# AE Order Number Banner

**Report Description**

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

**App Number:** pCOH0806354599

1RP - 1802

SOUTHERN UNION GAS COMPANY

*2/16/2016*

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
Revised August 1, 2011

**For temporary pits, closed-loop systems, and below-grade tanks**, submit to the appropriate NMOCD District Office.
**For permanent pits and exceptions** submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

# Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:
- ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
- ☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
- ☐ Modification to an existing permit
- ☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

***Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request***

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Southern Union Gas Services OGRID #: N/A
Address: 801 S. Loop 464 Monahans, Texas 79756
Facility or well name: Drip Tank #55
API Number: N/A OCD Permit Number:
U/L or Qtr/Qtr M Section 21 Township 21S Range 36E County: Lea County, NM
Center of Proposed Design: Latitude 32 27.637 Longitude -103 16.563 NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L_____ x W_____ x D_____

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 100 bbl bbl Type of fluid: Produced Water and Crude Oil
Tank Construction material: Steel
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Tank was installed by EPNG before BGT regulations
Liner type: Thickness N/A mil ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.

**Fencing:** Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*

☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify_____

7.

**Netting:** Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

☐ Monthly inspections (If netting or screening is not physically feasible)

8.

**Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

9.

**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

***Please check a box if one or more of the following is requested, if not leave blank:***

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

***Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance.*** **Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.**

| | |
|---|---|
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☒ No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☒ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)*<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☒ No<br>☐ NA |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to permanent pits)*<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☒ No<br>☐ NA |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☒ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☒ No |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☒ No |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☒ No |
| Within an unstable area.<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☒ No |
| Within a 100-year floodplain.<br>- FEMA map | ☐ Yes ☒ No |

11.
**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC
***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC
***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ *(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

13.
**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC
***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including $H_2S$, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.
**Proposed Closure:** 19.15.17.13 NMAC
***Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.***

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.
**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)
***Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.***

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.
**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC
***Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.***

| | |
|---|---|
| Ground water is less than 50 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area.<br>- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ☐ No |
| Within a 100-year floodplain.<br>- FEMA map | ☐ Yes ☐ No |

18.
**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.
**Operator Application Certification:**
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

20.
**OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment) ☒ CLOSURE CERTIFICATION

**OCD Representative Signature:** Geoffrey Leking Environmental Specialist **Approval Date:** 6/19/13

**Title:** _____ **OCD Permit Number:** _____

21.
**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC
***Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.***

☒ **Closure Completion Date:** 4/25/13

22.
**Closure Method:**
☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

23.
**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**
***Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.***

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*
☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.
**Closure Report Attachment Checklist:** ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***
☒ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☒ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☒ Disposal Facility Name and Permit Number
☒ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☒ Site Reclamation (Photo Documentation)
On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐1927 ☐ 1983

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JUN 19 2013

25.
**Operator Closure Certification:**
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

RECEIVED

Name (Print): Jacob Krautsch Title: Sr. Director EH&S

Signature: Jacob Krautsch Date: 6-17-2013

e-mail address: jacob.krautsch@regencygas.com Telephone: 817-302-9426

*Basin Environmental Service Technologies, LLC*

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

Effective Solutions

# REMEDIATION SUMMARY &

# SITE CLOSURE REQUEST

**SOUTHERN UNION GAS SERVICES**
**DRIP TANK #55 (1RP-1802)**
**HISTORICAL RELEASE SITE**
**Lea County, New Mexico**
**Unit Letter "M", Section 21, Township 21 South, Range 36 East**
**Latitude 32° 27.637' North, Longitude 103° 16.563' West**
**NMOCD Reference # 1RP-1802**

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

**June 2013**

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JUN 19 2013
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Joel W. Lowry
Project Manager

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**FIGURES**



**TABLES**



**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 Drip Tank Battery #55 Historical Remediation Site (1RP-1802). The legal description of the release site is Unit Letter "M", Section 21, Township 21 South, Range 36 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 27.637' North latitude and 103° 16.563' West longitude. The property affected by the release is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO).

On February 23, 2008, Southern Union filed a "Pit or Below-Grade Tank Registration of Closure Form" (Form C-144) with the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office, registering the Drip Tank #55 and notifying them of their intentions to remove the on-site below-grade tank (BGT) and remediate the area. The Form C-144 described the BGT as a steel, one hundred barrel (100 bbl) tank used to contain produced water and crude oil. The C-144 indicated the tank was installed by El Paso Natural Gas (EPNG) before the BGT regulations were written. General photographs of the release site are provided as Appendix A. The Form C-144 is provided as Appendix C.

## 2.0 NMOCD SITE CLASSIFICATION

An NMOCD representative indicated on the initial C-144 that the depth to groundwater is greater than two hundred feet (>200') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

A search of the New Mexico Water Rights Reporting System (NMWRRS) database indicated there are no registered water wells within 1,000' of the remediation site. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within 1,000' of the remediation site. 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 Drip Tank #55 Historical Remediation Site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) – 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) – 5,000 mg/Kg (ppm)

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

## 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On March 4, 2008, exhumation of the BGT began. Inactive pipelines and plumbing were disconnected, and the BGT was removed and transported to an approved disposal facility. Upon removing the BGT, six (6) soil samples (Sample 3 Floor, Floor Composite, North Wall Composite, South Wall Composite, West Wall Composite and East Wall Composite) were collected from the excavation floor and sidewalls and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH were less than the appropriate laboratory method detection limit (MDL) for each of the submitted soil samples with the exception of Sample 3 Floor which had a concentration of 16.8 mg/kg. Soil sample Sample 3 Floor was also analyzed for concentrations of BTEX and chloride which were determined to be less than the laboratory MDL and 7.92 mg/kg, respectively. 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 or around March 13, 2013, the last remaining above ground storage tank (AST) was removed from the location. During the removal of the AST, no holes were discovered and very minimal surface staining was encountered.

On April 25, 2013, a test trench was advanced in the footprint of the former AST in an effort to determine soil had been impacted above NMOCD Regulatory Standards. During the advancement of the test trenches, three (3) soil samples (TT-1 @ Surface, TT-1 @ 4' and TT-1 @ 8') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the laboratory MDL for each of the submitted soil samples. Analytical results indicated TPH concentrations ranged from less than the laboratory MDL for soil sample TT-1 @ 4' to 93.6 mg/kg for soil sample TT-1 @ 8'. Chloride concentrations ranged from 208 mg/kg for soil sample TT-1 @ 8' to 432 mg/kg for soil sample TT-1 @ 4'. Test trenches were backfilled and the site was contoured to match the surrounding topography. The site will be reseeded at a time more conducive to germination. Based on laboratory analytical results it was determined that the soil beneath the former AST had not been impacted above NMOCD Regulatory Standards.

## 4.0 QA/QC PROCEDURES

### 4.1 Soil Sampling

Soil samples were delivered to Permian Basin Environmental Lab LP, of Midland, Texas, and/or Cardinal Laboratories, of Hobbs, New Mexico, 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 300.0 and/or 4500 Cl-B

### 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

Laboratory analytical results from confirmation soil samples collected during the BGT removal indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory standards. Soil samples collected from beneath the former AST indicated soil had not been impacted above NMOCD Regulatory Standards. 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 Drip Tank #55 Historical Remediation 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: Jacob Krautsch
Southern Union Gas Services
801 S. Loop 464
Monahans, Texas 79756
Jacob.krautsch@SUG.com

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

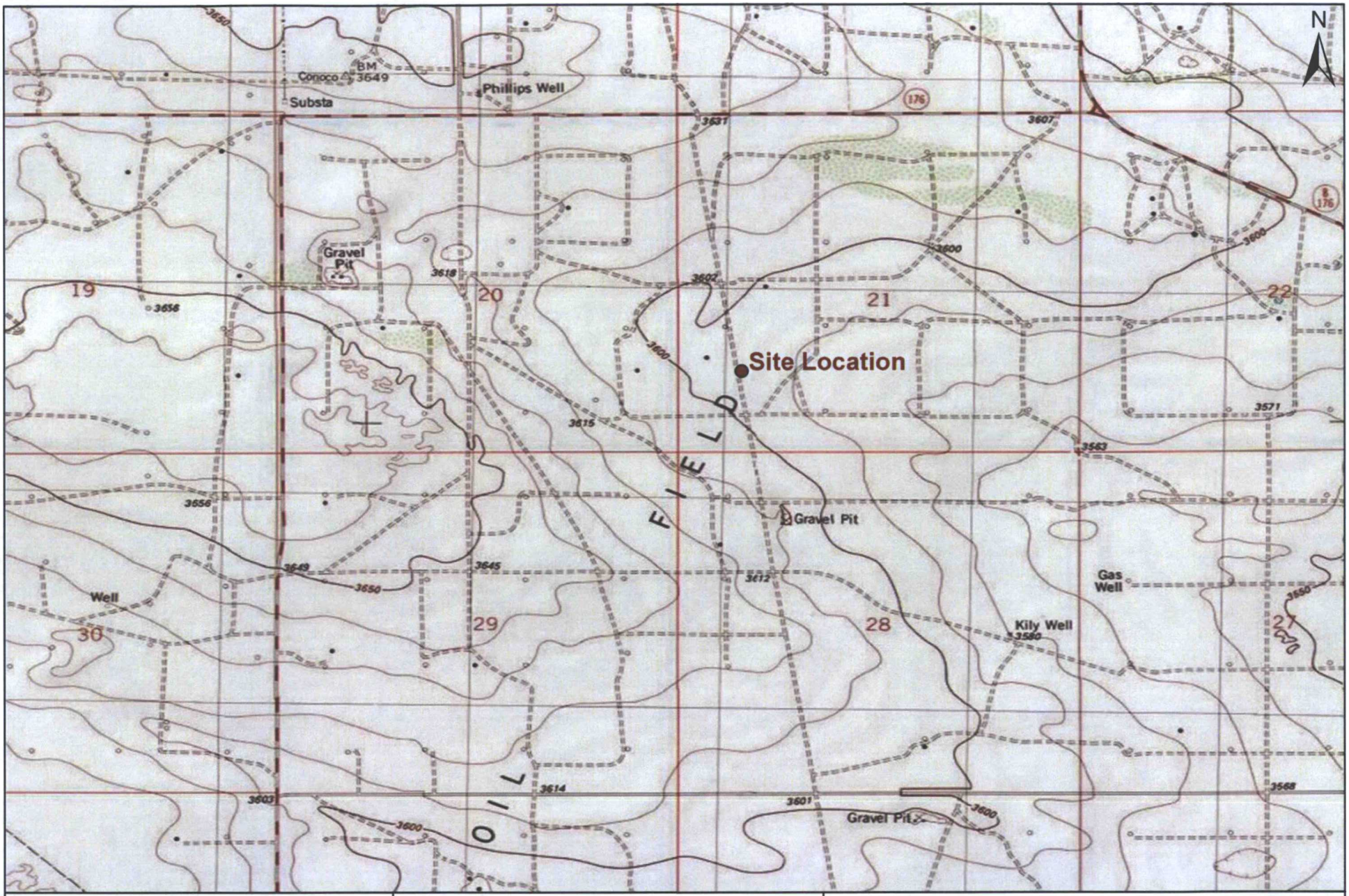


**Figure 1**
**Site Location Map**
**Southern Union Gas Services**
**Drip Tank #55**
**Lea County, New Mexico**
**NMOCD Reference #: 1RP-1802**

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

| | |
|---|---|
| Drawn By: BJA | Checked By: JWL |
| June 13, 2013 | Scale: 1" = 2000' |

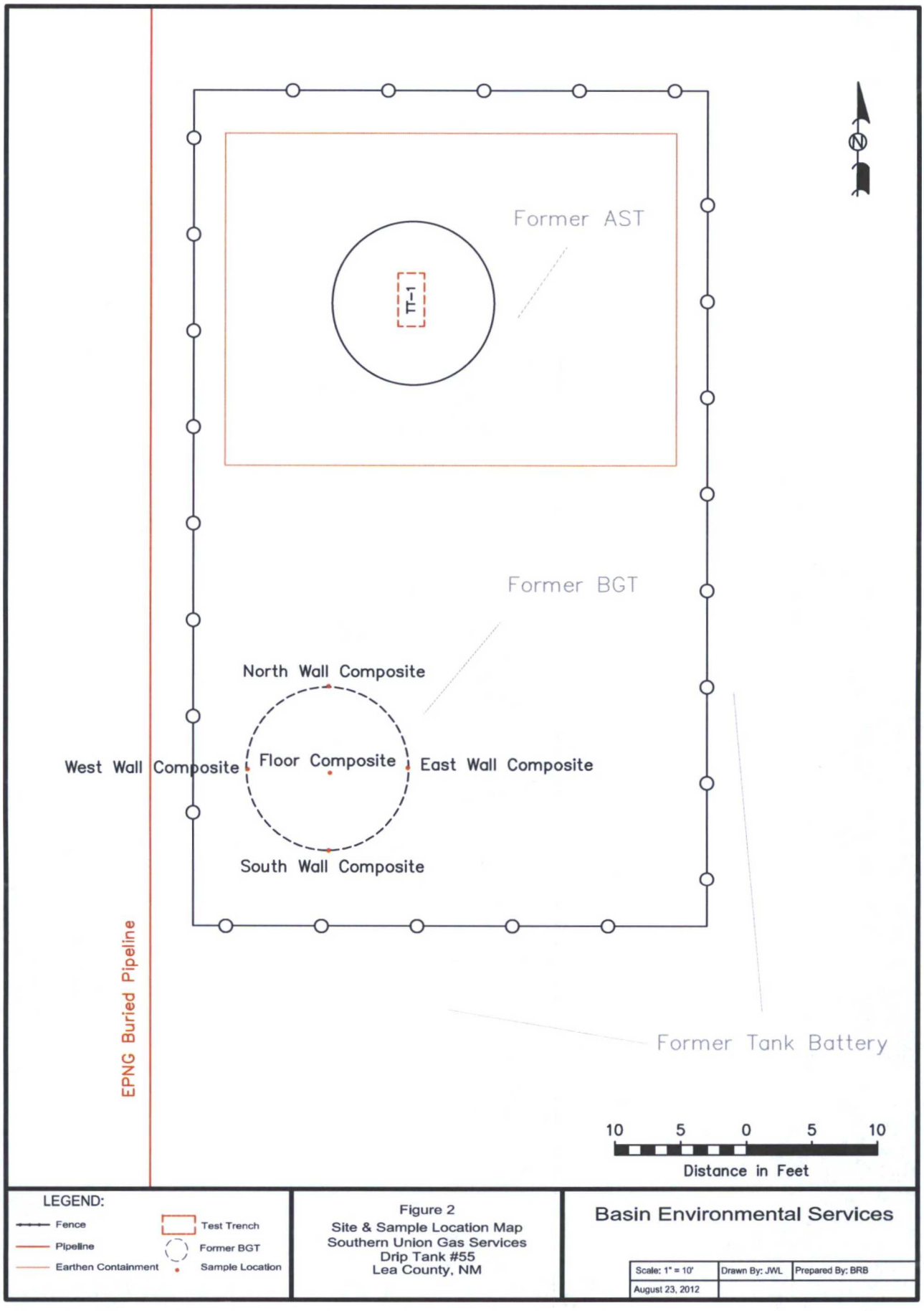


Figure 2
Site & Sample Location Map
Southern Union Gas Services
Drip Tank #55
Lea County, NM

Basin Environmental Services

| Scale: 1" = 10' | Drawn By: JWL | Prepared By: BRB |
|---|---|---|
| August 23, 2012 | | |

**TABLE 1**

**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**SOUTHERN UNION GAS SERVICES**
**DRIP TANK #55**
**HISTORICAL RELEASE SITE**
**LEA COUNTY, NEW MEXICO**
**NMOCD REF# 1RP-1802**

| SAMPLE LOCATION | SAMPLE DEPTH (BGS) | SAMPLE DATE | SOIL STATUS | METHOD: EPA SW 846-8021B, 5030 | | | | | METHOD: 8015M | | | TOTAL TPH $C_6$-$C_{28}$ (mg/Kg) | CHLORIDE (mg/Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 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) | | |
| Sample 3 Floor | N/A | 3/4/2008 | In-Situ | <0.0010 | <0.0020 | <0.0010 | <0.0020 | <0.0020 | <15.3 | 16.8 | <15.2 | 16.8 | 7.92 |
| Floor Composite | N/A | 3/4/2008 | In-Situ | - | - | - | - | - | <15.5 | <15.5 | <15.5 | <15.5 | - |
| North Wall Composite | N/A | 3/4/2008 | In-Situ | - | - | - | - | - | <16.0 | <16.0 | <16.0 | <16.0 | - |
| South Wall Composite | N/A | 3/4/2008 | In-Situ | - | - | - | - | - | <16.3 | <16.3 | <16.3 | <16.3 | - |
| West Wall Composite | N/A | 3/4/2008 | In-Situ | - | - | - | - | - | <15.9 | <15.9 | <15.9 | <15.9 | - |
| East Wall Composite | N/A | 3/4/2008 | In-Situ | - | - | - | - | - | <16.2 | <16.2 | <16.2 | <16.2 | - |
| | | | | | | | | | | | | | |
| TT-1 @ Surface | Surface | 4/25/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 35.8 | 45.5 | 81.3 | 368 |
| TT-1 @ 4' | 4' | 4/25/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | 432.0 |
| TT-1 @ 8' | 8' | 4/25/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 71.7 | 21.9 | 93.6 | 208 |
| | | | | | | | | | | | | | |
| **NMOCD Standard** | | | | **10** | | | | **50** | | | | **5,000** | **1,000** |

- = Not analyzed.

Photograph of the former BGT at Drip Tank #55.

Photograph of the BGT removal and sample locations at Drip Tank #55.

Photograph of the BGT removal and sample locations at Drip Tank #55.

Photograph of the former BGT location after being backfilled.

Photograph of the former above ground storage tank location.

Photograph of the former above ground storage tank location.

# Analytical Report 298902

## for

## Southern Union Gas Services-Jal

**Project Manager: Tony Savoie**

**Drip Tank 55**

**BGT 016**

**11-MAR-08**

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

Texas certification numbers:
Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

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

11-MAR-08

Project Manager: **Tony Savoie**
**Southern Union Gas Services-Jal**
610 Commerce
Jal, NM 88252

Reference: XENCO Report No: **298902**
**Drip Tank 55**
Project Address: Lea County, NM

**Tony Savoie**:

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 298902. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 298902 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron, II**
Odessa Laboratory Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***
*Certified and approved by numerous States and Agencies.*
*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

# Sample Cross Reference 298902

## Southern Union Gas Services-Jal, Jal, NM

Drip Tank 55

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| Sample 3 Floor | S | Mar-04-08 15:30 | | 298902-001 |
| Floor Composite | S | Mar-04-08 15:35 | | 298902-002 |
| North Wall Composite | S | Mar-04-08 15:40 | | 298902-003 |
| South Wall Composite | S | Mar-04-08 15:45 | | 298902-004 |
| West Wall Composite | S | Mar-04-08 15:50 | | 298902-005 |
| East Wall Composite | S | Mar-04-08 15:55 | | 298902-006 |

# Certificate of Analysis Summary 298902

## Southern Union Gas Services-Jal, Jal, NM

### Project Name: Drip Tank 55

**Project Id:** BGT 016
**Contact:** Tony Savoie
**Project Location:** Lea County, NM

**Date Received in Lab:** Wed Mar-05-08 12:20 pm
**Report Date:** 11-MAR-08
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 298902-001 | | 298902-002 | | 298902-003 | | 298902-004 | | 298902-005 | | 298902-006 | |
| | ***Field Id:*** | Sample 3 Floor | | Floor Composite | | North Wall Composite | | South Wall Composite | | West Wall Composite | | East Wall Composite | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Mar-04-08 15:30 | | Mar-04-08 15:35 | | Mar-04-08 15:40 | | Mar-04-08 15:45 | | Mar-04-08 15:50 | | Mar-04-08 15:55 | |
| **Anions by EPA 300/300.1** | ***Extracted:*** | | | | | | | | | | | | |
| | ***Analyzed:*** | Mar-05-08 16:17 | | | | | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | | | | | | | |
| Chloride | | 7.92 | 5.00 | | | | | | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Mar-10-08 11:16 | | | | | | | | | | | |
| | ***Analyzed:*** | Mar-10-08 14:59 | | | | | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | | | | | | | |
| Benzene | | ND | 0.0010 | | | | | | | | | | |
| Toluene | | ND | 0.0020 | | | | | | | | | | |
| Ethylbenzene | | ND | 0.0010 | | | | | | | | | | |
| m,p-Xylenes | | ND | 0.0020 | | | | | | | | | | |
| o-Xylene | | ND | 0.0010 | | | | | | | | | | |
| Xylenes, Total | | ND | | | | | | | | | | | |
| Total BTEX | | ND | | | | | | | | | | | |
| **Percent Moisture** | ***Extracted:*** | | | | | | | | | | | | |
| | ***Analyzed:*** | Mar-05-08 16:00 | | Mar-05-08 16:00 | | Mar-05-08 16:00 | | Mar-05-08 16:00 | | Mar-05-08 16:00 | | Mar-05-08 16:00 | |
| | ***Units/RL:*** | % | RL | % | RL | % | RL | % | RL | % | RL | % | RL |
| Percent Moisture | | 2.15 | 1.00 | 3.39 | 1.00 | 6.43 | 1.00 | 8.05 | 1.00 | 5.63 | 1.00 | 7.32 | 1.00 |
| **TPH By SW8015 Mod** | ***Extracted:*** | Mar-05-08 14:48 | | Mar-05-08 14:48 | | Mar-05-08 14:48 | | Mar-05-08 14:48 | | Mar-05-08 14:48 | | Mar-05-08 14:48 | |
| | ***Analyzed:*** | Mar-07-08 17:27 | | Mar-07-08 17:55 | | Mar-07-08 18:23 | | Mar-07-08 18:50 | | Mar-07-08 19:18 | | Mar-07-08 19:46 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 15.3 | ND | 15.5 | ND | 16.0 | ND | 16.3 | ND | 15.9 | ND | 16.2 |
| C12-C28 Diesel Range Hydrocarbons | | 16.8 | 15.3 | ND | 15.5 | ND | 16.0 | ND | 16.3 | ND | 15.9 | ND | 16.2 |
| C28-C35 Oil Range Hydrocarbons | | ND | 15.3 | ND | 15.5 | ND | 16.0 | ND | 16.3 | ND | 15.9 | ND | 16.2 |
| Total TPH | | 16.8 | | ND | | ND | | ND | | ND | | ND | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).

**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.

* Outside XENCO'S scope of NELAC Accreditation

# Form 2 - Surrogate Recoveries

**Project Name: Drip Tank 55**

**Work Order #:** 298902 **Project ID:** BGT 016

**Lab Batch #:** 716752 **Sample:** 298902-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0337 | 0.0300 | 112 | 80-120 | |
| 4-Bromofluorobenzene | 0.0340 | 0.0300 | 113 | 80-120 | |

**Lab Batch #:** 716752 **Sample:** 505700-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>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 | 0.0328 | 0.0300 | 109 | 80-120 | |

**Lab Batch #:** 716752 **Sample:** 505700-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0330 | 0.0300 | 110 | 80-120 | |
| 4-Bromofluorobenzene | 0.0335 | 0.0300 | 112 | 80-120 | |

**Lab Batch #:** 716752 **Sample:** 505700-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0306 | 0.0300 | 102 | 80-120 | |
| 4-Bromofluorobenzene | 0.0329 | 0.0300 | 110 | 80-120 | |

**Lab Batch #:** 716637 **Sample:** 298902-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.8 | 100 | 98 | 70-135 | |
| o-Terphenyl | 51.6 | 50.0 | 103 | 70-135 | |

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

# Form 2 - Surrogate Recoveries

**Project Name: Drip Tank 55**

**Work Order #:** 298902 **Project ID:** BGT 016

**Lab Batch #:** 716637 **Sample:** 298902-001 S / MS **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 109 | 100 | 109 | 70-135 | |
| o-Terphenyl | 55.9 | 50.0 | 112 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 298902-001 SD / MSD **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 100 | 100 | 100 | 70-135 | |
| o-Terphenyl | 52.4 | 50.0 | 105 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 298902-002 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 95.9 | 100 | 96 | 70-135 | |
| o-Terphenyl | 50.7 | 50.0 | 101 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 298902-003 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.5 | 100 | 98 | 70-135 | |
| o-Terphenyl | 52.2 | 50.0 | 104 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 298902-004 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 95.6 | 100 | 96 | 70-135 | |
| o-Terphenyl | 51.7 | 50.0 | 103 | 70-135 | |

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

# Form 2 - Surrogate Recoveries

**Project Name: Drip Tank 55**

**Work Order #:** 298902 **Project ID:** BGT 016

**Lab Batch #:** 716637 **Sample:** 298902-005 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.2 | 100 | 97 | 70-135 | |
| o-Terphenyl | 52.3 | 50.0 | 105 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 298902-006 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 94.8 | 100 | 95 | 70-135 | |
| o-Terphenyl | 51.1 | 50.0 | 102 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 505640-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 108 | 100 | 108 | 70-135 | |
| o-Terphenyl | 57.0 | 50.0 | 114 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 505640-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 54.5 | 50.0 | 109 | 70-135 | |

**Lab Batch #:** 716637 **Sample:** 505640-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 105 | 100 | 105 | 70-135 | |
| o-Terphenyl | 57.7 | 50.0 | 115 | 70-135 | |

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

# Blank Spike Recovery

## Project Name: Drip Tank 55

**Work Order #:** 298902 **Project ID:** BGT 016

**Lab Batch #:** 716323 **Sample:** 716323-1-BKS **Matrix:** Solid

**Date Analyzed:** 03/05/2008 **Date Prepared:** 03/05/2008 **Analyst:** LATCOR

**Reporting Units:** mg/kg **Batch #:** 1

| | BLANK /BLANK SPIKE RECOVERY STUDY | | | | | |
|---|---|---|---|---|---|---|
| **Anions by EPA 300/300.1**<br>**Analytes** | **Blank Result [A]** | **Spike Added [B]** | **Blank Spike Result [C]** | **Blank Spike %R [D]** | **Control Limits %R** | **Flags** |
| Chloride | ND | 100 | 98.6 | 99 | 75-125 | |

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

# BS / BSD Recoveries

## Project Name: Drip Tank 55

**Work Order #:** 298902 **Project ID:** BGT 016

**Analyst:** SHE **Date Prepared:** 03/10/2008 **Date Analyzed:** 03/10/2008

**Lab Batch ID:** 716752 **Sample:** 505700-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| BTEX by EPA 8021B<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.1000 | 0.0887 | 89 | 0.1 | 0.0901 | 90 | 2 | 70-130 | 35 | |
| Toluene | ND | 0.1000 | 0.0884 | 88 | 0.1 | 0.0902 | 90 | 2 | 70-130 | 35 | |
| Ethylbenzene | ND | 0.1000 | 0.0897 | 90 | 0.1 | 0.0921 | 92 | 3 | 71-129 | 35 | |
| m,p-Xylenes | ND | 0.2000 | 0.1805 | 90 | 0.2 | 0.1841 | 92 | 2 | 70-135 | 35 | |
| o-Xylene | ND | 0.1000 | 0.0956 | 96 | 0.1 | 0.0973 | 97 | 2 | 71-133 | 35 | |

**Analyst:** BRB **Date Prepared:** 03/05/2008 **Date Analyzed:** 03/07/2008

**Lab Batch ID:** 716637 **Sample:** 505640-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| TPH By SW8015 Mod<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C6-C12 Gasoline Range Hydrocarbons | ND | 1000 | 907 | 91 | 1000 | 874 | 87 | 4 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1000 | 913 | 91 | 1000 | 871 | 87 | 5 | 70-135 | 35 | |

Relative Percent Difference RPD = 200*|(D-F)/(D+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: Drip Tank 55**

**Work Order #:** 298902
**Lab Batch #:** 716323
**Date Analyzed:** 03/05/2008
**QC- Sample ID:** 298877-001 S
**Reporting Units:** mg/kg

**Date Prepared:** 03/05/2008
**Batch #:** 1

**Project ID:** BGT 016
**Analyst:** LATCOR
**Matrix:** Soil

| Inorganic Anions by EPA 300 | MATRIX / MATRIX SPIKE RECOVERY STUDY | | | | | |
|---|---|---|---|---|---|---|
| Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | %R [D] | Control Limits %R | Flag |
| Chloride | 903 | 200 | 1160 | 129 | 75-125 | 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

# Form 3 - MS / MSD Recoveries

## Project Name: Drip Tank 55

**Work Order # :** 298902 **Project ID:** BGT 016

**Lab Batch ID:** 716637 **QC- Sample ID:** 298902-001 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 03/07/2008 **Date Prepared:** 03/05/2008 **Analyst:** BRB

**Reporting Units:** mg/kg

| TPH By SW8015 Mod<br>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 | ND | 1020 | 932 | 91 | 1020 | 890 | 87 | 4 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | 16.8 | 1020 | 965 | 93 | 1020 | 926 | 89 | 4 | 70-135 | 35 | |

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

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: Drip Tank 55

**Work Order #:** 298902

**Lab Batch #:** 716323 **Project ID:** BGT 016

**Date Analyzed:** 03/05/2008 **Date Prepared:** 03/05/2008 **Analyst:** LATCOR

**QC- Sample ID:** 298877-001 D **Batch #:** 1 **Matrix:** Soil

**Reporting Units:** mg/kg

| Anions by EPA 300/300.1 | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Chloride | 903 | 890 | 1 | 20 | |

**Lab Batch #:** 716512

**Date Analyzed:** 03/05/2008 **Date Prepared:** 03/05/2008 **Analyst:** RBA

**QC- Sample ID:** 298858-001 D **Batch #:** 1 **Matrix:** Soil

**Reporting Units:** %

| Percent Moisture | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Percent Moisture | 3.50 | 3.29 | 6 | 20 | |

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

# Environmental Lab of Texas

*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: Tony Savoie PAGE 01 OF 01 Project Name: DRIP TANK 55

Company Name: Southern Union Gas Project #: BGT 016

Company Address: SUGS, Jal Project Loc: Lea County, NM

City/State/Zip: Jal, New Mexico 88252 PO #:

Telephone No: (575) 631-9376 Fax No: Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: Troy Haskew e-mail: tony.savoie@sug.com

(lab use only)
ORDER #: 298902

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | $HNO_3$ | HCl | $H_2SO_4$ | NaOH | $Na_2S_2O_3$ | None | Other (Specify) | Matrix: DW – Drinking Water SL – Sludge; GW – Groundwater S – Soil/Sol; NP – Non-Potable Specify Other | Analyze For: TPH: 418.1 8015M 8015B | TPH: TX 1005 TX 1006 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4, Alkalinity) | SAR / ESP / CEC | TCLP: Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | TOTAL: BTEX 8021B/5030 or BTEX 8260 | RCI | N.O.R.M | CHLORIDES | | | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT (3 DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | SAMPLE 3 FLOOR | | | 04 Mar 08 | 1530 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | X | | | X | | | | X |
| 02 | FLOOR COMPOSITE | | | 04 Mar 08 | 1535 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | | | | | | | | X |
| 03 | NORTH WALL COMPOSITE | | | 04 Mar 08 | 1540 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | | | | | | | | X |
| 04 | SOUTH WALL COMPOSITE | | | 04 Mar 08 | 1545 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | | | | | | | | X |
| 05 | WEST WALL COMPOSITE | | | 04 Mar 08 | 1550 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | | | | | | | | X |
| 06 | EAST WALLCOMPOSITE | | | 04 Mar 08 | 1555 | | 1 | X | | | | | | | | SOIL | X | | | | | | | | | | | | | | | X |

Special Instructions:

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Troy Haskew | 03/04/08 | 0830 | Billy Blackwell | 3-6-08 | 8:30 |
| Billy Blackwell | 3-5-08 | 12:20 | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by ELOT: Jeanne Fitch | 03 05 08 | 1220 |

Laboratory Comments:

| | |
|---|---|
| Sample Containers Intact? | N |
| VOCs Free of Headspace? | N |
| Labels on container(s) | N |
| Custody seals on container(s) | N |
| Custody seals on cooler(s) | N |
| Sample Hand Delivered | N |
| by Sampler/Client Rep.? | Y N |
| by Courier? UPS DHL | FedEx Lone Star |
| Temperature Upon Receipt: | 2.0 °C |

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: S.U.G.S

Date/ Time: 3.5.08 12.20

Lab ID # : 218702

Initials: CL

## Sample Receipt Checklist

| | | | | | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | 2.0 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | (Yes) | No | Not Present | |
| #4 | Custody Seals intact on sample bottles/ container? | (Yes) | No | Not Present | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | (Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | (Yes) | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | Yes | No | (Not Applicable) | |
| #20 | VOC samples have zero headspace? | (Yes) | No | Not Applicable | |

## Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

_____

Corrective Action Taken:

_____

_____

_____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 30, 2013

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DRIP TANK BATTERY #55

Enclosed are the results of analyses for samples received by the laboratory on 04/26/13 12:19.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

| | |
|---|---|
| Method EPA 552.2 | Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

Basin Environmental Service
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

| | | | |
|---|---|---|---|
| Received: | 04/26/2013 | Sampling Date: | 04/25/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | DRIP TANK BATTERY #55 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Celey D. Keene |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ SURFACE (H300991-01)

**BTEX 8021B** mg/kg Analyzed By: AP

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *101 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg Analyzed By: DW

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **368** | 16.0 | 04/29/2013 | ND | 432 | 108 | 400 | 3.77 | |

**TPH 8015M** mg/kg Analyzed By: MS

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/29/2013 | ND | 190 | 95.1 | 200 | 1.11 | |
| **DRO >C10-C28** | **35.8** | 10.0 | 04/29/2013 | ND | 192 | 95.9 | 200 | 0.524 | |
| **EXT DRO >C28-C35** | **45.5** | 10.0 | 04/29/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *82.2 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *97.0 %* *63.6-154*

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*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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## *Analytical Results For:*

Basin Environmental Service
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

| | | | |
|---|---|---|---|
| Received: | 04/26/2013 | Sampling Date: | 04/25/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | DRIP TANK BATTERY #55 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Celey D. Keene |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ 4' (H300991-02)

**BTEX 8021B** mg/kg **Analyzed By: AP**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *102 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg **Analyzed By: DW**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **432** | 16.0 | 04/29/2013 | ND | 432 | 108 | 400 | 3.77 | |

**TPH 8015M** mg/kg **Analyzed By: MS**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/29/2013 | ND | 190 | 95.1 | 200 | 1.11 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/29/2013 | ND | 192 | 95.9 | 200 | 0.524 | |
| EXT DRO >C28-C35 | <10.0 | 10.0 | 04/29/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *92.9 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *103 %* *63.6-154*

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*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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## *Analytical Results For:*

Basin Environmental Service
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

| | | | |
|---|---|---|---|
| Received: | 04/26/2013 | Sampling Date: | 04/25/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | DRIP TANK BATTERY #55 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Celey D. Keene |
| Project Location: | LEA COUNTY, NM | | |

**Sample ID: TT - 1 @ 8' (H300991-03)**

**BTEX 8021B** mg/kg **Analyzed By: AP**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *102 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg **Analyzed By: DW**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **208** | 16.0 | 04/29/2013 | ND | 432 | 108 | 400 | 3.77 | |

**TPH 8015M** mg/kg **Analyzed By: MS**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/29/2013 | ND | 190 | 95.1 | 200 | 1.11 | |
| **DRO >C10-C28** | **71.7** | 10.0 | 04/29/2013 | ND | 192 | 95.9 | 200 | 0.524 | |
| **EXT DRO >C28-C35** | **21.9** | 10.0 | 04/29/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *89.5 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *99.2 %* *63.6-154*

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*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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## Notes and Definitions

| | |
|---|---|
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C |
| | Samples reported on an as received basis (wet) unless otherwise noted on report |

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

LAB Order ID # H300991

Page 1 of 1

Page 6 of 6

# Cardinal Laboratories

101 East Marland
Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

| | | | |
|---|---|---|---|
| **Company Name:** | Basin Environmental Service Technologies, LLC | **Phone #:** | (575)396-2378 |
| **Address:** | P.O. Box 301<br>Lovington, NM 88260 | **Fax #:** | (575)396-1429 |
| **Contact Person:** | | **E-mail:** | pm@basinenv.com,<br>rose.slade@sug.com,cyndi.inskeep@sug.com |
| **Invoice to:** | Southern Union Gas | | |
| **Project #:** | | **Project Name:** | Drip Tank Battery H55 |
| **Project Location:**<br>**(Include state)** | Lea Co., NM | **Sampler Signature:** | Joel Lowery |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB ID (LAB USE ONLY) | SAMPLE ID | (G)RAB or (C)OMP | # CONTAINERS | MATRIX: WATER | SOIL | AIR | SLUDGE | PRESERVATIVE METHOD: HCL | $HNO_3$ | $H_2SO_4$ | NaOH | ICE | NONE | SAMPLING: DATE (2013) | TIME | Chloride | TPH 8015M | BTEX 8021B | Turn Around Time if different from standard | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -01 | TT-1 @ Surface | G | 1 | | X | | | | | | | X | | 4/25 | 11:00 | X | X | X | | |
| 02 | TT-1 @ 4' | G | 1 | | X | | | | | | | X | | 4/25 | 11:15 | X | X | X | | |
| 03 | TT-1 @ 8' | G | 1 | | X | | | | | | | X | | 4/25 | 11:30 | X | X | X | | |

| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | |
|---|---|---|---|---|---|---|---|---|
| Joel Lowery | Basin | 4/26/13 | 12:19 | | | 4/26/13 | 12:19 | INST #54<br>OBS ___ °C<br>COR -1.4 °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST ___<br>OBS ___ °C<br>COR ___ °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST ___<br>OBS ___ °C<br>COR ___ °C |

**LAB USE ONLY**

Intact Y / N

Headspace Y / N /NA

Log-In Review

**REMARKS:**

☐ Dry Weight Basis Required

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

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-144
June 1, 2004

**For drilling and production facilities**, submit to appropriate NMOCD District Office.
**For downstream facilities**, submit to Santa Fe office

# Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: Southern Union Gas Services Telephone. 575-395-2116 e-mail address: tony.savoie @sug.com
Address: P.O. Box 1226 Jal, New Mexico 88252
Facility or well name: Drip Tank #55 API #: _____ U/L or Qtr/Qtr M Sec 21 T 21 S R 36E
County: Lea Latitude 32 deg. 27.637N Longitude 103 deg. 16.563W NAD: 1927 ☐ 1983 ☒
Surface Owner: Federal ☐ State ☒ Private ☐ Indian ☐

| **Pit** | **Below-grade tank** | |
|---|---|---|
| Type: Drilling ☐ Production ☐ Disposal ☐<br>Workover ☐ Emergency ☐<br>Lined ☐ Unlined ☐<br>Liner type: Synthetic ☐ Thickness _____mil Clay ☐<br>Pit Volume _____bbl | Volume: _100_bbl Type of fluid: __Produced water and crude oil<br>Construction material: __Steel_____<br>Double-walled, with leak detection? Yes ☐ If not, explain why not.<br>__Tank was installed by EPNG before the BGT regulations were written__ | |
| Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) Average 206 ft. | Less than 50 feet<br>50 feet or more, but less than 100 feet<br>100 feet or more WTR > 2025 | (20 points)<br>(10 points)<br>( 0 points) |
| Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)<br>No, 4746 Horiz. Ft. to a private water well | Yes<br>No | (20 points)<br>( 0 points) |
| Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)<br>2.18 Horizontal miles to an intermittent water course. | Less than 200 feet<br>200 feet or more, but less than 1000 feet<br>1000 feet or more | (20 points)<br>(10 points)<br>( 0 points) |
| | **Ranking Score (Total Points)** | 0 Points |

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☐ offsite ☐ If offsite, name of facility_____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface_____ft. and attach sample results (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: The Below Grade Tank will be removed in accordance with the NMOCD proposed Pit and Below Grade Tank Rules.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date: 2/23/08
Printed Name/ Tony Savoie
Title Waste Management and Remediation Specialist Signature Tony Savoie

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or

Approval:
Printed Name/Title Chris Williams Signature Chris Williams Date: 03/03/2008
RP # 1802

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