Basin Environmental Service Technologies, LLC

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Effective Solutions

REMEDIATION SUMMARY &

SITE CLOSURE REQUEST

SOUTHERN UNION GAS SERVICES
MA-DOOM
Lea County, New Mexico
Unit Letter "P" (SE/SE), Section 5, Township 24 South, Range 37 East
Latitude 32° 14.491' North, Longitude 103° 10.858' West
NMOCD Reference # 1RP-2899

Prepared For:

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

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

January 2013

Joel W. Lowry
Project Manager

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APPENDICES

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 MA-Doom Historical. The legal description of the release site is Unit Letter "P" (SE/SE), Section 5, Township 24 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 14.491' North latitude and 103° 10.858' West longitude. The property affected by the release is owned by Jarold and Dan Doom. Please reference Figure 1 for a "Site Location Map".

On June 4, 2009, Southern Union discovered a release had occurred on the "MA" pipeline. The "Release Notification and Corrective Action Form" (Form C-141) indicated failure of a section of ten-inch (10") low-pressure pipeline resulted in the release of greater than fifty (50) Mcf of natural gas and ten barrels (10 bbls) of crude oil. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on July 31, 2009. The initial Form C-141 indicated the release affected approximately one thousand, nine hundred and fifty square feet (1,950 ft^2) of pasture land. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix D.

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 the average depth to groundwater for Section 5, Township 24 South, Range 37 East is approximately one hundred and seven feet (107') bgs. Based on the NMOCD ranking system, ten (10) 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 one thousand feet (1,000') 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 one thousand feet (1,000') 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 MA-Doom Historical Release Site has an initial ranking score of ten (10) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) – 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) – 1,000 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 December 4, 2012, Basin began delineation activities at the release site. A test trench was advanced within the stained area to approximately three feet (3') bgs. During the advancement of the test trench, two soil samples (SP#1 @ Surface and SP#1 @ 3') were collected and submitted to Xenco Laboratories Inc., of Odessa, Texas, for analysis of TPH and chloride concentrations in accordance with EPA Methods SW 846-8015M and 300.1, respectively. Laboratory analytical results indicated TPH concentrations ranged 1,060 mg/Kg for soil sample SP#1 @ 3' to 16,300 mg/Kg for soil sample SP#1 @ Surface. Analytical results indicated chloride concentrations ranged from 165 mg/Kg for soil sample SP#1 @ 3' to 672 mg/Kg in soil SP#1 @ Surface. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix B.

On December 6, 2012, the test trench was advanced to approximately twelve feet (12') bgs. During the advancement of the test trench, two (2) soil samples (SP#1 @ 8' and SP#1 @ 12') were collected and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations ranged from 4,420 mg/Kg for soil samples SP#1 @ 8' to 9,420 mg/Kg for soil sample SP #1 @ 12'. Chloride concentrations ranged from 97.1 mg/Kg for soil sample SP#1 @ 12' to 379 mg/Kg for soil sample SP#1 @ 8'.

On December 17, 2012, the test trench was advanced to approximately eighteen feet (18') bgs. During the advancement of the test trench, one (1) soil sample (SP#1 @ 15') was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the TPH concentration was less than the laboratory MDL.

On December 18, 2012, Basin began excavation activities at the release site. The excavation floor and sidewalls were advanced until chloride field tests and photo-ionization detector (PID) readings suggested concentrations of chloride and TPH were less than NMOCD regulatory remediation action levels established for the site. Impacted material was stockpiled onsite pending final disposition. Two (2) soil samples (South Wall 12' bgs and North Wall 12' bgs) were collected from the excavation sidewalls and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit MDL for soil sample South Wall 12' bgs to 20.4 mg/Kg for soil sample North Wall 12' bgs. Chloride concentrations ranged from 33.3 mg/Kg for soil sample North Wall 12' bgs to 71.9 mg/Kg for soil sample South Wall 12'. TPH and chloride concentrations were less than NMOCD regulatory remediation action levels for each of the submitted soil samples.

On December 21, 2012, three (3) soil samples (East Wall 12' bgs, Floor 14' bgs and West Wall 12' bgs) were collected from the floor and sidewalls of the excavation and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. Soil samples East Wall 12' bgs and West Wall 12' bgs were also analyzed for chloride concentrations. Chloride concentrations ranged from 49.9 mg/Kg for soil sample East Wall 12' bgs to 97.1 mg/Kg for soil sample West Wall 12' bgs. Soil sample Floor 14' bgs was also analyzed for BTEX constituent concentrations in accordance with EPA Method SW 846-8021B. Analytical results indicated the BTEX concentration was less than the laboratory MDL. Benzene,

BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels for each of the submitted soil samples.

On January 8, 2013. on receiving approval from an NMOCD representative, Basin began backfilling the excavation with locally purchased, non-impacted material. Excavation backfill was compacted in twelve-inch lifts and contoured to fit the surrounding topography. The final dimensions of the excavation were approximately forty feet (40') in length, thirty-five feet (35') in width, and approximately five feet (5') in depth. The final dimensions of the flowpath area were approximately three hundred fifty feet (350') in length, ten feet (10') in width, and ranged in depth from twelve inches (12") to eighteen inches (18") bgs.

Between December 20 and 27, 2012, approximately five hundred and fifty-two cubic yards (552 yd^3) of impacted material was transported to Doom Landfarm (Discharge Permit # 0033) for treatment. Copies of disposal manifests are provided as Appendix C.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Xenco Laboratories, Inc., of Odessa, Texas, for BTEX, TPH, and/or chloride analyses using the methods described below:

- 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 reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Confirmation soil samples collected from the floor and sidewalls of the MA-Doom excavation were analyzed by an NMOCD-approved laboratory, which determined concentrations of benzene, BTEX, TPH and chloride were less than the regulatory remediation action levels established for the site. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the MA-Doom 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.

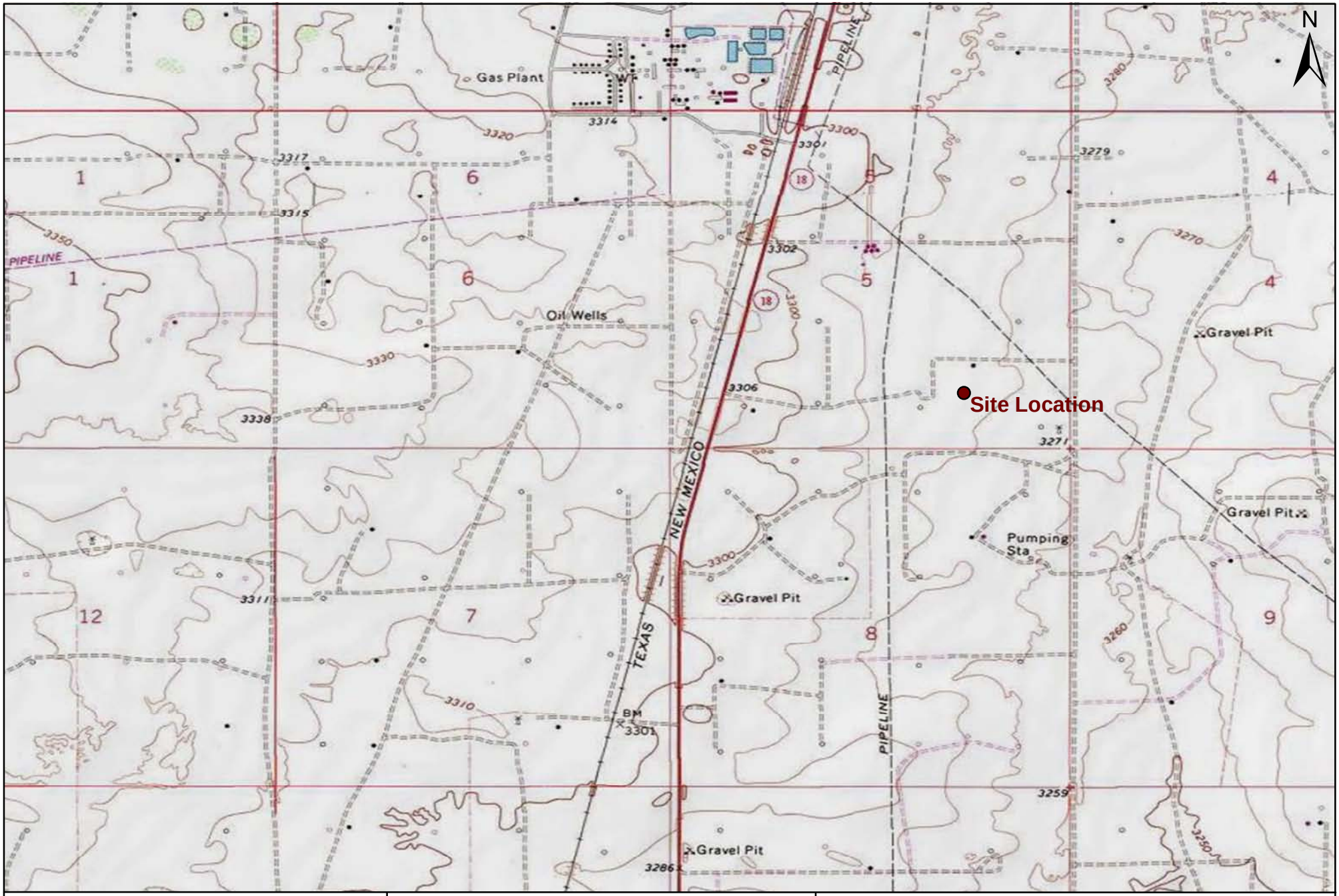
This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Southern Union Gas Services.

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: Rose Slade
Southern Union Gas Services
801 S. Loop 464
Monahans, Texas 79756
rose.slade@sug.com

Copy 3: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, New Mexico 88260



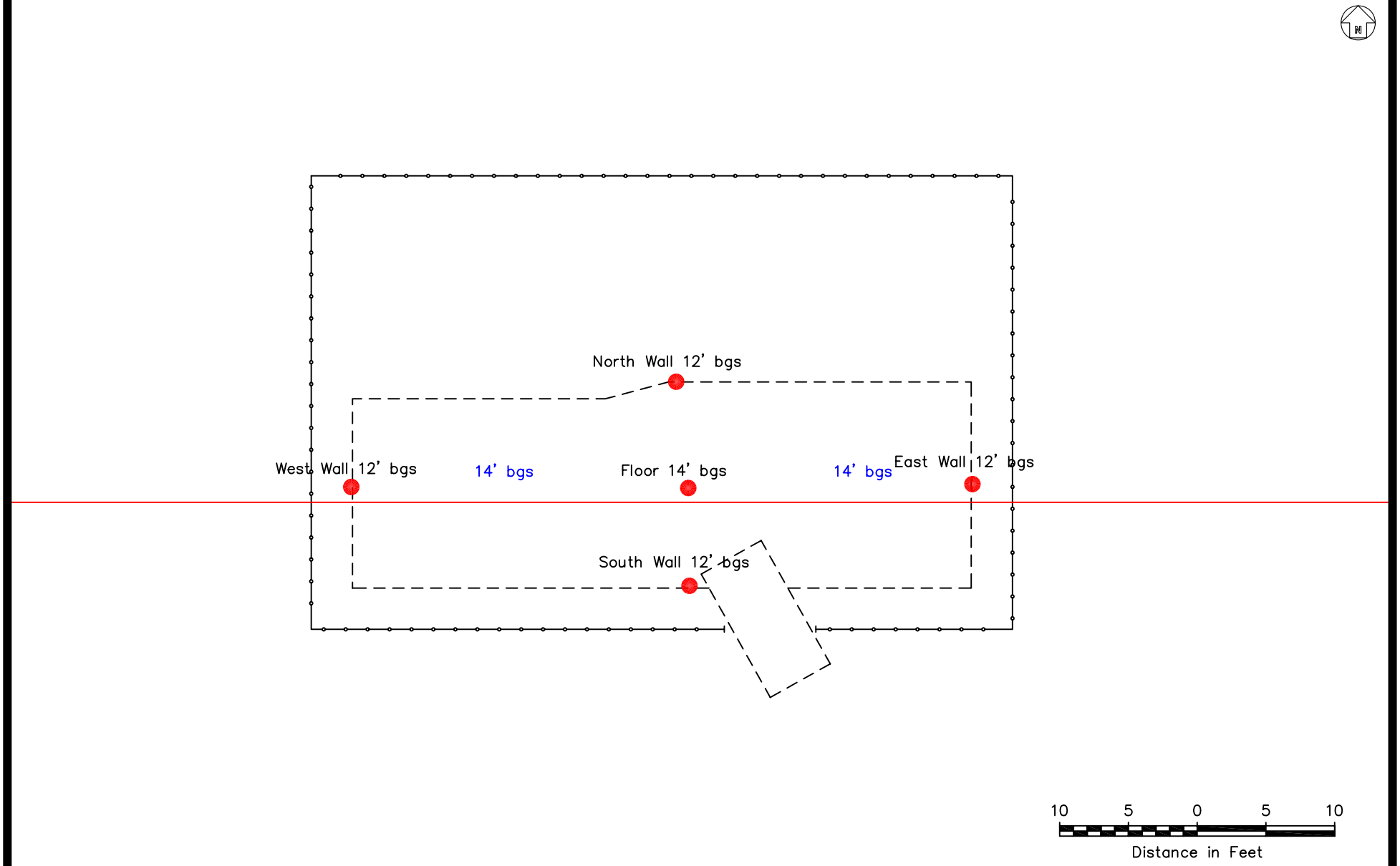
1,000500 0 1,000 2,000

Distance in Feet

Figure 1
Site Location Map
Southern Union Gas Services
MA-Doom
Lea County, New Mexico

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: JWL
December 10, 2012	Scale: 1" = 2000'



Legend

- Sample Location
- Excavation Extent
- Pipeline
- Fence

Figure 2
Site & Sample Location Map
Southern Union Gas Services
MA-DOOM
NMOCD Ref RP-2899
Lea County, New Mexico

Basin Environmental Services

Prep By: JWL	Checked By: BJA
December 27, 2012	Scale 1"=10'

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
MA-DOOM
HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REF# 1RP-2899

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{28} (mg/Kg)	CHLORIDE (mg/Kg)
SP#1 @ Surface	Surface	12/4/2012	Excavated	-	-	-	-	-	467	15,300	509	16,300	672
SP#1 @ 3'	3'	12/4/2012	Excavated	-	-	-	-	-	<18.0	978	83.1	1060	165
SP#1 @ 8'	8'	12/6/2012	Excavated	-	-	-	-	-	1030	3,290	98.6	9,820	379
SP#1 @ 12'	12'	12/6/2012	Excavated	-	-	-	-	-	2,630	6,610	182	9,420	97.1
SP#1 @ 15'	15'	12/17/2012	In-Situ	-	-	-	-	-	<16.5	<16.5	<16.5	<16.5	-
South Wall 12' bgs	12'	12/18/2012	In-Situ	-	-	-	-	-	<16.1	<16.1	<16.1	<16.1	71.9
North Wall 12' bgs	12'	12/18/2012	In-Situ	-	-	-	-	-	<16.1	20.4	<16.1	20.4	33.3
East Wall 12' bgs	12'	12/21/2012	In-Situ	-	-	-	-	-	<19.9	<19.9	<19.9	<19.9	49.9
Floor 14' bgs	14'	12/21/2012	In-Situ	<0.00104	<0.00209	<0.00104	<0.00209	<0.00209	<15.7	<15.7	<15.7	<15.7	-
West Wall 12' bgs	12'	12/21/2012	In-Situ	-	-	-	-	-	<15.9	<15.9	<15.9	<15.9	97.1
NMOCD Standard				**10**				**50**				**1,000**	**500**

- = Not analyzed.

Photograph of the initial release at the MA-Doom Historical Release Site.

Photograph of the initial release at the MA-Doom Historical Release Site.

Photograph of delineation activities at the MA-Doom Historical Release Site.

Photograph of delineation activities at the MA-Doom Historical Release Site.

Photograph of the MA-Doom Historical Release Site excavation.

Photograph of the MA-Doom Historical Release Site excavation.

Photograph of backfilling activities at the MA-Doom Historical Release Site.

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Photograph of backfilling activities at the MA-Doom Historical Release Site.

Photograph of the MA-Doom Historical Release Site after being backfilled.

Photograph of the MA-Doom Historical Release Site after being backfilled.

Analytical Report 453595

for

Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

MA-DOOM

13-DEC-12

Collected By: Client

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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
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)

13-DEC-12

Project Manager: **Ben Arguijo**
Southern Union Gas Services- Monahans
801 South Loop 464
Monahans, TX 79756

Reference: XENCO Report No(s): **453595**
MA-DOOM
Project Address: Lea County, NM

Ben Arguijo:

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(s) 453595. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 453595 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 453595

Southern Union Gas Services- Monahans, Monahans, TX

MA-DOOM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP#1 @ Surface	S	12-04-12 13:00		453595-001
SP#1 @ 3'	S	12-04-12 13:10		453595-002

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: MA-DOOM

Project ID:
Work Order Number(s): *453595*

Report Date: *13-DEC-12*
Date Received: *12/06/2012*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-902505 Inorganic Anions by EPA 300/300.1
E300

Batch 902505, Chloride recovered below QC limits
Samples affected are: 453595-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analysis Summary 453595

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: MA-DOOM

Project Id:
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Thu Dec-06-12 11:30 am
Report Date: 13-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested								
	Lab Id:	453595-001		453595-002				
	Field Id:	SP#1 @ Surface		SP#1 @ 3'				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	Dec-04-12 13:00		Dec-04-12 13:10				
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Dec-08-12 17:42		Dec-08-12 17:59				
	Analyzed:	Dec-08-12 17:42		Dec-08-12 17:59				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Chloride		672	1.01	165	1.20			
Percent Moisture	***Extracted:***							
	Analyzed:	Dec-10-12 09:25		Dec-10-12 09:25				
	Units/RL:	%	RL	%	RL			
Percent Moisture		1.52	1.00	17.0	1.00			
TPH By SW8015 Mod	***Extracted:***	Dec-07-12 08:30		Dec-07-12 08:30				
	Analyzed:	Dec-07-12 13:03		Dec-07-12 13:37				
	Units/RL:	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		467	152	ND	18.0			
C12-C28 Diesel Range Hydrocarbons		15300	152	978	18.0			
C28-C35 Oil Range Hydrocarbons		509	152	83.1	18.0			
Total TPH		16300	152	1060	18.0			

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

* Surrogate recovered outside laboratory control limit.

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 **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 453595, 453595 **Project ID:**

Lab Batch #: 902402 **Sample:** 453595-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/07/12 13:03 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-135	
o-Terphenyl	59.5	49.8	119	70-135	

Lab Batch #: 902402 **Sample:** 453595-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/07/12 13:37 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.0	99.8	87	70-135	
o-Terphenyl	44.4	49.9	89	70-135	

Lab Batch #: 902402 **Sample:** 630894-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/07/12 12:35 **SURROGATE RECOVERY 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	44.9	50.0	90	70-135	

Lab Batch #: 902402 **Sample:** 630894-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/07/12 10:51 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.1	100	91	70-135	
o-Terphenyl	52.7	50.1	105	70-135	

Lab Batch #: 902402 **Sample:** 630894-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/07/12 12:04 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.8	99.8	89	70-135	
o-Terphenyl	54.9	49.9	110	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 453595, 453595 **Project ID:**

Lab Batch #: 902402 **Sample:** 453592-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/08/12 00:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	54.1	50.1	108	70-135	

Lab Batch #: 902402 **Sample:** 453592-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/08/12 01:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	54.8	50.1	109	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: MA-DOOM

Work Order #: 453595, 453595 **Project ID:**

Analyst: JOL **Date Prepared:** 12/08/2012 **Date Analyzed:** 12/08/2012

Lab Batch ID: 902505 **Sample:** 630973-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	<1.00	100	97.7	98	100	97.0	97	1	80-120	20	

Analyst: KEB **Date Prepared:** 12/07/2012 **Date Analyzed:** 12/07/2012

Lab Batch ID: 902402 **Sample:** 630894-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	<15.0	1000	1030	103	998	983	98	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1000	100	998	962	96	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: MA-DOOM

Work Order #: 453595

Lab Batch #: 902505 **Project ID:**

Date Analyzed: 12/08/2012 **Date Prepared:** 12/08/2012 **Analyst:** JOL

QC- Sample ID: 453595-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	672	101	596	0	80-120	X

Lab Batch #: 902505

Date Analyzed: 12/08/2012 **Date Prepared:** 12/08/2012 **Analyst:** JOL

QC- Sample ID: 453597-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	172	103	242	68	80-120	X

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

Form 3 - MS / MSD Recoveries

Project Name: MA-DOOM

Work Order # : 453595 **Project ID:**

Lab Batch ID: 902402 **QC- Sample ID:** 453592-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/08/2012 **Date Prepared:** 12/07/2012 **Analyst:** KEB

Reporting Units: mg/kg

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
	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	1110	105	1060	1100	104	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	1130	107	1060	1110	105	2	70-135	35	

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

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

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

Sample Duplicate Recovery

Project Name: MA-DOOM

Work Order #: 453595

Lab Batch #: 902481 **Project ID:**

Date Analyzed: 12/10/2012 09:25 **Date Prepared:** 12/10/2012 **Analyst:** WRU

QC- Sample ID: 453595-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.52	1.47	3	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo; Joel Lowry

Project Name: MA-DOOM

Company Name: Basin Environmental Service Technologies, LLC

Project #:

Company Address: P.O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: Bill Southern Union Gas Services

Telephone No: (575)396-2378

Fax No: (575) 396-1429

Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: Joel Lowry

e-mail: pm@basinenv.com curt.stanley@sug.com rose.slade@sug.com

(lab use only)
ORDER #: 453577 453595

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Soil NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	SP#1 @ Surface			12/4/2012	1300		1	X								Soil	X								X				X			X
	SP#1 @ 3'			12/4/2012	1310		1	X								Soil	X								X				X			X

Special Instructions:
Hold SP#1 @ 3' for BTEX

Relinquished by:	Date	Time	Received by:	Date	Time
Joel Lowry	12/5/12	7:00		12/5/12	2000
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Shaunee Smith	12-6-12	11:30

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)	Y	(N)
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL (FedEx) Lone Star

Temperature Upon Receipt: 0.5 15.8 °C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 12/06/2012 11:30:00 AM

Work Order #: 453595

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 453782

for

Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

MA-Doom (Historical)

14-DEC-12

Collected By: Client

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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
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)

14-DEC-12

Project Manager: **Ben Arguijo**
Southern Union Gas Services- Monahans
801 South Loop 464
Monahans, TX 79756

Reference: XENCO Report No(s): **453782**
MA-Doom (Historical)
Project Address: Lea County, NM

Ben Arguijo:

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(s) 453782. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 453782 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 453782

Southern Union Gas Services- Monahans, Monahans, TX

MA-Doom (Historical)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP#1 @ 8'	S	12-06-12 13:10		453782-001
SP#1 @ 12'	S	12-06-12 13:40		453782-002

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: MA-Doom (Historical)

Project ID:
Work Order Number(s): *453782*

Report Date: *14-DEC-12*
Date Received: *12/10/2012*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-902670 TPH By SW8015 Mod
SW8015MOD_NM

Batch 902670, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 453782-001, -002.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analysis Summary 453782

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: MA-Doom (Historical)

Project Id:
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Mon Dec-10-12 09:46 am
Report Date: 14-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested									
	Lab Id:	453782-001		453782-002					
	Field Id:	SP#1 @ 8'		SP#1 @ 12'					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-06-12 13:10		Dec-06-12 13:40					
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Dec-11-12 10:00		Dec-11-12 10:00					
	Analyzed:	Dec-11-12 18:49		Dec-11-12 18:49					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		379	1.13	97.1	1.09				
Percent Moisture	***Extracted:***								
	Analyzed:	Dec-10-12 16:37		Dec-10-12 16:37					
	Units/RL:	%	RL	%	RL				
Percent Moisture		11.4	1.00	8.28	1.00				
TPH By SW8015 Mod	***Extracted:***	Dec-11-12 14:30		Dec-11-12 14:30					
	Analyzed:	Dec-12-12 04:09		Dec-12-12 11:28					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		1030	16.9	2630	81.5				
C12-C28 Diesel Range Hydrocarbons		3290	16.9	6610	81.5				
C28-C35 Oil Range Hydrocarbons		98.6	16.9	182	81.5				
Total TPH		4420	16.9	9420	81.5				

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.

* Surrogate recovered outside laboratory control limit.

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 **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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	Phone	Fax
4143 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: MA-Doom (Historical)

Work Orders : 453782,

Project ID:

Lab Batch #: 902670 **Sample:** 453782-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/12 04:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	54.5	50.1	109	70-135	

Lab Batch #: 902670 **Sample:** 453782-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/12 11:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	53.1	49.9	106	70-135	

Lab Batch #: 902670 **Sample:** 631085-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/11/12 18:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.2	99.6	98	70-135	
o-Terphenyl	48.8	49.8	98	70-135	

Lab Batch #: 902670 **Sample:** 631085-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/11/12 17:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	61.4	49.9	123	70-135	

Lab Batch #: 902670 **Sample:** 631085-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/11/12 18:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	
o-Terphenyl	55.0	50.1	110	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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: MA-Doom (Historical)

Work Orders : 453782,

Project ID:

Lab Batch #: 902670 **Sample:** 453701-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/12 05:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

Lab Batch #: 902670 **Sample:** 453701-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/12 05:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	49.2	50.0	98	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Version: 1.%

BS / BSD Recoveries

Project Name: MA-Doom (Historical)

Work Order #: 453782 **Project ID:**

Analyst: JOL **Date Prepared:** 12/11/2012 **Date Analyzed:** 12/11/2012

Lab Batch ID: 902591 **Sample:** 631032-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	<1.00	100	99.1	99	100	98.7	99	0	80-120	20	

Analyst: KEB **Date Prepared:** 12/11/2012 **Date Analyzed:** 12/11/2012

Lab Batch ID: 902670 **Sample:** 631085-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	<15.0	997	1020	102	1000	1050	105	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	1010	101	1000	1040	104	3	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

Version: 1.%

Form 3 - MS Recoveries

Project Name: MA-Doom (Historical)

Work Order #: 453782
Lab Batch #: 902591
Project ID:
Date Analyzed: 12/11/2012
Date Prepared: 12/11/2012
Analyst: JOL
QC- Sample ID: 453785-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	6.29	104	107	97	80-120	

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

BRL - Below Reporting Limit

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: MA-Doom (Historical)

Work Order # : 453782 **Project ID:**

Lab Batch ID: 902670 **QC- Sample ID:** 453701-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/12/2012 **Date Prepared:** 12/11/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<17.5	1170	1180	101	1170	1180	101	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<17.5	1170	3540	303	1170	2930	250	19	70-135	35	X

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

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

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

Sample Duplicate Recovery

Project Name: MA-Doom (Historical)

Work Order #: 453782

Lab Batch #: 902526 **Project ID:**

Date Analyzed: 12/10/2012 16:00 **Date Prepared:** 12/10/2012 **Analyst:** WRU

QC- Sample ID: 453796-021 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	13.2	13.0	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

Version: 1.%

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo; Joel Lowry
Project Name: MA-Doom (Historical)
Company Name: Basin Environmental Service Technologies, LLC
Project #:
Company Address: P.O. Box 301
Project Loc: Lea County, NM
City/State/Zip: Lovington, NM 88260
PO #: Bill Southern Union Gas Services
Telephone No: (575)396-2378
Fax No: (575) 396-1429
Report Format: [X] Standard [ ] TRRP [ ] NPDES
Sampler Signature:
e-mail: pm@basinenv.com curt.stanley@sug.com rose.slade@sug.com

(lab use only) ORDER #: 453782

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW = Drinking Water SL = Sludg; GW = Groundwater S = Soil/Soil; NP = Non-Potable Specify Othe	Analyze For: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	SP#1 @ 8'			12/6/2012	1310		1	X								Soil	X											X			X
	SP#1 @ 12'			12/6/2012	1340		1	X								Soil	X											X			X

TCLP:
TOTAL: X

Special Instructions:
Hold SP#1 @ 12' for BTEX

Relinquished by:	Date: 12-7-12	Time: 13:45	Received by: Steve Butler	Date: 12-7-12	Time: 1345
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by ELOT: Shaunee Smith	Date: 12-10-12	Time: 9:46

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	A	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 10.6 °C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 12/10/2012 09:46:00 AM

Work Order #: 453782

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	10.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 454441

for

Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

MA-DOOM

20-DEC-12

Collected By: Client

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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
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)

20-DEC-12

Project Manager: **Ben Arguijo**
Southern Union Gas Services- Monahans
801 South Loop 464
Monahans, TX 79756

Reference: XENCO Report No(s): **454441**
MA-DOOM
Project Address: Lea County, NM

Ben Arguijo:

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(s) 454441. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 454441 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 454441

Southern Union Gas Services- Monahans, Monahans, TX

MA-DOOM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP#1 @ 15'	S	12-17-12 13:00		454441-001
SP#1 @ 18'	S	12-17-12 14:00		454441-002

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: MA-DOOM

Project ID:
Work Order Number(s): *454441*

Report Date: *20-DEC-12*
Date Received: *12/19/2012*

Sample receipt non conformances and comments:
hold for btex

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 454441

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: MA-DOOM

Project Id:
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Wed Dec-19-12 02:00 pm
Report Date: 20-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested								
	Lab Id:	454441-001		454441-002				
	Field Id:	SP#1 @ 15'		SP#1 @ 18'				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	Dec-17-12 13:00		Dec-17-12 14:00				
Percent Moisture	***Extracted:***							
	Analyzed:	Dec-19-12 15:30		Dec-19-12 15:30				
	Units/RL:	%	RL	%	RL			
Percent Moisture		9.13	1.00	7.27	1.00			
TPH By SW8015 Mod	***Extracted:***	Dec-19-12 14:20						
	Analyzed:	Dec-20-12 05:51						
	Units/RL:	mg/kg	RL					
C6-C12 Gasoline Range Hydrocarbons		ND	16.5					
C12-C28 Diesel Range Hydrocarbons		ND	16.5					
C28-C35 Oil Range Hydrocarbons		ND	16.5					
Total TPH		ND	16.5					

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

* Surrogate recovered outside laboratory control limit.

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 **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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

Certified and approved by numerous States and Agencies.

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

Houston - Dallas - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

	Phone	Fax
4143 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 454441,

Project ID:

Lab Batch #: 903328 **Sample:** 454441-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 05:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	100	93	70-135	
o-Terphenyl	45.9	50.1	92	70-135	

Lab Batch #: 903328 **Sample:** 631504-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 22:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	100	91	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

Lab Batch #: 903328 **Sample:** 631504-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 21:10

SURROGATE RECOVERY 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	51.3	50.0	103	70-135	

Lab Batch #: 903328 **Sample:** 631504-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 21:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.7	95	70-135	
o-Terphenyl	53.1	49.9	106	70-135	

Lab Batch #: 903328 **Sample:** 454401-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 08:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	100	89	70-135	
o-Terphenyl	50.0	50.1	100	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 454441,

Project ID:

Lab Batch #: 903328 **Sample:** 454401-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 09:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.6	98	70-135	
o-Terphenyl	49.2	49.8	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.

BS / BSD Recoveries

Project Name: MA-DOOM

Work Order #: 454441
Analyst: KEB
Date Prepared: 12/19/2012
Project ID:
Date Analyzed: 12/19/2012
Lab Batch ID: 903328
Sample: 631504-1-BKS
Batch #: 1
Matrix: Solid
Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	<15.0	1000	1020	102	997	1070	107	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	979	98	997	1030	103	5	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 / MSD Recoveries

Project Name: MA-DOOM

Work Order # : 454441 **Project ID:**

Lab Batch ID: 903328 **QC- Sample ID:** 454401-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/20/2012 **Date Prepared:** 12/19/2012 **Analyst:** KEB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.9	1060	1110	105	1060	1070	101	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.9	1060	1070	101	1060	1030	97	4	70-135	35	

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

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

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

Sample Duplicate Recovery

Project Name: MA-DOOM

Work Order #: 454441

Lab Batch #: 903331 **Project ID:**

Date Analyzed: 12/19/2012 15:07 **Date Prepared:** 12/19/2012 **Analyst:** WRU

QC- Sample ID: 454401-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.62	5.51	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo; Joel Lowry

Project Name: MA-DOOM

Company Name: Basin Environmental Service Technologies, LLC

Project #:

Company Address: P.O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: Bill Southern Union Gas

Telephone No: (575)396-2378

Fax No: (575) 396-1429

Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: Jody Walters

e-mail: pm@basinenv.com

(lab use only) ORDER #: 454441

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW = Drinking Water SL = Sludge; GW = Groundwater S = Soil/Soli; NP = Non-Potable Specify Othe	Analyze For: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260 (TCLP: / TOTAL: X)	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	SP#1 @ 15'			12/17/2012	1300		1	X								Soil	X													X	
	SP#1 @ 18'			12/17/2012	1400		1	X								Soil	X														

Special Instructions: Run SP#1@15' 1st. Hold SP#1@18'. Email Results or Call w/TPH Verbal. Hold for BTEX.

Relinquished by:	Date	Time	Received by:	Date	Time
Jody Walters	12-17-12	16:30		12/18/12	8:40AM
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Maurel Smith	12/19/12	1400

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	N	(N)
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.4 1.6

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 12/19/2012 02:00:00 PM

Work Order #: 454441

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 454444

for

Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

MA-DOOM

21-DEC-12

Collected By: Client

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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
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)

21-DEC-12

Project Manager: **Ben Arguijo**
Southern Union Gas Services- Monahans
801 South Loop 464
Monahans, TX 79756

Reference: XENCO Report No(s): **454444**
MA-DOOM
Project Address: Lea County, NM

Ben Arguijo:

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(s) 454444. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 454444 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 454444

Southern Union Gas Services- Monahans, Monahans, TX

MA-DOOM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Wall 12' BGS	S	12-18-12 13:00		454444-001
North Wall 12' BGS	S	12-18-12 13:10		454444-002

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: MA-DOOM

Project ID:
Work Order Number(s): 454444

Report Date: 21-DEC-12
Date Received: 12/19/2012

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-903383 Inorganic Anions by EPA 300/300.1
E300

Batch 903383, Chloride recovered above QC limits in the Matrix Spike.
Samples affected are: 454444-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-903463 BTEX by EPA 8021B
SW8021BM

Batch 903463, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 454444-001, -002.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analysis Summary 454444

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: MA-DOOM

Project Id:
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Wed Dec-19-12 02:00 pm
Report Date: 21-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested									
	Lab Id:	454444-001		454444-002					
	Field Id:	South Wall 12' BGS		North Wall 12' BGS					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-18-12 13:00		Dec-18-12 13:10					
BTEX by EPA 8021B	***Extracted:***	Dec-20-12 16:30		Dec-20-12 16:30					
	Analyzed:	Dec-21-12 13:17		Dec-21-12 13:34					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00107	ND	0.00107				
Toluene		ND	0.00214	ND	0.00214				
Ethylbenzene		ND	0.00107	ND	0.00107				
m_p-Xylenes		ND	0.00214	ND	0.00214				
o-Xylene		ND	0.00107	ND	0.00107				
Total Xylenes		ND	0.00107	ND	0.00107				
Total BTEX		ND	0.00107	ND	0.00107				
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Dec-20-12 13:25		Dec-20-12 13:25					
	Analyzed:	Dec-20-12 15:46		Dec-20-12 16:03					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		71.9	1.08	33.3	1.07				
Percent Moisture	***Extracted:***								
	Analyzed:	Dec-19-12 15:30		Dec-19-12 15:30					
	Units/RL:	%	RL	%	RL				
Percent Moisture		7.03	1.00	6.91	1.00				
TPH By SW8015 Mod	***Extracted:***	Dec-19-12 14:20		Dec-19-12 14:20					
	Analyzed:	Dec-20-12 06:18		Dec-20-12 06:45					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.1	ND	16.1				
C12-C28 Diesel Range Hydrocarbons		ND	16.1	20.4	16.1				
C28-C35 Oil Range Hydrocarbons		ND	16.1	ND	16.1				
Total TPH		ND	16.1	20.4	16.1				

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

* Surrogate recovered outside laboratory control limit.

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 **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Certified and approved by numerous States and Agencies.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 454444,

Project ID:

Lab Batch #: 903328 **Sample:** 454444-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 06:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	99.9	94	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 903328 **Sample:** 454444-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 06:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.7	100	93	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 903463 **Sample:** 454444-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/21/12 13:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 903463 **Sample:** 454444-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/21/12 13:34

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 903328 **Sample:** 631504-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 22:14

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	100	91	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 454444,

Project ID:

Lab Batch #: 903463 **Sample:** 631588-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/20/12 21:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 903328 **Sample:** 631504-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 21:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	100	94	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 903463 **Sample:** 631588-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/20/12 21:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 903328 **Sample:** 631504-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/19/12 21:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.7	95	70-135	
o-Terphenyl	53.1	49.9	106	70-135	

Lab Batch #: 903463 **Sample:** 631588-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/20/12 21:24

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: MA-DOOM

Work Orders : 454444,

Project ID:

Lab Batch #: 903328 **Sample:** 454401-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 08:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	100	89	70-135	
o-Terphenyl	50.0	50.1	100	70-135	

Lab Batch #: 903328 **Sample:** 454401-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/20/12 09:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.6	98	70-135	
o-Terphenyl	49.2	49.8	99	70-135	

Lab Batch #: 903463 **Sample:** 454340-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/21/12 01:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: MA-DOOM

Work Order #: 454444

Project ID:

Analyst: KEB **Date Prepared:** 12/20/2012 **Date Analyzed:** 12/20/2012

Lab Batch ID: 903463 **Sample:** 631588-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000994	0.0994	0.0866	87	0.100	0.112	112	26	70-130	35	
Toluene	<0.00199	0.0994	0.0898	90	0.100	0.113	113	23	70-130	35	
Ethylbenzene	<0.000994	0.0994	0.0800	80	0.100	0.0977	98	20	71-129	35	
m_p-Xylenes	<0.00199	0.199	0.185	93	0.200	0.231	116	22	70-135	35	
o-Xylene	<0.000994	0.0994	0.0895	90	0.100	0.111	111	21	71-133	35	

Analyst: JOL **Date Prepared:** 12/20/2012 **Date Analyzed:** 12/20/2012

Lab Batch ID: 903383 **Sample:** 631537-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	2.93	100	101	101	100	103	103	2	80-120	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: MA-DOOM

Work Order #: 454444

Project ID:

Analyst: KEB

Date Prepared: 12/19/2012

Date Analyzed: 12/19/2012

Lab Batch ID: 903328

Sample: 631504-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	<15.0	1000	1020	102	997	1070	107	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	979	98	997	1030	103	5	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: MA-DOOM

Work Order #: 454444
Lab Batch #: 903383
Project ID:
Date Analyzed: 12/20/2012
Date Prepared: 12/20/2012
Analyst: JOL
QC- Sample ID: 454444-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	71.9	108	263	177	80-120	X

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

Form 3 - MS / MSD Recoveries

Project Name: MA-DOOM

Work Order # : 454444 **Project ID:**

Lab Batch ID: 903328 **QC- Sample ID:** 454401-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/20/2012 **Date Prepared:** 12/19/2012 **Analyst:** KEB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.9	1060	1110	105	1060	1070	101	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.9	1060	1070	101	1060	1030	97	4	70-135	35	

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

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

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

Sample Duplicate Recovery

Project Name: MA-DOOM

Work Order #: 454444

Lab Batch #: 903331 **Project ID:**

Date Analyzed: 12/19/2012 15:07 **Date Prepared:** 12/19/2012 **Analyst:** WRU

QC- Sample ID: 454401-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.62	5.51	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo; Joel Lowry

Project Name: MA-DOOM

Company Name: Basin Environmental Service Technologies, LLC

Project #:

Company Address: P.O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: Bill Southern Union Gas

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: Jody Walter e-mail: pm@basinenv.com

(lab use only) ORDER #: 454444

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludg / GW=Groundwater S=Soil/Soil / NP=Non-Potable Specify Othe	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260 (TOTAL: X)	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	South Wall 12'BGS			12-18-12	13:00		1	X								Soil	X											X			X	
	North Wall 12' BGS			12-18-12	13:10		1	X								Soil	X											X			X	

Special Instructions: RUSH Email or Call w/TPH & Chloride verbal

Relinquished by:	Date	Time	Received by:	Date	Time
Jody Walter	12-18-12	16:00	Steve Butler	12-18-12	1606
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Shawnee Smith	12/19/12	1400

Laboratory Comments:

Sample Containers Intact?	Y N
VOCs Free of Headspace?	Y N
Labels on container(s)	Y N
Custody seals on container(s)	Y N
Custody seals on cooler(s)	Y N
Sample Hand Delivered by Sampler/Client Rep. ?	Y N
by Courier? UPS DHL FedEx Lone Star	
Temperature Upon Receipt:	8.0 °C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 12/19/2012 02:00:00 PM

Work Order #: 454444

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 454701

for

Southern Union Gas Services- Monahans

Project Manager: Joel Lowry

MA DOOM

27-DEC-12

Collected By: Client

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), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
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)

27-DEC-12

Project Manager: **Joel Lowry**
Southern Union Gas Services- Monahans
801 South Loop 464
Monahans, TX 79756

Reference: XENCO Report No(s): **454701**
MA DOOM
Project Address: Lea County, NM

Joel Lowry:

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(s) 454701. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 454701 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,

Alejandro Montoya
New Mexico Laboratory Director

Sample Cross Reference 454701

Southern Union Gas Services- Monahans, Monahans, TX

MA DOOM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East wall 12' BGS	S	12-21-12 10:00		454701-001
Floor 14' BGS	S	12-21-12 10:10		454701-002
West Wall 12'BGS	S	12-21-12 10:20		454701-003

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: MA DOOM

Project ID:
Work Order Number(s): 454701

Report Date: 27-DEC-12
Date Received: 12/24/2012

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 454701

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: MA DOOM

Project Id:
Contact: Joel Lowry
Project Location: Lea County, NM

Date Received in Lab: Mon Dec-24-12 03:20 pm
Report Date: 27-DEC-12
Project Manager: Nicholas Straccione

Analysis Requested									
	Lab Id:	454701-001		454701-002		454701-003			
	Field Id:	East wall 12' BGS		Floor 14' BGS		West Wall 12'BGS			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Dec-21-12 10:00		Dec-21-12 10:10		Dec-21-12 10:20			
BTEX by EPA 8021B	***Extracted:***			Dec-26-12 11:00					
	Analyzed:			Dec-26-12 15:56					
	Units/RL:			mg/kg	RL				
Benzene				ND	0.00104				
Toluene				ND	0.00209				
Ethylbenzene				ND	0.00104				
m,p-Xylenes				ND	0.00209				
o-Xylene				ND	0.00104				
Total Xylenes				ND	0.00104				
Total BTEX				ND	0.00104				
Inorganic Anions by EPA 300/300.1 SUB: E871002	***Extracted:***	Dec-27-12 10:59				Dec-27-12 10:59			
	Analyzed:	Dec-27-12 12:07				Dec-27-12 12:59			
	Units/RL:	mg/kg	RL			mg/kg	RL		
Chloride		49.9	1.35			97.1	1.08		
Percent Moisture	***Extracted:***								
	Analyzed:	Dec-26-12 12:00		Dec-26-12 12:00		Dec-26-12 12:00			
	Units/RL:	%	RL	%	RL	%	RL		
Percent Moisture		26.0	1.00	4.38	1.00	7.24	1.00		
TPH By SW8015 Mod	***Extracted:***	Dec-26-12 11:00		Dec-26-12 11:00		Dec-26-12 11:00			
	Analyzed:	Dec-26-12 15:35		Dec-26-12 16:58		Dec-26-12 17:25			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	19.9	ND	15.7	ND	15.9		
C12-C28 Diesel Range Hydrocarbons		ND	19.9	ND	15.7	ND	15.9		
C28-C35 Oil Range Hydrocarbons		ND	19.9	ND	15.7	ND	15.9		
Total TPH		ND	19.9	ND	15.7	ND	15.9		

Alejandro Montoya
New Mexico Laboratory Director

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to 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.

* Surrogate recovered outside laboratory control limit.

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 **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Certified and approved by numerous States and Agencies.

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4143 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: MA DOOM

Work Orders : 454701,

Project ID:

Lab Batch #: 903671 **Sample:** 454701-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 15:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	98.0	92	70-135	
o-Terphenyl	42.3	49.0	86	70-135	

Lab Batch #: 903663 **Sample:** 454701-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 15:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 903671 **Sample:** 454701-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 16:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	99.8	95	70-135	
o-Terphenyl	45.0	49.9	90	70-135	

Lab Batch #: 903671 **Sample:** 454701-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 17:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	98.2	92	70-135	
o-Terphenyl	42.7	49.1	87	70-135	

Lab Batch #: 903671 **Sample:** 631733-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 15:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.9	93	70-135	
o-Terphenyl	44.0	50.0	88	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: MA DOOM

Work Orders : 454701,

Project ID:

Lab Batch #: 903663 **Sample:** 631732-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 15:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

Lab Batch #: 903671 **Sample:** 631733-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 14:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	99.5	96	70-135	
o-Terphenyl	49.1	49.8	99	70-135	

Lab Batch #: 903663 **Sample:** 631732-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 15:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 903671 **Sample:** 631733-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 14:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	99.8	98	70-135	
o-Terphenyl	50.2	49.9	101	70-135	

Lab Batch #: 903663 **Sample:** 631732-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/26/12 15:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: MA DOOM

Work Orders : 454701,

Project ID:

Lab Batch #: 903671 **Sample:** 454701-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 16:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	99.0	99	70-135	
o-Terphenyl	50.2	49.5	101	70-135	

Lab Batch #: 903663 **Sample:** 454701-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 16:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0359	0.0300	120	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 903663 **Sample:** 454701-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 16:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 903671 **Sample:** 454701-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/26/12 16:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	99.1	96	70-135	
o-Terphenyl	49.7	49.6	100	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: MA DOOM

Work Order #: 454701 **Project ID:**

Analyst: AMB **Date Prepared:** 12/26/2012 **Date Analyzed:** 12/26/2012

Lab Batch ID: 903663 **Sample:** 631732-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000996	0.0996	0.0752	76	0.100	0.0741	74	1	70-130	35	
Toluene	<0.00199	0.0996	0.0869	87	0.100	0.0822	82	6	70-130	35	
Ethylbenzene	<0.000996	0.0996	0.0779	78	0.100	0.0766	77	2	71-129	35	
m,p-Xylenes	<0.00199	0.199	0.159	80	0.200	0.156	78	2	70-135	35	
o-Xylene	<0.000996	0.0996	0.0819	82	0.100	0.0799	80	2	71-133	35	

Analyst: RKO **Date Prepared:** 12/27/2012 **Date Analyzed:** 12/27/2012

Lab Batch ID: 903747 **Sample:** 631776-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	<1.00	100	104	104	100	104	104	0	80-120	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: MA DOOM

Work Order #: 454701
Analyst: AMB
Lab Batch ID: 903671
Sample: 631733-1-BKS
Units: mg/kg

Date Prepared: 12/26/2012
Batch #: 1

Project ID:
Date Analyzed: 12/26/2012
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	<14.9	995	889	89	998	894	90	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<14.9	995	835	84	998	848	85	2	70-135	35	

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

Form 3 - MS Recoveries

Project Name: MA DOOM

Work Order #: 454701
Lab Batch #: 903747
Project ID:
Date Analyzed: 12/27/2012
Date Prepared: 12/27/2012
Analyst: RKO
QC- Sample ID: 454701-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	49.9	135	178	95	80-120	

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

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: MA DOOM

Work Order # : 454701 **Project ID:**

Lab Batch ID: 903663 **QC- Sample ID:** 454701-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/26/2012 **Date Prepared:** 12/26/2012 **Analyst:** AMB

Reporting Units: mg/kg

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
	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Benzene	<0.00104	0.104	0.0807	78	0.104	0.0754	73	7	70-130	35	
Toluene	<0.00208	0.104	0.0891	86	0.104	0.0830	80	7	70-130	35	
Ethylbenzene	<0.00104	0.104	0.0837	80	0.104	0.0807	78	4	71-129	35	
m,p-Xylenes	<0.00208	0.208	0.174	84	0.209	0.166	79	5	70-135	35	
o-Xylene	<0.00104	0.104	0.0809	78	0.104	0.0865	83	7	71-133	35	

Lab Batch ID: 903671 **QC- Sample ID:** 454701-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/26/2012 **Date Prepared:** 12/26/2012 **Analyst:** AMB

Reporting Units: mg/kg

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
	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	<20.1	1340	1230	92	1340	1200	90	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<20.1	1340	1140	85	1340	1130	84	1	70-135	35	

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

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

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

Sample Duplicate Recovery

Project Name: MA DOOM

Work Order #: 454701

Lab Batch #: 903662 **Project ID:**

Date Analyzed: 12/26/2012 12:00 **Date Prepared:** 12/26/2012 **Analyst:** AMB

QC- Sample ID: 454701-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	26.0	25.3	3	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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo; Joel Lowry
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Jody Walton e-mail: pm@basinenv.com

Project Name: MA DOOM
Project #:
Project Loc: Lea County, NM
PO #: Bill Southern Union Gas
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 454701

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Soil NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260 X	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	EAST Wall 12'BGS			12-21-12	10:00		1	X								Soil	X											X				X	
	Floor 14'BGS			12-21-12	10:10		1	X								Soil	X								X							X	
	West wall 12'BGS			12-21-12	10:20		1	X								Soil	X											X				X	

Special Instructions: RUSH E-Mail or Call w/TPH Verbal

Relinquished by:	Date	Time	Received by:	Date	Time
Jody Walton	12-21-12	320		12/21/12	320pm
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				12/24/12	15:00

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	Y	(N/A)
Labels on container(s)	(Y)	N
Custody seals on container(s)	(Y)	N
Custody seals on cooler(s)	(Y)	N
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.9 °C

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. UNION LINE - DOOM

Section 5 Township 24S Range 37E

Trucking Company Basin Enviro - TRIPLE M RED

Drivers Signature: X ENRIQUE ESPARANTO

Type of Material Hydrocarbon Impacted Soil

Quantity 6 Loads By 12 yd Dump Truck 72 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Jerald Doom

Date 12-21-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

575 395 3537

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. Union Doom

Section 5 Township 24S Range 37E

Trucking Company Basin TRIPLE M BLUE

Drivers Signature: X Enrique

Type of Material HIS

Quantity 6 Loads By 12 yd Dump Truck 72 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: J Doom

Date 12-26-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature: Enrique

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: 5 UNION LINE - Doom

Section 5 Township 24S Range 37E

Trucking Company Basin - TRIPLE M white

Drivers Signature: X EVERARDO TORRES

Type of Material H2S

Quantity 6 Loads By 12 yd Dump Truck 72 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: J Doom

Date 12-26-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature: EVERARDO TORRES

NM OCD Permit DI-0033
SOC# 2157071
Sec 5 T25S R37E
(575) 395-3537 (575) 395-2877

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. UNION LINE - Doom

Section 5 Township 24S Range R37E

Trucking Company Basin - TRIPLE M BLUE

Drivers Signature: X Enrique

Type of Material H2S

Quantity 6 Loads By 12 yd Dump Truck 72 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Jerold Doom

Date 12-21-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. UNION LINE — DOOM

Section 5 Township 24S Range 37E

Trucking Company Basin Enviro TRIPLE M white

Drivers Signature Alex Lomas

Type of Material Hydrocarbon Impacted Soil

Quantity 7 Loads By 12 yd Dump Truck 84 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Gerald Doom

Date 12-20-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. UNION LINE - DOOM

Section 5 Township 24S Range 37E

Trucking Company Basin — TRIPLE M BLVE

Drivers Signature: Enrique Avellan

Type of Material HFS

Quantity 7 Loads By 12 yd Dump Truck 84 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Gerald Doom

Date 12-20-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: MA-Doom

Section 5 Township 24S, 37E Range

Trucking Company Basin Environmental

Drivers Signature:

Type of Material OD

Quantity 5 Loads By 12 yd Dump Truck ~~12~~ 60 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Jerold Doom

Date 12-18-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

Doom Land Farm
Waste Manifest

Generators/Originating Site Location: S. UNION LINE

Section 5 Township 24S Range 37E

Trucking Company BASIN ENVIRO

Drivers Signature:

Type of Material Hydrocarbon Impacted Soil

Quantity 3 Loads By 12 yd Dump Truck 36 Total yds

Cell Number material was placed in land farm #8

Comments:

Attendant on duty signature: Jerold Doom

Date 12-19-12

As a condition of acceptance for disposal, I hereby certify that this waste is exempt waste as defined by the EPA. The waste listed above was generated as a result of oil and gas operations and is exempt from RCRA sub title c regulations and not mixed with non-exempt waste.

Signature:

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Tony Savoie
Address	P.O. Box 1226 Jal, N.M. 88252	Telephone No.	505-395-2116
Facility Name	Lea County Field Dept.	Facility Type	Natural Gas Gathering

Surface Owner: Jarold and Dan Doom	Mineral Owner: State	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	5	24S	37E					Lea

Latitude N32 14.491 Longitude W103 10.858

NATURE OF RELEASE

Type of Release : Crude Oil, and Natural Gas	Volume of Release: Greater than 50 mcf gas and 10 bbls crude oil	Volume Recovered NONE
Source of Release : 10" Natural Gas Pipeline	Date and Hour of Occurrence not known	Date and Hour of Discovery 6/4/09 10:23 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The 10" Natural gas pipeline developed a leak while operating at approximately 30 psi, the affected area was clamped, all of the crude oil that was released had soaked into the ground. Permanent repairs were made the following day.

Describe Area Affected and Cleanup Action Taken. Approximately 1950 sq.ft. of pasture land was affected by the leak and temporary repair. Final remediation will follow the NMOCD recommended guidelines for leaks and spills.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION Approved by District Supervisor:	
Printed Name:		
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: 7/31/09 Phone: 505-395-2116		

* 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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

Initial Report ☒ Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Crystal Callaway
Address	801 S. Loop 464, Monahans, TX, 79756	Telephone No.	(817) 302-9407
Facility Name:	MA-Doom (1RP-2899)	Facility Type	Natural Gas Gathering

Surface Owner Jarold and Dan Doom	Mineral Owner: State	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	5	24S	37E					Lea

Latitude N32 14.491 Longitude W103 10.858

NATURE OF RELEASE

Type of Release: Crude Oil, and Natural Gas	Volume of Release Greater than 50 mcf gas and 10 bbls crude oil	Volume Recovered NONE
Source of Release: 10" Natural Gas Pipeline	Date and Hour of Occurrence Not known	Date and Hour of Discovery 6/4/09 10:23 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken:
The 10" Natural gas pipeline developed a leak while operating at approximately 30 psi, the affected area was clamped, all of the crude oil that was release had soaked into the ground. Permanent repairs were made the following day.

Describe Area Affected and Cleanup Action Taken. Approximately 1950 sq. ft. of pasture land was affected by the leak and temporary repair. Final remediation will follow the NMOCD recommended guidelines for leaks and spills.

Approximately 350 yd^3 of impacted material was excavated from the remediation site. Confirmation soil samples collected from the floor and sidewalls of the MA-Doom excavation were analyzed by an NMOCD-approved laboratory, which determined concentrations of benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels.

Please reference the attached Basin Environmental Services Technologies *Remediation Summary and Site Closure Request* for details of remedial activities and the site investigation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Crystal Callaway	OIL CONSERVATION DIVISION	
Printed Name: Crystal Callaway	Approved by District Supervisor:	
Title: Senior Environmental Remediation Specialist	Approval Date:	Expiration Date:
E-mail Address: Crystal.Callaway@Regencygas.com	Conditions of Approval:	
Date: 10/27/14 Phone: (817) 302-9407		