District I       State of         1625 N. French Dr , Hobbs, NM 88240       Energy Minerals a         District II       Energy Minerals a         1301 W Grand Avenue, Artesia, NM 88210       Oil Conser         District III       0il Conser         1000 Rio Brazos Road, Aztec, NM 87410       1220 South         District IV       1220 South         1220 S St Francis Dr , Santa Fe, NM 87505       Santa Fe         Release Notification							ico I Resourc vision N is Dr. 05	RE ses FE	CD /	IVED 5 2010 ARTES	Re Submit 2 ( Alpistrict W	Form C-141 sysed October 10, 2003 Copies to appropriate Office in accordance ith Rule 116 on back side of form	
			RUI		auvi								
OPERATOR Initial Report X Final Report													
Name of Co	ompany	Lime Rock	Resource	s		Contact M	chael Bar	rett				t	
Address 1	111 Bagby	y Street Suite	<b>4600,</b> H	ouston, TX 770	02	Telephone N	lo. 575-62	23-8424	4 505	-353-2644	1		
Facility Na	me Stale	y State A #4	ļ			Facility Typ	e Oil We	ell					
Surface Ow	ner Pul	itzer Broadc	asting	Mineral C	wner	State of Ne	w Mexico			Lease N	o. 30-015	-36252	
30-015-	36252	-		LOCA	TIO	N OF REI	LEASE						
Unit Letter K	Section 30	Township 17S	Range 28E	Feet from the 990'	North FSL	/South Line	Feet from 1980'	the	East/V FWL	Vest Line	County Eddy		
( <u> </u>		<b>.</b>	Latitud	le 32° 48 08.34"	North		Longitue	<b>de</b> 104	° 12 5	8.91" Wes	<u>it</u>		
				NAT	<b>URE</b>	OF REL	EASE						
Type of Rele	ease Produ	ced Water and	crude oil			Volume of 75 Bbls W	Release 20 ater	0 Bbls (	Dil,	Volume R	ecovered	none	
Source of Re	elease Poly		Date and H 11/7/09 @	lour of Occ 0600	urrence	;	Date and 1 11/7/09 (a)	Hour of Dis	scovery				
Was Immedi	Was Immediate Notice Given? X Yes No Not Required						Whom? ham				£		
By Whom?	By Whom? Michael Barrett						Date and Hour 11/9/09 @1000						
Was a Water	Was a Watercourse Reached?						lume Impa total fluid	cting th	e Wate	ercourse.			
If a Waterco	urse was Im	pacted. Descr	ibe Fully.	*		-							

Runoff from leak to low lying area

Describe Cause of Problem and Remedial Action Taken:

Frac sand plugged 3" poly line causing it to fail.

Shut in wells, isolated line, cleared plug and repaired.

Describe Area Affected and Cleanup Action Taken.

Release site was remediated to applicable NMOCD standards, please see Basin Consulting Remediation Summary and Site Closure Request.

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.

1.1 P C	OIL CONSERVATION DIVISION
Signature: Mut Out	
Printed Name: Michael Barret Michael Garrett	Approved by District Supervisors
Title: Production Supervisor	Approval Date: 2-5-10 Expiration Date: N/A
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:
Date: 11/10/09 Phone: 505-353-2644	N/A 2RP. 364

# Basin Environmental Consulting, LLC

2800 Plains Highway P. O. Box 381 Lovington, New Mexico 88260 cdstanley@basin-consulting.com Office: (575) 396-2378 Fax: (575) 396-1429





RECEIVED

FEB - 5 2010

NMOCD ARTESIA

**REMEDIATION SUMMARY** 

### AND

## SITE CLOSURE REQUEST

#### LIME ROCK RESOURCES OPERATING COMPANY, INC Staley State A #4 Eddy County, New Mexico UNIT K (NE/SW), Section 30, Township 17 South, Range 28 East Latitude 32° 48' 08.53" North, Longitude 104° 12' 59.42" West

Prepared For:

Lime Rock Resources Operating Company, Inc. 1111 Bagby Street Suite 4600 Houston, Texas 77002

Prepared By: Basin Environmental Consulting, LLC

January 2010

Curt D.

Project Manager

#### **TABLE OF CONTENTS**

1.0	INTRODUCTION	.1
2.0	NMOCD SITE CLASSIFICATION	.1
3.0	SUMMARY OF FIELD ACTIVITIES	2
4.0	QA/QC PROCEDURES4.1Soil Sampling4.2Decontamination of Equipment4.3Laboratory Protocol	4 4 4 4
5.0	SITE CLOSURE REQUEST	4
6.0	LIMITATIONS	4
7.0	DISTRIBUTION	6

,

#### FIGURES

Figure 1 – Site Location Map Figure 2 – Site Map

#### TABLES

Table 1 – Concentrations of BTEX, TPH and Chloride in Soil

### APPENDICES

- Appendix A Laboratory Analytical Reports
- Appendix B Photographs
- Appendix C Release Notification and Corrective Action (Form C-141)

#### **1.0 INTRODUCTION**

Basin Environmental Consulting, LLC (Basin), on behalf of Lime Rock Resources (Lime Rock), has prepared this Remediation Summary and Site Closure Request for the release site known as Staley State A #4. The site is located in Unit Letter K (NE ¼ SW ¼), Section 30, Township 17 South, Range 28 East, in Eddy County, New Mexico. The release was initially reported as Unit Letter N (SE ¼ SW ¼), Section 30, Township 17 South, Range 28 East. The property is owned by Pulitizer Broadcasting. The site latitude is 32° 48' 08.53" North and the longitude is 104° 12' 59.42" West. The release site latitude and longitude were initially reported as 32.8004891718328° North, 104.217172694796° West. The Site Location and Site Map are provided as Figure 1 and Figure 2, respectively. The Release Notification and Corrective Action (NMOCD Form C-141) indicated twenty (20) barrels of crude oil and seventy-five (75) barrels of produced water were released from a Lime Rock poly line, with no recover during the initial response activities. General site photographs are included as Appendix B and the Initial and Final Release Notification and Corrective Action are provided as Appendix C.

#### 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database indicates there are no water wells within Section 30 of the above referenced township and range. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) indicated groundwater should be encountered at approximately one hundred twenty five (125) feet below ground surface (bgs). The inferred depth to groundwater of approximately 125 feet bgs, results in a score of zero (0) being assigned to the site based on the depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells located less than 1,000 feet from the release site, resulting in zero (0) points being assigned to this site as a result of this criteria.

The release affected a drainage channel located south of the highway right-of-way fence. The drainage channel terminates at Logan Draw, located approximately one (1) mile to the west of the release point. Based on the NMOCD ranking system ten (10) points will be assigned to the site as a result of these criteria.

The NMOCD guidelines indicate the Staley State A #4 release site has a ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene 10 mg/Kg (ppm)
- BTEX 50 mg/Kg (ppm)
- TPH 1,000 mg/Kg (ppm)

Chloride remediation levels are site specific and are generally set at 250 mg/Kg by the NMOCD.

#### 3.0 SUMMARY OF FIELD ACTIVITIES

On November 16, 2009, excavation of impacted soil began at the release site. Excavated soil was placed on a poly liner adjacent to the release site to mitigate any potential leaching of contaminants to the subsurface. Impacted soil was manifested and transported to Lea Land Disposal (WM-01-35 – New Mexico) throughout the excavation process.

On November 17, 2009, nine (9) delineation soil samples (East of RP #1, East of RP #2, East of RP #3, Main Ex. NSW @ 3.5', Main Ex. SSW @ 3.5', Main Ex. ESW @ 3.5', Main Ex. WSW @ 3.5', Main Ex. F-1 @ 4' and Main Ex. F-2 @ 2') were collected from the excavation and submitted to the laboratory for analysis. Soil samples "East of RP #1", "East of RP #2", "East of RP #3", Main Ex. SSW @ 3.5, Main Ex. WSW @ 3.5' and Main Ex. F-2 @ 2' were analyzed for benzene, toluene, ethylbenzene and xylene (BTEX) concentrations using EPA Method 8021b and total petroleum hydrocarbons (TPH) concentrations using Method SW 848-8015M. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory method detection limits (MDL), with the exception of soil sample Main Ex. WSW @ 3.5' which exhibited a TPH concentration of 21.1 mg/Kg. A summary table of Concentrations of BTEX, TPH and Chlorides in Soil is provided as Table 1 and laboratory analytical reports are provided as Appendix A.

All nine (9) soil samples were analyzed for chloride concentrations using EPA Method 300.1. The analytical results indicated chloride concentrations ranged from less than the laboratory MDL of 26.3 mg/Kg in soil sample Main Ex. F-2 @ 2' to 381 mg/Kg in soil sample Main Ex. ESW @ 3.5'.

On November 19, 2009, thirty (30) delineation soil samples (SFP-1 @ 3', SFP-2 @ 2', SFP-3 @ 2', SFP-4 @ 3', SFP-5 @ 2', SFP-6 @ 2', SFP-7 @ 2', SFP-8 @ 2', WFP-1, WFP-2, EFPWSW, EFP-Floor @ 3', EFPESW, D1-Floor, D2-Floor, D3-Floor, D3-SSW @ 3', D4-Floor, D5-Floor, D6-Floor, D7-Floor, D8-Floor, D9-NSW @ 6', D10-Floor, D10-SSW @ 5', D11-Floor, D11-NSW @ 10', D11-SSW @ 10', D12-Floor) were collected from the excavation and submitted to the laboratory for analysis. Soil samples SFP-1 @ 3', SFP-2 @ 2', SFP-3 @ 2', SFP-4 @ 3', SFP-5 @ 2', SFP-6 @ 2', SFP-7 @ 2', SFP-8 @ 2', WFP-2, EFPWSW, EFP-Floor @ 3', EFPESW, D1-Floor, D3-Floor, D3-SSW @ 3', D9-NSW @ 6', D10-SSW @ 5', D11-NSW @ 10', D11-SSW @ 10', D12-Floor were analyzed for BTEX and TPH concentrations. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL, with the exception of soil samples SFP-3 @ 2', SFP-4 @ 3' and SFP-7 @ 2' which exhibited TPH concentration of 116 mg/Kg, 322 mg/Kg and 42.6 mg/Kg, respectively.

All thirty (30) soil samples collected on November 19, 2009 were analyzed for chloride concentrations. The analytical results indicated chloride concentrations ranged from less than the laboratory MDL of 19.6 mg/Kg in soil sample WFP-2 to 15,600 mg/Kg in soil sample D7-Floor.

On November 30, 2009, representatives of Lime Rock, Basin and the NMOCD Artesia District Office met onsite. Lime Rock and Basin representatives presented the analytical results of the collected soil samples and proposed additional excavation activities in the drainage channel. The

proposed area of additional excavation included soil represented by soil samples D4-Floor, D5-Floor, D6-Floor, D7-Floor, D8-Floor, D9-Floor, D10-Floor, and D11-Floor. In additional, Lime Rock and Basin representatives proposed the collection of alternating north and south sidewall soil samples to further demonstrate the delineation and remediation of the drainage channel. On review, the NMOCD representative approved the proposed excavation activities, as well as approving the backfilling of areas adjacent to the drainage channel.

On November 30, 2009, a soil sample (West of D4) was collected and submitted to the laboratory. The soil sample was collected approximately forty (40) feet west of soil sample "D4-Floor" and was collected in response to the analytical results of soil sample "D4-Floor".

The analytical results indicated soil sample "West of D4" exhibited a benzene concentration of less than the laboratory MDL of 0.0012 mg/Kg, a BTEX concentration of less than the laboratory MDL of 0.0026 mg/Kg, and a TPH concentration of 716 mg/Kg. Analysis for chloride concentration indicated a concentration of 10.2 mg/Kg. Based on the analytical results of soil sample "West of D4", no further delineation was warranted.

On December 10, 2009, excavation of the proposed area of additional excavation commenced at the release site. Following the excavation activities eight (8) confirmation floor soil samples (D7A-Floor, D6A-Floor, D4A-Floor, D8A-Floor, D5A-Floor, D9A-Floor, D10A-Floor, D11A-Floor) were collected and submitted to the laboratory. The analytical results indicated benzene and BTEX concentrations in all eight (8) floor soil samples were less than the appropriate laboratory MDL. TPH concentrations ranged from less than the laboratory MDL in soil samples D7A-Floor and D8A Floor to 110.6 mg/Kg in soil sample D9A-Floor. Chloride concentrations ranged from 158 mg/Kg in soil sample D5A-Floor to 327 mg/Kg in soil sample D6A-Floor.

Following the excavation activities six (6) confirmation sidewall soil samples (D6-SSW @ 3.5', D5-NSW @ 7.5', D7-NSW @ 8', D4-WSW @ 8', D8-SSW @ 7', D4-SSW @ 8') were collected and submitted to the laboratory. The analytical results indicated benzene and BTEX concentrations in all six (6) floor soil samples were less than the appropriate laboratory MDL. TPH concentrations ranged from less than the laboratory MDL in soil samples D6-SSW @ 3.5' and D5-NSW @ 7.5' to 479 mg/Kg in soil sample D7A-NSW @ 8'. Chloride concentrations ranged from less than the laboratory MDL of 26.1 mg/Kg in soil sample D7-NSW @ 8' to 6,280 mg/Kg in soil sample D8-SSW @ 7'. Based on the analytical results, only soil sample D8-SSW @ 7' exhibited a chloride concentration unacceptable to the NMOCD.

On December 21, 2009, soil represented by and adjacent to D8-SSW @ 7' was excavated and stockpiled onsite pending transportation to Lea Land Disposal. Following the excavation activity, a soil sample (D8A-SSW @ 7') was collected from the sidewall and submitted to the laboratory. The analytical results indicated the chloride concentration was 80.4 mg/Kg.

On receipt of the analytical results, the NMOCD approved the backfilling of the drainage channel with locally purchased soil. Following backfill activities the release site was contoured to fit the surrounding topography. The surface of the backfill material was "ripped" to a depth of approximately six (6) inches bgs and the large blocks of gypsum removed from the excavation

were placed in the drainage channel to minimize wind and water erosion. The site will be reseeded with vegetation acceptable to the landowner when soil moisture conditions are optimal.

#### 4.0 QA/QC PROCEDURES

#### 4.1 Soil Sampling

Soil samples were delivered to Xenco Laboratories, Inc., of Odessa, Texas for BTEX and/or TPH and/or Chloride analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO
- Chloride concentrations in accordance with modified EPA Method

#### 4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

#### 4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-ofcustody (COC) form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

#### 5.0 SITE CLOSURE REQUEST

Based on the analytical results of the confirmation soil samples, Basin recommends Lime Rock provide the NMOCD Artesia District Office a copy of this *Remediation Summary and Site Closure Request* and request the NMOCD grant site closure to the Staley State A #4 release site.

#### 6.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Lime Rock Resources. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Lime Rock Resources.

### 7.0 **DISTRIBUTION:**

Copy 1:	Sherry Bonham New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 2) 1301 W. Grand Avenue Artesia, New Mexico 88210
Copy 2:	Michael Barrett Lime Rock Resources Operating Company, Inc. P.O. Box 2147 720 East College Roswell, New Mexico 88202 mbarrett@limerockresources.com
Copy 3:	Jerry Smith Lime Rock Resources Operating Company, Inc. 303 East Main Artesia, New Mexico 88210 jsmith@limerockresources.com
Copy 5:	Curt D. Stanley Basin Environmental Consulting LLC P.O. Box 381 Lovington, New Mexico 88260 cdstanley@basin-consulting.com

Figures

.

-





Tables

١

#### Table 1

#### CONCENTRATIONS OF BTEX, TPH and CHLORIDES IN SOIL LIME ROCK RESOURCES STALEY STATE A #4 EDDY COUNTY, NEW MEXICO 2RP-364

					ME	THOD: EPA SW	846-8021B, 50	30			SW 84	8-8015M		E 300.1
SAMPLE DATE	SAMPLE LOCATION	SAMPLE DEPTH	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M,P- XYLENE (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C6-C12 (mg/Kg)	DRO C12-C28 (mg/Kg)	ORO C28-C35 (mg/Kg)	TOTAL TPH C6-C35 (mg/Kg)	Chlorides (mg/Kg)
11/17/09	East of RP #1	Surface	In-Situ	< 0.0013	<0.0027	<0.0013	<0.0027	<0.0013	<0.0027	<20.1	<20.1	<20.1	<20.1	210
11/17/09	East of RP #2	Surface	In-Situ	< 0.0013	<0.0026	<0.0013	<0.0026	< 0.0013	< 0.0026	<19.2	<19.2	<19.2	<19.2	221
11/17/09	East of RP #3	Surface	In-Situ	< 0.0013	<0.0025	< 0.0013	<0.0025	<0.0013	<0.0025	<18.9	<18.9	<18.9	<18.9	137
11/17/09	Main Ex. NSW @ 3.5'	3.5 feet	In-Situ	-	-	-	-	-	-	-	-	-	-	355
11/17/09	Main Ex. SSW @ 3.5'	3.5 feet	In-Situ	< 0.0012	<0.0024	<0.0012	<0.0024	< 0.0012	< 0.0024	<17.9	<17.9	<17.9	<17.9	195
11/17/09	Main Ex. WSW @ 3.5'	3.5 feet	In-Situ	< 0.0012	<0.0024	<0.0012	< 0.0024	< 0.0012	<0.0024	<18.4	21.1	<18.4	21.1	129
11/17/09	Main Ex. ESW @ 3.5'	3.5 feet	In-Situ	-	-	-	-	-	-	-	-	-	-	381
11/17/09	Main Ex. F-1 @ 4'	4 feet	In-Situ	-	-	-	-	-	-	-	-	-	-	307
11/17/09	Main Ex. F-2 @ 2'	2 feet	In-Situ	< 0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	<18.8	<18.8	<18.8.	<18.8	<26.3
11/19/09	SFP-1 @ 3'	3 feet	In-Situ	< 0.0012	<0.0024	<0.0012	< 0.0024	< 0.0012	<0.0024	<17.7	<17.7	<17.7	<17.7	34.3
11/19/09	SFP-2 @ 2'	2 feet	In-Situ	<0.0012	< 0.0023	<0.0012	<0.0023	< 0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	25.5
11/19/09	SFP-3 @ 2'	2 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	116	<18.0	<18.0	116	46.4
11/19/09	SFP-4 @ 3'	3 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	< 0.0012	<0.0024	<18.2	159	163	322	50.9
11/19/09	SFP-5 @ 2'	2 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	59.8
11/19/09	SFP-6 @ 2'	2 feet	In-Situ	< 0.0013	<0.0025	< 0.0013	<0.0025	< 0.0013	<0.0025	<18.9	<18.9	<18.9	<18.9	38.3
11/19/09	SFP-7 @ 2'	2 feet	In-Situ	< 0.0013	<0.0026	<0.0013	<0.0026	< 0.0013	<0.0026	<19.2	42.6	<19.2	42.6	59.7
11/19/09	SFP-8 @ 2'	2 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.2	<18.2	<18.2	<18.2	69.6
11/19/09	WFP-1	6 Inches	In-Situ	-	-	-	-	-	-	-	-	-	-	408
11/19/09	WFP-2	6 Inches	In-Situ	< 0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.5	<17.5	<17.5	<17.5	<19.6
11/19/09	EFPWSW	1 foot	In-Situ	< 0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	<18.8	<18.8	<18.8	<18.8	149
11/19/09	EFP-Floor @ 3'	3 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.4	<18.4	<18.4	<18.4	54.3
11/19/09	EFPESW	1 foot	In-Situ	<0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	<19.3	<19.3	<19.3	<19.3	191
11/19/09	D1-Floor	-	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.5	<18.5	<18.5	<18.5	206
11/19/09	D2-Floor	-	In-Situ	-	-	-	-	-	-	-	-	-	-	429
11/19/09	D3-Floor	-	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.4	<18.4	<18.4	<18.4	190
11/19/09	D3-SSW @ 3'	3 feet	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.5	<17.5	<17.5	<17.5	230
11/19/09	D4-Floor	-	Excavated	-	-	-	-	-	-	-	-	-	-	12,900
11/19/09	D5-Floor	1	Excavated	-	-	-	-	-	-	-	-	-	-	2,140
11/19/09	D6-Floor	-	Excavated	-	-	-	-	-	-	-	-	-	-	1,900
11/19/09	D7-Floor	-	Excavated	-	-	-	-	-	-	-	-		-	15,600
11/19/09	D8-Floor	-	Excavated	-	-	-	-	-	-	-	-	-	-	3,960
11/19/09	D9-Floor	-	Excavated	-	-	-	-	-	-	-	-	-	-	433
11/19/09	D9-NSW @ 6'	6 feet	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	< 0.0023	<17.0	<17.0	<17.0	<17.0	175
11/19/09	D10-Floor	-	Excavated	-		-	-	-	-	-	-	-	-	594

#### Table 1

#### CONCENTRATIONS OF BTEX, TPH and CHLORIDES IN SOIL LIME ROCK RESOURCES STALEY STATE A #4 EDDY COUNTY, NEW MEXICO 2RP-364

					ME	THOD: EPA SW	846-8021B, 50	30				E 300.1		
SAMPLE DATE	SAMPLE LOCATION	SAMPLE DEPTH	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M,P- XYLENE (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C6-C12 (mg/Kg)	DRO C12-C28 (mg/Kg)	ORO C28-C35 (mg/Kg)	TOTAL TPH C6-C35 (mg/Kg)	Chlorides (mg/Kg)
11/19/09	D10-SSW @ 5'	5 feet	In-Situ	<0.0013	<0.0026	< 0.0013	<0.0026	<0.0013	<0.0026	<19.2	<19.2	<19.2	<19.2	177
11/19/09	D11-Floor	-	Excavated	-	-	-	-	-	-	-	-	-	-	748
11/19/09	D11-NSW @ 10'	10 feet	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	< 0.0012	<0.0025	<18.7	18.7	<18.7	<18.7	311
11/19/09	D11-SSW @ 10'	10 feet	In-Situ	<0.0012	< 0.0023	<0.0012	< 0.0023	< 0.0012	< 0.0023	<17.4	<17.4	<17.4	<17.4	140
11/19/09	D12-Floor	-	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	< 0.0012	<0.0025	<18.7	18.7	<18.7	<18.7	42.6
a seannaí	ar ha fear a			就的一个原本		に、空父を発	and the second and the	the fitter				a state the second		
11/30/09	West of D4	Surface	In-Situ	<0.0012	0.0172	<0.0012	<0.0024	<0.0012	<0.0024	54.5	484	177	716	10.2
	のでの、「動物ないない」で	التركيم من من مانيد الم مركزه من طريق من مانيد الم											時期間に成	
12/10/09	D7A-Floor	9 feet	In-Situ	<0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	<18.9	<18.9	<18.9	<18.9	255
12/10/09	D6A-Floor	4 feet	In-Situ	<0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	19	19.2	<18.7	38.2	327
12/10/09	D4A-Floor	9 feet	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.6	19.3	<18.6	19.3	304
12/10/09	D8A-Floor	8 feet	In-Situ	< 0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.3	<19.3	<19.3	<19.3	160
12/10/09	D5A-Floor	8 feet	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.7	55	33.2	88.2	158
12/10/09	D9A-Floor	6 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.2	37	73.6	110.6	225
12/10/09	D10A-Floor	7 feet	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.1	93.9	<18.1	93.9	205
12/10/09	D11A-Floor	12 feet	In-Situ	<0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	20.3	22.1	<19.0	42.4	191
12/10/09	D6-SSW @ 3.5'	3.5'	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.0	<19.0	<19.0	<19.0	39.9
12/10/09	D5-NSW @ 7.5'	7.5'	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.2	<19.2	<19.2	<19.2	139
12/10/09	D7-NSW @ 8'	8'	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0026	243	236	<18.6	479	<26.1
12/10/09	D4-WSW @ 8'	8'	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.5	22	<18.5	22	186
12/10/09	D8-SSW @ 7'	7'	Excavated	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.3	30	<18.3	30	6,280
12/10/09	D4-SSW @ 8'	8'	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	18.6	19.2	<18.5	37.8	32.2
REAL FOR			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		S. S. Starker		- 135 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			ar i gar i gar i sa			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
12/21/09	D8A-SSW @ 7'	7'	In-Situ	-	-	-	-	-	-	-	-	-	-	80.4
and the safet	等に変わるない	ny. Without &		1		and the second sec	Star Bang Ba	P + S		and the second second	· · · · · · · · · · · · · · · · · · ·		Fred to Barton	

/

.

# Appendix A Laboratory Analytical Reports

# Analytical Report 353037

for

# **Basin Environmental Consulting, LLC**

**Project Manager: Curt Stanley** 

Staley State A # 4

#### **Lime Rock Resources**

#### 02-FEB-10





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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)



02-FEB-10



Project Manager: **Curt Stanley Basin Environmental Consulting, LLC** P.O. Box 381 Lovington, NM 88260

Reference: XENCO Report No: **353037 Staley State A # 4** Project Address: Eddy County, NM

#### **Curt Stanley**:

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 353037. 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. 353037 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. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America 

# Sample Cross Reference 353037

### Basin Environmental Consulting, LLC, Lovington, NM

Staley State A # 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East of RP # 1	S	Nov-17-09 10:00		353037-001
East of RP # 2	S	Nov-17-09 10:10		353037-002
East of RP # 3	S	Nov-17-09 10:20		353037-003
Main Ex. NSW @ 3.5'	S	Nov-17-09 14:20		353037-004
Main Ex. SSW @ 3.5'	S	Nov-17-09 14:25		353037-005
Main Ex. ESW @ 3.5'	S	Nov-17-09 14:30		353037-006
Main Ex. WSW @ 3.5'	S	Nov-17-09 14:35		353037-007
Main Ex. F-1 @ 4'	S	Nov-17-09 15:10		353037-008
Main Ex. F-2 @ 2'	S	Nov-17-09 15:20		353037-009
SFP-1 @ 3'	S	Nov-19-09 10:00		353037-010
SFP-2 @ 2'	S	Nov-19-09 10:05		353037-011
SFP-3 @ 2'	S	Nov-19-09 10:10		353037-012
SFP-4 @ 3'	S	Nov-19-09 10:15		353037-013
SFP-5 @ 2'	S	Nov-19-09 10:20		353037-014
SFP-6 @ 2'	S	Nov-19-09 10:30		353037-015
SFP-7 @ 2'	S	Nov-19-09 10:40		353037-016
SFP-8 @ 2'	S	Nov-19-09 10:50		353037-017
WFP-1	S	Nov-19-09 12:00		353037-018
WFP-2	S	Nov-19-09 12:05		353037-019
EFPWSW	S	Nov-19-09 13:10		353037-020
EFP-Floor @ 3'	S	Nov-19-09 13:15		353037-021
EFPESW	S	Nov-19-09 13:20		353037-022
D1-Floor	S	Nov-19-09 14:05		353037-023
D2-Floor	S	Nov-19-09 14:10		353037-024
D3-Floor	S	Nov-19-09 14:15		353037-025
D4-Floor	S	Nov-19-09 14:20		353037-026
D3-SSW @ 3'	S	Nov-19-09 14:25		353037-027
D5-Floor	S	Nov-19-09 14:30		353037-028
D6-Floor	S	Nov-19-09 14:35		353037-029
D7-Floor	S	Nov-19-09 14:40		353037-030
D8-Floor	S	Nov-19-09 14:45		353037-031
D9-Floor	S	Nov-19-09 14:50		353037-032
D9-NSW @ 6'	S	Nov-19-09 15:00		353037-033
D10-Floor	S	Nov-19-09 15:05		353037-034
D10-SSW @ 5'	S	Nov-19-09 15:10		353037-035
D11-Floor	S	Nov-19-09 15:20		353037-036
D11-NSW @ 10'	S	Nov-19-09 15:30		353037-037
D11-SSW @ 10'	S	Nov-19-09 15:40		353037-038
D12-Floor	S	Nov-19-09 16:00		353037-039

.

### CASE NARRATIVE



Client Name: Basin Environmental Consulting, LLC Project Name: Staley State A # 4

Project ID:Lime Rock ResourcesWork Order Number:353037

Report Date: 02-FEB-10 Date Received: 11/20/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-782767 Percent Moisture None

Batch: LBA-782775 Percent Moisture None

Batch: LBA-782776 Percent Moisture None

Batch: LBA-783001 Inorganic Anions by EPA 300 None

Batch: LBA-783006 Anions by E300 None

Batch: LBA-783011 Anions by E300 None

Batch: LBA-783611 TPH By SW8015 Mod None

Batch: LBA-783656 TPH By SW8015 Mod None

#### CASE NARRATIVE



Client Name: Basin Environmental Consulting, LLC Project Name: Staley State A # 4

Project ID:Lime Rock ResourcesWork Order Number:353037

Report Date: 02-FEB-10 Date Received: 11/20/2009

Batch: LBA-783675 BTEX by EPA 8021B SW8021BM

Batch 783675, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 353037-007, -011, -012, -017, -010, -016, -023, -025, -002, -015, -022, -005, -014, -019, -001, -003, -013, -021, -009, -020. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-783683 BTEX by EPA 8021B SW8021BM

Batch 783683, Benzene, Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 353037-033, -038, -039, -035, -037, -027. The Laboratory Control Sample for m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10

								Project Ma	nager:	Brent Barron	, II		
	Lab Id:	353037-	001	353037-0	353037-002		003	353037-0	04	353037-	005	353037-(	006
Anglusis Degranted	Field Id:	East of R	P#1	East of RP	P#2	East of R	P#3	Main Ex NSW	/@3.5'	Main Ex. SS	W @ 3.5'	Main Ex. ESW	V @ 3 5'
Analysis Kequesiea	Depth:												
	Matrix:	SOII		SOIL		SOIL	-	SOIL		SOIL	-	SOIL	
	Sampled:	Nov-17-09	10:00	Nov-17-09	10:10	Nov-17-09	10:20	Nov-17-09	14:20	Nov-17-09	14:25	Nov-17-09	14:30
Anions by E300	Extracted:	•											
	Analyzed:	Nov-23-09	9 09:08	Nov-23-09	09.08	Nov-23-09	09:08	Nov-23-09	09:08	Nov-23-09	09.08	Nov-23-09	09:08
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL.	mg/kg	RL
Chlonde		210 56.4		221 27.0		137	26.6	355	52.7	195	50.3	381	99.7
BTEX by EPA 8021B	Extracted:	Nov-25-09	Nov-25-09 12.15		12:15	Nov-25-09	Nov-25-09 12.15			Nov-25-09	12:15		
Analyzed		Nov-27-09	19:25	Nov-27-09	19.47	Nov-27-09 20 08				Nov-27-09	20:29		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL		
enzene		ND	0.0013	ND	0.0013	ND	0 0013			ND	0.0012		
Toluene		ND	0.0027	ND	0.0026	ND	0.0025			ND	0.0024		
Ethylbenzene		ND	0.0013	ND	0.0013	ND	0.0013			ND	0.0012		
m,p-Xylenes		ND	0.0027	ND	0.0026	ND	0 0025			ND	0.0024		
o-Xylene		ND	0.0013	ND	0 0013	ND	0.0013			ND	0.0012		
Total Xylenes		ND	0 0013	ND	0.0013	ND	0.0013			ND	0.0012		
Total BTEX		ND	0 0013	ND	0.0013	ND	0.0013			ND	0.0012		
Percent Moisture	Extracted:												
	Analyzed:	Nov-20-09	17:00	Nov-20-09	17.00	Nov-20-09	17.00	Nov-20-09	17.00	Nov-20-09	17 00	Nov-20-09	17.00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		25.5	1.00	22.2	1.00	20.9	1.00	20.4	1.00	16.4	1 00	15.7	1.00
TPH By SW8015 Mod	Extracted:	Nov-25-09	11.30	Nov-25-09	11:30	Nov-25-09	11:30			Nov-25-09	11:30		
	Analyzed:	Nov-26-09	16.30	Nov-26-09	16:55	Nov-26-09	17:22			Nov-26-09	17:47		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	20.1	ND	19.2	ND	18.9			ND	17.9		
C12-C28 Diesel Range Hydrocarbons		ND	20.1	ND	19.2	ND	18.9			ND	17.9		
C28-C35 O1l Range Hydrocarbons		ND	20.1	ND	192	ND	18.9			ND	17.9		
Total TPH		ND	20.1	ND	19.2	ND	18.9			ND	17.9		

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 habitity 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



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10 Project Manager: Brent Barron, II

										,			
	Lab Id:	353037-	007	353037-0	008	353037-(	009	353037-(	010	353037-0	011	353037-	012
Analysis Descreted	Field Id:	Maın Ex. WS	W @ 3.5'	Main Ex. F-	1 @ 4'	Main Ex. F-2	2@2'	SFP-1 @	) 3'	SFP-2 @	) 2'	SFP-3 @	ī) 2'
Analysis Kequestea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-17-09	14·35	Nov-17-09	15:10	Nov-17-09	15:20	Nov-19-09	10:00	Nov-19-09	10:05	Nov-19-09	10.10
Anions by F300	Extractade												
	Landured.	Nov 22.00	00.00	Nov 22.00	00.08	N 22 00 00 00		N 22 00 00 00		No. 22.00.00.08		Nov. 22.00.00.09	
	Anaiyzea:	NOV-23-09	09.08	NOV-23-09	09:08	Nov-23-09	09:08	NOV-23-09	09.08	Nov-23-09	09:08	NOV-23-09	09.08
Chlende	Units/RL:	mg/kg		mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	
		129	25.9	307	52.1	ND	20.3	34.3	24.8	25.5	24.5	40.4	20.2
BTEX by EPA 8021B	Extracted:	Nov-25-09	12:15			Nov-25-09	12:15	Nov-25-09	12:15	Nov-25-09	12.15	Nov-25-09	12:15
	Analyzed:	Nov-27-09	20.50			Nov-27-09	21:12	Nov-27-09 21:33		Nov-27-09 21.54		Nov-27-09 22:15	
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012			ND	0.0013	ND	0.0012	ND	0.0012	ND	0.0012
Toluene		ND	0.0024			ND	0.0025	ND	0.0024	ND	0.0023	ND	0 0024
Ethylbenzene		ND	0.0012			ND	0.0013	ND	0.0012	ND	0 0012	ND	0.0012
m,p-Xylenes		ND	0.0024			ND	0.0025	ND	0.0024	ND	0 0023	ND	0.0024
o-Xylene		ND	0.0012			ND	0.0013	ND	0.0012	ND	0.0012	ND	0.0012
Total Xylenes		ND	0.0012			ND	0.0013	ND	0 0012	ND	0.0012	ND	0.0012
Total BTEX		ND	0.0012			ND	0.0013	ND	0.0012	ND	0.0012	ND	0.0012
Percent Moisture	Extracted:												
	Analyzed:	Nov-20-09	17 00	Nov-20-09	17 00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17.00	Nov-20-09	17.00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL.
Percent Moisture		18.8	1.00	19.4	1.00	20.1	1.00	15.2	1.00	14.3	1.00	16.8	1.00
TPH By SW8015 Mod	Extracted:	Nov-25-09	11:30			Nov-25-09	11:30	Nov-25-09	11 30	Nov-25-09	11:30	Nov-25-09	11:30
	Analyzed:	Nov-26-09	18:13			Nov-26-09	18.39	Nov-26-09	19.05	Nov-26-09	19:32	Nov-26-09	19:57
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.4			ND	18.8	ND	17.7	ND	17.4	116	18.0
C12-C28 Diesel Range Hydrocarbons		21.1	18.4			ND	18.8	ND	17.7	ND	17.4	ND	18.0
C28-C35 Oil Range Hydrocarbons		ND	18.4			ND	18.8	ND	17.7	ND	17.4	ND	18.0
Total TPH		21.1	18.4			ND	18.8	ND	17.7	ND	17.4	116	18.0

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



.

# Certificate of Analysis Summary 353037

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10

								Project Ma	nager:	Brent Barron,	II		
	Lab Id:	353037-	013	353037-(	014	353037-	015	353037-	016	353037-0	017	353037-0	018
Analysis Provestad	Field Id:	SFP-4 @	D 3'	SFP-5@	2'	SFP-6 @	) 2'	SFP-7 @	ý 2'	SFP-8 @	) 2'	WFP-1	1
Analysis Kequesiea	Depth:												
	Matrix:	SOII	-	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-19-09	10:15	Nov-19-09	10:20	Nov-19-09	10:30	Nov-19-09	10:40	Nov-19-09	10:50	Nov-19-09	12:00
Anions by E300	Extracted:												
	Analyzed:	Nov-23-09	09.08	Nov-23-09	17.00	Nov-23-09	17:00	Nov-23-09	17:00	Nov-23-09	17:00	Nov-23-09	17.00
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		50.9	50.9 20.4		59.8 25.2		21.1	59.7	21.6	69.6 25.6		408	25.4
BTEX by EPA 8021B	Extracted:	Nov-25-09	Nov-25-09 12.15		12:15	Nov-25-09 12:15		Nov-25-09	12:15	Nov-25-09	12:15		
Analyzed		Nov-27-09	22:36	Nov-27-09	23:40	Nov-28-09 00.01		Nov-28-09 00:22		Nov-28-09 00:44		{	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL.		
Benzene		ND	0.0012	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012		
Toluene	-	ND	0.0024	ND	0.0024	ND	0.0025	ND	0.0026	ND	0.0024	l	
Ethylbenzene		ND	0.0012	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012		
m,p-Xylenes		ND	0.0024	ND	0.0024	ND	0.0025	ND	0.0026	ND	0.0024	1	
o-Xylene		ND	0.0012	ND	0.0012	ND	0 0013	ND	0.0013	ND	0 0012		
Total Xylenes		ND	0.0012	ND	0.0012	ND	0 0013	ND	0.0013	ND	0.0012	L	
Total BTEX		ND	0.0012	ND	0.0012	ND	0 0013	ND	0 0013	ND	0.0012	Ļ	
Percent Moisture	Extracted:												
	Analyzed:	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17.00	Nov-20-09	17:00	Nov-20-09	17.00	Nov-20-09	17:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		17.6	1.00	16.8	1.00	20.5	1.00	22.4	1.00	17.9	1.00	17.5	1.00
TPH By SW8015 Mod	Extracted:	Nov-25-09	11:30	Nov-25-09	11:30	Nov-25-09	11.30	Nov-25-09	11 30	Nov-25-09	11:30		
	Analyzed:	Nov-26-09	20.23	Nov-26-09	21 15	Nov-26-09	21.41	Nov-26-09	22:07	Nov-26-09	22:33		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	18 2	ND	18.0	ND	18.9	ND	19.2	ND	18.2		
C12-C28 Diesel Range Hydrocarbons		159	18.2	ND	18.0	ND	18.9	42.6	19.2	ND	18.2		
C28-C35 Oil Range Hydrocarbons		163	18 2	ND	18.0	ND	18.9	ND	19.2	ND	18.2		
Total TPH		322	18 2	ND	18.0	ND	189	42 6	192	ND	18.2		

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

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

Brent Barron, II

Odessa Laboratory Manager



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10 Project Manager: Brent Barron. II

	Lab Id:	353037-	019	353037-	020	353037-0	021	353037-0	022	353037-0	023	353037-0	)24
Anglusis Deguested	Field Id:	WFP-	2	EFPWS	w	EFP-Floor	@ 3'	EFPES	w	D1-Flo	or	D2-Flo	or
Analysis Kequesieu	Depth:												
	Matrix:	SOIL	-	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-19-09	12:05	Nov-19-09	13:10	Nov-19-09	13:15	Nov-19-09	13.20	Nov-19-09	14:05	Nov-19-09	14:10
Anions by E300	Extracted:										÷		
	Analyzed:	Nov-23-09	17:00	Nov-23-09	Nov-23-09 17.00		17.00	Nov-23-09 17:00		Nov-23-09 17:00		Nov-23-09 17.00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chlonde		ND	19.6	149	21.0	54.3	25.8	191	27.0	206	199	429	50.4
BTEX by EPA 8021B	Extracted:	Nov-25-09	12:15	Nov-25-09	12:15	Nov-25-09 12:15		Nov-25-09 12.15		Nov-25-09 12:15			
	Analyzed:	Nov-28-09	01:05	Nov-28-09	01:26	Nov-28-09 01:47		Nov-28-09 02.09		Nov-28-09 02.29			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzenc		ND	0.0012	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0012		
Toluene		ND	0.0023	ND	0.0025	ND	0.0024	ND	0.0025	ND	0.0025		
Ethylbenzene		ND	0.0012	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0012		
m,p-Xylenes		ND	0.0023	ND	0.0025	ND	0.0024	ND	0.0025	ND	0.0025		
o-Xylene		ND	0.0012	ND	0.0013	ND	0.0012	ND	0 0013	ND	0.0012		
Total Xylenes		ND	0.0012	ND	0.0013	ND	0.0012	ND	0 0013	ND	0 0012		
Total BTEX		ND	0.0012	ND	0.0013	ND	0 0012	ND	0.0013	ND	0 0012		
Percent Moisture	Extracted:												
	Analyzed:	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.3	1.00	20.0	1.00	18.7	1.00	22.2	1.00	19.4	1.00	16.7	1.00
TPH By SW8015 Mod	Extracted:	Nov-25-09	11.30	Nov-25-09	11:30	Nov-25-09	11:30	Nov-25-09	11.30	Nov-25-09	11:30		
	Analyzed:	Nov-26-09	22:58	Nov-26-09	23:24	Nov-26-09	23.50	Nov-27-09	00:16	Nov-27-09	00:42		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	17.5	ND	18.8	ND	18.4	ND	19.3	ND	18.5		
C12-C28 Diesel Range Hydrocarbons		ND	17.5	ND	18.8	ND	184	ND	19.3	ND	18.5		
C28-C35 Oil Range Hydrocarbons		ND	17.5	ND	18.8	ND	18.4	ND	19.3	ND	18.5		
Total TPH		ND	17.5	ND	18 8	ND	18.4	ND	19.3	ND	18.5		

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 lability 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



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10 Project Manager: Brent Barron, II

									0				
	Lab Id:	353037-0	)25	353037-0	26	353037-0	027	353037-0	028	353037-0	29	353037-0	30
Analysis Descented	Field Id:	D3-Floo	or	D4-Floo	or	D3-SSW @	a) 3'	D5-Floo	or	D6-Floo	or	D7-Floc	or
Analysis Requested	Depth:				l							I	
	Matrix;	SOIL		SOIL	ļ	SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-19-09	14.15	Nov-19-09	14:20	Nov-19-09	14·25	Nov-19-09	14.30	Nov-19-09	14.35	Nov-19-09 1	14:40
Anions by E300	Extracted:	· · ·											
	Analyzed:	Nov-23-09	17:00	Nov-23-09	17.00	Nov-23-09	17:00	Nov-23-09	17.00	Nov-23-09	17:00	Nov-23-09	17.00
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		190	51.6	12900	544	230	49.1	2140	52.4	1900	51.8	15600	552
BTEX by EPA 8021B	Extracted:	Nov-25-09	Nov-25-09 12.15			Nov-25-09 12.30							
	Analyzed:	Nov-28-09	02:51			Nov-28-09	05:40						
	Units/RL:	mg/kg	RL			mg/kg	RL						
Benzene		ND	0.0012		l	ND	0.0012						
Toluene		ND	0.0024			ND	0.0023						
Ethylbenzene	Ī	ND	0.0012			ND	0.0012						
m,p-Xylenes		ND	0.0024			ND	0.0023						
o-Xylene		ND	0.0012			ND	0.0012						
Total Xylenes		ND	0.0012			ND	0.0012						
Total BTEX		ND	0.0012			ND	0.0012						
<b>Percent Moisture</b>	Extracted:												
	Analyzed:	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09 1	7.00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		18.6	1.00	22 7	1.00	14 5	1.00	19.9	1 00	18.9	1.00	23.9	1.00
TPH By SW8015 Mod	Extracted:	Nov-25-09	11:30			Nov-25-09	11.30						
	Analyzed:	Nov-27-09	01:07			Nov-29-09	19.48						
	Units/RL:	mg/kg	RL			mg/kg	RL						
C6-C12 Gasoline Range Hydrocarbons		ND	18.4			ND	175						
C12-C28 Diesel Range Hydrocarbons		ND	18.4			ND	175						
C28-C35 Oil Range Hydrocarbons		101	184			ND	17.5						
Total TPH		101	18.4			ND	17.5						

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



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10 Project Manager: Brent Barron, II

	Lab Id:	353037-0	031	353037-0	032	353037-(	033	353037-0	034	353037-0	035	353037-0	036
	Field Id:	D8-Floo	or	D9-Flo	or	D9-NSW	@ 6'	D10-Flo	or	DI0-SSW	@ 5'	D11-Flo	or
Analysis Kequestea	Depth:												
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		SOIL		SOIL	
	Sampled:	Nov-19-09	14:45	Nov-19-09	14:50	Nov-19-09	15:00	Nov-19-09	15:05	Nov-19-09	15:10	Nov-19-09	15:20
Anions by E300	Extracted												
	Analyzed:	Nov-23-09	17.00	Nov-23-09	17.00	Nov-23-09	17.00	Nov-23-09	21.18	Nov-23-09	21.18	Nov-23-09	21.18
	Inits/DI .	ma/ka	17.00 PI		DI	ma/ka	DI		21.10 D1	ma/ka	21.10 D1	mg/kg	21.10 D1
Chloride	Unus/KL.	3960	102	433	49.6	175	23.8	594	25.6	177	26.8	111g/ Kg 748	213
BTEX by EPA 8021B	Extracted					Nov-25-09	12.30			Nov-25-09	12.30		
	Analyzadi					Nov 28 09	06:01			Nov 28 00	06.22		
	Anutyzeu:					110V-20-07	00.01			100V-20-09	00.22 DI		
Benzene	Units/KL:					nig/kg	0.0011			nig/kg	0.0013		
Toluenc						ND	0.0023			ND	0.0026		
Ethylbenzene						ND	0.0011			ND	0.0013		
m.p-Xylenes						ND	0.0023			ND	0 0026		
o-Xylene						ND	0.0011			ND	0 0013		
Total Xylenes						ND	0.0011			ND	0 0013	· · · · · · · · · · · · · · · · · · ·	
Total BTEX						ND	0.0011			ND	0.0013		
Percent Moisture	Extracted:												
	Analyzed:	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17.00	Nov-20-09	17.00	Nov-20-09	17.00	Nov-20-09	17.00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		18 0	1.00	15.3	1.00	11.9	1.00	17.8	1.00	21.8	1.00	21.1	1.00
TPH By SW8015 Mod	Extracted:					Nov-25-09	11.30			Nov-25-09	11:30		
	Analyzed:					Nov-29-09	20.14			Nov-29-09	20:39		
	Units/RL:					mg/kg	RL			mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons						ND	17.0			ND	19.2		
C12-C28 Diesel Range Hydrocarbons						ND	17.0			ND	19.2		
C28-C35 Oil Range Hydrocarbons	,	·				ND	17.0			ND	19.2		
Total TPH		-				ND	17.0			ND	19.2		

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



Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4



Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Fri Nov-20-09 09:55 am

Report Date: 02-FEB-10

Project Manager: Brent Barron, II

	Lab Id:	353037-0	037	353037-0	)38	353037-0	)39			
Analysis Paguastad	Field Id:	DII-NSW	@ 10'	D11-SSW (	@ 10'	D12-Flo	or			
Anuiysis Requested	Depth:		ļ							
	Matrix:	SOIL	ا ہے	SOIL		SOIL				
	Sampled:	Nov-19-09	15.30	Nov-19-09	15:40	Nov-19-09	16:00			
Anions by E300	Extracted:								-	
	Analyzed:	Nov-23-09	21:18	Nov-23-09	21.18	Nov-23-09	21:18			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		311	105	140	24.3	42.6	26.2			
BTEX by EPA 8021B	Extracted:	Nov-25-09	12.30	Nov-25-09	12.30	Nov-25-09	12:30			
	Analyzed:	Nov-28-09	06.43	Nov-28-09	07.04	Nov-28-09	07.25			1
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		ND	0.0012	ND	0.0012	ND	0.0012			
Toluene		ND	0.0025	ND	0.0023	ND	0.0025			
Ethylbenzene		ND	0.0012	ND	0.0012	ND	0.0012			
m.p-Xylenes		ND	0.0025	ND	0.0023	ND	0.0025			
o-Xylene		ND	0.0012	ND	0.0012	ND	0.0012			
Total Xylenes		ND	0.0012	ND	0.0012	ND	0 0012			
Total BTEX		ND	0.0012	ND	0.0012	ND	0 0012			
Percent Moisture	Extracted:		I							
	A nalyzed:	Nov-20-09	17:00	Nov-20-09	17:00	Nov-20-09	17:00	1		
	Units/RL:	%	RL	%	RL	%	RL.	L		
Percent Moisture		19.8	1.00	13.7	1.00	19.9	1.00			
TPH By SW8015 Mod	Extracted:	Nov-25-09	11.30	Nov-25-09	11:30	Nov-25-09	11.30			
	A nalyzed:	Nov-29-09	21:05	Nov-29-09	21:30	Nov-29-09 2	21:56			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	ı		
C6-C12 Gasoline Range Hydrocarbons		ND	18.7	ND	17.4	ND	18.7			
C12-C28 Diesel Range Hydrocarbons		ND	18.7	ND	17.4	ND	18.7			
C28-C35 Oil Range Hydrocarbons		ND	18.7	ND	17.4	ND	18.7			
Total TPH		ND	18 7	ND	17.4	ND	18.7	1		

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





- 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.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and OUALITY

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

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
	Phone (281) 240-4200 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500 (432) 563-1800 (361) 884-0371



## Project Name: Staley State A # 4

Units:         mg/kg         Date Analyzed:         11/27/09         SURROGATE         RECOVERY STUDY           BTEX by EPA 8021B         Annound Found [A]         True [B]         True (B]         Recovery (SR)         Control (Jainite (B)         Flags           1.4-Diffuorohenzene         0.0301         0.0300         100         86-120         -           4-Bromoffuorohenzene         0.0301         0.0300         97         80-120         -           Lab Batch #:         Statch #:         Matrix: Solid         -         -         -           Units:         mg/kg         Date Analyzed:         11/27/09         18:22         SURROGATE         RECOVERY STUDY           BTEX by EPA 8021B         Amount [B]         Amount [B]         Recovery (SR)         Control Limits (SR)         Flags           1.4-Diffuorohenzene         0.0298         0.0300         99         80-120         -           Lab Batch #:         Statf Arabyzed:         11/27/09         19:04         SURROGATE         Recovery Staff         Flags           1.4-Diffuorohenzene         0.0298         0.0300         99         80-120         -           Lab Batch #:         Ramount [B]         Matrix:Solid         -         -         -	Work Orders : 353037 Lab Batch #: 783675	7, <b>Sample:</b> 544333-1-BKS / B	KS Batel	Project II h: <sup>1</sup> Matrix:	D: Lime Rock	k Resources	5
BTEX by EPA 8021B         Amount Found [A]         True [B]         True [B]         Reevery (P]         Control Limits (P]         Flags           1.4-Diffuorobenzene         0.0301         0.0300         90         80-120         .           4-Bromofluorobenzene         0.0291         0.0300         97         80-120         .           Lab Batch #: 783675         Sample: 544333-1-BSD / BSD         Batch:         1         Matrix: Solid         .           Units: mg/kg         Date Analyzed: 11/27/09 18:22         SURROGATE         Recovery (B]         Control Limits         Limits         .           1.4-Difluorobenzene         0.0298         0.0300         99         80-120         .         .           1.4-Difluorobenzene         0.0298         0.0300         99         80-120         .         .           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch:         1         Matrix: Solid         .           Units: mg/kg         Date Analyzet: 11/27/09 19:04         SURROGATE         Recovery 101         Limits 70R         .           1.4-Difluorobenzene         0.0270         0.0300         90         80-120         .           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1 <th>Units: mg/kg</th> <th>Date Analyzed: 11/27/09 18:01</th> <th>SU</th> <th>RROGATE RE</th> <th>ECOVERY</th> <th>STUDY</th> <th></th>	Units: mg/kg	Date Analyzed: 11/27/09 18:01	SU	RROGATE RE	ECOVERY	STUDY	
Analytes         I.I Diffuorobenzene         <	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
H-Millonobenzate         0.0301         0.0300         1000         86-120           4-Bromefluorobenzene         0.0291         0.0300         97         80-120           Lab Batch #: 783675         Sample: 544333-1-BSD / BSD         Batch: 1         Matrix: Solid           Units: mg/g         Date Analyzed: 11/27/09 18:22         SURROGATE RECOVERY STUDY           Analytes         Ial         IBI         Xmount Found         True Amount Found         Recovery Ial         Control Ial         Flags           1.4-Difluorobenzene         0.0298         0.0300         99         80-120         -           -Bromefluorobenzene         0.0298         0.0300         96         86-120         -           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch: 1         Matrix: Solid         -           Units: mg/g         Date Analyzed: 11/27/09 19:04         SURROGATE RECOVERY STUDY         -           Analytes         IAI         IBI         YaR         Flags           1,4-Difluorobenzene         0.0270         0.0300         90         80-120           Lab Batch #: 783675         Sample: 355037-001 / SMP         Batch: 1         Matrix: Soil           Units: mg/g         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY	14 Diffuersharrana	Analytes	0.0201	0.02.00		00.100	
Controlucionationationationationation         Output         Output <tho< td=""><td>4. Bromofluorobenzene</td><td></td><td>0.0301</td><td>0.0300</td><td>100</td><td>80-120</td><td></td></tho<>	4. Bromofluorobenzene		0.0301	0.0300	100	80-120	
Batch #: /836/5         Sample: \$44333-1-BSD / BSD         Batch:         1         Matrix:Solid           Units: mg/kg         Date Analyzed: 11/27/09 18:22         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True [B]         Control 5%R         Flags 5%R           1.4-Drifluorobenzone         0.0298         0.0300         99         80-120           4-Bromofluorobenzone         0.0298         0.0300         96         80-120           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch:         1         Matrix: Solid           Units: mg/kg         Date Analyzed: 11/27/09 19:04         SURROGATE RECOVERY STUDY         Control           BTEX by EPA 8021B         Amount [A]         True mound [A]         Mamount [B]         Recovery 5%R         Control 5%R           1.4-Drifluorobenzone         0.0270         0.0300         90         80-120           1.4-Drifluorobenzone         0.0270         0.0300         97         80-120			0 0291	0.0300	97	80-120	
Units: mg/kg         Date Analyzed: 11/27/09 18:22         SURROGATE         RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True [B]         Recovery %R         Control 1%R         Flags           1.4-Diffuorobenzene         0.0298         0.0300         99         80-120         Excovery %R         Flags           4-Bromoffuorobenzene         0.0298         0.0300         96         80-120         Excovery %R         Flags           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch: 1         Matrix: Solid         Excovery 101         Flags           BTEX by EPA 8021B         Amount Found IAI         True Recovery 101         Recovery %R         Control Limits         Flags           1.4-Diffuorobenzene         0 0270         0.0300         90         80-120         Excovery 101         Flags           1.4-Diffuorobenzene         0 0270         0.0300         90         80-120         Excovery 100         Solid           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch: 1         Matrix: Sol         Excovery 100         Solid           Lab Batch #: 783675         Sample: 353037-002 / SMP         SurROGATE RECOVERY STUDY         Excovery 100         Solid         Excovery 100         Solid           1.4-Dif	Lab Batch #: 783675	<b>Sample:</b> 544333-1-BSD / B	SD Batel	h: 1 Matrix:	Solid		
BTEX by EPA 8021B Analytes         Amount Found [A]         True Amount [B]         True Amount [B]         Recovery %R [D]         Centrol Limits %R         Flags           1.4-Diffuorobenzene         0.0298         0.0300         99         80-120         -           4-Bromoffuorobenzene         0.0288         0.0300         96         80-120         -           Lab Batch #: 783675         Sample: \$44333-1-BLK / BLK         Batch:         1         Matrix: Solid         -           BTEX by EPA 8021B         Amount Found [A]         True Recovery [D]         Recovery %R         Control Limits         Flags           Analytes         0         0.0270         0.0300         90         80-120         -           1.4-Diffuorobenzene         0         0270         0.0300         90         80-120         -           1.4-Diffuorobenzene         0         0270         0.0300         90         80-120         -           1.4-Diffuorobenzene         0         0270         0.0300         97         80-120         -           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soli         -           Limits         mount Found [A]         Flags         %R         - <t< td=""><td>Units: mg/kg</td><td>Date Analyzed: 11/27/09 18:22</td><td>SU</td><td>RROGATE RI</td><td>COVERY</td><td>STUDY</td><td></td></t<>	Units: mg/kg	Date Analyzed: 11/27/09 18:22	SU	RROGATE RI	COVERY	STUDY	
1.4-Difluorobenzene         0.0298         0.0300         99         80-120           4-Bromofluorobenzene         0.0288         0.0300         96         80-120           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch:         1         Matrix:Solid           Units: mg/kg         Date Analyzed: 11/27/09 19:04         SURROGATE RECOVERY STUDY         Flags           Manalytes         Analytes         1         Anount Found IAI         Recovery IBI         Control Limits VR           1.4-Difluorobenzene         0 0270         0.0300         90         80-120         Easth #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY         Easth #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY         Easth #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix: Soil           1.4-Difluorobenzene         0 0273         0.0300         91         80-120         Easth #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix: Soil           1.4-Difluorobenzene         0	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene         0.0288         0.0300         96         80-120           Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch:         1         Matrix: Solid           Units: mg/kg         Date Analyzed: 11/27/09 19:04         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True Amount [B]         Recovery %R         Control Limits         Flags           1.4-Difluorobenzene         0.0270         0.0300         90         80-120         Flags           4-Bromofluorobenzene         0.0270         0.0300         97         80-120         Flags           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soil         Flags           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY         Limits         Flags           1.4-Difluorobenzene         0.0273         0.0300         91         80-120         Limits           BTEX by EPA 8021B         Amount [A]         True [B]         Matrix: Soil         Flags         %R           1.4-Difluorobenzene         0.0273         0.0300         91         80-120         Limits           Lab Batch #: 783675         Sample: 353037-002 / SMP         Batch:         1	1,4-Difluorobenzene	<u> </u>	0.0298	0.0300	99	80-120	
Lab Batch #: 783675         Sample: 544333-1-BLK / BLK         Batch:         1         Matrix: Solid           Units: mg/kg         Date Analyzed: 11/27/09 19:04         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount found [A]         True Amount [A]         Recovery [ID]         Control Limits %R         Flags           1.4-Diffuorobenzene         0.0270         0.0300         90         80-120         Flags           4-Bromofluorobenzene         0.0291         0.0300         97         80-120         Image: Solid	4-Bromofluorobenzene		0.0288	0.0300	96	80-120	
Units:         mg/kg         Date Analyzed:         11/27/09         9:04         SURROGATE         RECOVERY         STUDY           BTEX by EPA 8021B         Amount [A]         True Found [A]         True [B]         Recovery %R         Control Limits %R         Flags           1.4-Difluorobenzene         0 0270         0.0300         90         80-120         -           4.Bromofluorobenzene         0.0270         0.0300         97         80-120         -           Lab Batch #: 783675         Sample:         353037-001 / SMP         Batch:         1         Matrix:Soil         -           Units:         mg/kg         Date Analyzed:         11/27/09 19:25         SURROGATE         Recovery Recovery         Control Limits         Flags           1.4-Difluorobenzene         0.0273         0.0300         91         80-120           BTEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R         Control Limits         Flags           1.4-Difluorobenzene         0.0273         0.0300         91         80-120         -           Lab Batch #: 783675         Sample:         353037-002 / SMP         Batch:         1         Matrix:Soil           Units:         mg/kg         Date Analyzed:	Lah Batch #: 783675	Sample: 544333-1-BLK / B		h· 1 Matrix	Solid		
BTEX by EPA 8021B         Amount [A]         True Amount [A]         True Amount [B]         Control Amount [B]         Flags           1.4-Difluorobenzene         0 0270         0.0300         90         80-120	Units: mg/kg	<b>Date Analyzed:</b> 11/27/09 19:04	SU	RROGATE RE	COVERY	STUDY	
I.4-Difluorobenzene         0 0270         0.0300         90         80-120           4-Bromofluorobenzene         0.0291         0 0300         97         80-120           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix:Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         Found [A]         Recovery %R         Control Limits         Flags           1.4-Difluorobenzene         0 0273         0.0300         91         80-120            1.4-Difluorobenzene         0 0273         0.0300         91         80-120            Lab Batch #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix:Soil            Lab Batch #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix:Soil            Units: mg/kg         Date Analyzed: 11/27/09 19:47         SURROGATE RECOVERY STUDY             BTEX by EPA 8021B         Amount [A]         Flags         %R [D]              J.4-Difluorobenzene         0.0275         0.0300         92         80-120	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene       0.0270       0.0300       90       80-120         4-Bromofluorobenzene       0.0291       0.0300       97       80-120         Lab Batch #: 783675       Sample: 353037-001 / SMP       Batch:       1       Matrix: Sol         Units: mg/kg       Date Analyzed: 11/27/09 19:25       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount [A]       True Recovery [A]       Recovery [B]       Control Limits %R       Flags         1,4-Difluorobenzene       0.0297       0.0300       91       80-120         Lab Batch #: 783675       Sample: 353037-002 / SMP       Batch:       1       Matrix: Soil         Lab Batch #: 783675       Sample: 353037-002 / SMP       Batch:       1       Matrix: Soil         Units: mg/kg       Date Analyzed: 11/27/09 19:47       SURROGATE RECOVERY STUDY       Imits: Soil         BTEX by EPA 8021B       Amount [A]       True Amount [A]       Recovery [D]       Control Limits       Flags         1.4-Difluorobenzene       0.0275       0.0300       92       80-120       Imits         4-Bromofluorobenzene       0.0275       0.0300       92       80-120         1.4-Difluorobenzene       0.0304       0.0300       101       80-120	14 Diffuorohongono	Analytes	0.0270	0.0200		80.120	
Homometric         0.0291         0.0300         97         00120           Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True [A]         Recovery [B]         Control Limits %R         Flags           1.4-Difluorobenzene         0 0273         0.0300         91         80-120	4-Bromofluorobenzene		0.0270	0.0300	90	80-120	
Lab Batch #: 783675         Sample: 353037-001 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:25         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True Found [A]         Recovery (B]         Control Limits %R         Flags           1.4-Difluorobenzene         0 0273         0.0300         91         80-120			0.0291	0 0300	97	80-120	
Units: mg/kgDate Analyzed: 11/27/09 19:25SURROGATE RECOVERY STUDYBTEX by EPA 8021BAmount Found [A]True Amount [B]Recovery %R [D]Control Limits %RFlags1,4-Difluorobenzene0 02730.03009180-1204-Bromofluorobenzene0 02970.03009980-120Lab Batch #: 783675Sample: 353037-002 / SMP Date Analyzed: 11/27/09 19:47Batch: 1Matrix: SoilUnits: mg/kgDate Analyzed: 11/27/09 19:47SURROGATE RECOVERY STUDYBTEX by EPA 8021BAmount Found [A]True Amount [B]Recovery %R (D]I,4-Difluorobenzene0.02750.03009280-1201,4-Difluorobenzene0.02750.03009280-120	Lab Batch #: 783675	Sample: 353037-001 / SMF	Batel	h: 1 Matrix:	Soil	CTUDV	
BTEX by EPA 8021BAmount Found [A]True Amount [B]Control Limits %R [D]Flags1,4-Difluorobenzene0 02730.03009180-120-4-Bromofluorobenzene0.02970.03009980-120-Lab Batch #: 783675Sample: 353037-002 / SMP Date Analyzed: 11/27/09 19:47Batch: 1 Matrix: Soil-Matrix: mg/kgDate Analyzed: 11/27/09 19:47SURROGATE RECOVERY STUDY-BTEX by EPA 8021BAmount Found [A]True (B]Recovery %R (D]Control Limits %PFlags1,4-Difluorobenzene0.02750.03009280-120-4-Bromofluorobenzene0.02750.03009280-120-	Units: mg/kg	Date Analyzed: 11/27/09 19:25	50.	RRUGATE RE	LCOVERY		
Interfect         O	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene         0.0297         0.0300         99         80-120           Lab Batch #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:47         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount [A]         True [B]         Recovery %R [D]         Control Limits %R         Flags           1.4-Difluorobenzene         0.0275         0.0300         92         80-120           4-Bromofluorobenzene         0.0275         0.0300         91         80-120	1,4-Difluorobenzene		0.0273	0.0300	91	80-120	
Lab Batch #: 783675         Sample: 353037-002 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 11/27/09 19:47         SURROGATE RECOVERY STUDY           BTEX by EPA 8021B         Amount Found [A]         True Amount [B]         Recovery %R [D]         Control Limits %R         Flags           1.4-Difluorobenzene         0.0275         0.0300         92         80-120           4-Bromofluorobenzene         0.0304         0.0300         101         80-120	4-Bromofluorobenzene		0.0297	0.0300	99	80-120	
Units: mg/kgDate Analyzed: 11/27/09 19:47SURROGATE RECOVERY STUDYBTEX by EPA 8021BAmount Found [A]True Amount [B]Recovery %R [D]Control Limits %RFlags1,4-Difluorobenzene0.02750.03009280-1204-Bromofluorobenzene0.03040.030010180-120	Lab Batch #: 783675	Sample: 353037-002 / SMF	Batel	h: 1 Matrix:	: Soil	1	
BTEX by EPA 8021BAmount Found [A]True Amount [B]Control Limits %R [D]Flags1,4-Difluorobenzene0.02750.03009280-1204-Bromofluorobenzene0.03040.030010180-120	Units: mg/kg	Date Analyzed: 11/27/09 19:47	SU	RROGATE RI	ECOVERY	STUDY	
1,4-Difluorobenzene         0.0275         0.0300         92         80-120           4-Bromofluorobenzene         0.0304         0.0300         101         80-120	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene 0.0304 0.0300 101 80-120	1,4-Difluorobenzene		0.0275	0.0300	92	80-120	
	4-Bromofluorobenzene		0.0304	0.0300	101	80-120	

\* 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.



# Project Name: Staley State A # 4

Vork Orders : 353037 Lab Batch #: 783675	, <b>Sample:</b> 353037-003 / SMP	Bate	Project II h: <sup>1</sup> Matrix:	<b>):</b> Lime Rocl Soil	k Resources	5
Units: mg/kg	Date Analyzed: 11/27/09 20:08	SU	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0 0293	0 0300	98	80-120	
Lab Batch #: 783675	Sample: 353037-005 / SMP	Bate	h:   Matrix:	Soil	1	
Units: mg/kg	Date Analyzed: 11/27/09 20:29	SU	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0272	0.0300	91	80-120	
4-Bromofluorobenzene		0.0303	0.0300	101	80-120	
Lab Batch #: 783675	Sample: 353037-007 / SMP	Bate	h: <sup>1</sup> Matrix:	:Soil		
Units: mg/kg	Date Analyzed: 11/27/09 20:50	SU	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0273	0.0300	91	80-120	
4-Bromofluorobenzene		0.0310	0.0300	103	80-120	
Lab Batch #: 783675	Sample: 353037-009 / SMP	Batc	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/27/09 21:12	SU	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	
Lab Batch #: 783675	Sample: 353037-010 / SMP	Batc	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/27/09 21:33	SU	RROGATE RE	ECOVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0276	0,0300	92	80-120	
4-Bromofluorobenzene		0.0308	0.0300	103	80-120	

\* 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

.



# Project Name: Staley State A # 4

<b>Work Orders :</b> 353037. Lab Batch #: 783675	, Sample: 353037-011 / SMP	Bate	Project II h: 1 Matrix:	: Lime Rock	K Resources	5
Units: mg/kg	Date Analyzed: 11/27/09 21:54	SU	RROGATE RE	COVERY	STUDY	
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			D)		
1,4-Difluorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0 0305	0 0300	102	80-120	
Lab Batch #: 783675	Sample: 353037-012 / SMP	Batcl	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/27/09 22:15	SU.	RROGATE RE	<b>COVERY</b> S	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	
Lab Batch #: 783675	Sample: 353037-013 / SMP	Batel	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/27/09 22:36	SU	RROGATE RE	<b>COVERY</b>	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	
Lab Batch #: 783675	Sample: 353037-014 / SMP	Batel	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/27/09 23:40	SU	RROGATE RE	COVERY	STUDY	
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0295	0.0300	98	80-120	
Lab Batch #: 783675	Sample: 353037-015 / SMP	Batel	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 00:01	SU	RROGATE RE	COVERY	STUDY	
втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	

\* 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.



# Project Name: Staley State A # 4

/ork Orders : 353037	, ,		Project ID	: Lime Rock	Resources	
Lab Batch #: /830/5	Sample: 353037-0167 SMP	Batch	I: Matrix:	Soll	STUDY	
Units: mg/kg BTE2	Date Analyzed:         11/28/09 00:22           X by EPA 8021B         1	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	1 1	[ ~~ ]	[D]		
1,4-Difluorobenzene		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0301	0.0300	100	80-120	
Lab Batch #: 783675	Sample: 353037-017 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 00:44	SUI	RROGATE RF	COVERY S	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Analytes	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	
Lah Batch #: 783675	Sample: 353037-019 / SMP	Batel	h: 1 Matrix:	· Soil	<u> </u> L	
Units: mg/kg	Date Analyzed: 11/28/09 01:05	SU	RROGATE RF	COVERY S	STUDY	
BTEZ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1.4 Diffuershonrone	Analytes	0.0271	0.0200	00	90.120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	
	2	D-4-	1 Materia	Pail	00-120	
Lab Baten #: 103013	Sample: 555057-0207 Sivil		REACATE RE	FCOVERY !	STUDY	
	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4-Difluorobenzene		0 0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	
Lah Batch #: 783675	Sample: 353037-021 / SMP	Batc	h: 1 Matrix	: Soil	<u> </u>	
Units: mg/kg	Date Analyzed: 11/28/09 01:47	SU	RROGATE RI	COVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	1

\* 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.



# Project Name: Staley State A # 4

Vork Orders : 353037	, Sample: 353037-022 / SMP	Batel	Project II	: Lime Rock	c Resources	
Units: mg/kg	Date Analyzed: 11/28/09 02:09	SUI	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0 0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0287	0.0300	96	80-120	
Lab Batch #: 783675	Sample: 353037-023 / SMP	Batch	h: l Matrix	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 02:29	SU	RROGATE RI	ECOVERY S	STUDY	
BTE	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Analytes	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0312	0.0300	104	80-120	
Lab Batch #: 783675	Sample: 353037-025 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 02:51	SURROGATE RECOVERY STUDY				
BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0318	0.0300	106	80-120	
Lab Batch #: 783675	Sample: 353037-001 S / MS	Batcl	h: 1 Matrix	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 03:12	SU	RROGATE RI	ECOVERY	STUDY	
BTE	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0310	0 0300	103	80-120	
Lab Batch #: 783675	Sample: 353037-001 SD / M	ISD Bate	h: <sup>1</sup> Matrix	Soil	4	L
Units: mg/kg	Date Analyzed: 11/28/09 03:33	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	-	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	

\* 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.



# Project Name: Staley State A # 4

Vork Orders : 353037	, Sample: 544334-1-BKS / B	KS Batel	Project IE	: Lime Rock	Resources	5
Units: mg/kg	Date Analyzed: 11/28/09 04:16	SU	RROGATE RE	COVERY S	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0300	0.0300	100	80-120	
4-Bromofluorobenzene		0.0298	0.0300	99	80-120	
Lab Batch #: 783683	Sample: 544334-1-BSD / B	SD Batel	h: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 11/28/09 04:37	SU	RROGATE RE	COVERY S	STUDY	
втех	A nalytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0296	0.0300	99	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	
Lab Batch #. 783683	Sample: 544334-1-BLK / B	LK Batel	h• 1 Matriv	Solid		
Units: mg/kg	Date Analyzed: 11/28/09 05:19	SU.	RROGATE RE	ECOVERY S	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0267	0.0300	89	80-120	
4-Bromofluorobenzene		0.0293	0.0300	98	80-120	
Lab Batch #: 783683	Sample: 353037-027 / SMP	Batel	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 05:40	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorohenzene	Anarytes	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	· · · · · ·	0.0318	0.0300	106	80-120	
Lab Batch #: 783683	Sample: 353037-033 / SMP	Bate	h; l Matrix:	Soil		1
Units: mg/kg	Date Analyzed: 11/28/09 06:01	SU	RROGATE RE	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0322	0.0300	107	80-120	

\* 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 / BAll results are based on MDL and validated for QC purposes.



## Project Name: Staley State A # 4

<b>Vork Orders :</b> 353037 Lab Batch #: 783683	, Sample: 353037-035 / SMP	Batel	Project ID	: Lime Rock Soil	Resources	
Units: mg/kg	Date Analyzed: 11/28/09 06:22	SUI	RROGATE RE	COVERY	STUDY	
ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0275	0.0300	92	80-120	
4-Bromofluorobenzene		0.0309	0.0300	103	80-120	
Lab Batch #: 783683	Sample: 353037-037 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 06:43	SU	RROGATE RE	COVERY	STUDY	
втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4 Difluorobenzene	Analytes	0.0277	0.0200	02	80.120	
4-Bromofluorobenzene		0.0277	0.0300	107	80-120	
Lab Datab # 783683	Samelar 252027 028 / SMP	Detal		Soil	00.120	
Lab Balen #: 705005	Date Analyzed: 11/28/00 07:04	SU	RROGATE RE	COVERY	STUDY	
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			(D)		
1,4-Difluorobenzene		0.0279	0.0300	93	80-120	
4-Bromofluorobenzene		0.0316	0.0300	105	80-120	
Lab Batch #: 783683	Sample: 353037-039 / SMP	Batel	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/28/09 07:25	SU	RROGATE RE	<b>COVERY</b>	STUDY	
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			ן טן		
1,4-Difluorobenzene		0.0277	0.0300	92	80-120	
4-Bromofluorobenzene		0.0302	0.0300	101	80-120	
Lab Batch #: 783683	Sample: 353037-027 S / MS	Batel	h:   Matrix:	Soil	STUDY	
Units: mg/kg	Date Analyzed: 11/29/09 00:37	30.	KRUGATE KE			
BTE	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	-	0 0253	0.0300	84	80-120	
4-Bromofluorobenzene		0.0289	0.0300	96	80-120	

\* 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 / BAll results are based on MDL and validated for QC purposes.


### Project Name: Staley State A # 4

<b>Vork Orders :</b> 353037, Lab Batch #: 783683	, Sample: 353037-027 SD / N	MSD Batel	Project IE	: Lime Rock	Resources	
Units: mg/kg	Date Analyzed: 11/29/09 00:58	SU	RROGATE RE	COVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Dıfluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0281	0.0300	94	80-120	
Lab Batch #: 783611	Sample: 544343-1-BKS / B	KS Batcl	h: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 11/26/09 15:12	SU	RROGATE RE	COVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	<b>-</b>	118	99.6	118	70-135	
o-Terphenyl		49.3	49.8	99	70-135	
Lab Batch #: 783611	Sample: 544343-1-BSD / B	SD Batcl	h: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 11/26/09 15:38	SU	RROGATE RE	ECOVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		126	100	126	70-135	
o-Terphenyl		52.9	50.0	106	70-135	
Lab Batch #: 783611	Sample: 544343-1-BLK / B	BLK Bate	h: 1 Matrix:	Solid	•	
Units: mg/kg	Date Analyzed: 11/26/09 16:04	SU	RROGATE RE	COVERY	STUDY	
TPHI	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	00.(	100		70.125	
o-Terphenyl		<u> </u>	50.0	90	70-135	
	0	<b>D D D C C C C C C C C C C</b>	JU,U	Soil	70-133	
Lab Batch #: 785011	Data A palyzod: 11/26/00 16:20	SU	RROGATE RE	COVERY	STUDY	
TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		96.5	99.6	97	70-135	
o-Terphenyl		61.5	49 8	123	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 / BAll results are based on MDL and validated for QC purposes.



### Project Name: Staley State A # 4

Vork Orders : 353037, Lab Batch #: 783611	Sample: 353037-002 / SMP	Batch	Project IE	: Lime Rock Soil	Resources	
Units: mg/kg	Date Analyzed: 11/26/09 16:55	SU	RROGATE RE	<b>COVERY</b> S	STUDY	
ТРН Е	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וען		
I-Chlorooctanc		95.2	99.8	95	70-135	
o-I erphenyl		60.0	49.9	120	70-135	
Lab Batch #: 783611	Sample: 353037-003 / SMP	Batcl	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 17:22	SU	RROGATE RE	COVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	5	82.5	99.9	83	70-135	
o-Tcrphcnyl		50.8	50.0	102	70-135	
Lab Batch #: 783611	Sample: 353037-005 / SMP	Batcl	h:   Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 17:47	SU	RROGATE RE	ECOVERY S	STUDY	ш
ТРН І	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		87.6	100	88	70-135	· · ·
o-Terphenyl		54.2	50.0	108	70-135	
Lab Batch #: 783611	Sample: 353037-007 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 18:13	SU	RROGATE RI	ECOVERY S	STUDY	
ТРН І	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וען		
1-Chlorooctane		73.4	99.6	74	70-135	=
o-I crphenyl		42.7	49.8	86	70-135	
Lab Batch #: 783611	Sample: 353037-009 / SMP	Batel	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 18:39	SU.	RROGATE RI	COVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		80.6	99.9	81	70-135	-
o-Terphenyl		48.1	50.0	96	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



## Project Name: Staley State A # 4

Vork Orders : 353037, Lab Batch #: 783611	Sample: 353037-010 / SMP	Batch	Project IE	: Lime Rock	c Resources	
Units: mg/kg	Date Analyzed: 11/26/09 19:05	SUI	RROGATE RE	COVERY	STUDY	
ТРН Е	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctanc		70 9	100	71	70-135	
o-Terphenyl		43 0	50.0	86	70-135	
Lab Batch #: 783611	Sample: 353037-011 / SMP	Batch	n: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 19:32	SUI	RROGATE RE	COVERY	STUDY	
ТРН І	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		82.4	99.7	83	70-135	
o-Tcrphenyl		50.9	49.9	102	70-135	
Lab Batch #: 783611	Sample: 353037-012 / SMP	Batch	n: 1 Matrix:	Soil	I	
Units: mg/kg	Date Analyzed: 11/26/09 19:57	SUI	RROGATE RE	COVERY	STUDY	
ТРН Н	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		88.1	100	88	70-135	
o-Terphenyl		54.0	50.0	108	70-135	
Lab Batch #: 783611	Sample: 353037-013 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 20:23	SU	RROGATE RE	COVERY	STUDY	
ТРН І	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
I-Chlorooctane		84 8	100	85	70-135	
o-Terphenyl		51.9	50.0	104	70-135	
Lab Batch #: 783611	Sample: 353037-014 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 21:15	SU	RROGATE RI	ECOVERY	STUDY	
ТРН Н	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		82.1	99.9	82	70-135	
o-Terphenyl		49.4	50.0	99	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.



### Project Name: Staley State A # 4

<b>Work Orders :</b> 353037 Lab Batch #: 783611	, Sample: 353037-015 / SMP	Bate	Project IE	: Lime Rock Soil	Resources	
Units: mg/kg	Date Analyzed: 11/26/09 21:41	SU	RROGATE RE	COVERY S	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Txilary tes	84.0	00.0	84	70-135	
o-Terphenyl		50.6	50.0	101	70-135	
Lab Batch #: 783611	Sample: 353037-016 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 22:07	SU	RROGATE RE	COVERY S	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		84.6	99.6	85	70-135	
o-Terphenyl		51 4	49.8	103	70-135	
Lah Batch #: 783611	Sample: 353037-017 / SMP	Batc	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 22:33	SU	RROGATE RE	COVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		82.6	99.6	83	70-135	
o-Terphenyl		49.7	49.8	100	70-135	
Lab Batch #: 783611	Sample: 353037-019 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/26/09 22:58	SU	RROGATE RE	COVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1 Chloroostana	Analytes	01.7	100	02	70 135	
o-Terphenyl		55.9	50.0	112	70-135	
Lab Batch #: 783611	Sample: 353037-020 / SMP	Bate	h. 1 Matrix	Soil	10 100	
Lab Balling. 703011	Date Analyzed: 11/26/09 23:24	SU	RROGATE RE	COVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	00.0	100			
I-Chlorooctanc		80.8	100	81	70-135	
0-recplicity	•	40.0	50.0	71	/0-133	

\* 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 / BAll results are based on MDL and validated for QC purposes



### Project Name: Staley State A # 4

Vork Orders : 353037 Lab Batch #: 783611	7, Sample: 353037-021 / SMP	Bate	Project II h: <sup>1</sup> Matrix	D: Lime Rocl ;Soil	k Resources	5
Units: mg/kg	Date Analyzed: 11/26/09 23:50	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		88 4	99.9	88	70-135	
o-Terphenyl		51.4	50.0	103	70-135	
Lab Batch #: 783611	Sample: 353037-022 / SMP	Bate	ch: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/27/09 00:16	SU	<b>IRROGATE</b> R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		83.1	100	83	70-135	
o-Terphenyl		50.5	50.0	101	70-135	
Lab Batch #: 783611	Sample: 353037-023 / SMP	Bato	h:   Matrix	:Soil	1	
Units: mg/kg	Date Analyzed: 11/27/09 00:42	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		84.5	99.5	85	70-135	
o-Terphenyl		52.3	49 8	105	70-135	
Lab Batch #: 783611	Sample: 353037-025 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/27/09 01:07	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		85.1	99 7	85	70-135	
o-Terphenyl		52.6	49.9	105	70-135	
Lab Batch #: 783611	Sample: 353037-019 S / MS	Bate	.h: l Matrix	: Soil	•	
Units: mg/kg	Date Analyzed: 11/27/09 01:33	su	JRROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1			1	1 ''		
1-Chlorooctane		129	00.7	120	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 / BAll results are based on MDL and validated for QC purposes.



### Project Name: Staley State A # 4

Vork Orders : 353037 Lab Batch #: 783611	7, Sample: 353037-019 SD / N	ASD Batel	Project II h: <sup>1</sup> Matrix	D: Lime Rock Soil	k Resources	5
Units: mg/kg	Date Analyzed: 11/27/09 01:59	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytts	113	00.8	113	70.135	
o-Terphenyl		46.6	49.9	93	70-135	
Lab Batch #: 783656	Sample: 544365-1-BKS / B	KS Potal	h. 1 Matrix	· Solid		
Units: mg/kg	Date Analyzed: 11/29/09 18:32	SU:	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		118	99.9	118	70-135	
o-Terphenyl		49.1	50.0	98	70-135	
Lab Batch #: 783656	Sample: 544365-1-BSD / B	SD Batc	h: <sup>1</sup> Matrix	;Solid	1	
Units: mg/kg	Date Analyzed: 11/29/09 18:57	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		120	99.8	120	70-135	
o-Terphenyl	· · ·	49.9	49.9	100	70-135	
Lab Batch #: 783656	Sample: 544365-1-BLK / B	LK Batcl	h: <sup>1</sup> Matrix	:Solid		
Units: mg/kg	Date Analyzed: 11/29/09 19:23	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			וטן		
1-Chlorooctane		84.9	99 9	85	70-135	
o-1 crphenyl	· · · · · · · · · · · · · · · · · · ·	507.	50.0	101	70-135	
Lab Batch #: 783656	Sample: 353037-027 / SMP	Batel	h: <sup>1</sup> Matrix	:Soil	OTUDY	
Units: mg/kg	Date Analyzed: 11/29/09 19:48	50	RRUGATE R			
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	•	85.5	100	86	70-135	
o-Terphenyl		51.8	50.0	104	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



### Project Name: Staley State A # 4

<b>Work Orders :</b> 353037 Lab Batch #: 783656	Sample: 353037-033 / SMP	Batc	Project II h: 1 Matrix:	): Lime Rock Soil	k Resources				
Units: mg/kg	Date Analyzed: 11/29/09 20:14	SURROGATE RECOVERY STUDY							
TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			ועו					
1-Chlorooctane		88.8	99.7	89	70-135				
o-Terphenyl		54.0	49.9	108	70-135				
Lab Batch #: 783656	Sample: 353037-035 / SMP	Batc	h: 1 Matrix	:Soil					
Units: mg/kg	Date Analyzed: 11/29/09 20:39	SU	RROGATE RI	ECOVERY	STUDY				
ТРН І	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctanc		86.6	99.9	87	70-135				
o-Terphenyl		51.9	50.0	104	70-135				
Lab Batch #1 783656	Sample: 353037-037 / SMP	Bata	l . 1 Matrix	Soil					
Lab Balen #. 705050	Date Analyzed: 11/29/09 21:05	SU	RROGATE RI	ECOVERY	STUDY				
TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags			
1-Chlorooctane	/ mary too	81.4	100	81	70-135				
o-Terphenyl		49.0	50.0	98	70-135				
Lab Batch #: 783656	Sample: 353037-038 / SMP	Bate	h·   Matrix	Soil					
Lab Batch #. 105050	Date Analyzed: 11/29/09 21:30	SU	RROGATE RI	ECOVERY	STUDY				
TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctanc		84.3	100	84	70-135				
o-Terphenyl		50.9	50 0	102	70-135				
Lab Batch #: 783656	Sample: 353037-039 / SMP	Batc	h: <sup>1</sup> Matrix	Soil	Ł				
Units: mg/kg	Date Analyzed: 11/29/09 21:56	SU	RROGATE RI	ECOVERY	STUDY				
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane		81 4	100	81	70-135	·			
o-Terphenyl		49.2	50.0	98	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.



### Project Name: Staley State A # 4

Work Orders : 353037	,		Project II	D: Lime Rock	c Resources	5
Lab Batch #: 783656	Sample: 353037-027 S / MS	S Bate	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/30/09 02:10	SU	RROGATE RE	ECOVERY	STUDY	
ТРН Н	By SW8015 Mod Analytes	V8015 Mod Amount True Found Amount Rec [A] [B] 9 vtes		Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		122	99.9	122	70-135	
o-Terphenyl	1	54.3	50.0	109	70-135	
Lab Batch #: 783656	Sample: 353037-027 SD / M	ASD Bate	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 11/30/09 02:35	SU	RROGATE RI	COVERY	STUDY	
ТРН В	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		119	99.6	119	70-135	
o-Terphenyl		51.9	49.8	104	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





Work Order #: 3:	53037			P	roject ID:	Li	me Rock R	esources
Lab Batch #:	783001	Sa	.mple: 783001-	1-BKS	Matrix:	Solid		
Date Analyzed:	11/23/2009	Date Prej	pared: 11/23/20	009	Analyst:	LATCOF	ι	
<b>Reporting Units:</b>	mg/kg	Ba	itch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
	Anions by E300		Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
	Analytes		[A]	[13]	[C]	%к [D]	%K	
Chloride	······		ND	10.0	10.9	109	75-125	
Lab Batch #:	783006	Sa	ample: 783006-	I-BKS	Matrix:	Solid		
Date Analyzed:	11/23/2009	Date Prep	pared: 11/23/20	)09	Analyst	LATCOR	ર	
<b>Reporting Units:</b>	mg/kg	Ba	atch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
	Anions by E300		Blank Result	Spike Added	Blank Spike Bosult	Blank Spike	Control Limits %P	Flags
	Analytes			ומן	[C]	[D]	/01	
Chloride			ND	10.0	10 5	105	75-125	
Lab Batch #:	783011	Sa	ample: 783011-	1-BKS	Matrix	Solid		
Date Analyzed:	11/23/2009	Date Pre	pared: 11/23/20	)09	Analyst	LATCOR	ર	
<b>Reporting Units:</b>	mg/kg	Ba	atch #: 1	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
	Anions by E300		Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
	Analytes		[A]	[B]	Result [C]	%R [D]	%R	
Chloride			ND	10.0	10.7	107	75-125	1

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





1 and the State . 3

work Urder #: 353037 Analyst: ASA	D	ato Pronar	ed. 11/25/200	19			Pro Date A	ject ID: 1 nalyzed: 1	Lime Rock 1 11/27/2009	Resources	
Lab Batch ID: 783675     Sample: 544333-1	-BKS	Batcl	h#: 1				Duteri	Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE	RECOVI	ERY STUD	Ŷ	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzenc	ND	0.1000	0.0915	92	01	0.0956	96	4	70-130	35	
Toluene	ND	0 1000	0.0908	91	0.1	0 0917	92	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0880	88	0.1	0.0899	90	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1886	94	0.2	0.1864	93	1	70-135	35	
o-Xylene	ND	0.1000	0.0951	95	0.1	0.0910	91	4	71-133	35	
									L		
Analyst: ASA	D	ate Prepar	ed: 11/25/200	)9	1		Date A	nalyzed: ]	1/28/2009	1	
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1	-BKS	ate Prepar Batcl	ed: 11/25/200 h #: 1	)9	1	. <u> </u>	Date A	nalyzed: 1 Matrix: S	1/28/2009 Solid		L
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: <sup>mg/kg</sup>	-BKS	ate Prepar Batcl BLAN	ed: 11/25/200 h #: 1 K /BLANK \$	)9 5 <b>91KE / 1</b>	BLANK S	PIKE DUPI	Date A	nalyzed: 1 Matrix: S RECOVI	1/28/2009 Solid E <b>RY STUD</b>	Y	L
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: mg/kg BTEX by EPA 8021B Analytes	D: -BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	ed: 11/25/200 h #: 1 K /BLANK S Blank Spike Result [C]	)9 SPIKE / E Blank Spike %R [D]	Spike Added [E]	Blank Blank Spike Duplicate Result [F]	Date A LICATE Bik. Spk Dup. %R [G]	nalyzed: 1 Matrix: 5 RECOVI RPD %	L 1/28/2009 Solid ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: mg/kg BTEX by EPA 8021B Analytes Benzene	-BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	ed: 11/25/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.0928	)9 SPIKE / F Blank Spike %R [D] 93	BLANK S Spike Added [E]	Blank Spike Duplicate Result [F] 0.0930	Date A LICATE Blk. Spk Dup. %R [G] 93	nalyzed: 1 Matrix: 5 RECOVI RPD %	L 1/28/2009 Solid ERY STUD Control Limits %R 70-130	Y Control Limits %RPD	Flag
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene	-BKS Blank Sample Result [A] ND	ate Prepar Batcl BLAN Spike Added [B] 0.1000 0.1000	ed: 11/25/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.0928 0.0932	)9 SPIKE / E Blank Spike %R [D] 93 93	Spike Added [E] 0.1	Blank Spike Duplicate Result [F] 0.0930 0.0929	Date A LICATE Bik. Spk Dup. %R [G] 93 93	nalyzed: 1 Matrix: 5 RECOVI % 0 0	1/28/2009 Solid ERY STUD Control Limits %R 70-130 70-130	Y Control Limits %RPD 35 35	Flag
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene Ethylbenzene	BKS Blank Sample Result [A] ND ND ND	ate Prepar Batcl BLAN Spike Added [B] 0.1000 0.1000 0.1000	ed: 11/25/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.0928 0.0932 0.0894	)9 <b>SPIKE / E</b> <b>Blank</b> <b>Spike</b> %R [D] 93 93 89	BLANK S Spike Added [E] 0.1 0.1 0.1	Blank Spike Duplicate Result [F] 0.0930 0.0929 0.0888	Date A JICATE Blk. Spk Dup. %R [G] 93 93 89	nalyzed: 1 Matrix: 5 RECOVI % 0 0 1	1/28/2009 Solid ERY STUD Control Limits %R 70-130 70-130 71-129	Y Control Limits %RPD 35 35 35 35	Flag
Analyst: ASA Lab Batch ID: 783683 Sample: 544334-1 Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene Ethylbenzene m,p-Xylenes	BKS Blank Sample Result [A] ND ND ND ND	ate Prepar Batcl BLAN Spike Added [B] 0.1000 0.1000 0.1000 0.2000	ed: 11/25/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.0928 0.0932 0.0894 0.1916	)9 <b>SPIKE / F</b> <b>Blank</b> <b>Spike</b> %R [D] 93 93 89 96	BLANK S Spike Added [E] 0.1 0.1 0.1 0.2	<b>PIKE DUPI</b> Blank Spike Duplicate Result [F] 0.0930 0.0929 0.0888 0.1901	Date A .ICATE Blk. Spk Dup. %R [G] 93 93 89 95	nalyzed: 1 Matrix: 5 RECOVI % 0 0 1 1	11/28/2009 Solid ERY STUD Control Limits %R 70-130 70-130 71-129 70-135	Y Control Limits %RPD 35 35 35 35 35	Flag

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 NACE BY AND NOT A STREET, AND





Work Order #: 353037	n	ata Duanas		00			Pro Date A	ject ID: I	_ime Rock	Resources	,
Lab Batch ID: 783611 Sample	e: 544343-1-BKS	Batel	ed: 11/23/200 h #: 1				Date A	Matrix: 5	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / F	<b>3LANK S</b>	SPIKE DUP	LICATE	RECOVI	ERY STUP	νY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	996	925	93	1000	964	96	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	996	904	91	1000	823	82	9	70-135	35	
Analyst: BEV	D	ate Prepar	ed: 11/25/20	09			Date A	nalyzed: 1	1/29/2009		
Lab Batch ID: 783656 Sample	e: 544365-1-BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / F	<b>JLANK S</b>	SPIKE DUP	LICATE	RECOVE	ERY STUP	γ	
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
C6-C12 Gasoline Range Hydrocarbons	ND	999	908	91	998	929	93	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	999	880	88	998	907	91	3	70-135	35	<b></b>

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 and second second second second





Project Name: Staley State A # 4

Work Order #: 353037							
Lab Batch #: 783001			Pr	oject ID:	Lime Rock	Resources	
Date Analyzed: 11/23/2009 Date	Prepared: 11/2	3/2009	A	Analyst: L.	ATCOR		
QC- Sample ID: 353024-001 S	Batch #: 1		1	Matrix: Se	oil		
Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Chloride	45.3	405	469	105	75-125		
Lab Batch #: 783006			<u>I</u>		L	<u> </u>	
Date Analyzed: 11/23/2009 Date	Prepared: 11/2	3/2009	A	Analyst: L	ATCOR		
QC- Sample ID: 353037-014 S	Batch #: 1 Matri				x: Soil		
Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Chloride	59.8	661	750	104	75-125		
Lab Batch #: 783011							
Date Analyzed: 11/23/2009 Date	Prepared: 11/2	3/2009	A	analyst: L	ATCOR		
QC- Sample ID: 353037-034 S	Batch #: 1		I	Matrix: So	oil		
Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	ERY STU	DY	
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Chlorida	594	669	1300	106	75-125		

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

BRL - Below Reporting Limit





.

Work Order # :	353037						Project II	D: Lime R	ock Reso	irces		
Lab Batch ID: Date Analyzed:	783675 C	C- Sample ID: Date Prepared:	353037- 11/25/20	-001 S 009	Ba An:	tch #: alyst:	l <b>Matri</b> ASA	k: Soil				
<b>Reporting Units:</b>	mg/kg		М	ATRIX SPIKI	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
B	BTEX by EPA 8021B 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
Benzepe		ND	0 1343	0.0880	66	0 1343	0.0845	63	4	70-130	35	
Toluene		ND	0.1343	0.0844	63	0.1343	0.0817	61	3	70-130	35	X
Ethylbenzene		ND	0.1343	0.0847	63	0.1343	0.0816	61	4	71-129	35	X
m,p-Xylenes		ND	0 2685	0.1664	62	0.2685	0 1680	63	1	70-135	35	X
o-Xvlene		ND	0.1343	0.0884	66	0 1 3 4 3	0.0893	66	1	71-133	35	x
•			0110 10	010001	00		0100370					
Lab Batch ID: Date Analyzed;	783683 C	C- Sample ID: Date Prepared:	353037- 11/25/20	027 S 009	Ba An:	tch #: alyst:	1 Matrix ASA	x: Soil				
Lab Batch ID: Date Analyzed: Reporting Units:	783683 Q : 11/29/2009 I mg/kg	C- Sample ID: Date Prepared:	353037- 11/25/20 M	027 S 009 ATRIX SPIKI	Ba An: E / MAT	tch #: alyst:	1 Matrix ASA KE DUPLICA	x: Soil	OVERY S	STUDY		
Lab Batch ID: Date Analyzed: Reporting Units: B	783683 Q   11/29/2009 Img/kg   BTEX by EPA 8021B Analytes	C- Sample ID: Date Prepared: Parent Sample Result [A]	353037- 11/25/20 M Spike Added [B]	027 S 009 ATRIX SPIKI Spiked Sample Result [C]	Ba An: E / MAT Spiked Sample %R [D]	tch #: alyst: RIX SPI Spike Added [E]	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F]	x: Soil TE REC Spiked Dup. %R [G]	OVERY S RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag
Lab Batch ID: Date Analyzed: Reporting Units: Benzene	783683 Q   11/29/2009 Img/kg   BTEX by EPA 8021B Analytes	C- Sample ID: Date Prepared: Parent Sample Result [A] ND	353037- 11/25/20 M Spike Added [B] 0.1170	027 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0632	Ba An: E / MAT Spiked Sample %R [D] 54	tch #: alyst: RIX SPI Spike Added [E] 0 1163	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0629	x: Soil TE RECC Spiked Dup. %R [G] 54	OVERY S RPD % 0	STUDY Control Limits %R 70-130	Control Limits %RPD 35	Flag X
Lab Batch ID: Date Analyzed; Reporting Units: Benzene Toluene	783683 Q   11/29/2009 1   mg/kg 1   BTEX by EPA 8021B Analytes	Parent Sample Result [A] ND ND	353037- 11/25/20 M Spike Added [B] 0.1170 0 1170	027 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0632 0.1205	Ba An: E / MAT Spiked Sample %R [D] 54 103	tch #: alyst: RIX SPI Spike Added [E] 0 1163 0.1163	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0629 0.0983	x: Soil <b>TE REC</b> <b>Spiked</b> <b>Dup.</b> %R [G] 54 85	<b>OVERY</b> 5 <b>RPD</b> % 0 20	Control Limits %R 70-130 70-130	Control Limits %RPD 35 35	Flag
Lab Batch ID: Date Analyzed; Reporting Units: B Benzene Toluene Ethylbenzene	783683 Q   11/29/2009 1   mg/kg 1   BTEX by EPA 8021B Analytes	Parent Sample Result [A] ND ND ND	353037- 11/25/20 M Spike Added [B] 0.1170 0 1170 0.1170	027 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0632 0.1205 0.0607	Ba An: Spiked Sample %R [D] 54 103 52	tch #: alyst: RIX SPI Spike Added [E] 0 1163 0.1163 0.1163	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0629 0.0983 0.0626	x: Soil TE REC Spiked Dup. %R [G] 54 85 54	OVERY 5 RPD % 0 20 3	Control Limits %R 70-130 70-130 71-129	Control Limits %RPD 35 35 35	Flag X X
Lab Batch ID: Date Analyzed: Reporting Units: Benzene Toluene Ethylbenzene m,p-Xylenes	783683   Q     11/29/2009   1     mg/kg   1     BTEX by EPA 8021B   Analytes	Parent Sample Result [A] ND ND ND ND ND	353037- 11/25/20 M Spike Added [B] 0.1170 0.1170 0.1170 0.2340	027 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0632 0.1205 0.0607 0.1529	Ba An: E / MAT Spiked Sample %R [D] 54 103 52 65	tch #: alyst: RIX SPI Spike Added [E] 0 1163 0.1163 0.2326	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0629 0.0983 0.0626 0.1457	x: Soil TE RECC Spiked Dup. %R [G] 54 85 54 63	OVERY 5 RPD % 0 20 3 5	Control Limits %R 70-130 70-130 71-129 70-135	Control Limits %RPD 35 35 35 35 35	Flag X X X X

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

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





Work Order #: 353037						Project I	D: Lime R	ock Reso	urces		
Lab Batch ID: 783611 Date Analyzed: 11/27/2009 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	353037 11/25/2 N	-019 S 009 IATRIX SPIK	Ba An: E / MAT	tch #: alyst: RIX SPI	l Matri BEV KE DUPLICA	x: Soil	OVERY	STUDY	.,. <del></del>	
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	1160	1120	97	1160	1130	97	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1160	868	75	1160	884	76	2	70-135	35	
Lab Batch ID: 783656 Date Analyzed: 11/30/2009 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	353037 11/25/2 N	-027 S 009 IATRIX SPIK	Ba An: E / MAT	tch #: alyst: RIX SPI	1 Matri BEV KE DUPLICA	x: Soil	OVERY S	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	1170	1060	91	1170	1050	90	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1170	856	73	1170	1030	88	18	70-135	35	

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

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



Sample Duplicate Recovery



Project Name: Staley State A # 4

Work Order #: 353037

Lab Batch #: 783001				Project I	D: Lime Ro	ck Resource
Date Analyzed: 11/23/2009	Date Prepar	ed:11/23/2009	Ana	lyst:LATC	OR	
QC- Sample ID: 353024-001 D	Batch	#: 1	Mat	rix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Chloride		45.3	46.4	2	20	
Lab Batch #: 783006						
Date Analyzed: 11/23/2009	Date Prepar	ed: 11/23/2009	) Ana	lyst:LATC	OR	
QC- Sample ID: 353037-014 D	Batch	#: 1	Mat	rix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300	ана и на т	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			<b>[B]</b>			
Chloride		59.8	53.4	11	20	
Lab Batch #: 783011						
Date Analyzed: 11/23/2009	Date Prepar	ed:11/23/2009	Ana	lyst: LATC	OR	
QC- Sample ID: 353037-034 D	Batch	#: 1	Mat	rix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Anaryte			1~1			
Chloride		594	607	2	20	
Lab Batch #: 782767						
Date Analyzed: 11/20/2009	Date Prepar	ed: 11/20/2009	) Ana	lyst:WRU		
QC- Sample ID: 352913-001 D	Batch	#: 1	Mat	rix: Soil		_
Reporting Units: %		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
		13.3	14.0	5	20	
		10.0	17.0	<u> </u>	20	L

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

- - -

Final Ver. 1.000





Work Order #: 353037

Lab Batch #: 782775 Date Analyzed: 11/20/2009 QC- Sample ID: 353037-015 D	Date Prepar Batcl	ed:11/20/2009 1#: 1	Ana Mat	Project I lyst: WRU rix: Soil	D: Lime Ro	ck Resource
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			<b>[B]</b>			
Percent Moisture		20.5	20.4	0	20	
Lab Batch #: 782776						
Date Analyzed: 11/20/2009	Date Prepar	ed: 11/20/2009	Ana	lyst: WRU		
QC- Sample ID: 353037-035 D	Batel	n#: 1	Mat	rix: Soil		
Reporting Units: %		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			(B)			
Percent Moisture		21.8	19.5	11	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

and the second se	Card and the second	a late of the second	

Env	vironment	al Lab o	f Te	exa	S					120 Od	300 I Iessi	Wes a, To	CH/ st 1-20 exas	A <i>iN</i> ( ) Eas 7976	DF ( t 5	cus	TODY	RE	COI	RD /	ANC	AN	AL Pho Fa	YSIS one: x:	6 RE 432 432	:-56: 1-56:	/ES7 3-18( 3-171	r 13	٩	291	- 01	fy
	Project Manager:	Curt Stanley				PAGE 01 0	F 04								·		_	Proj	ect	Nam	e: <u>9</u>	tale	y Si	tate	A #	<u>14</u>	<u> </u>	, <del>.</del>				
	Company Name	Basin Environme	ntal Co	nsultin	g, LLC						_						_		Pro	ject	#; <u>L</u>	ime	Ro	ck F	les	oun	285		<u></u>			
	Company Address:	2800 Plains Hwy															_	Pi	ojec	:t Lo	c: <u>E</u>	ddy	Cour	nty, i	NM							- <u></u>
	City/State/Zip:	Lovington, NM 88	8260														-			PO	#:											
	Telephone No:	(575) 441-2244	•				Fax No:	:	(57	5) 3	96-1	429					Re	port	For	nat:	þ	st	anda	ırd			TRR	P	Ľ	] NP	DES	i
	Sampler Signature:	CH:	<u>J</u>				e-mail	:	CS	tan	ley	@	basi	<u>n-cc</u>	ns	ultir	ng.co	<u>m</u>					ومستعدات						-		_	•
(lab use	only)		$\mathcal{L}_{\mathbf{r}}$		-																	TCLF	A T	naly	ze Fr	pr.	T	Τ	Т	T	e	
ORDEF	In: 35	3037		<b>.</b>					3		Pres	ervati	on & #	of Cor	taine	8	Mat	ix	g	T	T		: 	┝							48, 721	
AB # (lab use only)	FIEL	D CODE		leginning Depth	inding Depth	Date Sampled	Time Sampled	ield Filtered	otal #. of Containens 4026	108	HNO3	HCI (VOA X 2)	H <sub>2</sub> 804	NaOH Na-S-O	None (PAH)	Other ( Specify)	0M≭Drinking Wrater SL≖Si⊌dge SW = Groundwater S=Soit/Solid	4P=Non-Potable Specify Other	TPH: 418.1 8015M 801	TPH. TX 1005 TX 1008	Lattoris (La, Mg, NB, K) Antone KY: SCA Attentional	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg S	Volartiles	Semivolatiles	BTEX 80218/6030 or BTEX 826	RCI	N.O.R.M.	FALT FDA Peint Filter Test	Chlorides E 300	RUSH TAT (Prespectie) 24.	Standard TAT
01	East	of RP #1			<u> </u>	11/17/2009	1000	┟┺┤	1	x		-		╈	ϯ	1	So	, I	1				1			Ē			T	X		X
02	East	of RP #2				11/17/2009	1010		1	X					Γ		So	H				T						_Ĺ	1	×	L	X
03	East	of RP #3				11/17/2009	1020		1	x							So	1	$ \downarrow$								┝━╅	$\perp$	╇	⊥×	┡	X
Of	Main Ex.	NSW @ 3.5'				11/17/2009	1420		1	X							So		$\downarrow$	$\rightarrow$		┶	╞						╇	⊥×	┢	<del>ال</del> م
05	Main Ex.	SSW @ 3.5'				11/17/2009	1425	$\square$	1	X		_			$\vdash$	ļ	So	1	4	_			┞	-				-+-	+	⊥×	┢╴	<del>ا</del> ×
60	Main Ex.	ESW @ 3.5'				11/17/2009	1430	$\square$	1	X		_	-+		+	┢─	So	<u> </u>	+	-		+	┢	╞		$ \vdash                                   $	-+	+	╉	+ <u>×</u>	┡	Ĥ
61	Main Ex.	WSW @ 3.5'				11/17/2009	1435		1	X		-			╀		So	<u> </u>	+	-+-	+	╉	╀			$\vdash$	-+	+	╋	┼╴	┢	붜
09	Main E	k. F-1 @ 4'				11/17/2009	1510	$\left  \cdot \right $	1	X			$\vdash$	+-	╀	╀─	So		-+	-+-	╋	+	╀	╆╍╸		$\vdash$	$\rightarrow$	+	+	t	$\mathbf{T}$	녌
	Main E	<u>(F-2692</u>		-		11/1//2009	1520	$\left  \right $		÷,		$\neg$			┢	┢─	50		┽	╉	+	╈	+-	┿-		$\vdash$	$\neg$	+	╀	$f_{\mathbf{x}}$	$\uparrow$	1
Special I	nstructions:		ONC.	IS LES	58 TH	IAN 250 PPM	RUN SAMPI	ہــــا E F.	OR			L B'	TEX	(802	:1B)	AN	D	<u> </u>			abc	ator	y Co	上 新聞	enti iiki		周續	<del>ل</del> ے MA			30	340¥
Relinquish	ed by	TPH (8015m) 	Date Date	Tir Oq. Tir	me 55 Ne	Received by: Received by:										De	ate ate		îme îme		OC:	Fre dy s le H Sar	a of i sais and i and i npler	Head on c Celiv	space onta ared t Re UP	xe? iner( pp. ? S	s)/I	abel F			N N N N N N N N N N	§ ka kar
Relinquish	ed by:	D	Dete	Tir	ne	Received by ELC	t: Titel	2							11	ם -גי	ste )-09	0	ime 95	5	emp	erati	ire U	lpon	Rec	eipt:		<u> </u>	1.4	,	°C	

Env	vironment	al Lab of	Tex	as					12 Q	2600 dess	We ia, 1	CH st I-2 'exa:	IAIN 20 Ea 3 797	/ OF est 765	CU	ist	ODYI	REC	ORI	) AN	ID A	NA P	LYS Thoma Fax:	15 F a: 4: 4:	REQ 32-5 32-5	UES 63-1 63-1	57 800 713		٢	<sup>2</sup> G =	
	Project Manager:	Curt Stanley			PAGE 02 C	<u> </u>											F	roje	st Na	me:	Sta	ley	Stat	e A	#4						<u> </u>
	Company Name	Basin Environment	al Consult	ing, LLC	c													P	roje	ct #:	Lin	ne R	lock	Re	BOU	rce	3				
	Company Address:	2800 Plains Hwy		<u> </u>					<u> </u>									Proj	ect l	Loc:	Edd	y Co	unty	, NN	[						
	City/State/Zip:	Lovington, NM 8826	50					_								_			P	D#:											
	Telephone No:	(675) 441-2244	n-		<u></u>	Fax No	:	(51	75) 3	396-1	1429	)					Repo	ort Fo	rma	t:	X	Stan	dard		C	] TR	RP			NPD	ES
	Sampler Signature:	( H.J	In.			e-mail	:	<u>C</u>	star	niey	@	bas	in-c	con	sult	ling	l.com	<u>1</u>	_								-	_		<b></b>	
(lab use o	only)		7 _	~														┢			TC	UP.	Ana	iyze T	T	<u> </u>	Г	Ţ			_
ORDER	. 35	3037						ä	<b>F</b>	Pres		A not	# of C	ontain		-	Matrix	F		r	TOT	'AL:	_	+	Ŧ	]					172 he
B # (lab use only)		<u></u>	ainnina Death	ding Depth	ate Sampled	ime Samplad	d Filtered	al #. of Containers 402 9		KO,	CI (NOA X Z)	so.	HQ	1.5.03 	one (PAH)	mar ( Specify) Printing (Attending)	/= Groundwatter S=Soll/Solid	Private Potencia Spectry Unter 14. 418.1 80156	H: TX 1005 TX 1008	tions (Ca, Mg, Ns. K)	lons (Cl, SO4, Alkelinity)	R / ESP / CEC	htels: As Ag Ba Cd Cr Pb Hg Se Intilee	anne. mitrolatilas	EX 80218/6030 or BTEX 8260		O.R.M.	AH	oA Paint Flaer Fool	hloridel E 300	USH 1AT (Preschedule) 24. 48 andard TAT
4	FIEL		<b>_</b>	<u> </u>			<u>R</u>	Ĕ	₽	Ē	Ξ	Ť	ž	ž :	ž   č	5 2	8			8	-	8	2 5			<u> </u> ₽	Ē	<u>t</u>	Ē		<u>× 5</u> v
17.	SFP	-2022		+	11/19/2009	1010			<del> </del> ~	$\vdash$		$\left  - \right $	+	+	╋	╌╂╴	Soll	╉	┢	$\vdash$	-+	+	╉	╉	╀	+	┢─	┢	┢╴┦	Ŷ	$+\hat{\mathbf{x}}$
13	SFP	-4 @ 3'			11/19/2009	1015	┢	1	tî	$\square$			-+	-+	╋	$\dagger$	Soil	╉	┢		-+	-†	┿	╈	╈	$\uparrow$	$\uparrow$	$\uparrow$		x	X
iù	SFP	-5 @ 2'		1	11/19/2009	1020	T	1	x	┢──				1	╋	1	Soll	╈	$\top$			T	1	╈		T	T	T	Π	x	X
15	SFP	-6 @ 2			11/19/2009	1030	Γ	1	x						1	T	Soil	T	1						Τ			Γ		X	X
110	SFP	-7 @ 2			11/19/2009	1040		1	x						Τ	Τ	Soil								Τ					X	<u> </u>
11	SFP	-8 @ 2			11/19/2009	1050		1	X								Soil											$\bot$		X	_ <b>_</b> ×
18	W	FP-1			11/19/2009	1200		1	X			$\square$				⊥	Soil	╇	-		$\rightarrow$			$\perp$		_	╞	_		X	_ <b></b> ×
19	W	FP-2			11/19/2009	1205		1	X			$\square$				_	Soil	_	_			_		╇	_	$\downarrow$	┢	┢		×	<u>×</u>
W Secolal li	EFF	PWSW			11/19/2009	1310		1	X								Soil	L		Lat										X	
Sheriai u	1841 47 (1971) B.	IF CHLODIDE CO	NC, IS L	ESS TH	HAN 250 PPM	RUN SAMPL	EF	OR	R TC	DTA	LΒ	TEX	(80	)21E	8) AI	ND						Con				國語	17世	1). 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 - 1930 -	Ŷ	關	<b>B</b> EL
Reflipquist	- Aculy		1090	Time 755	Received by:									T		Date		Tin	e		tody	ree o Seal Clea	f Hea Is on Is on	idsp Cont	ace? aine aine	() ( <b>s)/</b> 医乳/	14		NO P	特部	N N N N N
			~		TOURINGU Dy.										·	- 410		1 11		4	by	amo	A/Cli	ent F	kap.` ⊃e	? กม	łŧ	Fer	Y	Lon	N a Star
Relinquish	ed by:	Dati	e	Time	Received by ELC	n: e Fitel	<u> </u>							-   /	י ג-ו	Date ひーし	,9	Tim 09	10 55	Ten	npera	sture	Upor	n Re	ceíp	5.			4.1	0	•C

.

Env	Environmental Lab of Texas									12	600 1	Wes	CH/	VN ( Eas	OF C t	:US	TOD	)Y Ri	ECC	ORD	) AN	ID A	NAI Pi	.YS	IS R :: 43	EQ	UES 13-18	T 00		P	53
										Od	less	<b>1</b> , To	exas '	7976	5								F	ax:	43	2-56	3-17	13			
	Project Manager:	Curi Stanle	¥			PAGE 03 0	<u>F 04</u>					_						Pn	ojec	t Na	me:	Sta	ley :	Stat	e A	#4					
	Company Name	Basin Envir	onmental Co	nsultin	ig, LLC												•		Pr	rojec	:t #:	Lin	ne R	ock	Re	SOUI	ces				<u>.</u>
	Company Address:	2800 Plains	Hwy														-	I	Proje	ect L	.oc:	Edd	y Ço	unty	<u>, NM</u>		<u> </u>			<u> </u>	u
	City/State/Zip:	Lovington, I	NM 88260				·										-			P	D #:										
	Telephone No:	(575) 441-22	44				Fax No:		(57	(5) 3	96-1	429					. R	lepon	t Fo	rma	t:	X	Stan	lard			TRF	ŧР		NPD	ES
	Sampler Signature:	L	1.1				e-mail:		<u>cs</u>	star	ley	@I	basi	<u>~cc</u>	กรเ	<u>ultir</u>	ng.c	om	_									_			_
(lab use d	only)		$ \rightarrow  $	$\overline{}$															F		_	тс	LP:	Ána T	yze	For:		- T	Τ	-I	
ORDER	1 25	2037							22	`	Dene			10.		_		atriv	F			тот	AL:	7	1	1	1				E E
				T	1	]		Γ	102			N VAL				Ì –	194		8158							8260					7
ab use only)				ng Depth	Depth	ampied	ampled	8	Containens 40			A X 2)			6	pecify)	ng Weter SL=Studge	indwater S≃SolySoli dable Specify Othe	18.1 8015M	X 1005 TX 10	Ca, Mg, Na, K)	1, SO4, Alkalinity)	P/CEC		lles	218/6030 or BTEX			of Settion Test	as E 300	(AT (Pre-Schedule) rd TAT
LAB#(	FiEL	D CODE		Beginni	Ending	Date S	Time S	Field Filter	Fotal #. of	8	ЧИО <mark>,</mark>	HCI CO	'os'H	O'STEN	None (P)	Other (S	DWHDRING	GW = Gra	TPH: 4	Heu	Cations (	Arrions (C	SAR / ES	Voluellas	Semivola	BTEX 80	RCI	N.O.R.M	EPA Pai	Chlorid	RUSH Standal
2	EFP-FI	.00R @ 3'				11/19/2009	1315		1	x							8	ioil -					$\Box$		Ι					×	×
12	EF	PESW				11/19/2009	1320		1	x							S	ioil	L						_			_	┶	<u>ا</u> لا	_ <u></u> ×
13	D1-	FLOOR		1		11/19/2009	1405		1	X				1			s	oil						_	1	_	Ļ	_	+-	1×1	_ <u> </u> ×
14	D2-I	FLOOR		ļ	ļ	11/19/2009	1410	ļ	1	X	$\square$				ļ		s	oil				-	_	_	+		$\square$		╇	1×1	_ <b></b> ×
15	D3-	FLOOR		<b> </b>	<u> </u>	11/19/2009	1415	ļ	1	X				<u>_</u>	ļ		S	oil	┡			-	+	_	+-	╞			┢	쓰	_ <b>X</b>
W	D4-	FLOOR		<u> </u>		11/19/2009	1420	<u> </u>	1	X			$\rightarrow$	+-	-		S	oil	┡	┣			+	-	╉	+-	$\vdash$	-+-	+-	쒸	+
	D4-S	SW @ 3'		<b> </b>		11/19/2009	1425		1	X		_		+-	┣		<u> </u>	oil	┢	-	$\left  - \right $		_	+-	╉╴	╀╴	$\vdash$	_+-	╉╌	붠	-+*
10	D5-	FLOOR				11/19/2009	1430		1	X		$\neg$		+-		$\vdash$	S		┢	-	$\square$		-	╋	╋	╉	+		+	ᆟ쉬	-13
20			<u></u>	$\vdash$		11/19/2009	1430		4	1÷		-	+	┿	┢	$\vdash$	2		┢			-+	╋	+	╉─	╀	┢┤		+	Í,	1,
Special in	nstructiona:	IF CHLODI	DE CONC.	IS LE	SS TH	IAN 250 PPM	RUN SAMPI	L .E F	OR			. 8	TEX	(802	1B)	AN	D		I	1		orat Safe	ory (	L Com Her	men Man	ts: sc?? ace?		1967 1967	Ę		N
Reinquish	report		Date	Ti	me	Received by:	<u></u>				·	-			T	Da	te	Τ	Tim	e	Cur	els d tody	n Go Seal	s on	cont	iti aine	の後日 (S) /	ا ماحدا برا	æ	約網 >	版語 N
Relinquish	1-)	·	Il Zel 09	09. Ti	S5 me	Received by:	, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>							_ <del></del>	-	Da	ite	+	Tim	e	Ců Sar	high	tinii Heng	Del	vera	9 <b>7</b> (5) d		68-13	Ĉ	斜(洞) >	N N N
~												,			L			4				by C	ourie	? ?	UI	S	DH	. F	edEx	Lon	, Star
Reinquishe	ed by:		Date	Till Till	ne	Received by ELC	»: 	- 1								Da -Da	αê 	0	תוו רא ק	° 5	Ten	npera	iture	Upo	n Re	ceipi	::		4.	۵	°C

Env	vironmental Lab	of Te	exa	S								СН	AIN	OF	cus	TO	DY R	EC	ORL	A	ND A	<b>INA</b>	LYS	'IS F	REQ	UES	37			Pg	4
									12 0d	800 less	We a, T	st I-2 'exas	0 Ea:	st 36								P	hone Fax:	e: 4: 4:	32-50 32-50	13-18 13-17	300 713				
	Project Manager: Curt Stanley	·			PAGE 04 0	F 04										-	Pr	ojec	t Na	me:	Sta	ley	Stat	e A	#4						
	Company Name Basin Enviro	onmental Co	nsuitin	ig, LLC	` <u>~</u>					-,						_		P	rojec	:t #:	Lin	<u>1e R</u>	ock	Re	sou	(C68	<u> </u>				
	Company Address: 2800 Plains	Hwy			<u></u>											_		Proj	ect i	.oc:	Edd	y Co	unty	<u>, NN</u>	۱						
	City/State/Zip: Lovington, M	IM 88260														-			P	D#:											
	Telephone No: (575) 441-22	4 <del>/~~</del>	<u> </u>		····	Fax No:		(57	5) 3	96-1	429					- '	Repo	rt Fo	rmai	t:	X	Stan	dard			TR	RP			۶DE	3
	Sampler Signature:	EXt				e-mail:		çs	tar	nley	@	bas	<u>in-c</u>	ons	<u>ulti</u>	ng.u	com	_					A	120	Éac		انسبيهان			<b>—</b>	7
(lab use o	oniy)																	E	_		TO	LP:		1928	-01. 	T	Π	Ţ	Т	Ē	
ORDER	<b>*</b> : 353031		T	r	· · · · · · · · · · · · · · · · · · ·	<u></u>	<b></b>	3		Pres	ervat	ion & i	t of Co	nteine	<b>4</b> 8	N	Aatrix	B				~	8	+	8	1				48, 72	
AB # (lab use only)	FIFL D CODE		leginning Depth	inding Depth	Date Sampled	Time Sampled	lehd Fütered	otal # of Containers Hoz 9	8	HNO3	HCI (VOA X 2)	H <sub>5</sub> SO4	NaOH	None (PAH)	Other ( Specify)	W=Dmiding Watter SL=Sludge	sW = Groundwater S≖Sol/Solid IP=Non-Potable Scecify Other	PH: 418.1 8015M 801	PH: TX 1006 TX 1006	Sations (Ca, Mg, Na, K)	Anions (Cl. 804, Alkelinity)	SAR / ESP / CEC	Metals: As Ag Be Cd Cr Pb Hg I	anno an	37EX 90218/5030 of BTEX 826	çci	NORM.	PAH	EPA Paim Eurai Tean Chiorides E 300	RUSH TAT IPPESchedule) 24.	Standard TAT
31	D8-FLOOR	<u> </u>	<b>—#</b>	<u> </u>	11/19/2009	1445	<u></u>	1	x								<u> </u>	f		Ť	Ì	<u> </u>	1	1		Ē		<u> </u>	X	T	X
32	D9-FLOOR				11/19/2009	1450		1	x								Soll												X		X
33	D9-NSW @ 6'				11/19/2009	1500		1	x								Soil										Ш		<u> </u>	<u>↓</u>	X
24	D10-FLOOR				11/19/2009	1505		1	x								Soil						$\bot$				$\square$		_ <u> ×</u>	1	×
25	D10-SSW @ 5'			l	11/19/2009	1510	Ц	1	X								Soil										$\square$		<u> </u>	4	Ľ
36	D11-FLOOR		L	 	11/19/2009	1520		1	X							L	Soil					_		$\bot$	$\bot$		$\square$	$\rightarrow$	_ <u> </u> ×	<u> </u>	1×
31	D11-NSW @ 10'				11/19/2009	1530		1	X					$\downarrow$		1	Soil	_				_	$\downarrow$	┢	4-		Ц		_ <u> ×</u>	4	ᆚ
33	D11-SSW @ 10'		ļ		11/19/2009	1540	Ц	1	X				_	<b>_</b>	╞	1	Soil	_					╇	╀		+	┢─┤	-+	_ <b> ×</b>	4	₽
- 39	D12-FLOOR				11/19/2009	1600		1	X			$\vdash$		+-		1.8	Soll	┢				+	+	╇	+-	╇─╵	┞╌┥	-+	<b>⊢</b> ×́	4-	<del>ا</del> م
Special In	nstructions: IF CHLODI TPH (8015n	DE CONC.	IS LE	I SS TH	AN 250 PPM	RUN SAMPL	E F	OR	тс	DTA	LB		(80)	218)		D		<u> </u>	L	Lat WO	Cs F	ory ( Coni	Com f Her	men Sili	ts: ace?	- Alto I		Ę			↓ 授封
Reinquishe		Date 11/20109	Til OG Til	me SS me	Received by:										De De	ate		Tim Tim	e 	Cus Cus Sar	de tody 映開 nple	seal seal Hand	s on s de l Del	coni coci	ainer ainer ainer	(s)/	(c <b>le</b>				1630 以六
																					by S by C	ampl	<b>}</b> ∕C∦ ∩	ent F Ul	Rep. 1 PS	, DH	L	FedE	/ İx Lo	N xne S	ter
Relinguishe	ed by:	Date	Ti	me	Received by ELC	r: e. Fitch	<u>`</u> _							1	De 1-20	ste S-CF	10	Tlm 95	\$	Ten	npen	sture	Upo	n Re	ceipt	:			1.6	°C	

## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Basin Env.
Date/ Time:	11-20-09 @ 0955
Lab ID # :	353037
Initials:	JMF

¥.1

「人民の代表の日本の日本

#### Sample Receipt Checklist

		_		Clier	nt initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °C	
#2	Shipping container in good condition?	(es)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container? / abel	(es)	No	Not Present	
#5	Chain of Custody present?	Tes	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
<b>#</b> 7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
<del>7</del> 8	Chain of Custody agrees with sample label(s)?	(Yes)	No	1D written on Cont./ Lid	
<b>#</b> 9	Container label(s) legible and intact?	(res)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
<b>#1</b> 1	Containers supplied by ELOT?	res	No		
#12	Samples in proper container/ bottle?	res	No	See Below	
#13	Samples properly preserved?	Ates	No	See Below	
#14	Sample bottles intact?	785.)	No		
#15	Preservations documented on Chain of Custody?	Nes	No		
#16	Containers documented on Chain of Custody?	(res)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	(No)	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	
	Variance Docun	nentation		· · · · · · · · · · · · · · · · · · ·	
Con	tact: Contacted by:			Deta/Time:	

			Date/ Time:	
Regarding:				
Corrective Action Taken	1:			
		······································		
Check all that Apply:		See attached e-mail/ fax		
		Client understands and would like to proceed	with analysis	
		Cooling process had begun shortly after samp	oling event	

Page 1 of 1

200

From:	Curt D Stanley (cstanley@basinenv.com)	
Sent:	Tuesday, November 24, 2009 2.53 PM	
To:	Jeanne Fitch	
Cc:	Camille Brvant w/Basin	
Subjec	t: Re; WO#353037 Staley State A #4 (chlorides)	
eanne.		
Please opm In	proceed with BTEX / TPH analysis on all samples exhibiting chloride concentrations less than 250 addition, please run BTEX / TPH on samples #27 and #37	
Thanks	as always,	
Curt		
From To: <u>'C</u> Sent: Subje	nginal Message : <u>Jeanne Fitch</u> .art <u>O. Stanley</u> : <u>'Camille J. Bryant'</u> Tuesday, November 24, 2009 10 43 AM .ct: Re: WO#353037 Statey State A #4 (chlorides)	
Hi Cu	d,	
Here noted	are your chloride results. Let me know if you want to proceed with the BTEX/TPH analysis as on your COC k Your	
Jean	ne Fiéch	`
0000		
Envir	onmenral Lab of Texas	
a Xei	neo Company	
Oder	v West 1-20 cast sa TY 79766	
(432)	563-1800 ext. 1701	
( <b>P</b> P	ease consider the environment before printing this email	
The indivi indivi emplo any d recei	Iformation contained in this message is confidential information and may also be covered by thorney client privilege and the work product doctrine and is only intended for the use of the dual/firm named above. If the reader of this message is not the intended recipient or the iyee or agent responsible to deliver it to the intended recipient, you are hereby notified that issemination, distribution or copying of this communication is strictly prohibited. If you have ved this communication in error please immediately notify us by e-mail or telephone in order turn the message to us. Thank you	

11 24/2009

,

# Analytical Report 353806

for

## **Basin Environmental Consulting, LLC**

**Project Manager: Curt Stanley** 

Staley State A # 4

### **Lime Rock Resources**

08-DEC-09





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AAL11), 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)



08-DEC-09



Project Manager: **Curt Stanley Basin Environmental Consulting, LLC** P.O. Box 381 Lovington, NM 88260

Reference: XENCO Report No: **353806** Staley State A # 4 Project Address: Eddy County, NM

#### **Curt Stanley**:

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 353806. 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. 353806 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. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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





1/24 19/10/21/2007:25-

# Sample Cross Reference 353806

#### Basin Environmental Consulting, LLC, Lovington, NM

Staley State A # 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West of D4	S	Nov-30-09 10:05		353806-001

### CASE NARRATIVE



Client Name: Basin Environmental Consulting, LLC Project Name: Staley State A # 4

Project ID:Lime Rock ResourcesWork Order Number:353806

Report Date: 08-DEC-09 Date Received: 12/01/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-783922 Inorganic Anions by EPA 300 None

Batch: LBA-784036 TPH By SW8015 Mod None

Batch: LBA-784038 Percent Moisture None

Batch: LBA-784762 BTEX by EPA 8021B SW8021BM

Batch 784762, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 353806-001. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



Г

### Certificate of Analysis Summary 353806 Basin Environmental Consulting, LLC, Lovington, NM



Project Name: Staley State A # 4

Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Tue Dec-01-09 11:23 am

Report Date: 08-DEC-09

Project Manager: Brent Barron, II

	Lab Id:	353806-001			
Anglusis Paguastad	Field Id:	West of D4			
Analysis Requested	Depth:				
}	Matrix:	SOIL			
	Sampled:	Nov-30-09 10:05			
Anions by E300	Extracted;		 		
	Analyzed:	Dec-01-09 12:02			
	Units/RL:	mg/kg RL			
Chloride		10.2 4.75			
BTEX by EPA 8021B	Extracted:	Dec-07-09 14:35			
	Analyzed:	Dec-07-09 16:33			
	Units/RL:	mg/kg RL			
Benzene		ND 0.0012			
Toluene		0.0172 0.0024			
Ethylbenzene		ND 0.0012			
m,p-Xylenes		ND 0.0024			
o-Xylene		ND 0.0012	 	 	
Total Xylenes		ND 0.0012	 	 	
Total BTEX		0.0172 0.0012	 	 	
Percent Moisture	Extracted:				
	Analyzed:	Dec-01-09 17:00			
	Units/RL:	% RL			
Percent Moisture		15.7 1.00			
TPH By SW8015 Mod	Extracted:	Dec-01-09 13:00			
	Analyzed:	Dec-02-09 13:30			
	Units/RL:	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		54.5 17.8			
C12-C28 Diesel Range Hydrocarbons		484 17.8			
C28-C35 Oil Range Hydrocarbons		177 17.8		 	
otal TPH		716 178			

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





- 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.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hincs 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



## Project Name: Staley State A # 4

Vork Orders : 353806,Project ID: Lime Rock ResourcesLab Batch #: 784762Sample: 544968-1-BKS / BKSBatch: 1Matrix: Solid												
Units: mg/kg	Date Analyzed: 12/07/09 15:24	SU	RROGATE RI	ECOVERY	STUDY							
ВТЕУ	K by EPA 8021B	Amount Found JAJ	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1.4-Difluorobenzene		0.0343	0.0300	114	80-120							
4-Bromofluorobenzene		0.0325	0.0300	108	80-120							
Lah Batch #: 784762		ILK Bate!	h. 1 Matrix	·Solid	L							
Units: mg/kg	Date Analyzed: 12/07/09 16:09	SURROGATE RECOVERY STUDY										
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1.4-Difluorobenzene		0.0314	0.0300	105	80-120	·						
4-Bromofluorobenzene		0.0329	0.0300	110	80-120							
Lah Batch #: 784762	Sample: 353806-001 / SMP	Bate!	h· 1 Matrix	· Soil	l							
Units: mg/kg	Date Analyzed: 12/07/09 16:33	SU	RROGATE RI	ECOVERY S	STUDY							
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0309	0.0300	103	80-120							
4-Bromofluorobenzene		0.0326	0.0300	109	80-120							
Lab Batch #: 784762	Sample: 353806-001 S / MS	S Batel	h: 1 Matrix	:Soil								
Units: mg/kg	Date Analyzed: 12/07/09 19:59	SU	RROGATE RF	<b>COVERY</b> f	STUDY							
ВТЕУ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0326	0.0300	109	80-120	í ———						
4-Bromofluorobenzene		0.0327	0.0300	109	80-120	i						
Lab Batch #: 784762	Sample: 353806-001 SD / N	MSD Batel	h: <sup>1</sup> Matrix	:Soil	<u> </u>							
Units: mg/kg	Date Analyzed: 12/07/09 20:21	SU	RROGATE RF	<b>COVERY</b> f	STUDY							
втеу	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0339	0.0300	113	80-120	[						
4-Bromofluorobenzene		0.0335	0.0300	112	80-120	i						

\* 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.



## Project Name: Staley State A # 4

Vork Orders: 353806	5,		Project IF	): Lime Rocl	k Resources	;						
Lab Batch #: 784036	Sample: 544563-1-BKS / BK	.S Batch	1: 1 Matrix:	:Solid								
Units: mg/kg	Date Analyzed: 12/02/09 10:27	SUI	RROGATE RF	COVERY S	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctanc		113	99.9	113	70-135							
o-Terphenyl		53.6	50.0	107	70-135	·						
Lab Batch #: 784036	Sample: 544563-1-BSD / BS	BSD Batch: 1 Matrix: Solid										
Units: mg/kg	Date Analyzed: 12/02/09 10:53	SUI	RROGATE RF	ECOVERY	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		103	100	103	70-135							
o-Terphenyl		46.9	50.0	94	70-135							
Lab Batch #: 784036	Sample: 544563-1-BLK / BI	_K Batc!	h: 1 Matrix	: Solid	<u></u>							
Units: mg/kg	Date Analyzed: 12/02/09 11:19	SU	RROGATE RF	ECOVERY (	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
I-Chlorooctanc		101	99.9	101	70-135							
o-Terphenyl		58.3	50.0	117	70-135							
Lab Batch #: 784036	Sample: 353806-001 / SMP	Bate	h: 1 Matrix:	:Soil	L	4						
Units: mg/kg	Date Analyzed: 12/02/09 13:30	SU	RROGATE RF	ECOVERY ?	STUDY							
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags						
1-Chlorooctanc		100	100	100	70-135	í						
o-Terphenyl		55.5	50.0	111	70-135	í						

\* 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.





Work Order #: 353806			Р	roject ID:	Liı	esources						
Lab Batch #: 784762	Sa	mple: 544968-	1-BKS	Matrix:	Solid							
Date Analyzed: 12/07/2009	Date Prep	oared: 12/07/20	009	Analyst:	ASA							
Reporting Units: mg/kg	Ba	tch #: 1	BLANK /	NK /BLANK SPIKE RECOVERY STUDY								
BTEX by EPA 8021B		Blank Result [A]	Spike Added (B)	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags					
Analytes		[*-]	1	[C]	[D]							
Benzene		ND	0.1000	0.0943	94	70-130						
Toluene		ND	0.1000	0.0979	98	70-130						
Ethylbenzene		0.0010	0.1000	0.0952	95	71-129						
m,p-Xylenes		ND	0.2000	0.1956	98	70-135						
o-Xylene		ND	0.1000	0.1027	103	71-133						
Lab Batch #: 783922	Sa	mple: 783922-	1-BKS	Matrix:	Solid							
Date Analyzed: 12/01/2009	Date Pre	oared: 12/01/20	009	Analyst:	LATCOF	۱						
Reporting Units: mg/kg	Ba	itch #: 1	BLANK /	BLANK SPI	KE REC	OVERY S	STUDY					
Anions by E300 Analytes		Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags					
hloride		ND	10.0	9.13	91	75-125						

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





Work Order #: 353806 Analyst: BEV Lab Batch ID: 784036	<b>Sample:</b> 544563-1-1	D: BKS	ate Prepar Batcl BLAN	ed: 12/01/20 1 #: 1 K /BLANK (	09 SPIKE / I	BLANK S	Matrix: Solid											
Units: mg/kg TPH By SW8015 Mod Analytes		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag						
C6-C12 Gasoline Range Hydroc	arbons	20.1	999	1070	107	1000	999	100	7	70-135	35							
C12-C28 Diesel Range Hydroca	rbons	40.8	999	1000	100	1000	922	92	8	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





Work Order #: 353806 Lab Batch #: 783922

Project ID: Lime Rock Resources

Date Analyzed: 12/01/2009	Date Prepared: 12/01/2009	Analyst:	LATCOR									
QC- Sample ID: 353750-001 S	Batch #: 1	Matrix:	Soil									
Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY											
Inorganic Anions by EPA 300	Parent Sample Spike Result Added	Spiked Sample Result %R [C] [D]	Control Limits Flag %R									
Analytes	[A] [B]											
Chloride	2200 1070	3260 99	75-125									

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

BRL - Below Reporting Limit





Work Order #: 353806   Project ID: Lime Rock Resources												
Lab Batch ID: 784762 Date Analyzed: 12/07/2009 Reporting Units: mg/kg	QC- Sample ID:   353806-001 S   Batch #:   1   Matrix:   Soil     Date Prepared:   12/07/2009   Analyst:   ASA     MATRIX SPIKE / MATRIX SPIKE DUPLICATE   RECOVERY STUDY											
BTEX by EPA 8021B 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	
Benzene	ND	0.1187	0.0664	56	0.1184	0.0773	65	15	70-130	35	X	
Toluene	0.0172	0.1187	0.0589	35	0.1184	0 0649	40	10	70-130	35	Х	
Ethylbenzene	ND	0.1187	0.0545	46	0.1184	0.0600	51	10	71-129	35	X	
m,p-Xylencs	ND	0.2374	0,1040	44	0.2369	0.1122	47	8	70-135	35	Х	
o-Xylene	ND	0.1187	0.0604	51	0.1184	0.0660	56	9	71-133	35	Х	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

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



Sample Duplicate Recovery



### Project Name: Staley State A # 4

Work Order #: 353806

Lab Batch #: 783922				Project I	D: Lime Ro	ck Resource			
Date Analyzed: 12/01/2009	Date Prepare	<b>d:</b> 12/01/2009	Anal	yst:LATC	OR				
QC- Sample ID: 353750-001 D	Batch	#: l	Mat	rix: Soil					
Reporting Units: mg/kg	Γ	DUPLIC	ATE REC	OVERY					
Anions by E300	P	arent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag			
Analyte		. ,	[B]						
Chloride		2200	2050	7	20				
Lab Batch #: 784038									
Date Analyzed: 12/01/2009	Date Prepare	d:12/01/2009	Anal	iyst:WRU					
QC- Sample ID: 353784-001 D	Batch	<b>#:</b> 1	Mat	Matrix: Soil					
Reporting Units: %	Г	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY			
Percent Moisture	P	'arent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag			
Percent Moisture		6.01	6.79	12	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

Env	vironmenta	I Lab of T	exa	IS					12 01	2600 dess	We 1a, T	C/ st I- 'exa	1A/N 20 E 8 79	/ O/ ast 765	= CUS	5 <b>70</b> /	DY R	REC	ORI	D AI	ND.	AN/ F	4 <i>L</i> Y Phoi Fax	'S/S ne:4 :4	RE( 132-( 132-)	<i>QUE</i> 563- 563-	FS <i>T</i> 180( 171:	03				
	Project Manager:	Curt Stanley		<b>.</b>	PAGE 01 0	F 01			_							-	P	roje	rt Na	me:	St	aley	Sta	ite A	#4			<u></u>				
	Company Name	asin Environmental Co	onsulting	g, LLC												-		P	roje	ct #:	Lic	ne F	loc	<u>k Re</u>	1901	arce	8					
	Company Address:	P. O. Box 381		-												-		Proj	ect l	.oc:	Ed	dy C	ount	iy, Ni	<u>M</u>			·				
	City/State/Zip:	ovington, NM 88260														-			P	0#:												
	Telephone No:	505) 441-2244				Fax No	):	(505)	396	<u>⊢142</u>	9					_ 1	Repor	rt Fa	rmat	t:	X	Star	ndaro	đ	Γ	] 7F	۲RP			ΝΡί	DES	
	Sampler Signature: (	1.t.R				e-mai	ł:	<u>cst</u>	anle	ey@	<u>)</u> ba	isir	env	/.cc	om			جمعي														
(lab use )	only)		ζ															E			T	CLP	Ania		For:		T			-	Ę	
ORDE	R#: 5538	bu			·				P	reser	vatio	on &	/ of (	Cont	ainers	M	atrix	g	T		то	TAL:	┇	+	干	1			5400)		47. 17	
J LAB # (lab use only)	FIELD	CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Freid Filtered	L Total #. of Containers	<u>\$</u> X	HNO	HCI	H <sub>2</sub> SO4	NaOH	Na,S,Q,	None Other ( Specify)	DW - Drinking Water SL - Skudg	O     GW - Groundwater     S-solifsoil       Image: Second state     Second state     Second state	X TPH: 418.1 8015M 801	TPH. TX 1005 TX 1008	Cetions (Ca. Mg. Na, K)	Anions (Cl. SO4, Alkaltmity)	SAR / ESP / CEC	Metals: As Ag Be Cd Cr Pb Hg	Volatiles Construction	V BTEX B)218/5/340 or BTEX 82	Ro	N.O.R.M	PAH 8270	TDS (EPA METHOD SM 2	× CHLORIDES (E 300)	RUSH TAT (Pro-Schedule) 24	Standard TAT
							T		Ê									Ê					1		Ĺ	1	$\Box$	Η		Î		Ĩ
										F													$\downarrow$	$\downarrow$	Ţ	Ļ	$\Box$			$\square$	Д	$\Box$
		· · · · · · · · · · · · · · · · · · ·					╋		┝	┟─			-+	-						-+		_	+	╇	╇	╇	┢─	Н	$\vdash$	┥	$\rightarrow$	4
<b> </b>							┿╸		+	+	$\square$		+	╉				┢	$\left  \right $	-+	-	+	╉	╈	╇	┿	┢	Η	$\vdash$	╉	-	-
													-					F				+	$\uparrow$	+	T	╈	<u> </u>			1	+	٦
												_	_									$\square$	$\bot$	T	$\bot$	T		$\Box$	$\Box$	$\Box$	$\Box$	
	<u> </u>						┢		-				-+	┽	_			<b>_</b>			$\neg$	+	╋	┿	╀╴	┢		┢╌┧	$\vdash$	╉	-	_
Special I Relinquig	Instructions:	Date/		me 23	Received by:	· · · · · · · · · · · · · · · · · · ·	<u> </u>		L	L		1			Da	le		Tim	÷	Lab VOC Cus	orat	ory ( Certification ree of Seal		adsp cont	La: ace?	上						
Relinquis Relinquis	shed by:	Date	T	me	Received by:	or: In In									De De	110 110 109		Tim Tim	• • • २	Sam I Tem	ple by S by C U ipera	Hand ampli ourie 0 7 sture	I Del er/Cl i? G Lo Upc	ivere lient F UI tSS in Re	d tep. 25 ceip	? · DH	L	Fed		tone	N N Sta	

. • - ^---

Final Ver. 1.000

ASSESSMENT ME
#### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client	Basin Env.
Date/ Time:	12.1.09 11:23
Lab ID # :	353804
Initials:	AL

#### Sample Receipt Checklist

**Client Initials** 

				Client	mua
#1	Temperature of container/ cooler?	(es)	No	1.6°C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	res	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Tes	No		
#11	Containers supplied by ELOT?	(Yes	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples property preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Tes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	Pes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	(Yes>	No	Not Applicable	
	Variance Docu	mentation			
Cor	tact: 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 355585

for

### **Basin Environmental Consulting, LLC**

**Project Manager: Curt Stanley** 

Staley State A # 4

#### **Lime Rock Resources**

02-FEB-10



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX) Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)



02-FEB-10

Project Manager: **Curt Stanley Basin Environmental Consulting, LLC** P.O. Box 381 Lovington, NM 88260

Reference: XENCO Report No: 355585 Staley State A # 4 Project Address: Eddy County, NM

#### **Curt Stanley:**

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 355585. 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. 355585 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. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



# nelad:

# Sample Cross Reference 355585

#### Basin Environmental Consulting, LLC, Lovington, NM

Staley State A # 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
D 7A-Floor	S	Dec-10-09 09:10		355585-001
D 6 A - Floor	S	Dec-10-09 09:20		355585-002
D 4 A - Floor	S	Dec-10-09 09:40		355585-003
D 8 A - Floor	S	Dec-10-09 10:00		355585-004
D 5 A - Floor	S	Dec-10-09 11:15		355585-005
D 9 A - Floor	S	Dec-10-09 11:30		355585-006
D 10 A - Floor	S	Dec-10-09 11:50		355585-007
D 11 A - Floor	S	Dec-10-09 12:05		355585-008
D 6 - SSW @ 3.5'	S	Dec-10-09 12:15		355585-009
D 5 - NSW @ 7.5'	S	Dec-10-09 12:25		355585-010
D 7 - NSW @ 8'	S	Dec-10-09 12:40		355585-011
D 4 - WSW @ 8'	S	Dec-10-09 12:55		355585-012
D 8 - SSW @ 7'	S	Dec-10-09 13:05		355585-013
D 4 - SSW @ 8'	S	Dec-10-09 13:15		355585-014

#### CASE NARRATIVE



Client Name: Basin Environmental Consulting, LLC Project Name: Staley State A # 4

Project ID:Lime Rock ResourcesWork Order Number:355585

Report Date: 02-FEB-10 Date Received: 12/14/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

#### Analytical Non Conformances and Comments:

Batch: LBA-785868 Anions by E300 None

Batch: LBA-785882 Percent Moisture None

Batch: LBA-786163 TPH By SW8015 Mod None

Batch: LBA-786278 BTEX by EPA 8021B SW8021BM

Batch 786278, m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 355585-006, -001, -002, -003, -005, -004. The Laboratory Control Sample for m,p-Xylenes is within laboratory Control Limits

Batch: LBA-786459 BTEX by EPA 8021B SW8021BM

Batch 786459, m,p-Xylenes recovered below QC limits in the Matrix Spike. Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 355585-009, -011, -007, -008, -012, -010, -014, -013. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



### Certificate of Analysis Summary 355585

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4

Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Mon Dec-14-09 05:20 pm

Report Date: 02-FEB-10

								Project Ma	nager:	Brent Barron,	, II		
	Lab Id:	355585-0	01	355585-	002	355585-0	003	355585-0	)04	355585-0	005	355585-(	006
Amphasia Descretad	Field Id:	D 7A-Flo	oor	D 6 A - F	Floor	D4A-F	loor	D 8 A - F	loor	D 5 A - F	loor	D 9 A - F	loor
Analysis Kequestea	Depth:												
	Matrix:	SOIL	,	SOII	-	SOIL	,	SOIL		SOIL	,	SOIL	
	Sampled:	Dec-10-09 (	09:10	Dec-10-09	09:20	Dec-10-09	09:40	Dec-10-09	10:00	Dec-10-09	11:15	Dec-10-09	11:30
Anions by E300	Extracted:												
	Analyzed:	Dec-15-09	14.06	Dec-15-09	14.06	Dec-15-09	14.06	Dec-15-09	14.06	Dec-15-09	14:06	Dec-15-09	14:06
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chlonde		255	53.1	327	26.3	304	52.2	160	54.3	158	55.4	225	51.0
BTEX by EPA 8021B	Extracted:	Dec-17-09	13:30	Dec-17-09	13:30	Dec-17-09	13:30	Dec-17-09	13:30	Dec-17-09	13:30	Dec-17-09	13.30
	Analyzed:	Dec-18-09	10 57	Dec-18-09	11.20	Dec-18-09	13:12	Dec-18-09	13:35	Dec-18-09	13.57	Dec-18-09	14:20
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012
Foluenc		ND	0.0025	ND	0.0025	ND	0.0025	ND	0.0026	ND	0.0026	ND	0.0024
Ethylbenzene		ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012
n,p-Xylenes		ND	0.0025	ND	0.0025	ND	0.0025	ND	0.0026	ND	0.0026	ND	0.0024
o-Xylene		ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012
Fotal Xylenes		ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0012
Fotal BTEX		ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0013	ND	0.0013	ND	0 0012
Percent Moisture	Extracted:												
	Analyzed:	Dec-15-09	17.00	Dec-15-09	17:00	Dec-15-09	17:00	Dec-15-09	17:00	Dec-15-09	17.00	Dec-15-09	17:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		20.9	1.00	20.1	1.00	19.5	1.00	22.7	1.00	24.2	1.00	17.6	1.00
TPH By SW8015 Mod	Extracted:	Dec-15-09	14:00	Dec-15-09	14.00	Dec-15-09	14.00	Dec-15-09	14:00	Dec-15-09	14:00	Dec-15-09	14:00
	Analyzed:	Dec-17-09	07:21	Dec-17-09	07.47	Dec-17-09	08:14	Dec-17-09	)8:41	Dec-17-09	09:08	Dec-17-09	09.35
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.9	19.0	18.7	ND	18.6	ND	19.3	ND	19 7	ND	18.2
C12-C28 Diesel Range Hydrocarbons		ND	18.9	19.2	18.7	19.3	18.6	ND	19.3	55.0	19.7	37.0	18.2
C28-C35 Oil Range Hydrocarbons		ND	18.9	ND	18.7	ND	18.6	ND	193	33.2	19.7	73.6	18.2
Fotal TPH		ND	18.9	38.2	18.7	19.3	186	ND	19.3	88.2	19.7	110.6	18.2

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

Sınce 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miamı - Latın America - Atlanta - Corpus Christi

Brent Barron, II

Odessa Laboratory Manager



# Certificate of Analysis Summary 355585

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4

Project Id: Lime Rock Resources Contact: Curt Stanley Project Location: Eddy County, NM

Date Received in Lab: Mon Dec-14-09 05:20 pm

Report Date: 02-FEB-10

						、		Project Ma	nager:	Brent Barron,	, II		
	Lab Id:	355585-(	007	355585-0	)08	355585-	009	355585-	010	355585-0	011	355585-	012
Analysis Degraphed	Field Id:	D 10 A - F	Floor	D 11 A - F	loor	D 6 - SSW	@ 3.5'	D 5 - NSW	@ 7.5'	D 7 - NSW	@ 8'	D4-WSW	V @ 8'
Anuiysis Requesieu	Depth:		i								I		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	-
	Sampled:	Dec-10-09	11:50	Dec-10-09	12:05	Dec-10-09	12:15	Dec-10-09	12:25	Dec-10-09	12.40	Dec-10-09	12.55
Anions by E300	Extracted:			[									
	Analyzed:	Dec-15-09	14.06	Dec-15-09	14 06	Dec-15-09	14:06	Dec-15-09	14.06	Dec-15-09	14 06	Dec-15-09	14:06
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		205	50.8	191	26.7	39.9	26.8	139	53.8	ND	26.1	186	26.0
BTEX by EPA 8021B	Extracted:	Dec-19-09	12:00	Dec-19-09	12:00	Dec-19-09	12:00	Dec-19-09	12:00	Dec-19-09	12.00	Dec-19-09	12.00
	Analyzed:	Dec-19-09	14.45	Dec-19-09	15.09	Dec-19-09	15:33	Dec-19-09	15.57	Dec-19-09	16:20	Dec-19-09	16.44
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0012
Tolucne		ND	0.0024	ND	0.0025	ND	0.0026	ND	0.0026	ND	0.0025	ND	0 0025
Ethylbenzene		ND	0.0012	ND	0.0013	ND	0 0013	ND	0.0013	ND	0.0012	ND	0 0012
m,p-Xylenes		ND	0.0024	ND	0.0025	ND	0.0026	ND	0.0026	ND	0.0025	ND	0 0025
o-Xylene		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0012
Total Xylenes		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0013	ND	0 0012	ND	0.0012
Total BTEX		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0013	ND	0.0012	ND	0.0012
Percent Moisture	Extracted:												
	Analyzed:	Dec-15-09	17:00	Dec-15-09	17:00	Dec-15-09	17.00	Dec-15-09	17:00	Dec-15-09	17:00	Dec-15-09	17:00
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		17.4	1.00	21.2	1.00	21.6	1.00	21.9	1.00	19.6	1.00	19.2	1.00
TPH By SW8015 Mod	Extracted:	Dec-15-09	14:00	Dec-15-09	14:00	Dec-15-09	14:00	Dec-15-09	14.00	Dec-15-09	14.00	Dec-15-09	14:00
	Analyzed:	Dec-17-09	10:03	Dec-17-09	10:29	Dec-17-09	10:56	Dec-17-09	11.22	Dec-17-09	12 15	Dec-17-09	12.42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.1	20.3	19.0	ND	19.0	ND	19.2	243	18.6	ND	18.5
C12-C28 Diesel Range Hydrocarbons		93.9	18.1	22.1	19.0	ND	19.0	ND	19.2	236	18.6	22.0	18.5
C28-C35 Oil Range Hydrocarbons		ND	18.1	ND	19.0	ND	19.0	ND	19.2	ND	18.6	ND	18.5
Total TPH		93.9	18.1	42.4	19.0	ND	19.0	ND	19.2	479	18.6	22.0	18.5

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



Г

Project Id: Lime Rock Resources

Contact: Curt Stanley

Project Location: Eddy County, NM

#### Certificate of Analysis Summary 355585 Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4

Date Received in Lab: Mon Dec-14-09 05:20 pm

Report Date: 02-FEB-10

Project Manager: Brent Barron, II

	Lab Id:	355585-0	013	355585-	014					
Analysis Paguastad	Field Id:	D 8 - SSW	@ 7'	D 4 - SSW	@ 8'					
Analysis Requested	Depth:									
	Matrix:	SOIL		SOIL	.					
	Sampled:	Dec-10-09	13:05	Dec-10-09	13:15					
Anions by E300	Extracted:			• •••••		 	-		<u> </u>	
	Analyzed:	Dec-15-09	14.06	Dec-15-09	14:06					
	Units/RL:	mg/kg	RL	mg/kg	RL					
Chlonde		6280	206	32.2	25.8					
BTEX by EPA 8021B	Extracted:	Dec-19-09	12:00	Dec-19-09	12.00					
	Analyzed:	Dec-19-09	17.08	Dec-19-09	17:31					
	Units/RL:	mg/kg	RL	mg/kg	RL					
Benzene		ND	0.0012	ND	0 0012					
Toluene		ND	0.0025	ND	0.0025					
Ethylbenzenc		ND	0.0012	ND	0.0012					
m,p-Xylenes		ND	0.0025	ND	0.0025			_		
o-Xylene		ND	0.0012	ND	0.0012					
Total Xylenes		ND	0.0012	ND	0.0012					
Total BTEX		ND	0.0012	ND	0.0012	 				
Percent Moisture	Extracted:									
	Analyzed:	Dec-15-09	17:00	Dec-15-09	17:00					
	Units/RL:	%	RL	%	RL					
Percent Moisture		18.4	1.00	18.7	1.00					
TPH By SW8015 Mod	Extracted:	Dec-15-09	14:00	Dec-15-09	14:00					
	Analyzed:	Dec-17-09	13.08	Dec-17-09	13:35					
	Units/RL:	mg/kg	RL	mg/kg	RL					
C6-C12 Gasoline Range Hydrocarbons		ND	18.3	18,6	18.5					
C12-C28 Diesel Range Hydrocarbons		30.0	18.3	19.2	18.5					
C28-C35 Oil Range Hydrocarbons		ND	18.3	ND	18.5					
Total TPH		30.0	18.3	37.8	18.5					

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

Final Ver. 1.000

### **Flagging Criteria**

- XENCO Laboratories
- 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.

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

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
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) 884-9110



### Project Name: Staley State A # 4

<b>Vork Orders :</b> 355585, Lab Batch #: 786278	<b>Sample:</b> 545849-1-BKS/B	KS Batel	Project IE	: Lime Rock Solid	Resources	
Units: mg/kg	Date Analyzed: 12/17/09 18:13	SU	RROGATE RE	COVERY	STUDY	
BTEX	a by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0324	0.0300	108	80-120	
4-Bromofluorobenzene		0.0308	0 0300	103	80-120	
Lab Batch #: 786278	Sample: 545849-1-BSD / B	SD Batel	h: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 12/17/09 18:36	SU	RROGATE RE	COVERY	STUDY	
BTEX	L by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobenzene		0 0304	0.0300	101	80-120	
Lab Batch #: 786278	Sampte: 545849-1-BLK / B	LK Bate	h: 1 Matrix:	Solid	<u> </u>	
Units: mg/kg	Date Analyzed: 12/17/09 19:42	SU	RROGATE RE	COVERY	STUDY	
BTEX	A by EPA 8021B	Amount Found [A]	True Amount  B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0270	0.0300	90	80-120	
Lab Batch #: 786278	Sample: 355585-001 / SMP	Batel	h:   Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/18/09 10:57	SU	RROGATE RE	COVERY	STUDY	
BTEX	Aby EPA 8021B	Amount Found [A]	True Amount  B	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0276	0.0300	92	80-120	
Lab Batch #: 786278	Sample: 355585-002 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/18/09 11:20	SU	RROGATE RE	COVERY	STUDY	
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0277	0.0300	92	80-120	

\* 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.



### Project Name: Staley State A # 4

Vork Orders : 355585 Lab Batch #: 786278	, Sample: 355585-003 / SMP	Batcl	Project ID	Lime Rock Soil	Resources	,
Units: mg/kg	Date Analyzed: 12/18/09 13:12	SUI	RROGATE RF	COVERY S	STUDY	
ВТЕХ	۲ by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		L]		L	I
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	'
4-Bromorluorobenzene		0.02 /9	0.0300	93	80-120	
Lab Batch #: 786278	Sample: 355585-004 / SMP	Batch	n: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/18/09 13:35	SU	RROGATE RE	COVERY 8	STUDY	
ВТЕХ	( by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0271	0.0300	90	80-120	i
4-Bromofluorobenzene		0 02 76	0.0300	92	80-120	·
Lab Batch #: 786278	Sample: 355585-005 / SMP	Batcl	h: 1 Matrix:	:Soil	<u></u>	
Units: mg/kg	Date Analyzed: 12/18/09 13:57	SUI	RROGATE RF	COVERY S	STUDY	<del>m,</del>
ВТЕХ	( by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0273	0.0300	91	80-120	i
Lab Batch #: 786278	Sample: 355585-006 / SMP	Batel	h: 1 Matrix:	: Soil		1 <u></u>
Units: mg/kg	Date Analyzed: 12/18/09 14:20	SUI	RROGATE RF	COVERY S	STUDY	·
ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0270	0.0300	90	80-120	ſ
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	i
Lab Batch #: 786278	Sample: 355585-006 S / MS	Batel	h: 1 Matrix:	:Soil	L	
Units: mg/kg	Date Analyzed: 12/18/09 17:23	SU	RROGATE RF	COVERY ?	STUDY	
ВТЕХ	۲ by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0309	0.0300	103	80-120	1
4-Bromofluorobenzene		0 0279	0.0300	93	80-120	í

\* 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.



### Project Name: Staley State A # 4

Vork Orders : 355585	5,		Project IF	): Lime Rocl	« Resources	÷				
Lab Batch #: /802/8	Sample: 3000000 50 / M	ISD Batch	1: 1 Matrix: RROGATE RI	Soil	STUDY					
BTE?	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
	Analytes	·]	I!	[D]		l				
1,4-Difluorobenzene		0.0303	0 0300	101	80-120					
4-Bromofluorobenzene		0.0267	0.0300	89	80-120	L				
Lab Batch #: 786459	Sample: 545940-1-BKS / BI	KS Batch	h: 1 Matrix:	:Solid						
Units: mg/kg	Date Analyzed: 12/19/09 12:15	SURROGATE RECOVERY STUDY								
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1.4-Difluorobenzene		0.0328	0.0300	109	80-120					
4-Bromofluorobenzene	+	0.0296	0.0300	99	80-120					
Lah Ratah #. 786459	Sample: 545940-1-BSD / B	SD Bate'	L. 1 Matrix	- Solid	L					
Units: mg/kg	Date Analyzed: 12/19/09 12:47	SU'	RROGATE RF	ECOVERY	STUDY					
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1.4-Difluorobenzene		0.0302	0.0300	101	80-120					
4-Bromofluorobenzene		0.0276	0.0300	92	80-120					
Lab Batch #: 786459	Sample: 545940-1-BLK / B	LK Batc	h: 1 Matrix	:Solid	<u> </u>	<u></u>				
Units: mg/kg	Date Analyzed: 12/19/09 13:58	SU'	RROGATE RF	ECOVERY	STUDY					
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1 4-Difluorobenzene	Anarytes	0.0283	0.0300	94	80-120	<b> </b>				
4-Bromofluorobenzene		0.0279	0.0300	93	80-120	<u> </u>				
Lah Ratch #• 786459	Sample: 355585-007 / SMP	Batc	h. 1 Matrix	· Soil		L				
Units: mg/kg	Date Analyzed: 12/19/09 14:45	SU	RROGATE RI	ECOVERY	STUDY					
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1,4-Difluorobenzene		0.0272	0.0300	91	80-120					
4-Bromofluorobenzene		0.0270	0.0300	90	80-120					

\* 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.



### Project Name: Staley State A # 4

Vork Orders : 355585,	Sample: 355585-008 / SMP	Batal	Project ID	: Lime Rock	Resources	j
Units: mg/kg	Date Analyzed: 12/19/09 15:09	SU	RROGATE RE	COVERY S	STUDY	
BTEX	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	
Lab Batch #: 786459	Sample: 355585-009 / SMP	Batch	h: 1 Matrix:	Soil	L	<u></u>
Units: mg/kg	Date Analyzed: 12/19/09 15:33	SU	RROGATE RE	COVERY	STUDY	<u> </u>
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0270	0.0300	90	80-120	
4-Bromofluorobenzene		0.0264	0.0300	88	80-120	
Lab Batch #: 786459	Sample: 355585-010 / SMP	Batcl	h· 1 Matrix:	Soil	L	
Units: mg/kg	Date Analyzed: 12/19/09 15:57	SU	RROGATE RE	COVERY S	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0 0276	0.0300	92	80-120	
4-Bromofluorobenzene		0.0278	0.0300	93	80-120	
Lab Batch #: 786459	Sample: 355585-011 / SMP	Batcl	h: i Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/19/09 16:20	SU	RROGATE RE	COVERY S	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0274	0.0300	91	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	
Lab Batch #: 786459	Sample: 355585-012 / SMP	Batel	h: 1 Matrix:	Soil	L	
Units: mg/kg	Date Analyzed: 12/19/09 16:44	SU	RROGATE RE	COVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0278	0.0300	93	80-120	
4-Bromofluorobenzene		0.0284	0 0300	95	80-120	

\* 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.



### Project Name: Staley State A # 4

Vork Orders : 355585, Lab Batch #: <sup>786459</sup>	, Sample: 355585-013 / SMP	Batch	Project IE	): Lime Rock :Soil	Resources	•
Units: mg/kg	Date Analyzed: 12/19/09 17:08	SUF	RROGATE RF	<b>COVERY</b> §	STUDY	
BTEX	L by EPA 8021B Analytes	Amount Found {A}	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0.0271	0.0300	90	80-120	
4-Bromofluorobenzene		0.0276	0.0300	92	80-120	
Lab Batch #: 786459	Sample: 355585-014 / SMP	Batch	n: 1 Matrix	:Soil	<u> </u>	
Units: mg/kg	Date Analyzed: 12/19/09 17:31	SUI	RROGATE RF	ECOVERY S	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Dıfluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0268	0.0300	89	80-120	[
Lab Batch #: 786459	Sample: 355585-014 S / MS	Batch	h: 1 Matrix	:Soil	<u> </u>	
Units: mg/kg	Date Analyzed: 12/19/09 23:01	SUI	RROGATE RF	COVERY S	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0302	0.0300	101	80-120	
4-Bromofluorobenzene		0.0283	0.0300	94	80-120	<b></b>
Lab Batch #: 786459	Sample: 355585-014 SD / M	ISD Batch	n: 1 Matrix	:Soil		10 <sup></sup>
Units: mg/kg	Date Analyzed: 12/19/09 23:25	SUI	RROGATE RF	<b>COVERY</b> 8	STUDY	
BTEX	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0311	0 0300	104	80-120	
4-Bromofluorobenzene		0.0290	0.0300	97	80-120	
Lab Batch #: 786163	Sample: 545779-1-BKS / BI	KS Batch	n: 1 Matrix:	:Solid	LL	
Units: mg/kg	Date Analyzed: 12/17/09 06:01	SUF	RROGATE RF	COVERY S	STUDY	
ТРН Е	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1	Anarvies			4 .		1
1-Chlorooctanc		124	99.5	125	70-135	ł

\* 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 / BAll results are based on MDL and validated for QC purposes.



### Project Name: Staley State A # 4

Vork Orders : 355585 Lab Batch #: 786163	, Samole: 545779-1-BSD / BS	SD Batch	Project II	: Lime Rock	k Resources	
Units: mg/kg	Date Analyzed: 12/17/09 06:27	SUI	RROGATE RE	COVERY	STUDY	<u></u>
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		123	99.6	123	70-135	
o-Terphenyl		55.1	49.8	111	70-135	
Lab Batch #: 786163	Sample: 545779-1-BLK / BI	LK Batch	n: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 12/17/09 06:54	SUI	RROGATE RE	COVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags
I-Chlorooctane		111	99.6	111	70-135	
o-Terphenyl		58.7	49.8	118	70-135	·
Lab Batch #: 786163	Sample: 355585-001 / SMP	Batch	n: 1 Matrix	;Soil	· · · · · · · · · · · · · · · · · · ·	
Units: mg/kg	Date Analyzed: 12/17/09 07:21	SUI	RROGATE RE	COVERY S	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		109	99.8	109	70-135	
o-Terphenyl		57 5	49 9	115	70-135	
Lab Batch #: 786163	Sample: 355585-002 / SMP	Batch	n: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/17/09 07:47	SUI	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1-Chlorooctane		105	99.7	105	70-135	
		52.4	49.9	105 0-11	70-133	
Lab Batch #: /80103	Sample: 355585-003 / SMP	Batch	REACTE RE	COVERV	STUDY	
Units: mg/kg	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
I-Chlorooctane		112	99.9	112	70-135	
o-Terphenyl		579	50.0	116	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.



### Project Name: Staley State A # 4

Vork Orders : 355585 Lab Batch #: 786163	, Sample: 355585-004 / SMP	Batcl	Project II h: 1 Matrix	D: Lime Rock :Soil	Resources	
Units: mg/kg	Date Analyzed: 12/17/09 08:41	SU	RROGATE R	ECOVERY	STUDY	<u> </u>
TPH )	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		109	99.7	109	70-135	
o-Terphenyl		56.9	49.9	114	70-135	<u> </u>
Lab Batch #: 786163	Sample: 355585-005 / SMP	Bate	h: 1 Matrix	:Soil	LI	
Units: mg/kg	Date Analyzed: 12/17/09 09:08	SU	RROGATE R	ECOVERY	STUDY	<u></u>
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		106	99.5	107	70-135	·
o-Terphenyl		55.0	49.8	110	70-135	
Lab Batch #: 786163	Sample: 355585-006 / SMP	Batc	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 12/17/09 09:35	SU	RROGATE R	ECOVERY	STUDY	·
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		88.4	99.8	89	70-135	
o-Terphenyl		46.0	49.9	92	70-135	
Lab Batch #: 786163	Sample: 355585-007 / SMP	Batc	h: l Matrix	:Soil		
Units: mg/kg	Date Analyzed: 12/17/09 10:03	SU	<b>RROGATE R</b>	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
L-Chlorooctane	Analytes	107	99.8	107	70-135	· · · · · · · · · · · · · · · · · · ·
o-Terphenyl		55.1	49.9	110	70-135	
Lab Batch #: 786163	Sample: 355585-008 / SMP	Bate	h: 1 Matrix	:Soil	L	
Units: mg/kg	Date Analyzed: 12/17/09 10:29	SU	RROGATE R	ECOVERY	STUDY	<u></u>
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane	Analytes	110	100	[ <b>D</b> ]	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 / BAll results are based on MDL and validated for QC purposes.



### Project Name: Staley State A # 4

Vork Orders : 355585 Lab Batch #: 786163	, Sample: 355585-009 / SMP	Batcl	Project ID h: 1 Matrix:	: Lime Rock Soil	k Resources	Ì
Units: mg/kg	Date Analyzed: 12/17/09 10:56	SU	RROGATE RE	COVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			נט]		
1-Chlorooctane		110	99.5	111	70-135	
o-Terphenyl		57.4	49.8	115	70-135	
Lab Batch #: 786163	Sample: 355585-010 / SMP	Batcl	h: <mark>1 Matrix:</mark>	Soil		
Units: mg/kg	Date Analyzed: 12/17/09 11:22	SU	RROGATE RE	COVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		111	100	111	70-135	
o-Terphenyl		58.1	50.0	116	70-135	
Lab Batch #: 786163	Sample: 355585-011 / SMP	Batcl	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/17/09 12:15	SU	RROGATE RE	COVERY	STUDY	<u></u>
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		112	100	112	70-135	
o-Terphenyl		57.0	50.0	114	70-135	
Lab Batch #: 786163	Sample: 355585-012 / SMP	Batc	h: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 12/17/09 12:42	SU	RROGATE RE	COVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		111	99.7	111	70-135	
o-Terphenyl		58,2	49.9	117	70-135	
Lab Batch #: 786163	Sample: 355585-013 / SMP	Bate	h: 1 Matrix:	Soil	L	
Units: mg/kg	Date Analyzed: 12/17/09 13:08	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		111	99.8	111	70-135	
o-Terphenyl		57.6	49.9	115	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery  $[D] \approx 100 * A / B$ 

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



# Project Name: Staley State A # 4

Vork Orders : 355585,	,		Project I	D: Lime Rocl	< Resources	
Lab Batch #: 786163	Sample: 355585-014 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 12/17/09 13:35	SU	RROGATE R	ECOVERY	STUDY	
ТРН Е	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[U]		
1-Chlorooctane		110	100	110	70-135	
o-Terphenyl		58.0	50.0	116	70-135	
Lab Batch #: 786163	Sample: 355585-001 S / MS	Batc	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 12/17/09 14:01	SU	RROGATE R	ECOVERY	STUDY	
ТРН Н	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctanc		121	99.9	121	70-135	
o-Tcrphenyl		60.3	50.0	121	70-135	
Lab Batch #: 786163	Sample: 355585-001 SD / M	SD Batc	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 12/17/09 14:27	SU	RROGATE R	ECOVERY	STUDY	
ТРН Н	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		119	99.8	119	70-135	
o-Tcrphenyl		60.6	49.9	121	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.





Work Order #: 355585		P	roject ID:	Li	me Rock R	esources		
Lab Batch #: 785868	Sample: 785868-	I-BKS	Matrix	Solid				
Date Analyzed: 12/15/2009	Date Prepared: 12/15/20	009	Analyst	LATCOR	٤			
Reporting Units: mg/kg	<b>Batch #:</b> 1	BLANK	/BLANK SPI	KE REC	RECOVERY STUD			
Anions by E300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags		
Analytes	[A]	[B]	Result [C]	%R [D]	%R			
Chloride	ND	10.0	10.8	108	75-125			

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



### **BS / BSD Recoveries**



#### Project Name: Staley State A # 4

Work Order #: 355585	Date Prepared:12/17/2009Project ID:Lime Rock ResourcesDate Analyzed:12/17/2009															
Lab Batch ID: 786278 Sample: 545849-1-	BKS	Bate	<b>h #:</b> 1	,,			Dute	Matrix: S	Solid							
Units: mg/kg		BLAN	K/BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOV	ERY STUD	DY						
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag					
Benzene	ND	0.1000	0.1090	109	0.1	0.1089	109	0	70-130	35						
Toluene	ND	0.1000	0.1122	112	0.1	0.1122	112	0	70-130	35						
Ethylbenzene	ND	0.1000	0.1081	108	0.1	0.1079	108	0	71-129	35						
m,p-Xylenes	ND	0.2000	0.2399	120	0.2	0.2402	120	0	70-135	35						
o-Xylene	ND	0.1000	0.1192	119	0.1	0.1188	119	0	71-133	35						
						Date Analyzed: 12/19/2009 Matrix: Solid										
Analyst: ASA           Lab Batch ID: 786459         Sample: 545940-1-1	D: BKS	ate Prepar Bate	red: 12/19/200 h #: 1	)9			Date A	nalyzed: ( Matrix: (	12/19/2009 Solid							
Analyst: ASA           Lab Batch ID: 786459         Sample: 545940-1-3           Units: mg/kg	Di BKS	ate Prepar Bate BLAN	red: 12/19/200 h #: 1 K /BLANK \$	)9 SPIKE / I	BLANK S	PIKE DUPI	Date A	nalyzed: 5 Matrix: 5 RECOVI	12/19/2009 Solid E <b>RY STUD</b>	OY						
Analyst: ASA Lab Batch ID: 786459 Sample: 545940-1- Units: mg/kg BTEX by EPA 8021B Analytes	Da BKS Blank Sample Result [A]	ate Prepar Batc BLAN Spike Added [B]	red: 12/19/200 h #: 1 K /BLANK S Blank Spike Result [C]	99 SPIKE / F Blank Spike %R [D]	BLANK S Spike Added [E]	Blank Blank Spike Duplicate Result [F]	Date A LICATE Blk. Spk Dup. %R [G]	nalyzed: 1 Matrix: 2 RECOVI RPD %	12/19/2009 Solid ERY STUD Control Limits %R	Control Limits %RPD	Flag					
Analyst: ASA Lab Batch ID: 786459 Sample: 545940-1- Units: mg/kg BTEX by EPA 8021B Analytes Bcnzene	Da BKS Blank Sample Result [A] ND	ate Prepar Batc BLAN Spike Added [B] 0.1000	red: 12/19/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.1063	99 SPIKE / F Blank Spike %R [D] 106	Spike Added [E] 0.1	Blank Blank Spike Duplicate Result [F] 0.1014	Date A LICATE Blk. Spk Dup. %R [G]	nalyzed: Matrix: S RECOVI RPD %	12/19/2009 Solid ERY STUD Control Limits %R 70-130	Control Limits %RPD 35	Flag					
Analyst: ASA Lab Batch ID: 786459 Sample: 545940-1- Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene	Da BKS Blank Sample Result [A] ND ND	ate Prepar Batc BLAN Spike Added [B] 0.1000 0.1000	red: 12/19/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.1063 0.1084	99 <b>SPIKE / H</b> <b>Blank</b> <b>Spike</b> %R <b>[D]</b> 106 108	Spike Added [E] 0.1 0.1	Blank Spike Duplicate Result [F] 0.1014 0.1041	Date A	nalyzed: 5 Matrix: 5 RECOVI	12/19/2009 Solid ERY STUD Control Limits %R 70-130 70-130	Control Limits %RPD 35 35	Flag					
Analyst: ASA Lab Batch ID: 786459 Sample: 545940-1- Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene Ethylbenzene	Da BKS Blank Sample Result [A] ND ND ND ND	ate Prepar Batc BLAN Spike Added [B] 0.1000 0.1000 0.1000	red: 12/19/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.1063 0.1084 0.1050	99 <b>SPIKE / H</b> <b>Blank</b> <b>Spike</b> %R <b>[D]</b> 106 108 105	<b>Spike</b> Added [E] 0.1 0.1 0.1	Blank Spike Duplicate Result [F] 0.1014 0.1041 0.1022	Date A	nalyzed: Matrix: S RECOVI % 5 4 3	12/19/2009 Solid ERY STUD Limits %R 70-130 70-130 71-129	Control Limits %RPD 35 35 35	Flag					
Analyst: ASA Lab Batch ID: 786459 Sample: 545940-1- Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene Ethylbenzene m,p-Xylenes	Da BKS Blank Sample Result [A] ND ND ND ND ND ND	ate Prepar Batc BLAN Spike Added [B] 0.1000 0.1000 0.1000 0.2000	red: 12/19/200 h #: 1 K /BLANK S Blank Spike Result [C] 0.1063 0.1084 0.1050 0.2366	99 <b>SPIKE / H</b> <b>Blank</b> <b>Spike</b> %R <b>[D]</b> 106 108 105 118	<b>BLANK S</b> Spike Added [E] 0.1 0.1 0.1 0.1 0.2	Blank Spike Duplicate Result [F] 0.1014 0.1022 0.2283	Date A	nalyzed: Matrix: S RECOVI % 5 4 3 4	12/19/2009 Solid ERY STUD Control Limits %R 70-130 70-130 71-129 70-135	Control Limits %RPD 35 35 35 35 35	Flag					

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





Work Order #: 355585 Analyst: BEV Lab Batch ID: 786163 Units: mg/kg	<b>Sample:</b> 545779-1-E	Da BKS	ate Prepar Batcl BLAN	ed: 12/15/200 h #: 1 K /BLANK S	)9 SPIKE / I	BLANK S	PIKE DUPI	Project ID: Lime Rock Resources Date Analyzed: 12/17/2009 Matrix: Solid PIKE DUPLICATE RECOVERY STUDY								
TPH By SW80 Analytes	15 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				
C6-C12 Gasoline Range Hydroc	arbons	ND	995	879	88	996	871	87	1	70-135	35					
C12-C28 Diesel Range Hydrocar	rbons	ND	995	761	76	996	753	76	1	70-135	35					

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100\*(C)/[B] Blank Spike Duplicate Recovery [G] = 100\*(F)/[E] All results are based on MDL and Validated for QC Purposes 1

and the state of the state of the set





Work Order #: 355585

Lab Batch #: 785868

Project ID: Lime Rock Resources

Date Analyzed: 12/15/2009	Date Prepared: 12/15	Date Prepared: 12/15/2009 Analyst: LATCOR									
QC- Sample ID: 355585-001 S	Batch #: 1	Batch #: 1 Matrix: Soil									
Reporting Units: mg/kg	MATR	IX / MA	TRIX SPIKE	RECO	VERY STU	DY					
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Flag						
Analytes	[A]	[ <b>B</b> ]									
Chloride	255	1260	1640	110	75-125						

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

BRL - Below Reporting Limit

.





work Order # : 300080	Project ID: Lime Rock Resources											
Lab Batch ID: 786278	QC- Sample ID:	355585	-006 S	Ba	tch #:	1 Matri	x: Soil					
Date Analyzed: 12/18/2009	Date Prepared:	12/17/2	009	An	alyst:	ASA						
Reporting Units: mg/kg		M	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R (D)	Spike Added [F]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		0.1214	0.1066	00	0.1214	0.0048		10	70.120			
	ND         0.1214         0.1000         88         0.1214         0.0948         78         12         70-130         33           ND         0.1214         0.1080         89         0.1214         0.0938         77         14         70-130         35											
	ND	0.1214	0.1080	89	0.1214	0,0938	77	14	/0-130	35		
Ethylbenzene	ND	0.1214	0.1002	83	0.1214	0.0870	72	14	71-129	35		
m,p-Xylenes	ND	0.2427	0.2181	90	0 2427	0.1543	64	34	70-135	35	X	
o-Xvlene	ND	0.1214	0.1050	86	0.1214	0.0912	75	14	71-133	35		
- Aylene	ND 0.1214 0.1030 80 0.1214 0.0912 75 14 7											
Lab Batch ID: 786459 (	C- Sample ID:	355585-	-014 S	Ba	tch #:	1 Matrix	k: Soil					
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009	C- Sample ID: Date Prepared:	355585- 12/19/20	-014 S 209	Ba An	tch #: alyst:	1 Matrix ASA	k: Soil					
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg	C- Sample ID: Date Prepared:	355585- 12/19/20 M	014 S 009 ATRIX SPIKI	Ba An E / MAT	tch #: alyst: RIX SPI	l Matri ASA KE DUPLICA	x: Soil TE REC	OVERY S	STUDY			
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg BTEX by EPA 8021B Analytes	C- Sample ID: Date Prepared: Parent Sample Result [A]	355585- 12/19/20 M Spike Added [B]	014 S 009 ATRIX SPIKI Spiked Sample Result [C]	Ba An E / MAT Spiked Sample %R [D]	tch #: alyst: RIX SPI Spike Added [E]	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F]	x: Soil TE REC Spiked Dup. %R [G]	OVERY S RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag	
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg BTEX by EPA 8021B Analytes Benzene	C- Sample ID: Date Prepared: Parent Sample Result [A] ND	355585- 12/19/20 M Spike Added [B] 0.1231	014 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0624	Ba An E / MAT Spiked Sample %R [D] 51	tch #: alyst: RIX SPI Spike Added [E] 0.1231	1 Matrix ASA <b>KE DUPLICA</b> Duplicate Spiked Sample Result [F] 0.0800	x: Soil TE REC Spiked Dup. %R [G] 65	OVERY S RPD %	STUDY Control Limits %R 70-130	Control Limits %RPD	Flag X	
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg BTEX by EPA 8021B Analytes Benzenc Toluene	C- Sample ID: Date Prepared: Parent Sample Result [A] ND ND	355585- 12/19/20 M Spike Added [B] 0.1231 0.1231	014 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0624 0.0663	Ba An Spiked Sample %R [D] 51 54	tch #: alyst: RIX SPI Spike Added [E] 0.1231 0.1231	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0800 0.0834	k: Soil TE RECO Spiked Dup. %R [G] 65 68	OVERY 5 RPD % 25 23	Control Limits %R 70-130 70-130	Control Limits %RPD 35 35	Flag X X	
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg BTEX by EPA 8021B Analytes Benzenc Toluene Ethylbenzene	C- Sample ID: Date Prepared: Parent Sample Result [A] ND ND ND	355585- 12/19/20 M Spike Added [B] 0.1231 0.1231 0.1231	014 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0624 0.0663 0.0651	Ba An Spiked Sample %R [D] 51 51 54 53	tch #: alyst: RIX SPI Spike Added [E] 0.1231 0.1231	1 Matrix ASA <b>KE DUPLICA</b> <b>Duplicate</b> <b>Spiked Sample</b> <b>Result</b> [F] 0.0800 0.0834 0.0798	x: Soil <b>TE REC</b> Spiked Dup. %R [G] 65 68 65	<b>PVERY</b> 5 <b>RPD</b> % 25 23 20	<b>STUDY</b> Control Limits %R 70-130 70-130 71-129	Control Limits %RPD 35 35 35	Flag X X X X	
Lab Batch ID: 786459 ( Date Analyzed: 12/19/2009 Reporting Units: mg/kg BTEX by EPA 8021B Analytes Benzene Toluene Ethylbenzene m,p-Xylenes	C- Sample ID: Date Prepared: Parent Sample Result [A] ND ND ND ND	355585- 12/19/20 M Spike Added [B] 0.1231 0.1231 0.1231 0.2461	014 S 009 ATRIX SPIKI Spiked Sample Result [C] 0.0624 0.0663 0.0651 0.1468	Ba An: Spiked Sample %R [D] 51 54 53 60	tch #: alyst: RIX SPI Spike Added [E] 0.1231 0.1231 0.1231 0.2461	1 Matrix ASA KE DUPLICA Duplicate Spiked Sample Result [F] 0.0800 0.0834 0.0798 0.1770	x: Soil TE REC Spiked Dup. %R [G] 65 68 65 72	<b>DVERY</b> <b>RPD</b> % 25 23 20 19	Control Limits %R 70-130 70-130 71-129 70-135	Control Limits %RPD 35 35 35 35 35	Flag X X X X X	

 $\label{eq:matrix_spike} \begin{array}{l} Matrix \ Spike \ Percent \ Recovery \ \ [D] \approx 100^{*}(C\text{-}A)/B \\ Relative \ Percent \ Difference \ \ RPD = 200^{*}|(C\text{-}F)/(C\text{+}F)| \end{array}$ 

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

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

.





Work Order # : 355585						Project D	D: Lime R	ock Reso	urces		
Lab Batch ID: 786163	QC- Sample ID:	355585	-001 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed: 12/17/2009	Date Prepared:	12/15/2	009	An	alyst:	BEV					
Reporting Units: mg/kg		M	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1260	1230	98	1260	1210	96	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1260	994	79	1260	1160	92	15	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100^{+}(C-A)/B$ Relative Percent Difference RPD =  $200^{+}[(C-F)/(C+F)]$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

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



### Sample Duplicate Recovery

#### Project Name: Staley State A # 4

Work Order #: 355585

Lab Batch #: 785868				Project I	D: Lime Ro	ck Resources
Date Analyzed: 12/15/2009	Date Prepar	ed: 12/15/2009	Ana	lyst:LATC	OR	
QC- Sample ID: 355585-001 D	Batch	#: 1	Mat	rix: Soil		
Reporting Units: mg/kg		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			<b>[B]</b>			
Chloride		255	241	6	20	
Lab Batch #: 785882						
Date Analyzed: 12/15/2009	Date Prepar	ed: 12/15/2009	Ana	lyst:WRU		
QC- Sample ID: 355585-001 D	Batch	ı#: l	Mat	rix: Soil		
<b>Reporting Units:</b> %		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			D			
Percent Moisture		20.9	22.4	7	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

Mary . . . . 

Env	rironmental	Lab of T	exa	IS					1: 0	2600 des:	We: sa, T	<i>CI</i> st I- `exa	4A// 20 E 18 79	V <i>OF</i> last 1765	= CU	STOD	Y RI	ECC	ORE	) AN	ID A	NAI Pi F	LYS/ 10ne ax:	IS R 1: 43 43	!EQ   2-56  2-56	UES )3-16 )3-17	57 800 713				
	Project Manager: Cu	t Stanley		$\leq$	PAGE 01 O	F 02											Pn	ojeci	t Na	me:	Stal	ey S	itate	<u>A 1</u>	#4						
1	Company Name Ba	in Environmental Co	nsultin	<del>g, LLC</del>														Pr	ojec	:t#:_	Lim	e Ro	ock (	Res	юuг	'C88	<u>، ا</u>				
1	Company Address: P. C	). Box 381														_	F	Proie	ect L	.oc:	Eddy	r Coi	untv.	NM							
	City/State/Zin: Lor	ington NM 89280														-			D	- - 4.											
																-			rv	-   	Y		<u></u>								
		1) 441-2244	<u> </u>	7		Fax No		(505)	396	5-142	9			<u> </u>		- <sup>R</sup>	eport	t For	mat	:: [	<u>പ</u> ദ	itand	ard		Ц	TRF	₹P			PDE	S
1	Sampler Signature:	JUS -	ent	7-		e-mail	:	cds	tar	ley	<u>@</u> b	aş	in-c	cons	sultir	ng.co	m	<b></b>					Analy	/7e F	or	_		—			٦
(lab use or	nly)		4	0																	TCL	.P.	Ŧ	Ē	Ĩ	Π	Π	Т		E	
ORDER	<u>#: 355585</u>	<u>.</u>		•				25	P	reser	vatio	)ក តំ	/ of	Conti	ainers	Ма	trix			T		.L.	<u>,</u> †	┿					2400	4	
AB # (lab use only)	FIELD C	ЮE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	iteld Filtered	otal #, of Containers 402.91	12	HNO	HCI	H <sub>2</sub> SO4	NaOH	Ne <sub>2</sub> S <sub>2</sub> O	Name Other ( Specify)	<mark>7W - Drinking Water SL - Sludge</mark> 2W - Crnindwater & solisoni	WP-NOn-Potable Soudhy Othe	PH: 418.1 80154 801	FPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Vnions (Cl. SO4, Alkalinity)	Metals As Ao Pa Cd Cr Ph Ho S	/olatites	Semivolatiles	3TE 80218/5030 or BTEX 828	Ş	4.O.R.M	PAH 8270	TDS (EPA METHOD SM 2 CHLORIDES ,E 300	RUSH TAT (Pre-Schedule) 24.	Standard TAT
01	D 7A - F	oor	1		12/10/2009	0910		1	x							s	, <u> </u>	X				<u>, -</u>	┢		x		Ĩ	-		Ť	X
DZ	D 6A - F	oor			12/10/2009	0920		1	x							S	oil	X					T		X	$\Box$			X	<u>i</u>	X
03	D 4A - F	oor			12/10/2009	0940		1	x							So	pil	X					L		X	$\Box$		$\square$	X	Ĺ	X
04	D 8A - F	100			12/10/2009	1000		1	x						_	Se	oll 🛛	X							x	Ш		$\downarrow$	<u> </u>	1	×
05	D 5A - F	<u>00</u> r		ļ	12/10/2009	1115		1	X					_		S	oli -	X					┶	$\square$	X		_	$\downarrow$	<u> </u>	4	⊥×
00	D 9A - F	oor			12/10/2009	1130		1	×				$\neg$	_		Sc	)il	X	_			+	+	$\square$	×		$\dashv$		<b>⊥×</b>	4	⊥×
01	D 10A - F	loor	<u> </u>		12/10/2009	1150		1	×							<u>s</u>	<b>bil</b>	X	$\neg$	_	+	╇	<u> </u>	$\square$	×	+	$\dashv$	-+	<b></b> *	₽	<b>⊢×</b>
09	D 11A - F				12/10/2009	1205	┡	1	X					+	_	Sc		X		-	+		╋┯╵	┢─┦	X	-+	-+	+-	<u> </u>	╀	<del> X</del>
	D 6 - SSW	@ 3.5'			12/10/2009	1215		1	<del> </del>			_	$\dashv$	-+-	+-			<del>X</del>		+	╉	+	╋┯	$\vdash$	H	-+	+	+	┼	╀	÷
Special in	structions: Bill to Basin Cons	utting	1	<u>I</u>	12/10/2009	1223			1~	<u></u>	L			<b>I</b>		_ 50				Labe Selfi	orato pia C s Fre	ry Co	Jomm Jomm Heac	ents Inter Ispa	 ;: ;: ;: ;: ;: ;: ;: ;: ;: ;: ;: ;: ;:	жęį		ـــــ کی: D	-14 1903 12	<u>і</u> Дії N	1 <b>0</b> 83
Relinquish	He by: Hanly	Date 2143 Date	77	me ZJ me	Received by: Received by:										D.	ate ate		Time	, ,	Cust Cust Sam t	ple H y Ca	eals eals and mple uner	on co on co Deliv r/Clie	(a) ontail bolar ored nt Re UP:	ner(s (s) ap. ? S	DHL	్రి శిక్షి సంగల సంగం	5 C FedE		N N N N N Sne 5	is
Relinquishe	ed by:	Date	Ťi	me	Received by ELC	n: ~ Tito	Ŀ	,							D  Z-1-	ato  -09	r	Time 720	>	Tem	perat	ure L	Jpon '	Reco	eipt:			2	6	°C	

ι.

A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY AND ADDRESS OF A REAL PROPERTY ADDRESS OF A REAL PR	

Env	vironment	al Lab of 1	Геха	IS					12 Od	600 less	Wes a, Te	CH t F2 exas	IAIN 20 Ea 8 797	OF est 765	- CU	\$то	DY R	REC	ORI	) AI	VD .	ANA F	ALY: Phon Fax:	S/S 1e:4 :4	REC 32-5 32-5	Q <i>UE</i> 63-1 63-1	ST  800  713	) 			
	Project Manager:	Curt Stanley		<u> </u>	PAGE 02 OF	= 02											P	rojec	:t Na	me:	Sta	lley	Sta	te A	#4						
	Company Name	Basin Environmental	Consultin	g. LLC								<b></b>						P	rojec	:t#:	Lin	ne F	lock	( Re	sou	rces	8				
	Company Address:	P. O. Box 381					_,									_		Proj	ect i	.00:	Edg	ty Ci	ount	y, NI	л						
	City/State/Zip:	Lovington, NM 88260			······										·	-			P	<b>0 #</b> :											
	Telephone No:	(505) 441-2244				Fax No	:	(505)	396-	142	9					_	Repo	rt Fo	rmal	ដ	X	Star	dard			] TR	RP			NPD	ES
	Sampler Signature:	J.	inly	_		e-mail		cds	tani	eγ	@b:	asi	<u>n-c</u> (	ons	sulti	 1 <u>g.c</u>	om														
(lab use	only}		8							_								F			T	LP:	Ana	lyze	For.	Т	Ι			Ŧ	]
ORDEF	R#: 3555	585						r L	Pr	eser	vation	1 8 1	of C	onta	iners		atrix	Ē			TOT	TAL:	-	+	×				40C)	1	
All 2	FIEI D7 - D4 - D8 - D4 -	.D CODE NSW @ 8' NSW @ 8' SSW @ 7' SSW @ 8'	Beginning Depth	Ending Depth	Padums 980 12/10/2009 12/10/2009 12/10/2009 12/10/2009	لی سی ا 1240 1255 1305 1315	Fletd Fittered		X X Ice	HNO	Ŷ	H <sub>5</sub> SO <sub>4</sub>	NaOH	CD-K2-EM	None Other (Specify)	DW - Drinking water St - Studge	00 00 00 0W - Croundwater s-solisof	X X X X TPH: 418.1 (8015M) 8015	TPH: TX 1005 TX 1006	Cattons (Ca, Mg, Na, K)	Anions (Cl, SO4, Alketinity)	SAR/ESP/CEC	Metals: As Ag Ba Cd Cr Pb Hg S	V ONDITION	X X X BITE( 0021819030 or BTEX 8286	RCI	N.O.R.M.	PAH 8270	TDS (EPA METHOD SM 2)		X X X Standard TAT
												-+		+	-+	F		<b>†</b> -					+	+	T					╇	╪
						<u></u>									+			╞										┝╼╉	+	+	+
Special I Relinquis	Instructions: Bill to Basin	Consulting Date		ime 70	Received by:				I			1			 	ate		Tim	e	Lab Sen VO Lab	orat ple Cs Fi ets v tody	Con Con ree c n co sea	Com Since of Hei nisin s on	men s (ra adsp c(s) cont	ts: ace? ainer	⊥	2044 2144 2144	 ( ( (			
Relinquis	hed by:	UCJI YIL	7 ' 4	ime	Received by							<u></u>			D	ate		Tim	ė	San	iple by S by C	Han	d Del lerCl	ivere lvere lient l U	egga) xd Rep.' PS	े " ? DH	्राज L	Fed		ASE N N	∑r∾√ Star
Relinquis	hed by:	Date	Т	ine	Received by ELC	ne H-		5	_						0  2.1	ate 4-0	<b>η</b>	Tim [72]	e 0	Tem	pera	ature	Upo	n Re	ceipt	:	6	2.5	•	•	2

#### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client	Plains / Basin	
Date/ Time:	12-14-09 @ 1720	
Lab ID # :	355585	
Initials:	JMF	

#### Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	Yes	No	2.6 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container? /label	s (Yes)	No	Not Present	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	÷
#13 Samples properly preserved?	(Yes>	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(res )	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	(No>	Not Applicable	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	
Variance Docu	umentation			
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 356484

for

### **Basin Environmental Consulting, LLC**

**Project Manager: Curt Stanley** 

Staley State A # 4

#### **Lime Rock Resources**

#### 23-DEC-09



#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX) Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)



23-DEC-09

Project Manager: **Curt Stanley Basin Environmental Consulting, LLC** P.O. Box 381 Lovington, NM 88260

Reference: XENCO Report No: **356484 Staley State A # 4** Project Address: Eddy County, NM

#### **Curt Stanley:**

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 356484. 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. 356484 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. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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





S March

Sample Cross Reference 356484

#### Basin Environmental Consulting, LLC, Lovington, NM

Staley State A # 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
D 8A - SSW @ 7'	S	Dec-21-09 10:05		356484-001

#### CASE NARRATIVE



Client Name: Basin Environmental Consulting, LLC Project Name: Staley State A # 4

Project ID:Lime Rock ResourcesWork Order Number:356484

Report Date: 23-DEC-09 Date Received: 12/21/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-786838 Percent Moisture None

Batch: LBA-786847 Anions by E300 None



Project Id: Lime Rock Resources

Contact: Curt Stanley

Project Location: Eddy County, NM

#### Certificate of Analysis Summary 356484 Basin Environmental Consulting, LLC, Lovington, NM

Project Name: Staley State A # 4

Date Received in Lab: Mon Dec-21-09 05:13 pm

Report Date: 23-DEC-09

Project Manager: Brent Barron, II

	Lab Id:	356484-001			
Analysis Descented	Field Id:	D 8A - SSW @ 7'			
Anulysis Kequesteu	Depth:				
	Matrix:	SOIL			
	Sampled:	Dec-21-09 10:05			
Anions by E300	Extracted:				
	Analyzed:	Dec-22-09 11.56			
	Units/RL:	mg/kg RL			
Chloride		80.4 25.9			
Percent Moisture	Extracted:				
	Analyzed:	Dec-22-09 17:00			
	Units/RL:	% RL			
Percent Moisture		18.9 1.00			

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 bost 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

Final Ver. 1.000

#### XENCO Laboratories

### **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.

12600 West I-20 East, Odessa, TX 79765

842 Cantwell Lane, Corpus Christi, TX 78408

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - San Antonio - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America Phone Fax (281) 240-4200 (281) 240-4280 4143 Greenbriar Dr, Stafford, Tx 77477 (214) 902 0300 (214) 351-9139 9701 Harry Hines Blvd, Dallas, TX 75220 (210) 509-3334 (210) 509-3335 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 (813) 620-2000 (813) 620-2033 (305) 823-8500 (305) 823-8555 5757 NW 158th St, Miami Lakes, FL 33014

(432) 563-1713

(361) 884-9116

(432) 563-1800

(361) 884-0371





Work Order #: 356484		P	roject ID:	Li	ne Rock R	esources		
Lab Batch #: 786847	Sample: 786847-	I-BKS	Matrix	Solid				
Date Analyzed: 12/22/2009	Date Prepared: 12/22/20	009	Analyst: LATCOR					
Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY S	STUDY		
Anions by E300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags		
Analytes	[A]	[ <b>B</b> ]	Result [C]	%R [D]	%R			
Chloride	ND	10 0	10.6	106	75-125			

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



### Form 3 - MS Recoveries



Project Name: Staley State A # 4

Work Order #: 356484 Lab Batch #: 786847 Date A QC-Sa Report

Project ID: Lime Rock Resources

Date Analyzed: 12/22/2009	Date Prepared: 12/22	/2009	Analyst: LATCOR						
QC- Sample ID: 356484-001 S	Batch #: 1		Γ	Matrix: S	oil				
Reporting Units: mg/kg	MATR	ERY STUDY							
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag			
Analytes	[A]	[B]							
Chloride	80.4	740	813	99	75-125				

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

BRL - Below Reporting Limit


## Sample Duplicate Recovery

## Project Name: Staley State A # 4

Work Order #: 356484

Lab Batch #: 786847			Project	ID: Lime Ro	ck Resources
Date Analyzed: 12/22/2009	Date Prepared: 12/22/2	009 <b>An</b> a	alyst:LAT(	COR	
QC- Sample ID: 356484-001 D	Batch #: 1	Ma	trix: Soil		
Reporting Units: mg/kg	SAMPL	E / SAMPLE	DUPLIC	CATE REC	OVERY
Anions by E300	Parent Sam Result [A]	ple Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		<b>(B)</b>			
Chloride	80.4	84.2	5	20	
Lab Batch #: 786838					
Date Analyzed: 12/22/2009	Date Prepared: 12/22/2	009 An:	alyst:JLG		
QC- Sample ID: 356484-001 D	Batch #: 1	Ma	trix: Soil		
Reporting Units: %	SAMPL	E / SAMPLE	DUPLIC	CATE REC	OVERY
Percent Moisture Analyte	Parent Sam Result [A]	ple Sample Duplicate Result {B}	RPD	Control Limits %RPD	Flag
Percent Moisture	18.9	16.7	13	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

-

En	vironment	al Lab of	Texa	IS								СНА	AIN C	of C	UST	ODY	RE	coi	RD /	AND	AN	AL	YSIS	S RE	QUI	EST	•			
									12 00	600 V Iessa	Vesi I, Te	1-20 xas	) Eas 7976	it i5								Pho Fa	x:	432- 432-	563- 563-	180 171	0 3			
	Project Manager:	Curt Stanley														۶	Proj	ect l	Nam	a: <u>S</u>	tale	y St	ate	<u>A #4</u>	,					<del>_</del>
Company Name Basin Environmental Consultin				g, LLC														Рго	ject i	¥: <u>L</u> i	ime	Ro	ck R	680	urce	8				
	Company Address:	y Address: P. O. Box 381															Pr	ojec	t Lo	:: <u>E</u>	idy (	Cour	nty, I	M						
	City/State/Zip:	Lovington, NM 88260		<u> </u>															PO	*:										
	Telephone No:	(575) 441-2244				Fax No	•	(575)	396	-1429						Repo	ort F	Form	at:	X	Sta	Inda	rd		ד	rrp	I		NPD	ES
	Sampler Signature:	(inti)	Sher	<u>I</u>	<del>م</del> ــــــ	e-mail		<u>cds</u>	tan	ley(C	<u>D</u> ba	isin	-CO	nsu	lting	.com	٢					A	nalvz	ne For	:					٦
(lab use (	only)	0.1			l												ļ				TCLP.		Ĺ		T	Τ	T			£
ORDER	<u>a#: 3564</u>	84				<u> </u>		6.3	Pr	eserva	ation	81	of Col	ntain	ers	Matrix		8	T	T		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	$\left  \right $	-+					ľ	* *
AB # (lab use only)	FiE		Jeginning Depth	inding Depth	Date Sampled	Time Sampled	iełd Filtered	otal #. of Containers 4029		HNO3	HCI	H <sub>SO4</sub>	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other ( Specify) M Drinking Water SI - Slinds	JW = Groundwater 5 - SolvSolt	W-HURPPUISTE SDECTY UTIL	PH: 418.1 8015M 801 PH: 428.1 8015M 801	THE IX 1000 IX 1000	vniorts (CI, SO4. Alkelinity)	SAR / ESP / CEC	Aetaks As Ag Ba Cd Cr Pb Hg (	/cdathes	iemtwotatiles		V.O.R.M.	PAH 8279	Chlorides E 300	MICH TAT	CUSH IAI (Presentate) 24, Standard TAI
o	D 8A-	- SSW @ 7'			12/21/2009	1005	ľ	1	T			T		x		Soil		1		Ť			Í				Ē	x	<b>_</b> ,	x
																											4			
									-		+		+		-+-	·	╉	+	_	4-	$\vdash$		$\square$	+		+	┿	┝┼	╉	+-
				<u> </u>					┢	$\left  \right $	╉	╉	+		╉		╉	+	╈	+			┝╌┥	╉	+-	╈	╋	$\vdash$	╉	+-
													T				1	T									T	$\Box$	1	T
Special I	nstructions: Bill to Basin	Environmental Consu	ulting	<u> </u>											_1		1			ibon impli	ston Ca Free	Co number	mme leads	ints: ntact	2 2 7	<u>بر روم</u> بر		L S	N	 i. ; ; ; ;
Relinquis	hed by Linle	1 Joanse	la n	ime 13 ime	Received by: Received by:										Date Date		T	me		ibels istor istor istor istor impl by	on c iy se iy se Ha Sem	octa als o als o od D oleo	inen in co in co lelive Clien	e) ntaine oler(s red t Rep	er(s) } .?	110	<b>ม</b> ็นไ	Ş,	z z C z z	14.87 D
Relinquis	hed by:	Date		me	Received by ELC	nt: ne fi-	le	4						12.	Date -21-0	9	17	ime 13	Te	by Impe	Cour	ier? re Up	oon F	UPS Receij	Di ot:	HL	Fed	ובא ו <u>3.ג</u>	_one *( 	Star C

and the second 
A second of the state of the second

Final Ver. 1 000



## Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Basin Env.	
Date/ Time:	12-21-09 @ 1713	
Lab ID # :	356484	
Initials:	JMF	

Sample Receipt Checklist

	·			<u>Cl</u>	lient Initials
#1	Temperature of container/ cooler?	Yes	No	3.6 °C	
#2	Shipping container in good condition?	(es)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container? //ale)	Yes	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	765)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	Xes	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	res	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

.

Appendix B Photographs



Staley State A #4 - excavation in drainage channel, looking west



Staley State A #4 - excavation in drainage channel, looking east



Staley State A #4 – soil remediation complete and contoured, looking west



Staley State A #4 – soil remediation complete and contoured, looking west

Appendix C Release Notification and Corrective Action (Form C-141)

District IState1625 N. French Dr., Hobbs, NM 88240Energy MineDistrict II1301 W. Grand Avenue, Artesia, NM 88210District IIIOil CoDistrict III011 Co1000 Rto Brazos Road, Aztec, NM 874101220 SDistrict IV1220 S1220 S. St. Francis Dr., Santa Fe, NM 87505Santa	e of N rals a nserv outh ta Fe	New Mex and Natura vation Div St. France , NM 875	ico <b>F</b> 1 Resources vision ús Dr. <b>NM</b> 05	RECEIV NOV 1320 10CD ART	ED Submit 2 Copies to appropriate District Office in accordance With Rule 116 on back side of form					
Release Notification and Corrective Action										
<b>OPERATOR</b> Initial Report Final Report										
Name of Company Lime Rock Resources	(	Contact N	lichael Barrett	24 505 252	2644					
Address 1111 Bagby Street Suite 4600 House Trans, T. 1701	1 <b>2</b>	Facility Tyr	No. 575-623-84	24 505-353	-2644					
Surface Oumer Pulitzer Providenting Minaral Oumer State										
Unit Letter Section Township Range Feet from the M	North/S	South Line	Feet from the	East/West Line	e County					
N 30 178 294 0007 1	<b>C1</b>		1080'	E11/1	Eddy					
	1022	Q I amaidad	1900		Cddy					
Latitude <u>32.8004891</u>	1832	8 Longitud	le <u>104.21/1/265</u>	94 /96						
NATU	RE	OF REL	EASE	Volum	Pecovered 0					
Type of Release - Crude On, Frondeed water		20 Bbls Oi	1, 75 Bbls Water	Volum						
Source of Release Poly Line Bursted		Date and F	Iour of Occurrenc	e Date an	d Hour of Discovery					
Was Immediate Notice Given?		If YES, To	Whom?							
	ired	Sherry Bor	iham	1.0						
By Whom? Michael Barrett Was a Watercourse Reached?		Date and F	lour 11/9/09 (a) plume Impacting t	10am he Watercourse.						
Yes 🗌 No		50 Bbls of	total fluid	,						
If a Watercourse was Impacted, Describe Fully.* Runoff from leak into low lying area.										
Frac sand plugged up 3" poly line causing it to burst. Shut in wells, isolated line, cleared plug & repaired.										
Describe Area Affected and Cleanup Action Taken.* Packed caliche & rock. Contaminated soil will be removed and replaced.										
I hereby certify that the information given above is true and complet regulations all operators are required to report and/or file certain rele public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and rem or the environment. In addition, NMOCD acceptance of a C-141 rep federal, state, or local laws and/or regulations.	e to the ease no by the nediate	to best of my otifications and NMOCD m e contaminations not reliev	knowledge and u nd perform correc arked as "Final R ion that pose a three the operator of n	nderstand that p tive actions for r eport" does not r eat to ground wa responsibility for	ursuant to NMOCD rules and elcases which may endanger clicve the operator of liability ter, surface water, human health compliance with any other					
Mall			<u>UIL CON</u>	SERVATIO	<u>I DIVISION</u>					
Signature: - VVV										
Printed Name: Michael Barrett										
Title: Production Supervisor	A	Approval Dat	1e 11-13-09	Expiratio	n Date: /-/3-/D					
E-mail Address: <u>mbarrett@limerockresources.com</u>	C	Conditions of	f Approval:		Attached					
Date: 11/10/09 Phone: 505-353-2644	×	SEE LA	tACHEN St		280-3/14					
* Attach Additional Sheets If Necessary <b>NSEB0931154361</b> (SEB0931154641 SEB09311546115		——————————————————————————————————————								