

JAN 16 2009  
OCD-ARTESIA

***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

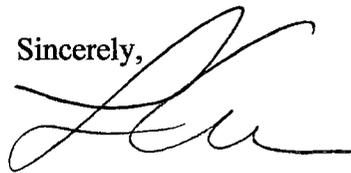
Re: Remediation Plan for Leak  
Oxy USA – Coyote 21 #2 Battery  
UL 'N' Sec. 21 T24S R29E Eddy County  
2RP-280

Mrs. Sherry Bohnam,

Elke Environmental was contracted by Oxy USA to complete the remediation of the leak at the Coyote 21 #2 Battery. A delineation of the site was completed using an air rotary rig. The ranking criteria for this site is as follows: Surface Body of Water – 0 points (1200' from Pecos River); Wellhead Protection Area – 0 points; Groundwater Depth – 20 points (GW < 50'). The total ranking for the site is 20 points. Attached is a plat map, field analytical and lab confirmation for the site.

Oxy USA proposes to excavate 4' of impacted soil and haul to CRI Disposal. The excavation will be backfilled with clean native soil. A 20 mil poly liner will be installed on the surface of the site with 4 oz geo-textile liner below the poly liner. The poly liner will have a layer of pea gravel installed above it. 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**

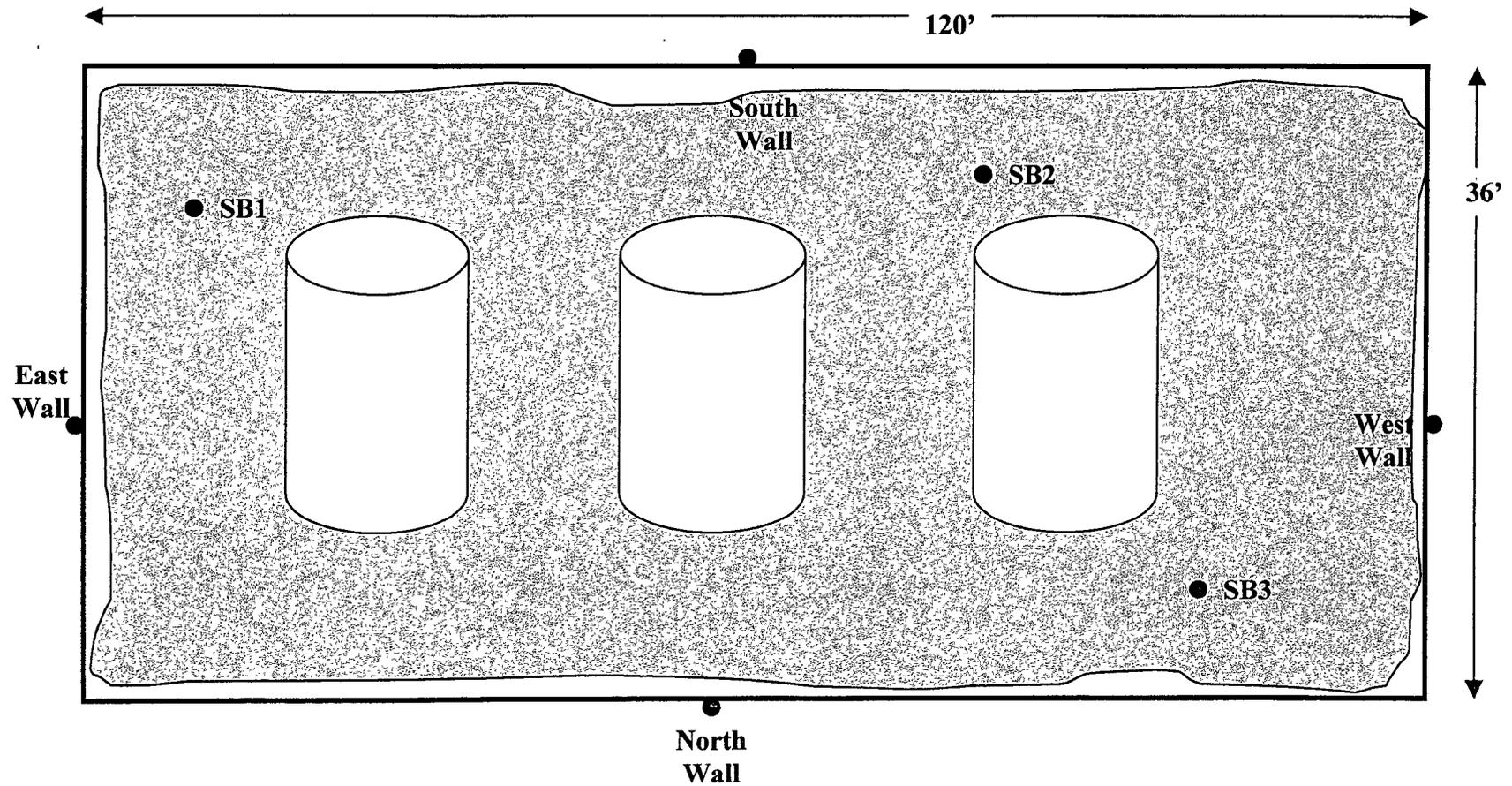
Coyote 21 #2 Battery

UL 'N' Sec. 21 T24S R29E

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 Coyote 21 #2 Battery

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
SB1	1-7-09	Surface	79	26,174	0.0	32° 11.886' N 103° 59.441' W
SB1	1-7-09	5'		206	0.0	32° 11.886' N 103° 59.441' W
SB1	1-7-09	10'	22	151	0.0	32° 11.886' N 103° 59.441' W
SB2	1-7-09	Surface	23	33,424	0.0	32° 11.887' N 103° 59.452' W
SB2	1-7-09	5'		317	0.0	32° 11.887' N 103° 59.452' W
SB2	1-7-09	10'		343	0.0	32° 11.887' N 103° 59.452' W
SB2	1-7-09	15'	31	260	0.0	32° 11.887' N 103° 59.452' W
SB3	1-7-09	Surface	48	24,811	0.0	32° 11.888' N 103° 59.458' W
SB3	1-7-09	5'		462	0.0	32° 11.888' N 103° 59.458' W
SB3	1-7-09	10'	54	270	0.0	32° 11.888' N 103° 59.458' W
North Wall	1-7-09	Surface	38	118	0.0	32° 11.890' N 103° 59.450' W
South Wall	1-7-09	Surface	42	92	0.0	32° 11.886' N 103° 59.446' W
East Wall	1-7-09	Surface	61	49	0.0	32° 11.888' N 103° 59.439' W
West Wall	1-7-09	Surface	53	64	0.0	32° 11.886' N 103° 59.461' W

Analyst Notes \_\_\_\_\_

# Analytical Report 322202

for

JAN 16 2009  
OCD-ARTESIA

**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: **322202**  
**Oxy USA**  
Project Address: Coyote 21 # 2 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 322202. 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. 322202 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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*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 322202**



**Elke Environmental, Inc., Odessa, TX**  
Oxy USA

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SB-1 @ 10'	S	Jan-07-09 16:25	10 ft	322202-001
SB-2 @ 15'	S	Jan-07-09 17:30	15 ft	322202-002
SB-3 @ 10'	S	Jan-07-09 17:51	10 ft	322202-003



# Certificate of Analysis Summary 322202

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id:

Contact: Logan Anderson

Project Location: Coyote 21 # 2 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>	322202-001	322202-002	322202-003			
	<i>Field Id:</i>	SB-1 @ 10'	SB-2 @ 15'	SB-3 @ 10'			
	<i>Depth:</i>	10 ft	15 ft	10 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jan-07-09 16:25	Jan-07-09 17:30	Jan-07-09 17:51			
<b>Anions by EPA 300</b>	<i>Extracted:</i>	Jan-12-09 16:19	Jan-12-09 16:19	Jan-12-09 16:19			
	<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		91.4 5.11	146 5.14	199 5.11			
<b>Percent Moisture</b>	<i>Extracted:</i>	Jan-12-09 11:30	Jan-12-09 11:30	Jan-12-09 11:30			
	<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		2.13 1.00	2.70 1.00	2.16 1.00			
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-12-09 13:00	Jan-12-09 13:00	Jan-12-09 13:00			
	<i>Analyzed:</i>	Jan-12-09 19:18	Jan-12-09 19:40	Jan-12-09 20:03			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		ND 15.3	ND 15.4	ND 15.3			
C12-C28 Diesel Range Hydrocarbons		ND 15.3	30.1 15.4	ND 15.3			
C28-C35 Oil Range Hydrocarbons		ND 15.3	22.3 15.4	ND 15.3			
Total TPH		ND 15.3	52.4 15.4	ND 15.3			

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.

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 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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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 322202,

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: 322202-001 / 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	97.3	100	97	70-135	
o-Terphenyl	48.1	50.0	96	70-135	

Lab Batch #: 746298

Sample: 322202-002 / 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	107	100	107	70-135	
o-Terphenyl	52.9	50.0	106	70-135	

Lab Batch #: 746298

Sample: 322202-003 / 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	99.6	100	100	70-135	
o-Terphenyl	49.0	50.0	98	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 : 322202,

Project ID:

Lab Batch #: 746298

Sample: 522806-1-BKS / BKS

Batch: 1 Matrix: Solid

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	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	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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 #: 322202**

**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 #: 322202

Analyst: BHW

Lab Batch ID: 746298

Sample: 522806-1-BKS

Date Prepared: 01/12/2009

Batch #: 1

Project ID:

Date Analyzed: 01/12/2009

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 #: 322202

Lab Batch #: 746220

Project ID:

Date Analyzed: 01/12/2009

Date Prepared: 01/12/2009

Analyst: LATCOR

QC-Sample ID: 322199-001-S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## MATRIX / MATRIX SPIKE RECOVERY STUDY

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

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



# Form 3 - MS / MSD Recoveries



Project Name: Oxy USA

Work Order #: 322202

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 #: 322202

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

Date Prepared: 01/12/2009  
Batch #: 1

Project ID:  
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	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  
Batch #: 1

Analyst: WRU  
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	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: Elke Env.  
 Date/ Time: 19 Oct 17:02  
 Lab ID #: 312102  
 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?	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)?	Yes	No	Not Applicable
20 VOC samples have zero headspace?	Yes	No	Not Applicable

**Variance Documentation**

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