

Elke Environmental, Inc.

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

January 14, 2009

New Mexico Oil Conservation Division
Mrs. Sherry Bohnam
1301 West Grand Ave.
Artesia, New Mexico 88210

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

Mrs. Sherry Bohnam,

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.

Oxy USA proposes to excavate 1' of impacted soil around the tanks and 5' at SB3. With no elevated chloride levels the soil will be remediated on-site to below the RAL's of 1,000 ppm TPH, 100 ppm BTEX using a field head vapor space measurement and 250 ppm Chlorides. The remediated soil will be backfilled into the excavation. If the soil can not be remediated onsite to below the RAL's the soil will be hauled to Lea Land Disposal. A final report will be submitted at the completion of the remediation. If you have any questions about the enclosed report please contact me at the office.

Sincerely,



Logan Anderson

Oxy USA

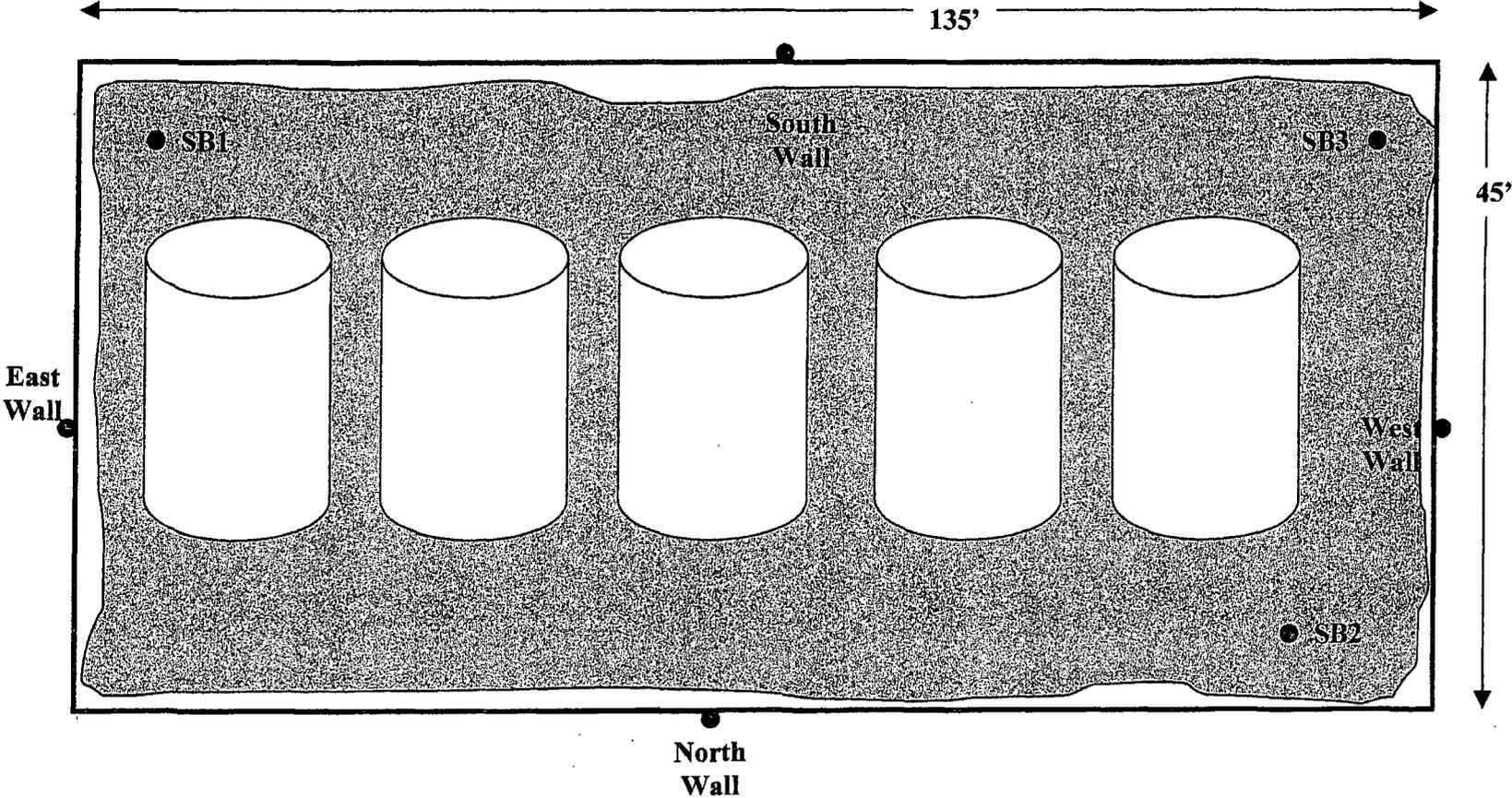
Roaring Springs 14 Fed Com #1 Battery

UL 'E' Sec. 14 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 #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 _____



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 1888				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 DATA FROM REQUIRED WGS 84			
		LONGITUDE 104	33	31.00 W				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS: UL "C" EDDY COUNTY, NEW MEXICO								
2. OPTIONAL	(2.5 ACRE) <input type="checkbox"/>	(10 ACRE) <input type="checkbox"/>	(40 ACRE) <input type="checkbox"/>	(160 ACRE) <input type="checkbox"/>	SECTION: 13	TOWNSHIP: 215	RANGE: 25	
	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):	BORE HOLE DEPTH (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)		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	FROM	TO						
		6"	N/A	N/A	N/A	N/A	N/A	
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
	FROM	TO						
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"/> BAUER <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.				

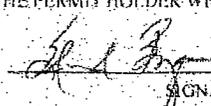
8. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING.	
	 SIGNATURE OF DRILLER	11/12/09 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			<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		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
						<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	1/23/08 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.*

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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

Analysis Requested	<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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(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 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
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*(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 #: 322203

Lab Batch #: 746220
Date Analyzed: 01/12/2009
QC- Sample ID: 322199-001 D
Reporting Units: mg/kg

Project ID:
Analyst: LATCOR
Date Prepared: 01/12/2009
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: %

Project ID:
Analyst: WRU
Date Prepared: 01/12/2009
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.

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

Client: EIKE Env.
 Date/ Time: 1-9-09 11:02
 Lab ID #: 322203
 Initials: OL

Sample Receipt Checklist

			Client Initials
1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	E.I.K.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