Administrative/Environmental Order



### **AE Order Number Banner**

**Report Description** 

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pJXK1604731189

1RP - 2727

### SOUTHERN UNION GAS SERVICES LTD

2/22/2016

District II 1301 W. Grand Avenue, Artesia, NM 88210	neral	s and Natura	al Resources	AUC	0.9.20	Re	vised O	tober 10,
District III 1000 Rio Brazos Road, Azteo, NM 87410 Oil C	onse	rvation Di	vision	AUG	0 3 20	Bubinit 2 C	Opies f	o approp
District IV 1220	Sout	h St. Franc	cis Dr.			wi	th Rule	= 116 on t
1220 S. St. Francis Dr., Santa Fe, NM 87505 Sai	nta I	e, NM 87	505	RE	CEIVED	)		side of i
Release Notific	atio	n and C	orrective A	ction	t			
		OPERA	TOR		Initi	al Report	П	Final Re
Name of Company Southern Union Gas Services		Contact Ro	se Slade	1	Consult.			
Address P.O. Box 1226 Jal, New Mexico 8825	52	Telephone	No. 432-940-5	147				
Facility Name Trunk "M" Historical		Facility Ty	be Natural Gas	Pipelin	e			
Surface Owner State of New Mexico Mineral Or	wner				API No	30-025-28	822	
LOCA	TIO	NOFRE	LEASE					
Unit Letter Section Township Range Feet from the	North	/South Line	Feet from the	East/W	Vest Line	County.		
E 30 22S 37E						Lea		
	_		L	1				
Lafitude 32 degrees 21' 5	57.49	" Longitud	e 103 degrees	12' 36.6	512"			
NATU	URE	OF REL	EASE			1		
Type of Release Natural Gas and Crude Oil		Volume of	Release Unk	nown	Volume F	Recovered N	lone	
Source of Release 20-men Steer Pipenne (Low Pressure)		Unknown	iour of Occurrent	ie	June 24, 2	2011	overy	
Was Immediate Notice Given?		If YES, To	Whom?					
Yes No X Not Req	uired	- Carlo					4	1
By Whom?		Date and H	our					
NYP THE N I TO		Date and I	ioui					
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\* Attach Additional Sheets If Necessary,

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

### HOBBS OCD

DEC 1 3 Zori Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

### **Release Notification and Corrective Action**

		OPERATOR		Initial Report	$\boxtimes$	Final Report
Name of Company	Southern Union Gas Services	Contact Rose Slade				
Address	P.O. Box 1226 Jal, New Mexico 88252	Telephone No. 432-940-5147				
Facility Name	Trunk "M" Historical	Facility Type Natural Gas Pipelin	e	-		1
	V.S. LANDLAND CONTRACTOR OF A C		1.1	Y		

Surface Owner State of New Mexico	Mineral Owner	API No 30-025-28822
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### LOCATION OF RELEASE

Unit Letter E	Section 30	Township 22S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
				-				

Latitude 32 degrees 21' 57.49" Longitude 103 degrees 12' 36.612"

### NATURE OF RELEASE

Type of Release Natural Gas and Crude Oil	Volume of Release Unknown	Volume Recovered None
Source of Release 20-Inch Steel Pipeline (Low Pressure)	Date and Hour of Occurrence Unknown	Date and Hour of Discovery June 24, 2011
Was Immediate Notice Given?	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	itercourse.
Describe Cause of Problem and Remedial Action Taken.*		
Failure of a segment of the twenty (20) inch low pressure steel pipeline re historical release was reported to Southern Union by an agent of the Less	esulted in the release of an unknown vee.	olume of a natural gas and crude oil. The
Describe Area Affected and Cleanup Action Taken.* An area along the Southern Union ROW measuring approximately 1,000 was blended to NMOCD regulatory standards and used as excavation bac <i>Closure Request</i> " dated October 2011, for remediation details.	square feet was affected by the releas kfill with NMOCD approval. Please r	e. The release was excavated; impacted soil reference "Remediation Summary and Site
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release in public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report of federal, state, or local laws and/or regulations.	the best of my knowledge and understanotifications and perform corrective active NMOCD marked as "Final Report" te contamination that pose a threat to generate the operator of respon	and that pursuant to NMOCD rules and tions for releases which may endanger does not relieve the operator of liability ground water, surface water, human health sibility for compliance with any other
Signature: Roe Pade	OIL CONSERT	VATION DIVISION
Printed Name: Rose Slade	Approved by District Supervisor.	Market Sport
Title: EHS Compliance Specialist	Approval Date: 12/14/11	Expiration Date:
E-mail Address: rose.slade@sug.com	Conditions of Approval:	Attached
Date: December 12, 2011 Phone: 432-940-5147		1RP-08-11-2727

\* Attach Additional Sheets If Necessary,

### Basin Environmental Service Technologies, LLC

3100 Plains Highway P. O. Box 301 Lovington, New Mexico 88260 bjarguijo@basinenv.com Office: (575) 396-2378 Fax: (575) 396-1429

Effective Solutions

### **REMEDIATION SUMMARY &**

### SITE CLOSURE REQUEST

### SOUTHERN UNION GAS SERVICES TRUNK "M" HISTORICAL Lea County, New Mexico Unit Letter "E" (SW/NW), Section 30, Township 22 South, Range 37 East Latitude 32° 21' 57.49' North, Longitude 103° 12' 36.612' West NMOCD Reference #1RP-08-11-2727

Prepared For:

HOBBS OCD

Southern Union Gas Services 801 S. Loop 464 Monahans, TX 79756

DEC 1 3 2011

RECEIVED

Prepared By:

Basin Environmental Service Technologies, LLC 3100 Plains Highway Lovington, New Mexico 88260

October 2011

Ben J. Arguijo Project Manager

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### **1.0 INTRODUCTION & BACKGROUND INFORMATION**

Basin Environmental Service Technologies, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this *Remediation Summary & Site Closure Request* for the release site known as Trunk "M" Historical. The legal description of the release site is Unit Letter "E" (SW/NW), Section 30, Township 22 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 21' 57.49" North latitude and 103° 12' 36.612" West longitude. The property affected by the release is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO). A "Site Location Map" is provided as Figure 1.

On June 24, 2011, Southern Union was notified of a historical release on the Trunk "M" pipeline by the lessee of the affected property. Upon notification, the release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office. The "Release Notification and Corrective Action" (Form C-141) indicated failure of a segment of the twenty inch (20") low-pressure Trunk "M" steel pipeline resulted in the release of an unknown quantity of natural gas and crude oil. The release affected an area of land along the Southern Union right-of-way measuring approximately one thousand square feet (1,000 ft<sup>2</sup>).

The Form C-141 is provided as Appendix C. General photographs of the release site are provided as Appendix A.

### 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 30, Township 22 South, Range 37 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred and fifteen feet (115') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Trunk "M" Historical release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene 10 mg/Kg (ppm)
- BTEX 50 mg/Kg (ppm)
- TPH 5,000 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

### 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On July 26, 2011, excavation of impacted soil commenced at the site. Hach Quantab Chloride Low Range (30-600 mg/Kg) Titrators were used to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. As a safety and environmental precaution, Southern Union requested and received NMOCD approval to leave in-place soil beneath the pipeline, to support the pipeline during remediation activities.

Prior to beginning the excavation activities, two (2) soil samples (Baseline #1 and Baseline #2) were collected to determine the baseline concentrations of Total Petroleum Hydrocarbons (TPH) and chlorides at the release site. The soil samples were submitted to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of TPH and chloride concentrations using EPA Methods SW 846-8015M and 300.1, respectively. Laboratory analytical results indicated TPH concentrations ranged from 5,240 mg/Kg in soil sample Baseline #2 to 15,500 mg/Kg in soil sample Baseline #1. Chloride concentrations ranged from 12.0 mg/Kg in soil sample Baseline #2 to 15.0 mg/Kg in soil sample Baseline #1. Soil sample Baseline #2 was collected at the release point.

Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chlorides in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix B.

From July 26 through July 28, 2011, approximately three hundred and fifty (350) cubic yards (cy) of impacted soil was excavated and stockpiled on-site, pending final disposition.

On July 28, 2011, twenty (20) soil samples (Samples #1 through #20) were collected from the floor and sidewalls of the excavation. Samples were collected at fifty foot (50') horizontal intervals, beginning with Sample #1 in the northwest wall of the excavation and ending with Sample #20 in the southern wall. The soil samples were submitted to the laboratory for analysis of TPH and chloride concentrations. Soil samples Sample #7 through Sample #11 were also analyzed for benzene, ethylbenze, toluene, and xylene (BTEX) concentrations using EPA Method SW 846-8021b.

Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit (MDL) in all soil samples submitted, with the exceptions of soil samples Sample #8 (17.3 mg/Kg) and Sample #11 (24.9 mg/Kg). Chloride concentrations ranged 6.88 mg/Kg in soil sample Sample #12 to 210 mg/Kg in soil sample Sample #7. BTEX concentrations were less than the appropriate laboratory MDL in all soil samples submitted. Review of laboratory analytical results indicated TPH, Benzene, BTEX, and chloride concentrations were less than NMOCD regulatory standards for all submitted soil samples.

From July 29 through August 1, 2011, the stockpiled material was blended on-site with nonimpacted soil. On August 1, 2011, two (2) five-point composite soil samples (Stockpile #1 and Stockpile #2) were collected from the stockpiled material and submitted to the laboratory for analysis of TPH, chloride, and BTEX concentrations. Laboratory analytical results indicated TPH concentrations ranged from 1,450 mg/Kg in soil sample Stockpile #1 to 2,520 mg/Kg in soil sample Stockpile #2. Chloride concentrations ranged from 24.0 mg/Kg in soil sample Stockpile #2 to 31.8 mg/Kg in soil sample Stockpile #1. Benzene concentrations were less than the laboratory MDL for all soil samples submitted. BTEX concentrations ranged from 0.0314 mg/Kg in soil sample Stockpile #1 to 0.0332 mg/Kg in soil sample Stockpile #2. Soil represented by soil samples Stockpile #1 and Stockpile #2 was deemed suitable for use as backfill material.

On August 10, 2011, a Southern Union representative met with an NMOCD representative (Hobbs District Office) to request "Permission to Backfill" the excavation using the blended soil. The request was approved by the NMOCD representative.

Based on laboratory analytical results, and with NMOCD approval, from August 11 through August 12, 2011, the excavation was backfilled in eighteen-inch (18") lifts, compacted, and contoured to fit the surrounding topography. Prior to backfilling, final dimensions of the excavation were approximately one hundred and eight-five feet (185') in length, approximately four feet (4') to twenty-three feet (23') in width, and ranging in depth from approximately three feet (3') to nine and one-half feet (9.5') bgs.

The release site will be seeded with an NMSLO-approved seed mixture during the 2012 and 2013 calendar years.

### 4.0 QA/QC PROCEDURES

### 4.1 Soil Sampling

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

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method SW 846-8021b
- TPH concentrations in accordance with modified EPA Method SW 846-8015M
- Chloride concentrations in accordance with EPA Method 300.1

### 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-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

### 5.0 SITE CLOSURE REQUEST

Soil samples collected from the floor and sidewalls of the Trunk "M" Historical excavation were analyzed by an NMOCD-approved laboratory, and concentrations of Benzene, BTEX, TPH, and chlorides were less than the remediation action levels established for the site. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office and the NMSLO a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Trunk "M" Historical release site.

### 6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin 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 Southern Union Gas Services. 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 Service Technologies, LLC, and/or Southern Union Gas Services.

### 7.0 DISTRIBUTION:

- Copy 1: Geoffrey Leking New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, NM 88240 GeoffreyR.Leking@state.nm.us
- Copy 2: Myra Harrison New Mexico State Land Office 2827 N. Dal Paso, Ste. 117 Hobbs, NM 88240 mharrison@slo.state.nm.us
- Copy 3: Rose Slade and Curt Stanley Southern Union Gas Services 801 S. Loop 464 Monahans, Texas 79756 rose.slade@sug.com
- Copy 4: Basin Environmental Service Technologies, LLC P.O. Box 301 Lovington, New Mexico 88260





TABLE 1

# CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

### SOUTHERN UNION GAS SERVICES TRUNK "M" HISTORICAL LEA COUNTY, NEW MEXICO NMOCD REFERENCE #: 1RP-08-11-2727

	C ANDI C				METHO	D: EPA SW 8	46-8021B, 50	30		MET	THOD: 8015	N	TOTAL	E 300
	SAMPLE	SAMPLE	SOIL			ETHYL-	M.P	ò	TOTAL	GRO	DKO	OKO	TPH	
SAMPLE LOCATION	DEPTH	DATE	STATUS	BENZENE	TOLUENE	BENZENE	XYLENES	XYLENE	BTEX	C6-C12	C <sub>12</sub> -C <sub>28</sub>	C <sub>28</sub> -C <sub>35</sub>	C6-C35	CHLORIDE
the state of the state	loogl		-	(Buißill)	(Buißilli)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Baseline #1	.9	7/26/2011	In-Situ							1,690	13,800	<76.9	15,500	15.0
Baseline #2	6"	7/26/2011	In-Situ					- 11		934	4,220	88.5	5,240	12.0
		A STATE OF A STATE		The state of the second state				「「「なななない」」						「「「「「「「」」」」」
Sample #1	3'	7/28/2011	In-Situ							<15.7	<15.7	<15.7	<15.7	7.02
Sample #2	3'	7/28/2011	In-Situ							<16.2	<16.2	<16.2	<16.2	32.6
Sample #3	3'	7/28/2011	In-Situ							<15.9	<15.9	<15.9	<15.9	7.65
Sample #4	4'	7/28/2011	In-Situ					-		<16.6	<16.6	<16.6	<16.6	7.29
Sample #5	4'	7/28/2011	In-Situ							<16.2	<16.2	<16.2	<16.2	18.5
Sample #6	3'	7/28/2011	In-Situ	1					-	<16.3	<16.3	<16.3	<16.3	14.8
Sample #7	7.5'	7/28/2011	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<14.9	<14.9	<14.9	<14.9	210
Sample #8	9.5'	7/28/2011	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	17.3	<16.2	17.3	142
Sample #9	9.5'	7/28/2011	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	106
Sample #10	7.5'	7/28/2011	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	58.2
Sample #11	2'	7/28/2011	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	24.9	<15.9	24.9	7.11
Sample #12	3'	7/28/2011	In-Situ			A Martin				<15.9	<15.9	<15.9	<15.9	6.88
Sample #13	2'	7/28/2011	In-Situ	-			-			<15.6	<15.6	<15.6	<15.6	9.01
Sample #14	7.5'	7/28/2011	In-Situ		100					<16.2	<16.2	<16.2	<16.2	9.40
Sample #15	2'	7/28/2011	In-Situ		State State	100 - 100 M				<15.8	<15.8	<15.8	<15.8	7.21
Sample #16	3'	7/28/2011	In-Situ		10	1. · · · · · ·				<16.0	<16.0	<16.0	<16.0	7.39
Sample #17	2'	7/28/2011	In-Situ				-			<16.2	<16.2	<16.2	<16.2	7.09
Sample #18	2'	7/28/2011	In-Situ	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 4 P			<15.1	<15.1	<15.1	<15.1	17.6
Sample #19	2'	7/28/2011	In-Situ	141 · · · · ·						<15.4	<15.4	<15.4	<15.4	7.53
Sample #20	2'	7/28/2011	In-Situ			State - State				<16.0	<16.0	<16.0	<16.0	7.48
		The second second		The second second	A STATE OF A				and the second second				A Street Street	
Stockpile #1	N/A	8/1/2011	Backfill	<0.0010	<0.0020	0.00393	0.0183	0.00919	0.0314	125	1,300	26.5	1,450	31.8
Stockpile #2	N/A	8/1/2011	Backfill	<0.0010	<0.0020	0.00454	0.0188	0.00989	0.0332	227	2,270	22.3	2,520	24.0
「「「「「「」」」、「」」、「」」、「」」、「」、「」、「」、「」、「」、「」、			Superior States			12 12 12 12 12 12 12 12 12 12 12 12 12 1			And Andrews	Strate in	an All Annual			
NMOCD Criteria				10					50				5,000	

– Not analyzed.





Trunk "M" Historical - Excavation (Looking South)



Trunk "M" Historical - Excavation (Following Backfill)

### Analytical Report 424335

for

Southern Union Gas Services- Monahans

Project Manager: Rose Slade Trunk M Historical

### 27-JUL-11

Collected By: Client



### **Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



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Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), 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 (LAO00312), 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)

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27-JUL-11

Project Manager: **Rose Slade Southern Union Gas Services- Monahans** 1507 W. 15th Street Monahans, TX 79756

Reference: XENCO Report No: 424335 Trunk M Historical Project Address: Lea County, NM

### **Rose Slade:**

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 424335. 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. 424335 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,

ATA

Brent Barron, II Odessa Laboratory Manager

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### Sample Cross Reference 424335



### Southern Union Gas Services- Monahans, Monahans, TX

Trunk M Historical

Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
S	07-26-11 14:05		424335-001
S	07-26-11 14:10		424335-002
	Matrix S S	Matrix         Date Collected           S         07-26-11 14:05           S         07-26-11 14:10	MatrixDate CollectedSample DepthS07-26-11 14:05S07-26-11 14:10

### CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans Project Name: Trunk M Historical



Project ID: Work Order Number: 424335 Report Date: 27-JUL-11 Date Received: 07/27/2011

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None



Project Id:

### Certificate of Analysis Summary 424335 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical



Date Received in Lab: Wed Jul-27-11 08:10 am Report Date: 27-JUL-11 Project Manager: Brent Barron, II

				2	
	Lab Id:	424335-001	424335-002		
Andreis Dammed	Field Id:	Baseline # 1	Baseline # 2		
Anurysis Nequesieu	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	Jul-26-11 14:05	Jul-26-11 14:10		
Anions by E300	Extracted:				
	Analyzed:	Jul-27-11 14:07	Jul-27-11 14:07		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		15.0 4.3	12.0 4.41		
Percent Moisture	Extracted:				
	Analyzed:	Jul-27-11 09:25	Jul-27-11 09:25		
	Units/RL:	% RL	% RL		
Percent Moisture		2.65 1.00	4.84 1.00		
TPH By SW8015 Mod	Extracted:	Jul-27-11 10:40	Jul-27-11 10:40		
	Analyzed:	Jul-27-11 14:07	Jul-27-11 14:36		
	Units/RL:	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		1690 76.9	934 78.5		
C12-C28 Diesel Range Hydrocarbons		13800 76.9	4220 78.5		
C28-C35 Oil Range Hydrocarbons		ND 76.9	88.5 78.5		
Total TPH		15500 76.9	5240 78.5		

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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. Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brent Barron, II



### **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 affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.

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

MDL Method Detection Limit	SDL Sample Detection Limit
----------------------------	----------------------------

LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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Project Name: Trunk M Historical

Work Orders:         424335,           Lab Batch #:         865532         Sample:         424335-001	/ SMP Batc	Project I h: 1 Matrix	D: x:Soil		
Units: mg/kg Date Analyzed: 07/27/11 14:	07 <b>SU</b>	RROGATE R	ECOVERY	STUDY	1.1
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-135	
o-Terphenyl	58.9	49.9	118	70-135	
Lab Batch #: 865532 Sample: 424335-002	/ SMP Batc	h: 1 Matrix	k: Soil	4	19
Units: mg/kg Date Analyzed: 07/27/11 14:	36 <b>SU</b>	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.6	109	70-135	
o-Terphenyl	57.7	49.8	116	70-135	
Lab Batch #: 865532 Sample: 608891-1-BI	K/BLK Bate	h: 1 Matrix	: Solid		(*)
Units: mg/kg Date Analyzed: 07/27/11 13:	39 <b>SU</b>	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.7	107	70-135	
o-Terphenyl	53.2	49.9	107	70-135	
Lab Batch #: 865532 Sample: 608891-1-BE	KS/BKS Bate	h: 1 Matrix	:Solid		
Units: mg/kg Date Analyzed: 07/27/11 12:	43 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	101	107	70-135	2.2
o-Terphenyl	50.1	50.3	100	70-135	
Lab Batch #: 865532 Sample: 608891-1-BS	SD / BSD Bate	h: 1 Matrix	: Solid		e Sir
Units: mg/kg Date Analyzed: 07/27/11 13:	11 SU	RROGATE R	ECOVERY	STUDY	1.1.1
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	dia.
o-Terphenyl	47.6	50.2	95	70-135	614

\* Surrogate outside of Laboratory QC limits

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



Project Name: Trunk M Historical

Work Orders: 424335	,		Project 1	(D:		
Lab Batch #: 865532	Sample: 424335-001 D / MI	D Bate	h: 1 Matri	x:Soil		
Units: mg/kg	Date Analyzed: 07/27/11 15:04	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes	A VA		101	· · · · · ·	
1-Chlorooctane		99.3	99.8	99	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] = 100 \* A / B
 All results are based on MDL and validated for QC purposes.



## **BS / BSD Recoveries**



Project Name: Trunk M Historical

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Date Analyzed: 07/27/2011 Matrix: Solid Project ID: Blk. Spk Blank Spike **Spike** Added Date Prepared: 07/27/2011 Batch #: Spike Blank Sample: 865561-1-BKS Anions by E300 Work Order #: 424335 Lab Batch ID: 865561 Units: mg/kg Analyst: BRB

Flag Control Limits %RPD 20 **BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Control Limits %R 75-125 Date Analyzed: 07/27/2011 Matrix: Solid RPD % 0 Dup. %R 107 Duplicate Result [F] 21.3 20.0 Ξ Blank Spike %R [D] 106 Date Prepared: 07/27/2011 Blank Spike Result 21.2 C Batch #: 1 20.0 B Sample Result <0.840 [Y] Sample: 608891-1-BKS Lab Batch ID: 865532 Units: mg/kg Analyst: BEV Analytes Chloride

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	<15.1	1010	1030	102	1000	959	96	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.1	1010	930	92	1000	870	87	7	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 Page 9 of 13

YE	N	1	6	1
Labo	ra	to	ie	

### Form 3 - MS Recoveries



**Project Name: Trunk M Historical** 

Work Order #: 424335						
Lab Batch #: 865561			Pro	ject ID:		
Date Analyzed: 07/27/2011	Date Prepared: 07/27	/2011	A	nalyst: B	RB	
QC- Sample ID: 424335-001 S	Batch #: 1		N	latrix: S	oil	
Reporting Units: mg/kg	MATR	IX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	%R	Control Limits	Flag
Analytes	[A]	[B]	[C]	[0]		
Chloride	15.0	103	117	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: Trunk M Historical

Work Order #: 424335

Lab Batch #: 865561 Date Analyzed: 07/27/2011 14:07 D QC- Sample ID: 424335-001 D	ate Prepared: 07/27/201 Batch #: 1	ll Ana Ma	Project I alyst: BRB trix: Soil	ID:	
Reporting Units: mg/kg	SAMPLE	C/SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sampl Result [A]	e Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	15.0	15.6	4	- 20	4
Lab Batch #: 865481 Date Analyzed: 07/27/2011 09:25 D QC- Sample ID: 424335-001 D	ate Prepared: 07/27/201 Batch #: 1	11 Ana Ma	alyst: WRU trix: Soil	ATE DEC	OVEDV
Percent Moisture Analyte	Parent Sample Result [A]	e Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.65	2.77	4	20	
Lab Batch #: 865532 Date Analyzed: 07/27/2011 15:04 D QC- Sample ID: 424335-001 D Reporting Units: mg/kg	ate Prepared: 07/27/201 Batch #: 1 SAMPLE	11 Ana Ma 2 / SAMPLE	lyst:BEV trix: Soil DUPLIC	ATE REC	OVERY
TPH By SW8015 Mod Analyte	Parent Sample Result [A]	e Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	1690	1600	5	35	1 × 1
C12-C28 Diesel Range Hydrocarbons	13800	13200	4	35	
C28-C35 Oil Range Hydrocarbons	<76.9	<76.9	0	35	0

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

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Bine #1     7.26-10     2:05     11 Y     50:1     X     X       I/ac #2     7:26-11     2: 10     11 Y     50:1     X     X       I/ac #2     7:26-11     2: 10     11 Y     50:1     X     X       I/ac #2     7:26-11     2: 10     11 Y     50:1     X     X       I/ac #2     7:26-11     2: 10     11 Y     50:1     X     X       I/ac #3     7:26-11     2: 10     11 Y     50:1     X     X       I/ac #3     7:0     7:0     7:0     7:0     7:0     X       I/ac #3     7:0     7:0     7:0     7:0     7:0     X       I/ac #42     7:1.6-11     7:0     7:0     7:0     7:0     X       I/ac #1     7:1     7:0     7:0     7:0     7:0     7:0       I/ac #1     7:1     7:0     7:0     7:0     7:0     7:0       I/ac #1     7:1     7:0     7:0     7:0     7:0     7:0       I/ac #1     7:0     7:0     7:0     7:0     7:0     7:0       I/ac #1     7:0     7:0     7:0     7:0     7:0     7:0	FIELD CODE	Beginning Depth	Date Sampled	belqms2 emiT	Field Fillered		чол	<sup>t</sup> os²H	HOeN	Aone	Diher ( Specify) Other ( Specify)	WP - Groundwater S = Soil/Soil MP - Non-Potable Specify Oth	SFOR WELOB 1.814 .HOT	Cations (Ca, Mg, Va, K)	Anions (Cl. SO4, Alkalinity) SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Sa	volatiles	BTEX 8021B/5030 or BTEX 8260	N.O.R.M. RCI	CHLORIDES		RUSH TAT (Pre-Schedule ( 24.)4
Line #2. 7:26-11 2:10 11 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0 1 2:0	Cline #1		7.26.	1) 2:05	_	X					5	(:0	X							X		
Date Time Received by Date Time Received by Date Time Sample Containers Intact Date Time Sample Containers Intact Date Time Received by Date Time Sample Containers Intact Date Time Sample Containers Intact Date Time Received by Date Time Sample Containers Intact Date Sample Containers Intact Sample C	line #2		7.26.	01:2 10		~					N	1:0	$\times$				++-			~		X
Image: State of the second						+++				$\square$	+++						$\left  \right $		++i		$\left[ \right]$	
Similar     Time     Pacter volta     N       Date     Time     Pacter volta     N       N     VOCS Free of Free of Freedspace?     N       N     VOCS Freedspace?     N <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>+++</td><td>14</td><td></td><td></td><td></td><td></td></t<>																	+++	14				
Date     Time     Réceived by     Vocs Free of 'rieadspace?       1.216-11     2.20     Y i     Y       Date     Time     Labels on container(s)     N       Date     Time     Labels on container(s)     N       Date     Time     Sampler(s)     Y       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N       N     N     N     N			_		7	-		-	-	_				Sar	porator mple Co	y Con	mer in	ts: tact?	-	-12	70	z
	Date 7.26-11	2:20	Received	THE MAN						N	Date		Time	Sar Contrat of	Cs Free stody 's stody 's by Cot	e of river sontain sontain sontain sontain sontain bears on and De and D	n con n con n con n con lient F	) ) tainer ler(s) ed Rep. ?	(s)		E AR	ZZZZZZZZ

Final 1.000



### **XENCO** Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

### Prelogin / Nonconformance Report - Sample Log-In

Client:	Southern Union Gas
Date/Time:	7-27-11 8:10
Lab ID # :	424335
Initials:	LM

### Sample Receipt Checklist

1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?		(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	-	Yes	No	(N/A)	
4. Chain of Custody present?		Yes	No		
5. Sample instructions complete on chain of custody?		(Yes)	No		1
6. Any missing / extra samples?	1	Yes	No		
7. Chain of custody signed when relinquished / received?	2	Yes	No		L.,
8. Chain of custody agrees with sample label(s)?		Yes	No		in the
9. Container labels legible and intact?		Yes	No		<u>.</u>
10. Sample matrix / properties agree with chain of custody?	6	Yes	No		
11. Samples in proper container / bottle?		Yes	No		
12. Samples properly preserved?		Yes	No	N/A	
13. Sample container intact?		Yes	No		
14. Sufficient sample amount for indicated test(s)?		Yes	No		1.1
15. All samples received within sufficient hold time?		Yes	No		
16. Subcontract of sample(s)?	X	y tes	No	N/A	
17. VOC sample have zero head space?		Yes	No	N/A)	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
Ibs 5.1 °C Ibs °C Ibs	°C	lbs	°C	lbs	°C

### Analytical Report 424821

for

Southern Union Gas Services- Monahans

Project Manager: Rose Slade Trunk M Historical

### 10-AUG-11

Collected By: Client



### Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), 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 (LAO00312), 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-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370) Xenco-Boca Raton (EPA Lab Code: FL01273): Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



10-AUG-11

Project Manager: Rose Slade Southern Union Gas Services- Monahans 1507 W. 15th Street Monahans, TX 79756

Reference: XENCO Report No: 424821 Trunk M Historical Project Address: Lea County, NM

### **Rose Slade:**

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 424821. 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. 424821 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron II Odessa Laboratory Manager

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### Sample Cross Reference 424821



### Southern Union Gas Services- Monahans, Monahans, TX

Trunk M Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample # 1	S	07-28-11 08:00		424821-001
Sample # 2	S	07-28-11 08:05		424821-002
Sample # 3	S	07-28-11 08:10		424821-003
Sample # 4	S	07-28-11 08:15		424821-004
Sample # 5	S	07-28-11 08:20		424821-005
Sample # 6	S	07-28-11 08:25		424821-006
Sample # 7	S	07-28-11 08:30		424821-007
Sample # 8	S	07-28-11 08:35		424821-008
Sample # 9	S	07-28-11 08:40		424821-009
Sample # 10	S	07-28-11 08:45		424821-010
Sample # 11	S	07-28-11 08:50		424821-011
Sample # 12	S	07-28-11 08:55		424821-012
Sample # 13	S	07-28-11 09:00		424821-013
Sample # 14	S	07-28-11 09:05		424821-014
Sample # 15	S	07-28-11 09:10		424821-015
Sample # 16	S	07-28-11 09:15		424821-016
Sample # 17	S	07-28-11 09:20		424821-017
Sample # 18	S	07-28-11 09:25		424821-018
Sample # 19	S	07-28-11 09:30		424821-019
Sample # 20	S	07-28-11 09:35		424821-020

### CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans Project Name: Trunk M Historical



Project ID: Work Order Number: 424821 Report Date: 10-AUG-11 Date Received: 08/01/2011

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-866813 BTEX by EPA 8021B SW8021BM

Batch 866813, Ethylbenzene, Toluene, m\_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 424821-011, -010, -007, -008, -009. The Laboratory Control Sample for Toluene, Ethylbenzene, m\_p-Xylenes, o-Xylene is within laboratory Control Limits



Project Id:

Southern Union Gas Services- Monahans, Monahans, TX Certificate of Analysis Summary 424821 Project Name: Trunk M Historical



Date Received in Lab: Mon Aug-01-11 04:05 pm

Report Date: 10-AUG-11

					Project Manager: H	Srent Barron II	
	Lab Id:	424821-001	424821-002	424821-003	424821-004	424821-005	424821-006
	Field Id:	Sample # 1	Sample # 2	Sample # 3	Sample # 4	Sample # 5	Sample # 6
Analysis Kequestea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-28-11 08:00	Jul-28-11 08:05	Jul-28-11 08:10	Jul-28-11 08:15	Jul-28-11 08:20	Jul-28-11 08:25
Anions by E300	Extracted:						
	Analyzed:	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7.02 4.41	32.6 4.52	7.65 4.43	7.29 4.63	18.5 4.55	14.8 4.58
Percent Moisture	Extracted:						
	Analyzed:	Aug-02-11 09:35	Aug-02-11 09:35	Aug-02-11 09:35	Aug-02-11 09:35	Aug-02-11 09:35	Aug-02-11 09:35
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.66 1.00	7.09 1.00	5.29 1.00	9.29 1.00	7.74 1.00	8.22 1.00
TPH By SW8015 Mod	Extracted:	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00
	Analyzed:	Aug-03-11 01:56	Aug-03-11 02:23	Aug-03-11 02:50	Aug-03-11 03:17	Aug-03-11 03:46	Aug-03-11 04:14
	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 15.7	ND 16.2	ND 15.9	ND 16.6	ND 16.2	ND 16.3
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 16.2	ND 15.9	ND 16.6	ND 16.2	ND 16.3
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 16.2	ND 15.9	ND 16.6	ND 16.2	ND 16.3
Total TPH		ND 15.7	ND 16.2	ND 15.9	ND 16.6	ND 16.2	ND 16.3

ories 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 Laboratic XENCO Laboratorics assumes no responsibility and makes no warnany to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Breht Barron II



Project Id:

### Certificate of Analysis Summary 424821 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical



1 04:05 pm		
Mon Aug-01-1	10-AUG-11	
Date Received in Lab:	Report Date:	

Analysis Requested					Project Manager: F	Srent Barron II	
Analysis Requested							
Analysis Requested	Lab Id:	424821-007	424821-008	424821-009	424821-010	424821-011	424821-012
naisanhay sistinuy	Field Id:	Sample # 7	Sample # 8	Sample # 9	Sample # 10	Sample # 11	Sample # 12
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-28-11 08:30	Jul-28-11 08:35	Jul-28-11 08:40	Jul-28-11 08:45	Jul-28-11 08:50	Jul-28-11 08:55
Anions by E300	Extracted:						
	Analyzed:	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		210 8.40	142 4.53	106 4.53	58.2 4.47	7.11 4.46	6.88 4.44
BTEX by EPA 8021B	Extracted:	Aug-09-11 11:05	Aug-09-11 11:05	Aug-09-11 11:05	Aug-09-11 11:05	Aug-09-11 11:05	
	Analyzed:	Aug-09-11 16:20	Aug-09-11 16:43	Aug-09-11 17:06	Aug-09-11 17:29	Aug-09-11 20:09	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.000992	ND 0.00108	ND 0.00108	ND 0.00107	ND 0.00105	
Toluene		ND 0.00198	ND 0.00215	ND 0.00216	ND 0.00213	ND 0.00210	
Ethylbenzene		ND 0.000992	ND 0.00108	ND 0.00108	ND 0.00107	ND 0.00105	
m_p-Xylenes		ND 0.00198	ND 0.00215	ND 0.00216	ND 0.00213	ND 0.00210	
o-Xylene		ND 0.000992	ND 0.00108	ND 0.00108	ND 0.00107	ND 0.00105	
Total Xylenes		ND 0.000992	ND 0.00108	ND 0.00108	ND 0.00107	ND 0.00105	
Total BTEX		ND 0.000992	ND 0.00108	ND 0.00108	ND 0.00107	ND 0.00105	
Percent Moisture	Extracted:						
	Analyzed:	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture	L.	8.16 1.00	7.34 1.00	7.30 1.00	5.95 1.00	5.86 1.00	5.43 1.00
TPH By SW8015 Mod	Extracted:	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00
	Analyzed:	Aug-03-11 04:43	Aug-03-11 05:12	Aug-03-11 05:39	Aug-03-11 06:06	Aug-03-11 07:02	Aug-03-11 08:14
	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 14.9	ND 16.2	ND 16.2	ND 15.9	ND 15.9	ND 15.9
C12-C28 Diesel Range Hydrocarbons		ND 14.9	17.3 16.2	ND 16.2	ND 15.9	24.9 15.9	ND 15.9
C28-C35 Oil Range Hydrocarbons		ND 14.9	ND 16.2	ND 16.2	ND 15.9	ND 15.9	ND 15.9
Total TPH		ND 14.9	17.3 16.2	ND 16.2	ND 15.9	24.9 15.9	ND 15.9

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Odessa Laboratory Manager Breht Barron II



Project Id:

### Certificate of Analysis Summary 424821 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical



Date Received in Lab: Mon Aug-01-11 04:05 pm Report Date: 10-AUG-11

					Project Manager:	Brent Barron II	
	Lab Id:	424821-013	424821-014	424821-015	424821-016	424821-017	424821-018
	Field Id:	Sample # 13	Sample # 14	Sample # 15	Sample # 16	Sample # 17	Sample # 18
Analysis kequesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-28-11 09:00	Jul-28-11 09:05	Jul-28-11 09:10	Jul-28-11 09:15	Jul-28-11 09:20	Jul-28-11 09:25
Anions by E300	Extracted:						
	Analyzed:	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17	Aug-03-11 16:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RI
Chloride -		9.01 4.37	9.40 4.54	7.21 4.42	7.39 4.50	7.09 4.55	17.6 4.2
Percent Moisture	Extracted:						
	Analyzed:	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45	Aug-02-11 09:45
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RI
Percent Moisture		3.89 1.00	7.58 1.00	4.89 1.00	6.69 1.00	7.79 1.00	1.24 1.0
TPH By SW8015 Mod	Extracted:	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00	Aug-02-11 10:00
	Analyzed:	Aug-03-11 08:49	Aug-03-11 09:29	Aug-03-11 09:57	Aug-03-11 10:25	Aug-03-11 10:53	Aug-03-11 11:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RI
C6-C12 Gasoline Range Hydrocarbons		ND 15.6	ND 16.2	ND 15.8	ND 16.0	ND 16.2	ND 15.
C12-C28 Diesel Range Hydrocarbons		ND 15.6	ND 16.2	ND 15.8	ND 16.0	ND 16.2	ND 15.
C28-C35 Oil Range Hydrocarbons		ND 15.6	ND 16.2	ND 15.8	ND 16.0	ND 16.2	ND 15
Total TPH		ND 15.6	ND 16.2	ND 15.8	ND 16.0	ND 16.2	ND 15

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 warrany to the end use of the data heeby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Breht Barron II



Project Id:

Certificate of Analysis Summary 424821 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical



in Lab: Mon Aug-01-	ort Date: 10-AUG-11	Aanager: Brent Barron
e Received	Repo	Project N

roject Location: Lea County, NM				and a solution		
	A COMPANY OF	などの変に		Project Manager:	Brent Barron II	
	Lab Id:	424821-019	424821-020			
	Field Id:	Sample # 19	Sample # 20			
Analysis kequested	Depth:					
	Matrix:	SOIL	SOIL			
	Sampled:	Jul-28-11 09:30	Jul-28-11 09:35			
Anions by E300	Extracted:					
	Analyzed:	Aug-03-11 16:17	Aug-03-11 16:17			
	Units/RL:	mg/kg RL	mg/kg RL			
Chloride		7.53 4.31	7.48 4.48			
Percent Moisture	Extracted:					
	Analyzed:	Aug-02-11 09:45	Aug-02-11 09:45			
	Units/RL:	% RL	% RL			
Percent Moisture		2.52 1.00	6.33 1.00			
TPH By SW8015 Mod	Extracted:	Aug-02-11 10:00	Aug-02-11 10:00			
	Analyzed:	Aug-03-11 11:48	Aug-03-11 12:16			
	Units/RL:	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 16.0			
C12-C28 Diesel Range Hydrocarbons		ND 15.4	ND 16.0			
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 16.0			
Total TPH	1	ND 15.4	ND 16.0			

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Odessa Laboratory Manager Breht Barron II



### **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 affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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

MDL Method Detect	ion Limit	SDL Sample	Detection	Limit
-------------------	-----------	------------	-----------	-------

LOD Limit of Detection

LOQ Limit of Quantitation

PQL Practical Quantitation Limit MQL Method Quantitation Limit

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
6017 Financial Drive, Norcross, GA 30071
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Project Name: Trunk M Historical

Work Orders:         424821,           Lab Batch #:         866258         Sample:         424821-001 / SMP	Batch	Project I n: 1 Matrix	D: x:Soil		
Units: mg/kg Date Analyzed: 08/03/11 01:56	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	99.6	92	70-135	
o-Terphenyl	47.0	49.8	94	70-135	
Lab Batch #: 866258 Sample: 424821-002 / SMP	Batch	: 1 Matrix	c: Soil	1.1.1	
Units: mg/kg Date Analyzed: 08/03/11 02:23	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	48.0	50.2	96	70-135	
Lab Batch #: 866258 Sample: 424821-003 / SMP	Batch	: 1 Matrix	:Soil		
Units: mg/kg Date Analyzed: 08/03/11 02:50	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	101	99	70-135	
o-Terphenyl	52.1	50.3	104	70-135	
Lab Batch #: 866258 Sample: 424821-004 / SMP	Batch	: 1 Matrix	:Soil	•	
Units: mg/kg Date Analyzed: 08/03/11 03:17	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	52.8	50.2	105	70-135	
Lab Batch #: 866258 Sample: 424821-005 / SMP	Batch	: 1 Matrix	:Soil	1. t.	1.1
Units: mg/kg Date Analyzed: 08/03/11 03:46	SUI	RROGATE R	ECOVERY S	STUDY	1.1
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	99.5	97	70-135	
o-Terphenyl	51.6	49.8	104	70-135	

\* Surrogate outside of Laboratory QC limits

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



Project Name: Trunk M Historical

Work Orders : 424821,           Lab Batch #: 866258         Sample: 424821-006 / SMP	Bato	Project I h: 1 Matrix	D: x:Soil		
Units: mg/kg Date Analyzed: 08/03/11 04:14	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	99.7	94	70-135	
o-Terphenyl	50.0	49.9	100	70-135	
Lab Batch #: 866258 Sample: 424821-007 / SMP	Bate	h: 1 Matrix	k:Soil		
Units: mg/kg Date Analyzed: 08/03/11 04:43	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	99.6	97	70-135	
o-Terphenyl	49.9	49.8	100	70-135	1. 6.
Lab Batch #: 866258 Sample: 424821-008 / SMP	Bate	h: 1 Matrix	s:Soil		
Units: mg/kg Date Analyzed: 08/03/11 05:12	SU	RROGATE R	ECOVERY	STUDY	1
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	47.4	50.1	95	70-135	
Lab Batch #: 866258 Sample: 424821-009 / SMP	Bate	h: 1 Matrix	r:Soil		
Units: mg/kg Date Analyzed: 08/03/11 05:39	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	47.7	50.0	95	70-135	4.5
Lab Batch #: 866258 Sample: 424821-010 / SMP	Batc	h: 1 Matrix	:Soil		
Units: mg/kg Date Analyzed: 08/03/11 06:06	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.9	98	70-135	
o-Terphenyl	49.5	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: Trunk M Historical

Vork Orders:         424821,           Lab Batch #:         866258         Sample:         424821-01	1 / SMP Bate	Project I th: 1 Matrix	D: x:Soil		
Units: mg/kg Date Analyzed: 08/03/11 0	7:02 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.6	92	70-135	-
o-Terphenyl	45.0	49.8	90	70-135	
Lab Batch #: 866258 Sample: 424821-01	2/SMP Bate	h: 1 Matrix	soil		1
Units: mg/kg Date Analyzed: 08/03/11 0	8:14 SU	RROGATE R	ECOVERY	STUDY	1.10
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	1
o-Terphenyl	49.3	50.0	99	70-135	1.
Lab Batch #: 866258 Sample: 424821-01	3 / SMP Bate	h: 1 Matrix	s:Soil		-
Units: mg/kg Date Analyzed: 08/03/11 0	8:49 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	1
o-Terphenyl	49.7	50.1	99	70-135	
Lab Batch #: 866258 Sample: 424821-01	4 / SMP Bate	h: 1 Matrix	:Soil		
Units: mg/kg Date Analyzed: 08/03/11 0	9:29 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.6	98	70-135	1.1.1.1
o-Terphenyl	49.5	49.8	99	70-135	12.2
Lab Batch #: 866258 Sample: 424821-01	5 / SMP Bate	h: 1 Matrix	r:Soil	1	
Units: mg/kg Date Analyzed: 08/03/11 0	9:57 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	100	94	70-135	49
o-Terphenyl	47.6	50.0	95	70-135	

\* Surrogate outside of Laboratory QC limits
\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis



Project Name: Trunk M Historical

Vork Orders : 424821, Lab Batch #: 866258	Sample: 424821-016 / SMP	Bate	Project I h: 1 Matrix	D: c:Soil		
Units: mg/kg	Date Analyzed: 08/03/11 10:25	SU	RROGATE R	ECOVERY	STUDY	
ТРН Ву А	v SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		100	99.6	100	70-135	
o-Terphenyl		52.4	49.8	105	70-135	
Lab Batch #: 866258	Sample: 424821-017 / SMP	Batc	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 08/03/11 10:53	SU	<b>RROGATE</b> R	ECOVERY	STUDY	×
ТРН Ву А	v SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		97.2	99.7	97	70-135	
o-Terphenyl		50.9	49.9	102	70-135	
Lab Batch #: 866258	Sample: 424821-018 / SMP	Batc	h: 1 Matrix	soil '		
Units: mg/kg	Date Analyzed: 08/03/11 11:20	SU	RROGATE R	ECOVERY	STUDY	
ТРН Ву	v SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		92.8	99.7	93	70-135	
o-Terphenyl		47.4	49.9	95	70-135	
Lab Batch #: 866258	Sample: 424821-019 / SMP	Batc	h: 1 Matrix	:Soil		- /
Units: mg/kg	Date Analyzed: 08/03/11 11:48	SU	<b>RROGATE R</b>	ECOVERY S	STUDY	
ТРН Ву А	v SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8	92.5	100	93	70-135	
o-Terphenyl	di ka gara da ka sa	49.6	50.0	99	70-135	
Lab Batch #: 866258	Sample: 424821-020 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 08/03/11 12:16	SU	RROGATE R	ECOVERY	STUDY	1
ТРН Ву	v SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		94.5	99.8	95	70-135	14
o-Terphenyl		50.4	49.9	101	70-135	

\* Surrogate outside of Laboratory QC limits

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



Project Name: Trunk M Historical

Work Orders:         424821,           Lab Batch #:         866813         Sample:         424821-007 / SMP	Bate	Project I h: 1 Matrix	D: x:Soil		
Units: mg/kg Date Analyzed: 08/09/11 16:20	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	1 1
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	
Lab Batch #: 866813 Sample: 424821-008 / SMP	Bate	h: 1 Matrix	<b>k:</b> Soil		1.0
Units: mg/kg Date Analyzed: 08/09/11 16:43	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	-
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	
Lab Batch #: 866813         Sample: 424821-009 / SMP           Units: mg/kg         Date Analyzed: 08/09/11 17:06	Batel	h: <sup>1</sup> Matrix RROGATE R	:Soil ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	- N
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	
Lab Batch #: 866813 Sample: 424821-010 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg Date Analyzed: 08/09/11 17:29	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	1.1.1
Lab Batch #: 866813 Sample: 424821-011 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg Date Analyzed: 08/09/11 20:09	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

\* Surrogate outside of Laboratory QC limits

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



Project Name: Trunk M Historical

Vork Orders:         424821,           Lab Batch #:         866258         Sample:         609283	8-1-BLK / BLK Bate	Project I h: 1 Matrix	D: x:Solid		
Units: mg/kg Date Analyzed: 08/03/	11 01:27 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.7	89	70-135	
o-Terphenyl	46.1	49.9	92	70-135	
Lab Batch #: 866813 Sample: 60959	0-1-BLK / BLK Bate	h: 1 Matrix	:Solid		
Units: mg/kg Date Analyzed: 08/09/	11 13:11 SU	RROGATE R	ECOVERY	STUDY	
BTEX 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	0.0294	0.0300	98	80-120	
Lab Batch #: 866258 Sample: 60928	8-1-BKS/BKS Bate	h: 1 Matrix	e: Solid		
Units: mg/kg Date Analyzed: 08/03/	11 00:33 SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.6	90	70-135	1.12
o-Terphenyl	45.1	49.8	91	70-135	1 C
Lab Batch #: 866813 Sample: 609590	0-1-BKS / BKS Bate	h: 1 Matrix	:Solid		
Units: mg/kg Date Analyzed: 08/09/	11 11:39 SU	RROGATE R	ECOVERY	STUDY	1.1
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	1. 24 J
Lab Batch #: 866258 Sample: 609283	8-1-BSD / BSD Batel	h: 1 Matrix	c:Solid	- 8 · 5	( Sugar
Units: mg/kg Date Analyzed: 08/03/	11 01:00 SU	RROGATE R	ECOVERY	STUDY	1.
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	100	93	70-135	115
o-Terphenyl	46.1	50.0	92	70-135	and the

\* Surrogate outside of Laboratory QC limits

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



Project Name: Trunk M Historical

Vork Orders : 424821, Lab Batch #: 866813 Sample: 609590-1-BSD / 1	BSD Bate	Project I h: 1 Matrix	D: x:Solid		
Units: mg/kg Date Analyzed: 08/09/11 12:03	SU	RROGATE R	ECOVERY	STUDY	
BTEX 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	0.0301	0.0300	100	80-120	
Lab Batch #: 866258 Sample: 424821-020 S / M	IS Bate	h: 1 Matrix	s:Soil		
Units: mg/kg Date Analyzed: 08/03/11 12:45	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	100	94	70-135	
o-Terphenyl	46.1	50.2	92	70-135	
Lab Batch #: 866813         Sample: 424398-005 S / M           Units: mg/kg         Date Analyzed: 08/09/11 17:52	S Bate	h: <sup>1</sup> Matrix RROGATE R	c:Soil	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	1
Lab Batch #: 866258 Sample: 424821-020 SD /	MSD Batc	h: 1 Matrix	:Soil	191	
Units: mg/kg Date Analyzed: 08/03/11 13:13	SU	RROGATE R	ECOVERY	STUDY	1.0.
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	101	107	70-135	
o-Terphenyl	48.1	50.3	96	70-135	1.10
Lab Batch #: 866813 Sample: 424398-005 SD /	MSD Bate	h: 1 Matrix	:Soil		1.1
Units: mg/kg Date Analyzed: 08/09/11 18:15	SU	RROGATE R	ECOVERY S	STUDY	a second
BTEX 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	
		010000		00 120	

\* Surrogate outside of Laboratory QC limits

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



## **BS / BSD Recoveries**



Project Name: Trunk M Historical

Work Order #: 424821 Analyst: ASA Lab Batch ID: 866813 Sample: 609590-1-BKS Units: mg/kg BTEX by EPA 8021B

Date Prepared: 08/09/2011

Batch #: 1

Project ID: Date Analyzed: 08/09/2011 Matrix: Solid

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BTEX by EPA 8021B		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		<0.00100	0.100	0.117	117	0.100	0.114	114	3	70-130	35	
Toluene		<0.00200	0.100	0.103	103	0.100	0.101	101	2	70-130	35	
Ethylbenzene		<0.00100	0.100	0.114	114	0.100	0.110	110	4	71-129	35	
m_p-Xylenes		<0.00200	0.200	0.232	116	0.200	0.222	111	4	70-135	35	
o-Xylene		<0.00100	0.100	0.107	107	0.100	0.102	102	. 5	71-133	35	
Analyst: BRB		Da	ite Prepare	d: 08/03/201	-			Date An	alyzed: 0	8/03/2011		
I ah Ratch ID: 866288	R-1-866788-1-P	K C	Ratch	# 1					Matrix: S	olid		

Units: mg/kg		BLAN	K/BLANK S	PIKE / B	LANK S	PIKE DUPL	ICATE H	RECOVE	RY STUD	Y	
Anions by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Chloride	<0.840	20.0	21.3	107	20.0	21.1	106	-	75-125	20	

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



## **BS / BSD Recoveries**



# Project Name: Trunk M Historical

 Work Order #: 424821
 Date Prepared: 08/02/2011

 Analyst: BEV
 Date Prepared: 08/02/2011

 Lab Batch ID: 866258
 Sample: 609288-1-BKS
 Batch #: 1

 Units: mg/kg
 BLANK /BLANK SP

Batch #: 1 Matrix: Solid BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Project ID: Date Analyzed: 08/03/2011

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
C6-C12 Gasoline Range Hydrocarbons	<14.9	966	912	92	1000	677	98	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<14.9	966	881	.88	1000	921	92	4	70-135	35	

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



### Form 3 - MS Recoveries



### **Project Name: Trunk M Historical**

Work Order #: 424821							
Lab Batch #: 866288				Pro	ject ID:		
Date Analyzed: 08/03/2011	Date	Prepared: 08/0	3/2011	A	nalyst: B	RB	
QC- Sample ID: 424821-007 S		Batch #: 1		N	latrix: S	oil	
Reporting Units: mg/kg		MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300		Parent Sample Result	Spike	Spiked Sample Result ICI	%R	Control Limits %R	Flag
Analytes		[A]	[B]	1.1	1-1		
Chloride		210	200	413	102	75-125	

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

BRL - Below Reporting Limit

XENCO

# Form 3 - MS / MSD Recoveries

Project Name: Trunk M Historical

Project ID:

QC- Sample ID: 424398-005 S Date Prepared: 08/09/2011

Lab Batch ID: 866813 Work Order #: 424821

1 Matrix: Soil Analyst: ASA Batch #:

Date Analyzed: 08/09/2011	Date Prepared:	08/09/2(	011	Ana	alyst:	ASA					
Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	RIX SPI	KE DUPLICA	<b>FE RECO</b>	<b>DVERY</b>	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	<0.00103	0.103	0.0860	83	0.103	0.0831	81	3	70-130	35	
Toluene	<0.00207	0.103	0.0701	68	0.103	0.0663	64	9	70-130	35	×
Ethylbenzene	0.00512	0.103	0.0721	65	0.103	0.0670	60	7	71-129	35	X
m_p-Xylenes	0.00907	0.207	0.139	63	0.207	0.128	57	8	70-135	35	Х
o-Xylene	0.00477	0.103	0.0630	57	0.103	0.0567	50	11	71-133	35	х
Lab Batch ID: 866258 Date Analyzed: 08/03/2011	QC- Sample ID: Date Prepared:	424821-08/02/2	-020 S 011	Ba	tch #: alyst:	1 Matrix BEV	: Soil	100			
Reporting Units: mg/kg		M	ATRIX SPIKI	E / MAT	RIX SPI	KE DUPLICA'	<b>FE REC</b>	OVERY (	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

35 35

70-135 70-135

4 9

95 93

1020 1000

1070 1070

92 88

981

946

1070 1070

<16.1 <16.1

C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons 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

Final 1.002

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Sample Duplicate Recovery



### Project Name: Trunk M Historical

Work Order #: 424821

Lab Batch #: 866288				Project I	D:	
Date Analyzed: 08/03/2011 16:17	Date Prepar	ed: 08/03/2011	Ana	alyst:BRB		
QC- Sample ID: 424821-007 D	Batch	#: 1	Ma	trix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride		210	210	0	20	-
Lab Batch #: 866130		1. 19				
Date Analyzed: 08/02/2011 09:35	Date Prepar	ed: 08/02/2011	Ana	alyst: WRU		
QC- Sample ID: 424836-001 D	Batch	<b>#:</b> 1	Ma	trix: Soil		
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture		6.77	6.96	3	20	
Lab Batch #: 866173	D. 4. D.	1.08/02/2011				
Date Analyzed: 08/02/2011 09:45	Date Prepar	ed: 08/02/2011	Ana	alyst: BKB		
QC- Sample ID: 424821-007 D	Batch	1#: 1	Ma	trix: Soll		
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture		8.16	7.96	2	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

			-	F	L rin	50		126 Od	00 W ssa,	/est l- Texa	20 Ea	165						5 .	ax:	432.	563-	1713	k n	HL	stor
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y/State/Zip: Lovington, NM	88260											I			PO#									
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Sample # 10			7.28-11	9:15		X						~	1-100	X										$\times$
Sample # 17			11-82.L	02.6		X						5	101	~	-		-	_		+				×
Samole # 18			11-82-1	9:25		X	_		+			01	1.10		-	-	-			+		+		×
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### **XENCO** Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

### Prelogin / Nonconformance Report - Sample Log-In

Client:	Southern Union	Gas
Date/Time:	8-1-11 16 05	
Lab ID # :	424821	
Initials:	221	

### Sample Receipt Checklist

1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?		Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?		Yes	No	(N/A)	Pul .
4. Chain of Custody present?		Yes	No		- 1
5. Sample instructions complete on chain of custody?		Yes	No		
6. Any missing / extra samples?		Yes	No		
7. Chain of custody signed when relinquished / received?		Yes	No		
8. Chain of custody agrees with sample label(s)?		Yes	No		
9. Container labels legible and intact?		Yes	No		
10. Sample matrix / properties agree with chain of custody?		Yes	No		
11. Samples in proper container / bottle?		(Yes)	No		~
12. Samples properly preserved?	-	Yes	No	N/A	
13. Sample container intact?	2	Tas	No		
14. Sufficient sample amount for indicated test(s)?		(Yes)	No		
15. All samples received within sufficient hold time?		Tes	No		
16. Subcontract of sample(s)?		Yes	(No)	N/A	
17. VOC sample have zero head space?		Yes	No	(N/A)	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.		Cooler 4 No		Cooler 5 No.	
Ibs 3 °C Ibs °C Ibs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:	Contacted by:	Date/Time:	
Regarding:			
Corrective Action Tak	en:		
			1.1
1 2 2 2 3 2 2			
Check all that apply:	Cooling process has begun shortly after condition acceptable by NELAC 5.5 Initial and Backup Temperature confirm of Client understands and would like to pro-	sampling event and out of temperature .8.3.1.a.1. out of temperature conditions ceed with analysis	

### Analytical Report 424819

for

Southern Union Gas Services- Monahans

Project Manager: Rose Slade Trunk M Historical

### 02-AUG-11

Collected By: Client



### **Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



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

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), 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 (LAO00312), 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-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370) Xenco-Boca Raton (EPA Lab Code: FL01273): Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



02-AUG-11

Project Manager: **Rose Slade Southern Union Gas Services- Monahans** 1507 W. 15th Street Monahans, TX 79756

Reference: XENCO Report No: 424819 Trunk M Historical Project Address: Lea County, NM

### **Rose Slade:**

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 424819. 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. 424819 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,

BATA

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 424819



### Southern Union Gas Services- Monahans, Monahans, TX

Trunk M Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stock Pile # 1	S	08-01-11 12:30		424819-001
Stock Pile # 2	S	08-01-11 08:30		424819-002

### CASE NARRATIVE

![](_page_55_Picture_1.jpeg)

Client Name: Southern Union Gas Services- Monahans Project Name: Trunk M Historical

![](_page_55_Picture_3.jpeg)

Project ID: Work Order Number: 424819 Report Date: 02-AUG-11 Date Received: 08/01/2011

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-866057 TPH By SW8015 Mod SW8015MOD NM

Batch 866057, 1-Chlorooctane, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 424742-001 SD.

Batch: LBA-866106 Anions by E300 RPD recoverd outside QC limits between the sample and sample duplicate.

![](_page_56_Picture_0.jpeg)

Contact: Rose Slade Project Location: Lea County, NM

Project Id:

Certificate of Analysis Summary 424819 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical

![](_page_56_Picture_2.jpeg)

Date Received in Lab: Mon Aug-01-11 04:05 pm Report Date: 02-AUG-11 Project Manager: Brent Barron II

			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Project Manager: Brent Barron	II
	Lab Id:	424819-001	424819-002		
Analysis Dogustad	Field Id:	Stock Pile # 1	Stock Pile # 2		
naicanhay ciclimity	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	Aug-01-11 12:30	Aug-01-11 08:30		
Anions by E300	Extracted:				
	Analyzed:	Aug-02-11 08:00	Aug-02-11 08:00		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		31.8 8.53	24.0 4.25		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretendances and results expressed hroughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warrany 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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Breht Barron II

![](_page_57_Picture_0.jpeg)

Project Id: Contact: Rose Slade

### Certificate of Analysis Summary 424819 Southern Union Gas Services- Monahans, Monahans, TX Project Name: Trunk M Historical

![](_page_57_Picture_3.jpeg)

Date Received in Lab: Mon Aug-01-11 04:05 pm Report Date: 02-AUG-11 Project Manager: Brent Barron II

roject Location: Lea County, NM				Project Manager: Brent Barron II
	Lab Id:	424819-001	424819-002	
And include Damandad	Field Id:	Stock Pile # 1	Stock Pile # 2	
Anuty of the second	Depth:			
	Matrix:	SOIL	SOIL	
	Sampled:	Aug-01-11 12:30	Aug-01-11 08:30	
Percent Moisture	Extracted:			
	Analyzed:	Aug-01-11 16:30	Aug-01-11 16:30	
	Units/RL:	% RL	% RL	
Percent Moisture		1.52 1.00	1.12 1.00	
TPH By SW8015 Mod	Extracted:	Aug-01-11 16:30	Aug-01-11 16:30	
	Analyzed:	Aug-01-11 22:36	Aug-01-11 23:03	
	Units/RL:	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		125 15.3	227 15.2	
C12-C28 Diesel Range Hydrocarbons		1300 15.3	2270 15.2	
C28-C35 Oil Range Hydrocarbons		26.5 15.3	22.3 15.2	
Total TPH		1450 15.3	2520 15.2	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretentions and retraits expressed hiroughout 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. Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Breht Barron II

![](_page_58_Picture_0.jpeg)

### **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 affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.

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
- MDL Method Detection Limit SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit

**DL** Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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![](_page_59_Picture_0.jpeg)

Project Name: Trunk M Historical

Vork Orders : 424819, Lab Batch #: 866057 Sample: 424819-001 / SMP	Bat	Project I	I <b>D:</b> x:Soil		
Units: mg/kg Date Analyzed: 08/01/11 22:36	SU	JRROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.4	100	77	70-135	
o-Terphenyl	37.7	50.1	75	70-135	
Lab Batch #: 866057 Sample: 424819-002 / SMP	Bate	ch: 1 Matrix	x:Soil		
Units: mg/kg Date Analyzed: 08/01/11 23:03	SU	JRROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	100	96	70-135	
o-Terphenyl	47.2	50.1	94	70-135	
Lab Batch #: 866057 Sample: 609173-1-BLK / B	LK Bate	ch: 1 Matrix	x:Solid		1
Units: mg/kg Date Analyzed: 08/01/11 14:14	SL	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	66.9	50.2	133	70-135	
Lab Batch #: 866057 Sample: 609173-1-BKS / BI	KS Bate	ch: 1 Matrix	s:Solid		
Units: mg/kg Date Analyzed: 08/01/11 13:19	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	131	100	131	70-135	18 A. A.
o-Terphenyl	65.2	50.1	130	70-135	
Lab Batch #: 866057 Sample: 609173-1-BSD / BS	SD Bate	ch: 1 Matrix	:Solid		1
Units: mg/kg Date Analyzed: 08/01/11 13:46	SU	RROGATE R	ECOVERY	STUDY	the second
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	117	100	117	70-135	
o-Terphenyl	62.0	50.0	124	70-135	a fare a

\* 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.

![](_page_60_Picture_0.jpeg)

### Project Name: Trunk M Historical

<b>Vork Orders :</b> 424819,		Project 1	<b>D</b> :		
Lab Batch #: 866057 Sample: 424742-001 S / M	AS Bate	ch: 1 Matri	x:Soil		
Units: mg/kg Date Analyzed: 08/01/11 23:30	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	139	200	70	70-135	
o-Terphenyl	69.7	100	70	70-135	
Lab Batch #: 866057 Sample: 424742-001 SD /	MSD Bate	h: 1 Matri	x:Soil		
Units: mg/kg Date Analyzed: 08/01/11 23:58	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	138	100	138	70-135	*
o-Terphenyl	68.2	50.1	136	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.

![](_page_61_Picture_0.jpeg)

## **BS / BSD Recoveries**

![](_page_61_Picture_2.jpeg)

Project Name: Trunk M Historical

Work Order #: 424819 Analyst: BRB

Date Prepared: 08/02/2011 Batch #: 1

Sample: 866106-1-BKS

Lab Batch ID: 866106

Project ID: Date Analyzed: 08/02/2011 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	ILANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	X	
Anions by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[6]			,	
Chloride	<0.840	20.0	21.4	107	20.0	23.0	115	7	75-125	20	
Analyst: BEV	Da	te Prepar	ed: 08/01/201	_			Date A	nalyzed: 0	8/01/2011		
Lab Batch ID: 866057 Sample: 609173-1-E	3KS	Batcl	1 #: 1					Matrix: S	olid		
Units: mg/kg		BLAN	K /BLANK S	PIKE / B	S YNK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	$\square$
TPH By SW8015 Mod	Blank Sample Result	Spike	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	Result [C]	%R [D]	[E]	Duplicate Result [F]	%R [G]	%	%R	%RPD	

35 35

6 00

95 93

946 929

1000 1000

104

1040 1010

1000 1000

<15.0 <15.0

C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons

101

70-135 70-135

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

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![](_page_62_Picture_0.jpeg)

### Form 3 - MS Recoveries

![](_page_62_Picture_2.jpeg)

**Project Name: Trunk M Historical** 

Work Order #: 424819					
Lab Batch #: 866106		Pro	ject ID:		
Date Analyzed: 08/02/2011	Date Prepared: 08/02/20	11 A	nalyst: B	RB	
QC- Sample ID: 424819-001 S	Batch #: 1	N	Matrix: S	oil	
Reporting Units: mg/kg	MATRIX	/ MATRIX SPIKE	RECO	VERY STU	JDY
Inorganic Anions by EPA 300	Parent Sample S	pike Spiked Sample Result	%R	Control Limits	Flag
Analytes	[A]	IB	נטן	%R	
Chloride	31.8	203 247	106	75-125	

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

BRL - Below Reporting Limit

![](_page_63_Picture_0.jpeg)

# Form 3 - MS / MSD Recoveries

00

Project Name: Trunk M Historical

Work Order #: 424819

Date Analyzed: 08/01/2011 Lab Batch ID: 866057 Reporting Units: mg/kg

Project ID:

Analyst: Batch #: QC- Sample ID: 424742-001 S Date Prepared: 08/01/2011

Matrix: Soil BEV -

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	RIX SPII	KE DUPLICA	FE RECO	<b>VERY S</b>	TUDY		
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	Kesult [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	<17.1	1140	1320	116	1140	1310	115	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<17.1	1140	1270	111	1140	1230	108	3	70-135	35	

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

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

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

Page 12 of 15

![](_page_64_Picture_0.jpeg)

Sample Duplicate Recovery

![](_page_64_Picture_2.jpeg)

### Project Name: Trunk M Historical

Work Order #: 424819

Lab Batch #: 866106			Project I	D:	
Date Analyzed: 08/02/2011 08:00 Date	Prepared: 08/02/2011	Ana	lyst:BRB		
QC- Sample ID: 424819-001 D	Batch #: 1	Mat	rix: Soil		
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	31.8	43.0	30	20	F
Lab Batch #: 866070	118	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19			
Date Analyzed: 08/01/2011 14:00 Date	Prepared: 08/01/2011	Ana Ana	lyst:BRB		
QC- Sample ID: 424790-001 D	Batch #: 1	Mat	rix: Soil		
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.05	1.95	5	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

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7 8-1-11	12:30 pm	-	×	-			1	N	011	X		-						$\square$	-		X	1
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![](_page_66_Picture_0.jpeg)

### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

### Prelogin / Nonconformance Report - Sample Log-In

Client:	Southern Union Gas	
Date/Time:	8-1-11 16:05	
Lab ID # :	424819	
Initials:	LU	_

### Sample Receipt Checklist

1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?		Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles		Yes	No	NA	1
4. Chain of Custody present?		Yes	No		1
5. Sample instructions complete on chain of custody?		Yes	No		
6. Any missing / extra samples?		Yes	No		2
7. Chain of custody signed when relinquished / received?			No		
8. Chain of custody agrees with sample label(s)?		Yes,	No		
9. Container labels legible and intact?		Yes	No		100
10. Sample matrix / properties agree with chain of custody?		Yes	No ·		
11. Samples in proper container / bottle?		Yes	No		~
12. Samples property preserved?		Yes	No	N/A	
13. Sample container intact?		Yes	No		
14. Sufficient sample amount for indicated test(s)?			No		
15. All samples received within sufficient hold time?			No D		1. 2.1
16. Subcontract of sample(s)?			(No)	N/A	
17. VOC sample have zero head space?			No	NIA	1
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
Ibs 3.\ °C Ibs °C Ibs	°C	Ibs	°C	lbs	°C

Nonconformance Documentation

Contact:	Contacted by:	Date/Time:	
Regarding:			Sec.
Corrective Action Taken:			Stat.
			1
SACIONAL SECOND			and the second
Check all that apply:	Cooling process has begun shortly after s	ampling event and out of temperature	
	condition acceptable by NELAC 5.5.8	3.3.1.a.1.	

Initial and Backup Temperature confirm out of temperature conditions

Client understands and would like to proceed with analysis