09 13:00			
	<i>Analyzed:</i>	Jan-13-09 09:57	Jan-13-09 10:20	Jan-13-09 10:44			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		ND 17.1	ND 16.9	ND 19.7			
C12-C28 Diesel Range Hydrocarbons		103 17.1	137 16.9	103 19.7			
C28-C35 Oil Range Hydrocarbons		ND 17.1	ND 16.9	37.8 19.7			
Total TPH		103 17.1	137 16.9	140.8 19.7			

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 invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi


Brent Barron
Odessa Laboratory Director



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.
- * Outside XENCO's scope of NELAC Accreditation.

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5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(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 : 322203,

Project ID:

Lab Batch #: 746298

Sample: 322199-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 746298

Sample: 322199-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 746298

Sample: 322203-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 746298

Sample: 322203-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	93.9	100	94	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 746298

Sample: 322203-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

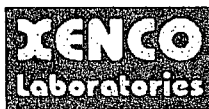
SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

** 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 : 322203,

Project ID:

Lab Batch #: 746298

Sample: 522806-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	62.2	50.0	124	70-135	

Lab Batch #: 746298

Sample: 522806-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 746298

Sample: 522806-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

** 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 #: 322203

Project ID:

Lab Batch #: 746220

Sample: 746220-1-BKS

Matrix: Solid

Date Analyzed: 01/12/2009

Date Prepared: 01/12/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.99	100	90-110	

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

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



BS / BSD Recoveries



Project Name: Oxy USA

Work Order #: 322203

Analyst: BHW

Date Prepared: 01/12/2009

Project ID:

Date Analyzed: 01/12/2009

Lab Batch ID: 746298

Sample: 522806-1-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	1000	971	97	1000	950	95	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1020	102	1000	997	100	2	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 #: 322203

Lab Batch #: 746220

Date Analyzed: 01/12/2009

QC- Sample ID: 322199-001 S

Reporting Units: mg/kg

Date Prepared: 01/12/2009

Batch #: 1

Project ID:

Analyst: LATCOR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	341	205	529	92	80-120	

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



Form 3 - MS / MSD Recoveries



Project Name: Oxy USA

Work Order #: 322203

Project ID:

Lab Batch ID: 746298

QC- Sample ID: 322199-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/13/2009

Date Prepared: 01/12/2009

Analyst: BHW

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	1030	954	93	1030	974	95	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	1020	99	1030	1040	101	2	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 #: 322203

Lab Batch #: 746220

Date Analyzed: 01/12/2009

QC- Sample ID: 322199-001 D

Reporting Units: mg/kg

Project ID:

Analyst: LATCOR

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	341	343	1	20	

Lab Batch #: 746179

Date Analyzed: 01/12/2009

QC- Sample ID: 322201-001 D

Reporting Units: %

Date Prepared: 01/12/2009

Analyst: WRU

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	3.45	3.35	3	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

A Xenco Laboratories Company

12600 West I-20 East
Odessa, Texas 79766

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

Project Name: Oxy USA

Project 4:

Project Loc: Roaring Springs 14 #1 Batt

PO #:

Fax No: 432-366-0884

Report Format: ☒ Standard ☐ TRAP ☐ NPDES

e-mail: la_elkeenv@yahoo.com

[illegible]

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.
 Date/ Time: 19.09 17:02
 Lab ID #: 322203
 Initials: AL

Sample Receipt Checklist

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

Analytical Report 338428

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Roaring Springs 14 # 1

31-AUG-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 (E87428), 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)



31-AUG-09

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
4817 Andrews Hwy
P.O. Box 14167 Odessa, tx 79768
Odessa, TX 79762

Reference: XENCO Report No: **338428**
Oxy USA
Project Address:

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 338428. 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. 338428 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 338428



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB3 @ 3'6"	S	Jul-16-09 15:30	3.5 ft	338428-001



CASE NARRATIVE

Client Name: Elke Environmental, Inc.

Project Name: Oxy USA

Project ID: Roaring Springs 14 #1

Work Order Number: 338428

Report Date: 31-AUG-09

Date Received: 07/20/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-766006 Percent Moisture

None

Batch: LBA-766214 Inorganic Anions by EPA 300

None

Batch: LBA-766215 TPH by SW8015 Mod

None



Certificate of Analysis Summary 338428

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id: Roaring Springs 14 # 1

Contact: Logan Anderson

Date Received in Lab: Mon Jul-20-09 02:30 pm

Report Date: 31-AUG-09


Project Location:

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	338428-001					
	Field Id:	SB3 @ 3'6"					
	Depth:	3.5 ft					
	Matrix:	SOIL					
	Sampled:	Jul-16-09 15:30					
Anions by EPA 300	Extracted:						
	Analyzed:	Jul-22-09 09:27					
	Units/RL:	mg/kg RL					
Chloride		104 27.4					
Percent Moisture	Extracted:						
	Analyzed:	Jul-21-09 10:47					
	Units/RL:	% RL					
Percent Moisture		8.75 1.00					
TPH By SW8015 Mod	Extracted:	Jul-21-09 09:48					
	Analyzed:	Jul-21-09 15:40					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		67.1 16.4					
C12-C28 Diesel Range Hydrocarbons		1330 16.4					
C28-C35 Oil Range Hydrocarbons		140 16.4					
Total TPH		1537.1 16.4					

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 invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi


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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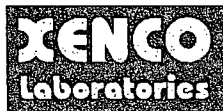
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2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(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 : 338428,

Project ID: Roaring Springs 14 # 1

Lab Batch #: 766215

Sample: 534063-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/21/09 11:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 766215

Sample: 534063-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/21/09 11:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 766215

Sample: 534063-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/21/09 11:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	100	90	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 766215

Sample: 338428-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/21/09 15:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.0	100	84	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 766215

Sample: 338237-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/21/09 17:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	43.3	50.0	87	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 : 338428,

Project ID: Roaring Springs 14 # 1

Lab Batch #: 766215

Sample: 338237-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/21/09 18:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	47.4	50.0	95	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 #: 338428

Project ID: Roaring Springs 14 # 1

Lab Batch #: 766214

Sample: 766214-1-BKS

Matrix: Solid

Date Analyzed: 07/22/2009

Date Prepared: 07/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

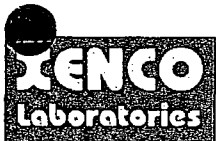
BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.2	102	90-110	

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 #: 338428

Analyst: BHW

Date Prepared: 07/21/2009

Project ID: Roaring Springs 14 # 1

Date Analyzed: 07/21/2009

Lab Batch ID: 766215

Sample: 534063-1-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	1000	826	83	1000	845	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	987	99	1000	1010	101	2	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 #: 338428

Lab Batch #: 766214

Date Analyzed: 07/22/2009

QC- Sample ID: 338428-001 S

Reporting Units: mg/kg

Date Prepared: 07/22/2009

Project ID: Roaring Springs 14 # 1

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	104	548	712	111	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

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 #: 338428

Project ID: Roaring Springs 14 # 1

Lab Batch ID: 766215

QC- Sample ID: 338237-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/21/2009

Date Prepared: 07/21/2009

Analyst: BHW

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	116	1290	1260	89	1290	1310	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	428	1290	2030	124	1290	1970	120	3	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 338428

Lab Batch #: 766214

Date Analyzed: 07/22/2009

QC- Sample ID: 338428-001 D

Reporting Units: mg/kg

Date Prepared: 07/22/2009

Batch #: 1

Project ID: Roaring Springs 14 # 1

Analyst: LATCOR

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	104	91.3	13	20	

Lab Batch #: 766006

Date Analyzed: 07/21/2009

QC- Sample ID: 338428-001 D

Reporting Units: %

Date Prepared: 07/21/2009

Batch #: 1

Analyst: BEV

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	8.75	8.71	0	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

A Xenco Laboratories Company

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79785

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

Project Manager: Logan Anderson

Project Name: Qx4 USA

Company Name Elke Environmental

Project #: TRAINING STRINGS 14th

Company Address: P O Box 14187

Project Loc:

City/State/Zip: Odessa, TX 79768

PO # : /

Telephone No: 432-366-0043

Fax No: 432-366-0884

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

a-mail: la_elkeenv@yahoo.com

[illegible]

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Eike Env.
Date/ Time: 7-20-09 14:30
Lab ID #: 338428
Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.0 °C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#11	Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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

Analytical Report 342293

for

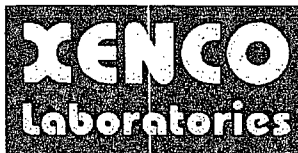
Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Roaring Springs 14-1

31-AUG-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 (E87428), 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)



31-AUG-09

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
4817 Andrews Hwy
P.O. Box 14167 Odessa, tx 79768
Odessa, TX 79762

Reference: XENCO Report No: **342293**
Oxy USA
Project Address:

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 342293. 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. 342293 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 342293



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Pile	S	Aug-19-09 17:50		342293-001



CASE NARRATIVE

Client Name: Elke Environmental, Inc.

Project Name: Oxy USA

Project ID: Roaring Springs 14-1
Work Order Number: 342293

Report Date: 31-AUG-09
Date Received: 08/26/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-769962 TPH by SW8015 Mod

None

Batch: LBA-769966 Percent Moisture

None

Batch: LBA-770296 Inorganic Anions by EPA 300

None



Certificate of Analysis Summary 342293

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id: Roaring Springs 14-1

Contact: Logan Anderson

Project Location:

Date Received in Lab: Wed Aug-26-09 08:32 am


Report Date: 31-AUG-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	342293-001					
	Field Id:	Pile					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Aug-19-09 17:50					
Anions by EPA 300	Extracted:						
	Analyzed:	Aug-28-09 16:27					
	Units/RL:	mg/kg RL					
Chloride		182 21.4					
Percent Moisture	Extracted:						
	Analyzed:	Aug-26-09 14:00					
	Units/RL:	% RL					
Percent Moisture		6.48 1.00					
TPH By SW8015 Mod	Extracted:	Aug-26-09 13:34					
	Analyzed:	Aug-26-09 18:59					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16.0					
C12-C28 Diesel Range Hydrocarbons		113 16.0					
C28-C35 Oil Range Hydrocarbons		ND 16.0					
Total TPH		113 16.0					

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 invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi


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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9701 Harry Hines Blvd , Dallas, TX 75220
5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(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 : 342293,

Project ID: Roaring Springs 14-1

Lab Batch #: 769962

Sample: 536317-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/26/09 16:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 769962

Sample: 536317-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/26/09 16:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	38.2	50.0	76	70-135	

Lab Batch #: 769962

Sample: 536317-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/26/09 16:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.2	100	77	70-135	
o-Terphenyl	39.6	50.0	79	70-135	

Lab Batch #: 769962

Sample: 342293-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/26/09 18:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	99.9	93	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 769962

Sample: 342293-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/09 00:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	37.4	50.0	75	70-135	

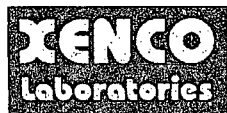
* Surrogate outside of Laboratory QC limits

** 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 : 342293,

Lab Batch #: 769962

Sample: 342293-001 SD / MSD

Project ID: Roaring Springs 14-1

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/09 00:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	44.9	50.0	90	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 #: 342293

Project ID: Roaring Springs 14-1

Lab Batch #: 770296

Sample: 770296-1-BKS

Matrix: Solid

Date Analyzed: 08/28/2009

Date Prepared: 08/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.84	98	80-120	

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 #: 342293

Analyst: BHW

Date Prepared: 08/26/2009

Project ID: Roaring Springs 14-1

Date Analyzed: 08/26/2009

Lab Batch ID: 769962

Sample: 536317-1-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	1000	927	93	1000	867	87	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1080	108	1000	1020	102	6	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 #: 342293

Lab Batch #: 770296

Date Analyzed: 08/28/2009

QC- Sample ID: 342293-001 S

Reporting Units: mg/kg

Date Prepared: 08/28/2009

Batch #: 1

Project ID: Roaring Springs 14-1

Analyst: LATCOR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	182	428	584	94	80-120	

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 #: 342293

Project ID: Roaring Springs 14-1

Lab Batch ID: 769962

QC- Sample ID: 342293-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/27/2009

Date Prepared: 08/26/2009

Analyst: BHW

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	1070	952	89	1070	1090	102	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	113	1070	1180	100	1070	1360	117	14	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 342293

Lab Batch #: 770296

Project ID: Roaring Springs 14-1

Date Analyzed: 08/28/2009

Date Prepared: 08/28/2009

Analyst: LATCOR

QC- Sample ID: 342293-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	182	149	20	20	

Lab Batch #: 769966

Date Analyzed: 08/26/2009

Date Prepared: 08/26/2009

Analyst: BEV

QC- Sample ID: 341905-001 D

Batch #: 1

Matrix: Solid

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	23.6	23.3	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

A Xenco Laboratories Company

12600 West I-20 East
Odessa, Texas 79766

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

City/State/Zip: Odessa, TX 79762
Telephone No: 432-366-0043

Fax No: 432-366-0884

e-mail: la_eikeenv@yahoo.com

Project #: Roaring Spines 14-

Project Loc:

PO #: _____

Report Format: ☒ Standard ☐ TRRP ☐ NPDES[illegible]

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Elke Environmental
Date/ Time: 8/26 08:32
Lab ID #: 347293
Initials: AS

Sample Receipt Checklist

			Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.1° C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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

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

OCT 29 2008

OCD-ARTESIA

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	192463	Contact Kelton Beaird
Address 102 S Main Carlsbad, NM 88220		Telephone No. (O) 505-887-8337 C) 575-390-1903
Facility Name Roaring Springs 14-1		Facility Type Well with Tank battery
ROARING SPRINGS 14 FEDERAL COM OXY		
Surface Owner BLM	Mineral Owner BLM	Lease No.

30 01526081

LOCATION OF RELEASE

Unit Letter E	Section 14	Township 21S	Range 23E	Feet from the	North/South Line	Feet from the	East/West Line	County EDDY
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release +500	Volume Recovered 480
Source of Release Discharge line	Date and Hour of Occurrence	Date and Hour of Discovery 10-22-08 11am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jim Amos- BLM Sherry Bohnam-NMOCD	
By Whom? Kelton Beaird	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.*

Victalic clamp on the water pump discharge line broke filling the containment area with water

Describe Area Affected and Cleanup Action Taken.*

The area affected was inside the bermed containment area. A vac-truck was called and all remaining fluid was picked up. A clean-up plan will be submitted for approval

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.

OIL CONSERVATION DIVISION

Signature:

Printed Name: Kelton Beaird

Title: HES Specialist

E-mail Address: kelton_beaird@oxy.com

Date: 10-27-08

Approved by District Supervisor:

Approval Date: 10-30-08

Conditions of Approval:

Within 30 days, on or before 12-2-08, completion of a remediation work plan based on delineation should be finalized and submitted for approval to the Division summarizing all actions taken and/or to be taken to mitigate environmental damage.

Remediation Actions to be completed and
Final C-141 submitted with confirmation
analyses/documentation on or before the
Expiration Date. ↓

Expiration Date: 01-05-09

Attached ☐

2RP - 263

* Attach Additional Sheets If Necessary

Notify OCD 48 hours prior to
obtaining samples where analyses
are to be presented to OCD

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
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1 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

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side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company – OXY USA	Contact – Kelton Beaird	
Address – P O Box 1988 / Carlsbad, NM	Telephone No. – 575-628-4121	
Facility Name – Roaring Springs 14 Fed Com #1	Facility Type – Battery	
Surface Owner – Federal	Mineral Owner – Federal	Lease No.

LOCATION OF RELEASE

Unit Letter E	Section 14	Township 21S	Range 23E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release – Produced Water	Volume of Release – +500 bbls	Volume Recovered – 480 bbls
Source of Release – Discharge Line	Date and Hour of Occurrence 10-22-08	Date and Hour of Discovery – 10-22-08 @ 11:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Sherry Bohnam – NMOCD Jim Amos – BLM	
By Whom? – Kelton Beaird - Oxy	Date and Hour – Same as above	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

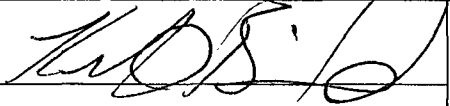
a Watercourse was Impacted, Describe Fully.

Describe Cause of Problem and Remedial Action Taken.* Victalic clamp on the water pump discharge line broke, filling the battery with water. Spill was contained within the berms. All fluid was picked up with a vacuum truck. The battery will be delineated using field analysis. Confirmation samples will be taken to the lab. The groundwater in the surrounding area is > 98' using a borehole drilled at the nearby Roaring Springs 13 Fed #4 Battery. The borehole was in Section 13 T21S R23E. The following are the recommended action levels for the site : Chloride – 500 ppm, TPH – 1,000 ppm, BTEX – 100 ppm(field vapor analysis).

Describe Area Affected and Cleanup Action Taken.* As per the approved plan the impacted soil at SB1 and SB2 was to excavated 1' bgs and SB3 was 5' bgs. Very hard rock was encountered at 3' 6" at SB3 and a confirmation sample was taken. As per the conversation with Mike Bratcher the soil below 3' 6" at SB3 would be left in place due to the hard rock. 150 cubic yards of impacted soil was removed from the pile and the remaining impacted soil was blended with clean caliche to below the RAL's and backfilled into the excavation. The berms around the battery were rebuilt.

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: Kelton Beaird	Approval Date:	Expiration Date:
Title: HES Specialist	Conditions of Approval:	
E-mail Address: kelton_beaird@oxy.com	Attached <input type="checkbox"/>	
Date: 8-31-09	Phone: 575-628-4121	

* Attach Additional Sheets If Necessary