



Approval given to  
Backfill 10/20/14  
Kristen Lynch  
NMOCD

## REMEDIATION SUMMARY AND SITE CLOSURE REQUEST

ETC FIELD SERVICES, LLC  
Boyd 4 Inch Historical West  
Lea County, New Mexico  
UNIT LTR "P", Section 23, Township 22 South, Range 37 East  
Latitude 32.372181° North, Longitude 103.127236° West  
NMOCD Reference # 1RP-4277

Prepared For:

ETC Field Services, LLC  
800 East Sonterra  
San Antonio, Texas 78258

HOBBS OCD

OCT 20 2016

RECEIVED

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October 2016

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## INTRODUCTION

TRC Environmental Corporation (TRC), on behalf of ETC Field Services, LLC (ETC), formerly known as Southern Union Gas Services (SUGS) and Regency Field Services, LLC (Regency), has prepared this Remediation Summary and Site Closure Request for the Release Site known as Boyd 4 Inch Historical West. The legal description of the Release Site is Unit Letter "P", Section 23, Township 22 South, Range 37 East, in Lea County, New Mexico. The subject property is owned by Mr. Irvin Boyd of Eunice, New Mexico. The Release Site GPS coordinates are 32.372181° North and 103. 127236° West. Please reference Figure 1 for the Site Location Map and Figure 4 for the Site Details and Confirmation Soil Sample Location Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

In September 2012, SUGS discovered a release had occurred on a four (4) inch lateral pipeline and the release was initially deemed to be non-reportable to the New Mexico Oil Conservation Division (NMOCD). On May 12, 2016, ETC filed a NMOCD Form C-141 documenting the release, information as to the volume and date of the release is not available. General photographs of the site are provided as Appendix B.

## NMOCD SITE CLASSIFICATION

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 23, Township 22 South, Range 37 East. A reference map utilized by the NMOCD Hobbs District Office, indicates groundwater should be encountered at approximately fifty-three (53) feet below ground surface (bgs). Analytical results derived from preliminary soil samples collected from the floor of the existing Release Site excavation indicates hydrocarbon impact exists at approximately twenty (20) feet bgs. Based on the NMOCD site classification system, twenty (20) points will be assigned to the Boyd 4 Inch Historical West Release Site as a result of this criterion.

An unregistered water well (windmill) is located approximately nine hundred seventy-eight (978) feet north-northwest (upgradient) of the Release Site. Based on the NMOCD site classification system, twenty (20) points will be assigned to the subject area ranking as a result of this criterion.

No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

The NMOCD guidelines indicate the Boyd 4 Inch Historical West Release Site has a ranking score of forty (40). Based on this score, the soil remediation levels for a site with a ranking score of forty (40) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 100 mg/Kg (ppm)
- Chloride – 250 mg/Kg (ppm)

## SUMMARY OF SOIL REMEDIATION ACTIVITIES

From September 18, 2012 through December 11, 2013, a previous contractor excavated approximately 587 cubic yards (cy) of impacted soil from the area of impact. Impacted soil was transported to Sundance Services, Inc. (Sundance), in Eunice, New Mexico. The area excavated by the previous contractor was left exposed and is referred to as, the existing remediation project.

On January 29, 2016, TRC, on behalf of ETC, collected six (6) preliminary soil status samples (Floor-1 @ 10', SSW-1 @ 8', NSW-1 @ 7', Floor-2 @ 4', SSW-2 @ 3', and NSW-2 @ 2.5') from the existing excavation to determine the current levels of impact at the Release Site. Based on field observations, it was determined the analytical results from soil samples collected were likely not an accurate representation of the remaining soil impacted at the Release site.

On March 8, 2016, eighteen (18) soil samples (Sample-1 BOE 2', Sample-1 BOE 8.5', Sample-1 BOE 10', Sample-2 BOE 2', Sample-2 BOE 4', Sample-2 BOE 4.6', Sample-3 2', Sample-3 6', Sample-3 10', Sample-4 2', Sample-4 6', Sample-4 10', Sample-5 2', Sample-5 6', Sample-5 10', Sample-6 Surface, Sample-7 Surface, and Sample-8 Surface) were collected from and in the vicinity of the existing excavation utilizing a hand auger. Soil samples were submitted to the laboratory and analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) using EPA Method SW 846-8021B, Total Petroleum Hydrocarbons (TPH) using EPA Method SW 846-8015M, and chloride using EPA Method E 300.0. A review of laboratory analytical results indicated additional vertical and horizontal delineation activities were necessary.

On April 5, 2016, delineation of the impacted soil with heavy equipment began at the Release Site. Six (6) soil samples (Sample-1 @ 21', T-SSW-1 @ 6', T-NSW-1 @ 7', T-WSW-1 @ 11', Sample-2 @ 20', and Sample-10 @ 2.5') were collected, field screened for concentrations of chloride and submitted to the laboratory for BTEX, TPH, and chloride analysis. Please reference Figure 2 for site details and soil sampling locations.

On May 16, 2016, representatives of ETC (formerly SUGS and Regency) and TRC met with a NMOCD representative and submitted the "Proposed Remediation Workplan" (Workplan) for NMOCD consideration. The Workplan summarized remedial activities to date and detailed a closure strategy designed to progress the Release Site toward an NMOCD approved closure status. ETC received written (email) NMOCD approval to proceed with the activities outlined in the Workplan.

On May 31, 2016, TRC commenced excavation activities from the west wall of the existing remediation project to the east, north, and south. Chloride field screening was utilized to guide the excavation activities. Excavated soil was stockpiled to the west of the excavation, pending final disposition of the soil.

On June 7, 2016, TRC began transporting the excavated material to Sundance concurrent with excavation activities. Approximately 16,672 cubic yards of excavated soil was transported to Sundance Services, Inc. The Sundance Disposal Tickets are provided as Appendix C (included on the provided disc).

On June 27, 2016, fifteen (15) soil samples (West Excavation Floor-1 @ 20', West Excavation SSW-1 @ 19', West Excavation NSW-1 @ 19', West Excavation ESW-1 @ 19', West Excavation

Floor-2 @ 20', West Excavation SSW-2 @ 19', West Excavation NSW-2 @ 19', West Excavation Floor-3 @ 20', West Excavation SSW-3 @ 19', West Excavation NSW-3 @ 19', West Excavation WSW-3 @ 19', West Excavation Floor-4 @ 20', West Excavation ESW-4 @ 19', West Excavation WSW-4 @ 19', West Excavation NSW-4 @ 19', and West Excavation Floor-5 @ 15') were collected from the floor and side walls of the excavated area. The soil samples were submitted to the laboratory and analyzed for concentrations of Total Petroleum Hydrocarbons (TPH) using EPA Method SW 846-8015M and chloride using EPA Method E 300.0. The analytical results indicated TPH concentrations were less than the laboratory Method Detection Limit (MDL) of 15 mg/Kg for all collected soil samples, with the exception of West Excavation SSW-2 @ 19', which exhibited a TPH concentration of 608.7 mg/Kg. In addition, analytical results indicated chloride concentrations ranged from less than laboratory MDL of 10 mg/Kg for soil sample West Excavation SSW-2 @ 19' to 1,600 mg/Kg for soil sample West Excavation ESW-1 @ 19'. A review of laboratory analytical results indicated additional excavation activities were necessary toward the north, south, and west. Table 1 summarizes the Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil. Analytical reports are provided as Appendix A.

On June 28, 2016, one (1) soil sample (West Excavation Floor-6 @ 25') was collected from the floor of the excavated area. Soil sample West Excavation Floor-6 @ 25' was collected approximately 25 feet below ground surface (bgs). The soil sample was submitted to the laboratory and the analytical results indicated soil sample West Excavation Floor-6 @ 25' exhibited a TPH concentrations of 2,154 mg/Kg and a chloride concentration below laboratory MDL of 10 mg/Kg.

An additional composite soil sample (West Excavation Stockpile-1) was collected from the overburdened non-impacted soil excavated during remediation activities. The soil sample was submitted to the laboratory for TPH and chloride analysis. Laboratory analytical results indicated TPH concentrations were below laboratory MDL of 14.9 mg/Kg and exhibited a chloride concentration of 177 mg/Kg, which are below NMOCD guidelines. At the request of the landowner, excavated material will not be used as backfill and was transported for disposal at Sundance.

Based on field observations and information provided by the landowner, no additional excavation activities can be conducted northwest of the excavation due to the presence of a buried drilling pit.

On July 15, 2016, following additional excavation activities in the area represented by soil sample West Excavation Floor-6 @ 25, two (2) soil samples (West Excavation Floor-6 @ 32' and ESW-6 @ 28') were collected and submitted to the laboratory for TPH and chloride analysis. A review of laboratory analytical results indicated TPH concentrations were below the laboratory MDL of 15 mg/Kg and chloride concentrations did not exceed 46 mg/Kg, which are below NMOCD guidelines.

On July 20 through 22, 2016, based on increasing chloride concentrations on the northeast excavation sidewall, excavation activities were halted and additional chloride field screen activities were conducted with a hand auger to delineate the vertical and horizontal extent of the impacted area northeast of the excavation. The auger samples were collected approximately twenty (20) feet north east of the north wall at depths of five (5) feet bgs, ten (10) feet bgs, and fifteen (15) feet bgs. On July 21, 2016, nine (9) soil samples (NW AH-1 @ 5' through NW AH-1 @ 15', NC AH-1 @ 5' through NC AH-1 @ 15', and NE AH-1 @ 5' through NE AH-1 @ 15') were collected during hand auger activities and submitted to the laboratory to confirm chloride

field screen results. A review of laboratory analytical results indicated chloride concentrations for the samples collected at five (5) feet bgs ranged from 712 mg/Kg for soil sample NW AH-1 @ 5' to 881 mg/Kg for soil sample NC AH-1 @ 5'. Chloride concentrations for soil samples collected at ten (10) feet bgs ranged from 284 mg/Kg for soil sample NW AH-1 @ 10' to 355 mg/Kg for soil sample NC AH-1 @ 10'. Chloride concentrations for soil samples collected at fifteen (15) feet bgs ranged from 15 mg/Kg for soil sample NC AH-1 @ 15' to 308 mg/Kg for soil sample NE AH-1 @ 15'.

On August 22 through September 9, 2016, excavation activities resumed, moving in a northeast direction from the northeast side wall. Six (6) soil samples (NW Floor @ 5', NC Wall @ 4', NC Floor @ 5', NE Floor A @ 5', NE Floor B @ 5', and NE Wall @ 4') were collected from the recently excavated northeast section and submitted for chloride analysis. Laboratory analytical results indicated chloride concentrations for soil samples NC Floor @ 5' and NE Floor A @ 5' were below NMOCD guidelines. Chloride concentrations for soil samples NW Floor @ 5', NC Wall @ 4', NE Floor B @ 5', and NE Wall @ 4' ranged from 271 mg/Kg for soil samples NW Floor @ 5' to 423 mg/Kg for soil sample NE Wall @ 4'.

On October 5, 2016, representatives of ETC, TRC, and the landowner met at the Site to discuss the project. During the meeting, a representative of TRC and an environmental contractor retained by the landowner, collected and split confirmation soil samples from the excavation. TRC submitted twenty-five (25) confirmation soil samples (Confirmation Floor-1 @ 32', Confirmation Floor-2 @ 28', Confirmation Floor-3 @ 20', Confirmation SW-1 @ 19', Confirmation SW-2 @ 19', Confirmation Floor-4 @ 20', Confirmation Floor-5 @ 20', Confirmation EW-1 @ 19', Confirmation EW-2 @ 19', Confirmation EW-3 @ 19', Confirmation NW-1 @ 19', Confirmation Floor-7 @ 20', Confirmation Floor-6 @ 20', Confirmation NW-2 @ 19', Confirmation WW-1 @ 19', Confirmation WW-2 @ 19', Confirmation NW-3 @ 7.5', Confirmation NW-4 @ 10', Confirmation NW-5 @ 12', Confirmation WW-3 @ 19') to Xenco Laboratories in Midland, Texas and analyzed the soil samples for BTEX, TPH, and chloride using Method E-300.1. A review of laboratory analytical results indicated TPH and BTEX concentrations for all submitted soil samples were below the laboratory MDL and NMOCD guidelines. Laboratory results indicated chloride concentrations for all collected soil samples ranged from below the laboratory MDL of 5 mg/Kg for soil samples Confirmation Floor-2 @ 28', Confirmation Floor-3 @ 20', and Confirmation Floor-7 @ 20' to 134 mg/Kg for soil sample Confirmation Floor-5 @ 20', with the exception of soil samples Confirmation NW-2 @ 19', Confirmation EW-1 @ 19', Confirmation EW-2 @ 19', Confirmation EW-3 @ 19', Confirmation WW-2 @ 19', Confirmation WW-3 @ 19', and Confirmation SW-1 @ 19'. Soil sample Confirmation NW-2 @ 19' exhibited a chloride concentration of 263 mg/Kg. A review of laboratory results indicated chloride concentrations for soil samples Confirmation EW-1 @ 19', Confirmation EW-2 @ 19', Confirmation EW-3 @ 19', collected from the eastern sidewall, were 808 mg/Kg, 383 mg/Kg, and 671 mg/Kg, respectively. Laboratory results indicated chloride concentrations for soil samples Confirmation WW-2 @ 19' and Confirmation WW-3 @ 19', collected from the western sidewall in close proximity to a buried drilling pit, were 272 mg/Kg and 2,670 mg/Kg, respectively. Laboratory analytical results indicated chloride concentrations for Confirmation SW-1 @ 19', collected from the southern sidewall in close proximity to the John H. Hendrix Corporation Lee # 2 Well location and pump jack.

Based on the laboratory results from the sampling event on October 5, 2016, no additional excavation activities can be conducted in the areas represented by soil samples Confirmation WW-

2 @ 19' and Confirmation WW-3 @ 19' due to the close proximity of a buried drilling pit and the risk of encroaching on the pit boundaries.

In addition, no additional excavation activities can be conducted in the area represented by soil sample Confirmation SW-1 @ 19' due to the close proximity of the John H. Hendrix Corporation Lee #2 Well Location due to well and pump jack stability safety concerns.

In addition, the areas represented by soil samples Confirmation EW-1 @ 19', Confirmation EW-2 @ 19', and Confirmation EW-3 @ 19', will be remediated at a later date and submitted under a separate cover (Boyd 4-Inch Historical East Site #1RP-4278).

On October 14, 2016, Mr. Irvin Boyd verbally granted ETC permission to backfill the existing excavation with locally obtained caliche and topsoil purchased from the landowner.

Pending NMOCD approval, ETC will backfill the existing excavation with non-impacted soil purchased from the landowner. On completion of backfilling activities, the impacted area will be contoured to fit the surrounding area and be reseeded with vegetation approved by the landowner.

#### **SITE CLOSURE REQUEST**

Based on the analytical results and landowner approval to backfill the excavation, ETC requests NMOCD permission to backfill the Boyd 4 Historical West excavation and grant Site Closure Status to the Boyd 4 Inch (Historical) West incident.

#### **LIMITATIONS**

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

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

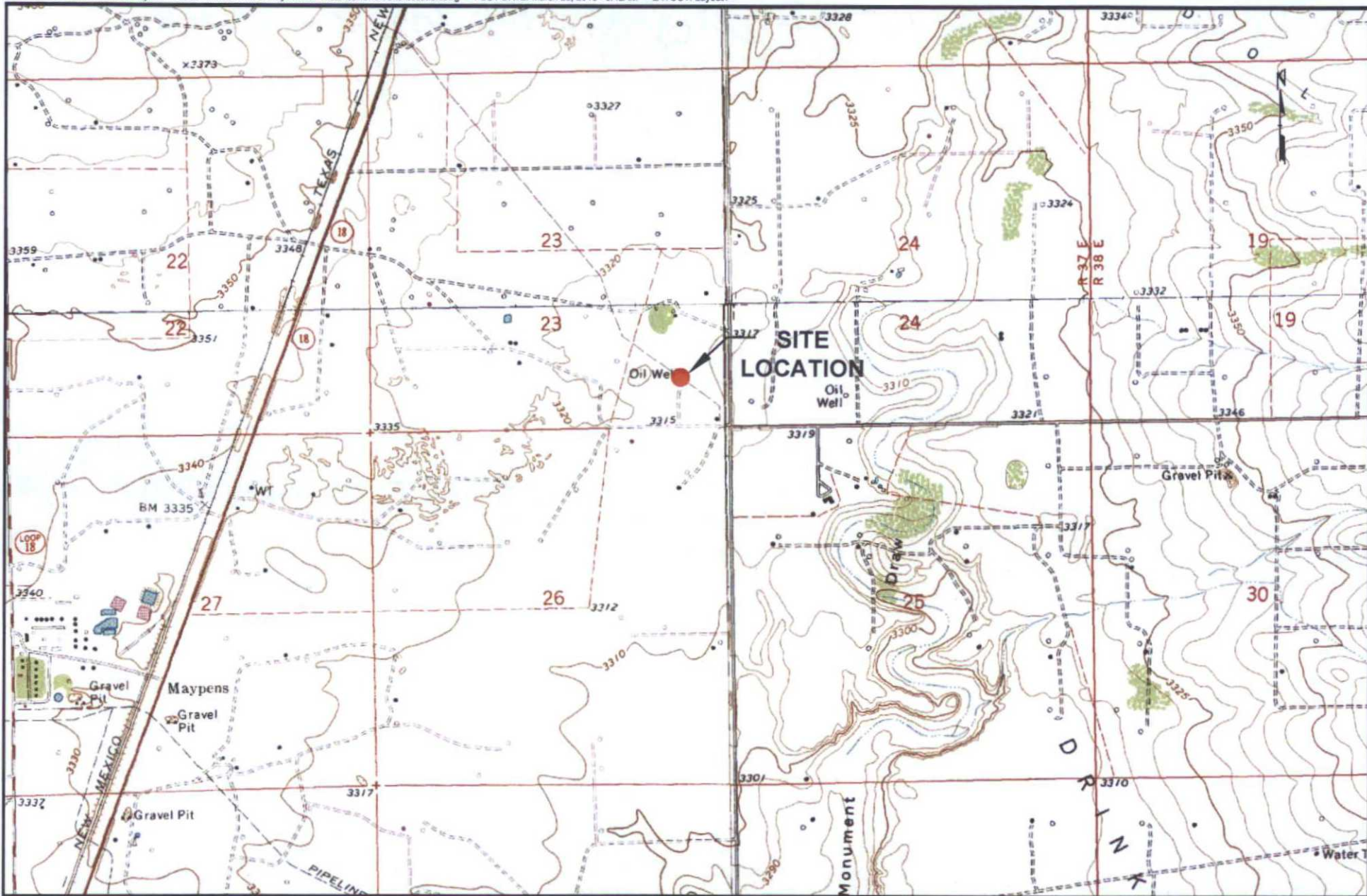
This report has been prepared for the benefit of ETC Field Services, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or ETC Field Services, LLC.

## **DISTRIBUTION**

- Copy 1:      Jamie Keyes  
              New Mexico Energy, Minerals and Natural Resources Department  
              Oil Conservation Division (District 1)  
              1625 French Drive  
              Hobbs, New Mexico 88240
- Copy 2:      Rose Slade  
              ETC Field Services, LLC  
              800 East Sonterra  
              San Antonio, Texas 78258
- Copy 3:      TRC Environmental Corporation  
              2057 Commerce Street  
              Midland, Texas 79703



## Figures



LEGEND:



Distance in Feet

Figure 1

Site Location Map  
 ETC Field Services, LLC  
 Boyd 4" Historical  
 Lea County, NM

Scale: 1" = 2000'

CAD By: TA      Checked By: CS

Draft: February 3, 2016

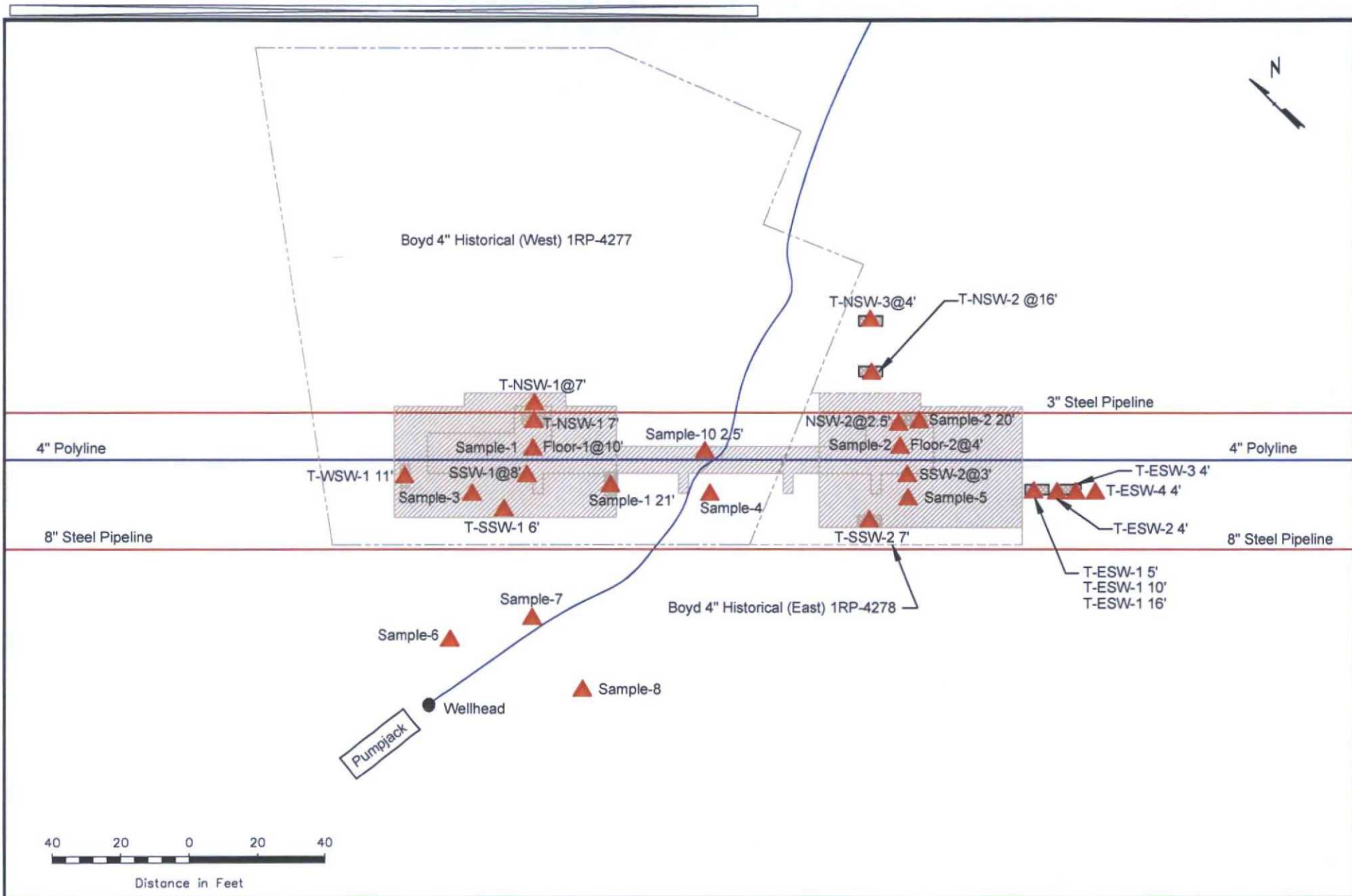
Lat. N 32.372074° , Long. W 103.127151°

SW1/4 SW1/4 Sec 23 T22S R37E

TRC Proj. No.: 251737



2057 Commerce Drive  
 Midland, Texas 79703  
 432.520.7720



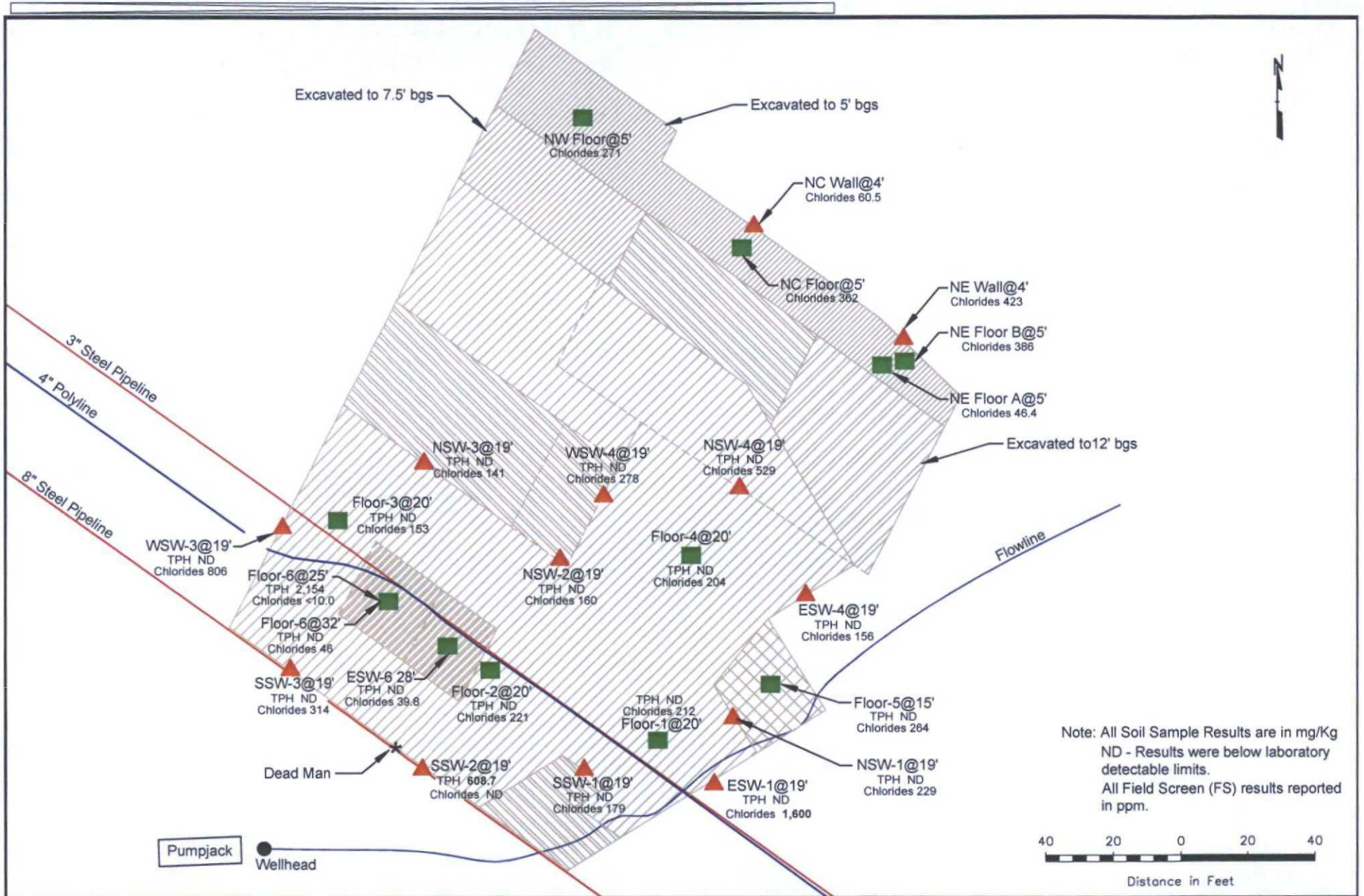
<b>LEGEND:</b>	
	Steel Pipeline
	Polyline
	Soil Sample Location

**Figure 2**  
 Site Detail and Initial  
 Soil Sample Locations  
 ETC Field Services, LLC  
 Boyd 4" Historical (West)  
 Lea County, NM

Scale: 1" = 40'	
CAD By: TA	Checked By: CS
Draft: February 3, 2016	
Lat. N 32.372074° , Long. W 103.127151°	
SW1/4 SW1/4 Sec 23 T22S R37E	
TRC Proj. No.: 251737	



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 Midland, Texas 79703  
 432.520.7720



**LEGEND:**

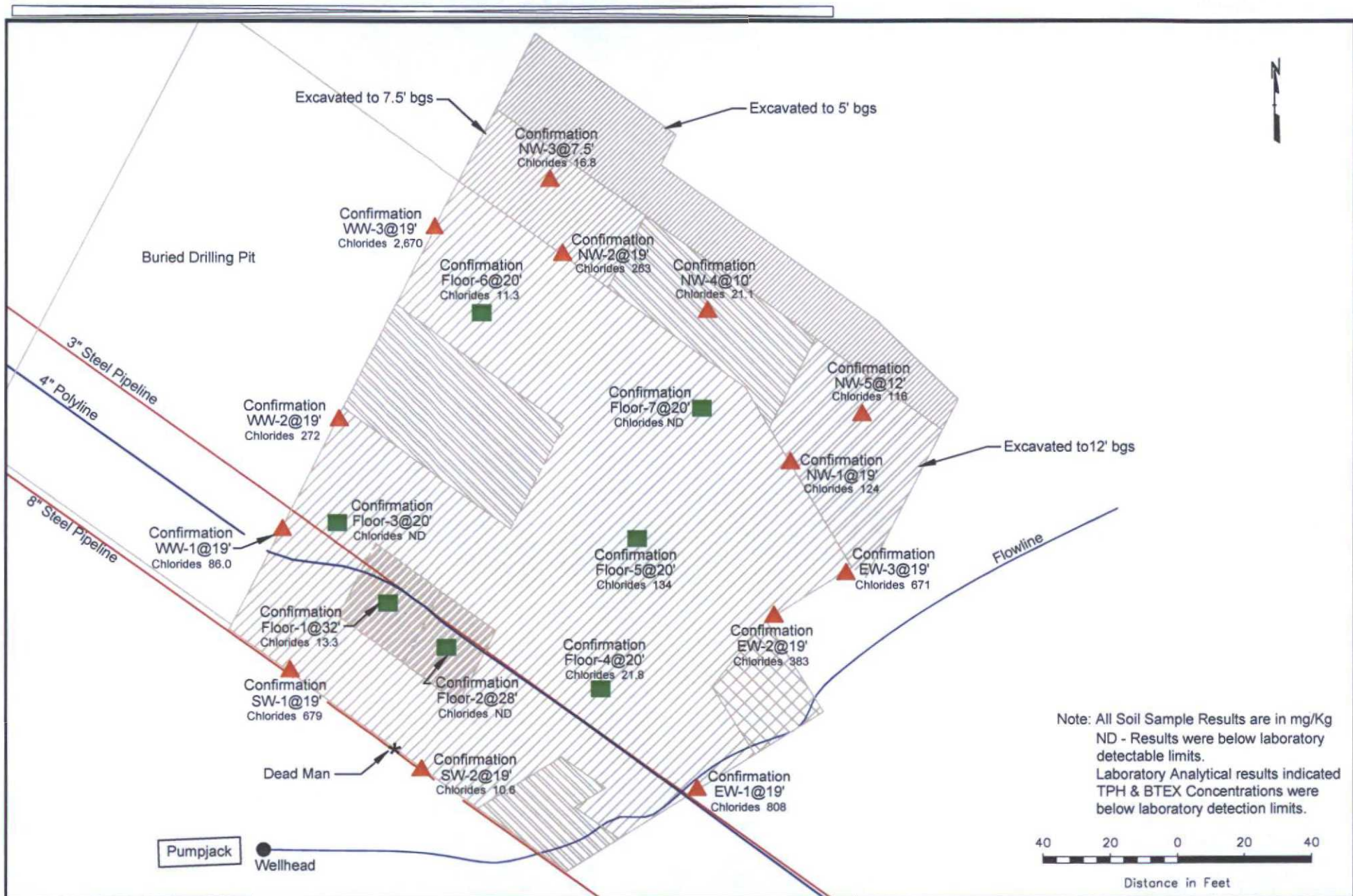
	Steel Pipeline		Excavation Depth 10' bgs
	Polyline		Excavation Depth 15' bgs
	Sidewall Soil Sample Location		Excavation Depth 20' bgs
	Floor Soil Sample Location		Excavation Depth 25' bgs

**Figure 3**  
**Site Detail and Exploratory**  
**Soil Sample Locations**  
**ETC Field Services, LLC**  
**Boyd 4" Historical (West)**  
**Lea County, NM**

Scale: 1" = 40'	
CAD By: TA	Checked By: CS
Draft: February 3, 2016	
Lat. N 32.372074° , Long. W 103.127151°	
SW1/4 SW1/4 Sec 23 T22S R37E	
TRC Proj. No.: 258926	



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 Midland, Texas 79703  
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LEGEND:	
	Steel Pipeline
	Polyline
	Sidewall Soil Sample Location
	Floor Soil Sample Location
	Field Screen Taken
	Excavation Depth 10' bgs
	Excavation Depth 15' bgs
	Excavation Depth 20' bgs
	Excavation Depth 25' bgs

**Figure 4**  
 Site Detail and Confirmation  
 Soil Sample Locations  
 ETC Field Services, LLC  
 Boyd 4" Historical (West)  
 Lea County, NM

Scale: 1" = 40'	
CAD By: TA	Checked By: CS
Draft: February 3, 2016	
Lat. N 32.372074° , Long. W 103.127151°	
SW1/4 SW1/4 Sec 23 T22S R37E	
TRC Proj. No.: 258926	

2057 Commerce Drive  
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## Tables

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

ETC FIELD SERVICES, LLC  
BOYD 4 INCH HISTORICAL WEST RELEASE SITE  
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C <sub>6</sub> -C <sub>12</sub>	TPH DRO C <sub>12</sub> -C <sub>28</sub>	TPH ORO C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	CHLORIDE
**Floor-1 @ 10'	01/29/16	Excavated	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.0	<15.0	<15.0	<15.0	24.4
**SSW-1 @ 8'	01/29/16	Excavated	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<14.9	<14.9	<14.9	<14.9	2.64
**NSW-1 @ 7'	01/29/16	Excavated	<0.000992	<0.00198	<0.000992	<0.00198	<0.000992	<0.00198	<15.0	<15.0	<15.0	<15.0	2.42
**Floor-2 @ 4'	01/29/16	Excavated	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<15.0	35.0	<15.0	35.0	<2.00
**SSW-2 @ 3'	01/29/16	Excavated	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<15.0	469	<15.0	469	17.8
**NSW-2 @ 2.5'	01/29/16	Excavated	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<14.9	151	<14.9	151	7.69
Sample-1 BOE 2'	03/08/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	15.0	<15.0	15.0	<9.98
Sample-1 BOE 8.5'	03/08/16	Excavated	<0.0149	0.177	1.49	6.40	1.20	9.267	613	2,810	35.0	3,458	<9.67
Sample-1 BOE 10'	03/08/16	Excavated	<0.0149	0.100	0.681	2.81	0.934	4.525	338	1,800	31.6	2,169.6	<9.88
*Sample-2 BOE 2'	03/08/16	IRP-4278	<0.00746	<0.00994	0.273	0.813	0.745	1.831	237	1,430	43.5	1,710.5	<9.98
*Sample-2 BOE 4'	03/08/16	IRP-4278	<0.0150	0.512	1.50	4.99	1.53	8.532	1,020	5,600	115	6,735	<9.96
*Sample-2 BOE 4.6'	03/08/16	IRP-4278	<0.0150	0.307	0.881	2.85	1.40	5.438	376	2,420	46.8	2,842.8	<10.0
Sample-3 2'	03/08/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	1,590
Sample-3 6'	03/08/16	Excavated	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	27.3	<15.0	27.3	1,200
Sample-3 10'	03/08/16	Excavated	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<14.9	20.6	<14.9	20.6	616
Sample-4 2'	03/08/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00300	<0.00300	<15.0	<15.0	<15.0	<15.0	506
Sample-4 6'	03/08/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	102
Sample-4 10'	03/08/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	28.1	<15.0	28.1	22.7
*Sample-5 2'	03/08/16	IRP-4278	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<14.9	<14.9	<14.9	<14.9	627
*Sample-5 6'	03/08/16	IRP-4278	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	472
*Sample-5 10'	03/08/16	IRP-4278	<0.00150	<0.00200	<0.00200	<0.00200	<0.00300	<0.00300	<15.0	<15.0	<15.0	<15.0	157
Sample-6 Surface	03/08/16	In-Situ	-	-	-	-	-	-	24.0	1,200	116	1,340	43.7
Sample-7 Surface	03/08/16	In-Situ	-	-	-	-	-	-	19.1	630	99.8	748.9	22.7
Sample-8 Surface	03/08/16	In-Situ	-	-	-	-	-	-	165	10,700	152	11,017	1,400
Sample-1 @ 21'	04/05/16	Excavated	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	9.07
T-SSW-1 @ 6'	04/05/16	Excavated	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	20.0
T-NSW-1 @ 7'	04/05/16	Excavated	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	3.65
T-WSW-1 @ 11'	04/05/16	Excavated	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	51.7	<15.0	51.7	35.6
*Sample-2 @ 20'	04/05/16	IRP-4278	0.0264	0.0132	0.160	0.315	0.059	0.5736	444	1,920	26	2,390.1	32.3
Sample -10 @ 2.5'	04/05/16	Excavated	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	40.9
West Excavation													
West Excavation Floor-1 @ 20'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	212
West Excavation SSW-1 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	179
West Excavation NSW-1 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	229
*West Excavation ESW-1 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	1,600

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

ETC FIELD SERVICES, LLC  
BOYD 4 INCH HISTORICAL WEST RELEASE SITE  
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p -XYLENES	o -XYLENE	TOTAL BTEX	TPH GRO C <sub>6</sub> -C <sub>12</sub>	TPH DRO C <sub>12</sub> -C <sub>28</sub>	TPH ORO C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	CHLORIDE
West Excavation Floor-2 @ 20'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	221
West Excavation SSW-2 @ 19'	06/27/16	Excavated	-	-	-	-	-	-	25.7	583	<15.0	608.7	<10.0
West Excavation NSW-2 @ 19'	06/27/16	Excavated	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	160
West Excavation Floor-3 @ 20'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	153
West Excavation SSW-3 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	314
West Excavation NSW-3 @ 19'	06/27/16	Excavated	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	141
West Excavation WSW-3 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	806
West Excavation Floor-4 @ 20'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	204
*West Excavation ESW-4 @ 19'	06/27/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	156
West Excavation WSW-4 @ 19'	06/27/16	Excavated	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	278
West Excavation NSW-4 @ 19'	06/27/16	Excavated	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	529
West Excavation Floor-5 @ 15'	06/27/16	Excavated	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	264
West Excavation Floor-6 @ 25'	06/28/16	Excavated	-	-	-	-	-	-	174.0	1,980	<15.0	2,154	<10.0
West Excavation Stockpile-1	06/28/16	-	-	-	-	-	-	-	<14.9	<14.9	<14.9	<14.9	177
West Excavation Floor-6 @ 32'	07/15/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	46
ESW-6 @ 28'	07/15/16	In-Situ	-	-	-	-	-	-	<15.0	<15.0	<15.0	<15.0	39.8
NW AH-1 @ 5'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	712
NW AH-1 @ 10'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	284
NW AH-1 @ 15'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	271
NC AH-1 @ 5'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	881
NC AH-1 @ 10'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	355
NC AH-1 @ 15'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	155
NE AH-1 @ 5'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	764
NE AH-1 @ 10'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	352
NE AH-1 @ 15'	07/20/16	Excavated	-	-	-	-	-	-	-	-	-	-	308
NW Floor @ 5'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	271
NC Wall @ 4'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	362
NC Floor @ 5'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	60.5
NE Floor A @ 5'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	46.4
NE Floor B @ 5'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	386
NE Wall @ 4'	09/08/16	In-Situ	-	-	-	-	-	-	-	-	-	-	423
Confirmation Floor-1 @ 32'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	13.3
Confirmation Floor-2 @ 28'	10/05/16	In-Situ	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<14.9	<14.9	<14.9	<14.9	<5.00
Confirmation Floor-3 @ 20'	10/05/16	In-Situ	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	<5.00



TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

ETC FIELD SERVICES, LLC  
BOYD 4 INCH HISTORICAL WEST RELEASE SITE  
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p -XYLENES	o -XYLENE	TOTAL BTEX	TPH GRO C <sub>6</sub> -C <sub>12</sub>	TPH DRO C <sub>12</sub> -C <sub>28</sub>	TPH ORO C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	CHLORIDE
Confirmation SW-1 @ 19'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	679
Confirmation SW-2 @ 19'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00300	<0.00300	<15.0	<15.0	<15.0	<15.0	10.6
Confirmation Floor-4 @ 20'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	21.8
Confirmation Floor-5 @ 20'	10/05/16	In-Situ	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	134
*Confirmation EW-1 @ 19'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	808
*Confirmation EW-2 @ 19'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	383
*Confirmation EW-3 @ 19'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00300	<0.00300	<15.0	<15.0	<15.0	<15.0	671
Confirmation NW-1 @ 19'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	124
Confirmation Floor-7 @ 20'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	<5.00
Confirmation Floor-6 @ 20'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	11.3
Confirmation NW-2 @ 19'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	263
Confirmation WW-1 @ 19'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	86.0
Confirmation WW-2 @ 19'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00300	<0.00300	<15.0	<15.0	<15.0	<15.0	272
Confirmation NW-3 @ 7.5'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<15.0	<15.0	<15.0	<15.0	16.8
Confirmation NW-4 @ 10'	10/05/16	In-Situ	<0.00149	<0.00199	<0.00199	<0.00199	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	21.1
Confirmation NW-5 @ 12'	10/05/16	In-Situ	<0.00149	<0.00198	<0.00198	<0.00198	<0.00298	<0.00298	<15.0	<15.0	<15.0	<15.0	116
Confirmation WW-3 @ 19'	10/05/16	In-Situ	<0.00150	<0.00200	<0.00200	<0.00200	<0.00299	<0.00299	<14.9	<14.9	<14.9	<14.9	2,670

\*\* = Soil sample results do not appear to be representative

\* = Soil samples are associated with the Boyd 4-Inch Historical East Release Site (1RP-4278), which will be remediated at a later date and submitted under separate cover.

## Appendices

Appendix A  
Analytical Reports

# Analytical Report 524056

for  
**TRC Solutions, Inc**

**Project Manager: Curt Stanley**

**Boyd 4 Inch Historical**

**ETC Field Services**

**08-FEB-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534-15-1)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)

Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)



08-FEB-16

Project Manager: **Curt Stanley**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **524056**  
**Boyd 4 Inch Historical**  
Project Address: Lea County, NM

**Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 524056. 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. 524056 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,

**Kelsey Brooks**  
Project Manager

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**Sample Cross Reference 524056**



**TRC Solutions, Inc, Midland, TX**

Boyd 4 Inch Historical

**Sample Id**

**Matrix**

**Date Collected**

**Sample Depth**

**Lab Sample Id**



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*  
*Project Name: Boyd 4 Inch Historical*

Project ID: *ETC Field Services*  
Work Order Number(s): *524056*

Report Date: *08-FEB-16*  
Date Received: *02/01/2016*

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analysis Summary 524056

TRC Solutions, Inc, Midland, TX

Project Name: Boyd 4 Inch Historical



Project Id: ETC Field Services  
 Contact: Curt Stanley  
 Project Location: Lea County, NM

Date Received in Lab: Mon Feb-01-16 04:38 pm  
 Report Date: 08-FEB-16  
 Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	524056-001	524056-002	524056-003	524056-004	524056-005	524056-006
	Field Id:	Floor-1 @ 10'	SSW-1 @ 8'	NSW-1 @ 7'	Floor-2 @ 4'	SSW-2 @ 3'	NSW-2 @ 2.5'
	Depth:	10 ft	8 ft	7 ft	4 ft	3 ft	2.5 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-29-16 14:00	Jan-29-16 14:05	Jan-29-16 14:10	Jan-29-16 14:30	Jan-29-16 14:35	Jan-29-16 14:40
<b>BTEX by EPA 8021B</b>	Extracted:	Feb-03-16 17:30	Feb-03-16 17:30	Feb-03-16 17:30	Feb-03-16 17:30	Feb-03-16 17:30	Feb-03-16 17:30
	Analyzed:	Feb-04-16 16:31	Feb-03-16 21:01	Feb-03-16 21:18	Feb-04-16 16:48	Feb-03-16 21:56	Feb-03-16 22:12
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00100	ND 0.000996	ND 0.000992	ND 0.000998	ND 0.000998	ND 0.00100
Toluene		ND 0.00200	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00200
Ethylbenzene		ND 0.00100	ND 0.000996	ND 0.000992	ND 0.000998	ND 0.000998	ND 0.00100
m_p-Xylenes		ND 0.00200	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00100	ND 0.000996	ND 0.000992	ND 0.000998	ND 0.000998	ND 0.00100
Total Xylenes		ND 0.00100	ND 0.000996	ND 0.000992	ND 0.000998	ND 0.000998	ND 0.00100
Total BTEX		ND 0.00100	ND 0.000996	ND 0.000992	ND 0.000998	ND 0.000998	ND 0.00100
<b>Inorganic Anions by EPA 300/300.1</b>	Extracted:	Feb-04-16 13:00	Feb-04-16 13:00	Feb-04-16 13:00	Feb-04-16 13:00	Feb-04-16 13:00	Feb-04-16 13:00
	Analyzed:	Feb-04-16 23:25	Feb-04-16 23:43	Feb-05-16 00:01	Feb-05-16 00:18	Feb-05-16 00:36	Feb-05-16 01:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		24.4 2.00	2.64 2.00	2.42 2.00	ND 2.00	17.8 2.00	7.69 2.00
<b>TPH By SW8015B Mod</b>	Extracted:	Feb-07-16 17:00	Feb-07-16 17:00	Feb-07-16 17:00	Feb-07-16 17:00	Feb-07-16 17:00	Feb-07-16 17:00
	Analyzed:	Feb-07-16 23:57	Feb-08-16 01:11	Feb-08-16 01:35	Feb-08-16 01:58	Feb-08-16 02:24	Feb-08-16 02:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	ND 14.9
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 14.9	ND 15.0	35.0 15.0	469 15.0	151 14.9
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	ND 14.9
Total TPH		ND 15.0	ND 14.9	ND 15.0	35.0 15.0	469 15.0	151 14.9

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

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Kelsey Brooks  
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 quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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      **SQL** 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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 1211 W Florida Ave, Midland, TX 79701  
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



**Form 2 - Surrogate Recoveries**  
**Project Name: Boyd 4 Inch Historical**

**Work Orders :** 524056,

**Project ID:** ETC Field Services

\* 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: Boyd 4 Inch Historical



Work Order #: 524056

Project ID: ETC Field Services

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



Work Order #: 524056

**Form 3 - MS Recoveries**  
**Project Name: Boyd 4 Inch Historical**



**Project ID: ETC Field Services**

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

BRL - Below Reporting Limit



**Form 3 - MS / MSD Recoveries**  
**Project Name: Boyd 4 Inch Historical**



Work Order #: 524056

Project ID: ETC Field Services

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Xenco Laboratories

The 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: Curt Stanley

Project Name: ETC Field Services

Company Name: TRC Solutions, Inc

Project #: Boyd 4 Inch Historical

Company Address: 2057 Commerce

Project Loc: Lea County, NM

City/State/Zip: Midland, TX 79703

PO #:

Telephone No: 432.520.7700

Fax No: 432.520.7701

Report Format:  Standard  TRRP  NPDES

Sampler Signature: 


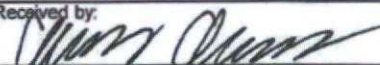
e-mail: cdstanley@trcsolutions.com  
rose.slade@energytransfer.com

(lab use only)  
ORDER #: 524056

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers											Matrix		Analyze For:																								
								Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NI(OH)	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water	IL=Sludge	GW=Groundwater	S=Soil/Solid	NP=Non-Portable	Specify Other	TPH: 418.1	TPH: 8015M	TPH: 8015B	TCLP:	TOTAL:	TX 1000	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , 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 E 300.1	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT				
	Floor-1 @ 10'			1/29/2016	1400	1	x																X								X													X	
	SSW-1 @ 8'			1/29/2016	1405	1	x															X								X														X	
	NSW-1 @ 7'			1/29/2016	1410	1	x															X								X														X	
	Floor-2 @ 4'			1/29/2016	1430	1	x															X								X													X		
	SSW-2 @ 3'			1/29/2016	1435	1	x															X								X													X		
	NSW-2 @ 2.5'			1/29/2016	1440	1	x															X								X												X			

Special Instructions:

Bill to Rose

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	2/11/16	1638		2/11/16	1638
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by ELOT:	Date:	Time:

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:	-0.9°C	

1-0+0 C35



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 02/01/2016 04:38:00 PM

Work Order #: 524056

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : r8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#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)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Carley Owens Date: 02/02/2016  
 Carley Owens

Checklist reviewed by: Kelsey Brooks Date: 02/02/2016  
 Kelsey Brooks

# Analytical Report 526570

for  
TRC Solutions, Inc

Project Manager: Nikki Green  
Energy Transfer Boyd 4" Historical

15-MAR-16

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534-15-1)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (EPA Lab Code: GA00046):  
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)





15-MAR-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **526570**  
**Energy Transfer Boyd 4" Historical**  
Project Address: Lea County, NM

**Nikki Green:**

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) 526570. 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. 526570 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,

**Kelsey Brooks**  
Project 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*

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## Sample Cross Reference 526570



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample-1 BOE	S	03-08-16 10:30	- 2 ft	526570-001
Sample-1 BOE	S	03-08-16 11:03	- 8.5 ft	526570-002
Sample-1 BOE	S	03-08-16 11:21	- 10 ft	526570-003
Sample-2 BOE	S	03-08-16 11:50	- 2 ft	526570-004
Sample-2 BOE	S	03-08-16 12:30	- 4 ft	526570-005
Sample-2 BOE	S	03-08-16 12:45	- 4.6 ft	526570-006
Sample-3	S	03-08-16 13:17	- 2 ft	526570-007
Sample-3	S	03-08-16 13:50	- 6 ft	526570-008
Sample-3	S	03-08-16 14:33	- 10 ft	526570-009
Sample-4	S	03-08-16 15:01	- 2 ft	526570-010
Sample-4	S	03-08-16 15:36	- 6 ft	526570-011
Sample-4	S	03-08-16 15:49	- 10 ft	526570-012
Sample-5	S	03-08-16 16:01	- 2 ft	526570-013
Sample-5	S	03-08-16 16:15	- 6 ft	526570-014
Sample-5	S	03-08-16 16:45	- 10 ft	526570-015
Sample-6 Surface	S	03-08-16 16:50		526570-016
Sample-7 Surface	S	03-08-16 16:55		526570-017
Sample-8 Surface	S	03-08-16 17:00		526570-018



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical*

Project ID:  
Work Order Number(s): 526570

Report Date: 15-MAR-16  
Date Received: 03/09/2016

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### Sample receipt non conformances and comments:

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### Sample receipt non conformances and comments per sample:

None

#### **Analytical non conformances and comments:**

Batch: LBA-990191 BTEX by EPA 8021B

Lab Sample ID 526570-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m\_p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 526570-002, -003, -004, -005, -006, -015.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m\_p-Xylenes , o-Xylene is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 526570

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Mar-09-16 04:30 pm  
 Report Date: 15-MAR-16  
 Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	526570-001	526570-002	526570-003	526570-004	526570-005	526570-006
	Field Id:	Sample-1 BOE	Sample-1 BOE	Sample-1 BOE	Sample-2 BOE	Sample-2 BOE	Sample-2 BOE
	Depth:	2 ft	8.5 ft	10 ft	2 ft	4 ft	4.6 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-08-16 10:30	Mar-08-16 11:03	Mar-08-16 11:21	Mar-08-16 11:50	Mar-08-16 12:30	Mar-08-16 12:45
<b>BTEX by EPA 8021B</b>	Extracted:	Mar-10-16 17:30	Mar-10-16 10:15	Mar-10-16 10:15	Mar-10-16 10:15	Mar-10-16 10:15	Mar-10-16 10:15
	Analyzed:	Mar-11-16 07:38	Mar-11-16 18:39	Mar-11-16 17:50	Mar-11-16 18:55	Mar-11-16 18:23	Mar-11-16 18:06
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00150	ND 0.0149	ND 0.0149	ND 0.00746	ND 0.0150	ND 0.0150
Toluene		ND 0.00200	0.177 0.0198	0.100 0.0199	ND 0.00994	0.512 0.0200	0.307 0.0200
Ethylbenzene		ND 0.00200	1.49 0.0198	0.681 0.0199	0.273 0.00994	1.50 0.0200	0.881 0.0200
m_p-Xylenes		ND 0.00200	6.40 0.0198	2.81 0.0199	0.813 0.00994	4.99 0.0200	2.85 0.0200
o-Xylene		ND 0.00299	1.20 0.0298	0.934 0.0298	0.745 0.0149	1.53 0.0299	1.40 0.0299
Total Xylenes		ND 0.00200	7.60 0.0198	3.74 0.0199	1.56 0.00994	6.52 0.0200	4.25 0.0200
Total BTEX		ND 0.00150	9.27 0.0149	4.53 0.0149	1.83 0.00746	8.53 0.0150	5.44 0.0150
<b>Inorganic Anions by EPA 300/300.1 SUB: TX104704215</b>	Extracted:	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00
	Analyzed:	Mar-11-16 18:05	Mar-11-16 18:49	Mar-11-16 19:32	Mar-11-16 19:46	Mar-11-16 20:01	Mar-11-16 20:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 9.98	ND 9.67	ND 9.88	ND 9.98	ND 9.96	ND 10.0
<b>TPH By SW8015B Mod</b>	Extracted:	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00
	Analyzed:	Mar-10-16 14:43	Mar-10-16 16:06	Mar-10-16 16:34	Mar-10-16 17:02	Mar-11-16 08:00	Mar-10-16 18:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	613 15.0	338 15.0	237 15.0	1020 75.0	376 15.0
C10-C28 Diesel Range Hydrocarbons		15.0 15.0	2810 15.0	1800 15.0	1430 15.0	5600 75.0	2420 15.0
C28-C35 Oil Range Hydrocarbons		ND 15.0	35.0 15.0	31.6 15.0	43.5 15.0	115 75.0	46.8 15.0
Total TPH		15.0 15.0	3460 15.0	2170 15.0	1710 15.0	6740 75.0	2840 15.0

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Kelsey Brooks  
Project Manager



# Certificate of Analysis Summary 526570

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Mar-09-16 04:30 pm  
 Report Date: 15-MAR-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	526570-007	526570-008	526570-009	526570-010	526570-011	526570-012
	<i>Field Id:</i>	Sample-3	Sample-3	Sample-3	Sample-4	Sample-4	Sample-4
	<i>Depth:</i>	2 ft	6 ft	10 ft	2 ft	6 ft	10 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-08-16 13:17	Mar-08-16 13:50	Mar-08-16 14:33	Mar-08-16 15:01	Mar-08-16 15:36	Mar-08-16 15:49
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Mar-10-16 17:30	Mar-10-16 17:30	Mar-10-16 17:30	Mar-10-16 17:30	Mar-10-16 17:30	Mar-10-16 17:30
	<i>Analyzed:</i>	Mar-11-16 07:55	Mar-11-16 08:11	Mar-11-16 08:28	Mar-11-16 08:44	Mar-11-16 09:01	Mar-11-16 09:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00150
Toluene	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00200	
Ethylbenzene	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00200	
m_p-Xylenes	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00200	
o-Xylene	ND 0.00299	ND 0.00298	ND 0.00298	ND 0.00300	ND 0.00299	ND 0.00299	
Total Xylenes	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00200	
Total BTEX	ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00150	
<b>Inorganic Anions by EPA 300/300.1 SUB: TX104704215</b>	<i>Extracted:</i>	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00
	<i>Analyzed:</i>	Mar-11-16 20:29	Mar-11-16 20:44	Mar-11-16 20:58	Mar-11-16 21:13	Mar-11-16 21:27	Mar-11-16 22:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride	1590 100	1200 100	616 99.0	506 99.8	102 48.8	22.7 9.67	
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00
	<i>Analyzed:</i>	Mar-10-16 18:29	Mar-10-16 18:57	Mar-10-16 19:25	Mar-10-16 19:52	Mar-10-16 20:51	Mar-10-16 21:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons	ND 15.0	ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	
C10-C28 Diesel Range Hydrocarbons	ND 15.0	27.3 15.0	20.6 14.9	ND 15.0	ND 15.0	28.1 15.0	
C28-C35 Oil Range Hydrocarbons	ND 15.0	ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	
Total TPH	ND 15.0	27.3 15.0	20.6 14.9	ND 15.0	ND 15.0	28.1 15.0	

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

Kelsey Brooks  
Project Manager



# Certificate of Analysis Summary 526570

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Mar-09-16 04:30 pm  
 Report Date: 15-MAR-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	526570-013	526570-014	526570-015	526570-016	526570-017	526570-018
	<i>Field Id:</i>	Sample-5	Sample-5	Sample-5	Sample-6 Surface	Sample-7 Surface	Sample-8 Surface
	<i>Depth:</i>	2 ft	6 ft	10 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-08-16 16:01	Mar-08-16 16:15	Mar-08-16 16:45	Mar-08-16 16:50	Mar-08-16 16:55	Mar-08-16 17:00
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Mar-10-16 17:30	Mar-10-16 17:30	Mar-10-16 10:15			
	<i>Analyzed:</i>	Mar-11-16 09:50	Mar-11-16 09:34	Mar-11-16 12:06			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.00150	ND 0.00149	ND 0.00150			
Toluene		ND 0.00200	ND 0.00199	ND 0.00200			
Ethylbenzene		ND 0.00200	ND 0.00199	ND 0.00200			
m_p-Xylenes		ND 0.00200	ND 0.00199	ND 0.00200			
o-Xylene		ND 0.00299	ND 0.00298	ND 0.00300			
Total Xylenes		ND 0.00200	ND 0.00199	ND 0.00200			
Total BTEX		ND 0.00150	ND 0.00149	ND 0.00150			
<b>Inorganic Anions by EPA 300/300.1 SUB: TX104704215</b>	<i>Extracted:</i>	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00	Mar-11-16 17:00
	<i>Analyzed:</i>	Mar-11-16 22:54	Mar-11-16 23:08	Mar-11-16 23:22	Mar-11-16 23:37	Mar-11-16 23:51	Mar-12-16 00:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		627 98.4	472 98.4	157 50.0	43.7 10.0	22.7 9.96	1400 99.6
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00	Mar-10-16 11:00
	<i>Analyzed:</i>	Mar-10-16 21:50	Mar-10-16 22:18	Mar-10-16 22:47	Mar-11-16 07:03	Mar-11-16 07:29	Mar-11-16 00:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 14.9	ND 15.0	ND 15.0	24.0 15.0	19.1 15.0	165 74.9
C10-C28 Diesel Range Hydrocarbons		ND 14.9	ND 15.0	ND 15.0	1200 15.0	630 15.0	10700 74.9
C28-C35 Oil Range Hydrocarbons		ND 14.9	ND 15.0	ND 15.0	116 15.0	99.8 15.0	152 74.9
Total TPH		ND 14.9	ND 15.0	ND 15.0	1340 15.0	749 15.0	11000 74.9

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

Kelsey Brooks  
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 quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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      **SQL** 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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	(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical

Work Orders : 526570,

Project ID:

Lab Batch #: 990033

Sample: 526570-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 14:43

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.9	112	70-130	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 990033

Sample: 526570-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 16:06

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.7	126	70-130	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 990033

Sample: 526570-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 16:34

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-130	
o-Terphenyl	56.0	50.0	112	70-135	

Lab Batch #: 990033

Sample: 526570-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 17:02

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.9	119	70-130	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 990033

Sample: 526570-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 18:01

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.7	123	70-130	
o-Terphenyl	57.0	49.9	114	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: Energy Transfer Boyd 4" Historical**

Work Orders : 526570,

Project ID:

Lab Batch #: 990033

Sample: 526570-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/10/16 18:29

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.8	110	70-130	
o-Terphenyl	54.8	49.9	110	70-135	

Lab Batch #: 990033

Sample: 526570-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/10/16 18:57

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-130	
o-Terphenyl	54.4	49.9	109	70-135	

Lab Batch #: 990033

Sample: 526570-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/10/16 19:25

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-130	
o-Terphenyl	53.8	49.8	108	70-135	

Lab Batch #: 990033

Sample: 526570-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/10/16 19:52

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.9	108	70-130	
o-Terphenyl	54.1	50.0	108	70-135	

Lab Batch #: 990033

Sample: 526570-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 03/10/16 20:51

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	99.7	98	70-130	
o-Terphenyl	48.9	49.9	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.



**Form 2 - Surrogate Recoveries**  
**Project Name: Energy Transfer Boyd 4" Historical**

Work Orders : 526570,

Project ID:

Lab Batch #: 990033

Sample: 526570-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 21:20

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-130	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 990033

Sample: 526570-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 21:50

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	99.6	90	70-130	
o-Terphenyl	44.7	49.8	90	70-135	

Lab Batch #: 990033

Sample: 526570-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 22:18

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.7	110	70-130	
o-Terphenyl	54.7	49.9	110	70-135	

Lab Batch #: 990033

Sample: 526570-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/10/16 22:47

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.4	99.9	92	70-130	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 990033

Sample: 526570-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 00:14

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.4	99.9	88	70-130	
o-Terphenyl	45.9	50.0	92	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: Energy Transfer Boyd 4" Historical**

Work Orders : 526570,

Project ID:

Lab Batch #: 990033

Sample: 526570-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 07:03

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-130	
o-Terphenyl	52.4	49.9	105	70-135	

Lab Batch #: 990033

Sample: 526570-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 07:29

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-130	
o-Terphenyl	50.5	49.9	101	70-135	

Lab Batch #: 990116

Sample: 526570-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 07:38

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 990116

Sample: 526570-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 07:55

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 990033

Sample: 526570-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 08:00

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	100	97	70-130	
o-Terphenyl	56.5	50.0	113	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: Energy Transfer Boyd 4" Historical

Work Orders : 526570,

Project ID:

Lab Batch #: 990116

Sample: 526570-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 08:11

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 990116

Sample: 526570-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 08:28

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 990116

Sample: 526570-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 08:44

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 990116

Sample: 526570-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 09:01

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 990116

Sample: 526570-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 09:18

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	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: Energy Transfer Boyd 4" Historical

Work Orders : 526570,

Project ID:

Lab Batch #: 990116

Sample: 526570-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 09:34

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 990116

Sample: 526570-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 09:50

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 990191

Sample: 526570-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 12:06

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 990191

Sample: 526570-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 17:50

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	80-120	

Lab Batch #: 990191

Sample: 526570-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03/11/16 18:06

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	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: Energy Transfer Boyd 4" Historical**

**Work Orders :** 526570,

**Project ID:**

**Lab Batch #:** 990191

**Sample:** 526570-005 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/11/16 18:23

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

**Lab Batch #:** 990191

**Sample:** 526570-002 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/11/16 18:39

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

**Lab Batch #:** 990191

**Sample:** 526570-004 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/11/16 18:55

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0358	0.0300	119	80-120	

**Lab Batch #:** 990033

**Sample:** 706222-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 03/10/16 13:16

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	109	100	109	70-130	
o-Terphenyl	53.9	50.0	108	70-135	

**Lab Batch #:** 990116

**Sample:** 706268-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 03/10/16 19:08

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical

Work Orders : 526570,

Project ID:

Lab Batch #: 990191

Sample: 706321-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/11/16 11:50

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 990033

Sample: 706222-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/10/16 13:45

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-130	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 990116

Sample: 706268-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/10/16 17:39

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 990191

Sample: 706321-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/11/16 10:23

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 990033

Sample: 706222-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/10/16 14:14

SURROGATE RECOVERY STUDY					
TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-130	
o-Terphenyl	53.0	50.0	106	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: Energy Transfer Boyd 4" Historical**

**Work Orders :** 526570,

**Project ID:**

**Lab Batch #:** 990116

**Sample:** 706268-1-BSD / BSD

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 03/10/16 17:55

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

**Lab Batch #:** 990191

**Sample:** 706321-1-BSD / BSD

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 03/11/16 10:40

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

**Lab Batch #:** 990033

**Sample:** 526570-001 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/10/16 15:11

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.8	120	70-130	
o-Terphenyl	53.3	49.9	107	70-135	

**Lab Batch #:** 990116

**Sample:** 526061-009 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/10/16 18:19

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

**Lab Batch #:** 990191

**Sample:** 526570-015 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/11/16 10:56

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	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: Energy Transfer Boyd 4" Historical**

**Work Orders :** 526570,

**Project ID:**

**Lab Batch #:** 990033

**Sample:** 526570-001 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/10/16 15:39

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.8	117	70-130	
o-Terphenyl	52.1	49.9	104	70-135	

**Lab Batch #:** 990116

**Sample:** 526061-009 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/10/16 18:36

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

**Lab Batch #:** 990191

**Sample:** 526570-015 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 03/11/16 11:13

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



## BS / BSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical**

Work Order #: 526570

Project ID:

Analyst: PJB

Date Prepared: 03/10/2016

Date Analyzed: 03/10/2016

Lab Batch ID: 990116

Sample: 706268-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00150	0.100	0.0837	84	0.100	0.0834	83	0	70-130	35	
Toluene	<0.00200	0.100	0.0854	85	0.100	0.0831	83	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0903	90	0.100	0.0901	90	0	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.187	94	0.200	0.188	94	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0862	86	0.100	0.0866	87	0	71-133	35	

Analyst: PJB

Date Prepared: 03/10/2016

Date Analyzed: 03/11/2016

Lab Batch ID: 990191

Sample: 706321-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00150	0.100	0.0824	82	0.100	0.0808	81	2	70-130	35	
Toluene	<0.00200	0.100	0.0814	81	0.100	0.0812	81	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0821	82	0.100	0.0853	85	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.171	86	0.200	0.178	89	4	70-135	35	
o-Xylene	<0.00300	0.100	0.0822	82	0.100	0.0855	86	4	71-133	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



## BS / BSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical**

**Work Order #:** 526570

**Project ID:**

**Analyst:** DEP

**Date Prepared:** 03/11/2016

**Date Analyzed:** 03/11/2016

**Lab Batch ID:** 990124

**Sample:** 706272-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

Inorganic Anions by EPA 300/300.1	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	<10.0	100	103	103	100	103	103	0	90-110	20	

**Analyst:** ARM

**Date Prepared:** 03/10/2016

**Date Analyzed:** 03/10/2016

**Lab Batch ID:** 990033

**Sample:** 706222-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	958	96	1000	907	91	5	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	992	99	1000	959	96	3	75-125	25	

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: Energy Transfer Boyd 4" Historical**

Work Order #: 526570  
 Lab Batch ID: 990116  
 Date Analyzed: 03/10/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 526061-009 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 03/10/2016      Analyst: PJB

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0811	81	0.0998	0.0799	80	1	70-130	35	
Toluene	<0.00200	0.100	0.0803	80	0.0998	0.0801	80	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0846	85	0.0998	0.0840	84	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.176	88	0.200	0.174	87	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0821	82	0.0998	0.0816	82	1	71-133	35	

Lab Batch ID: 990191  
 Date Analyzed: 03/11/2016  
 Reporting Units: mg/kg

QC- Sample ID: 526570-015 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 03/10/2016      Analyst: PJB

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.0576	58	0.0992	0.0593	60	3	70-130	35	X
Toluene	<0.00200	0.0998	0.0586	59	0.0992	0.0597	60	2	70-130	35	X
Ethylbenzene	<0.00200	0.0998	0.0637	64	0.0992	0.0647	65	2	71-129	35	X
m_p-Xylenes	<0.00200	0.200	0.135	68	0.198	0.137	69	1	70-135	35	X
o-Xylene	<0.00299	0.0998	0.0680	68	0.0992	0.0672	68	1	71-133	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 Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



### Form 3 - MS / MSD Recoveries



Project Name: Energy Transfer Boyd 4" Historical

Work Order #: 526570  
 Lab Batch ID: 990124  
 Date Analyzed: 03/11/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 526570-001 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 03/11/2016      Analyst: DEP

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	<9.98	99.8	110	110	99.8	109	109	1	80-120	20	

Lab Batch ID: 990124  
 Date Analyzed: 03/11/2016  
 Reporting Units: mg/kg

QC- Sample ID: 526570-011 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 03/11/2016      Analyst: DEP

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	102	488	592	100	488	594	101	0	80-120	20	

Lab Batch ID: 990033  
 Date Analyzed: 03/10/2016  
 Reporting Units: mg/kg

QC- Sample ID: 526570-001 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 03/10/2016      Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<15.0	998	908	91	998	934	94	3	75-125	25	
C10-C28 Diesel Range Hydrocarbons	15.0	998	1010	100	998	1030	102	2	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Xenco Laboratories

The 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

Pg 1 of 2

Project Manager: Nikki Green

Project Name: Energy Transfer Boyd 4" Historical

Company Name: TRC Solutions, Inc

Project #: \_\_\_\_\_

Company Address: 2057 Commerce

Project Loc: Lea County, NM

City/State/Zip: Midland, TX 79703

PO #: \_\_\_\_\_

Telephone No: 432.520.7720

Fax No: 432.520.7701

Report Format:  Standard  TRRP  NPDES

Sampler Signature: *Nikki Green*

e-mail: nrgreen@trcsolutions.com  
rose.slade@energytransfer.com

(lab use only)

ORDER #: 526570

Analyze For:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filled	Total # of Containers	Preservation & # of Containers								Matrix	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	Volatile	Semi-volatiles	BTEX (80219) 8030 or BTEX 8280	RCI	N.O.R.M.	Chlorides E 300.0	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)															
	Sample-1 BOE	2'		3/8/2016	1030	1	x								Soil	x							x					x		
	Sample-1 BOE	8.5'		3/8/2016	1103	1	x								Soil	x							x					x		
	Sample-1 BOE	10'		3/8/2016	1121	1	x								Soil	x							x					x		
	Sample-2 BOE	2'		3/8/2016	1150	1	x								Soil	x							x					x		
	Sample-2 BOE	4'		3/8/2016	1230	1	x								Soil	x							x					x		
	Sample-2 BOE	4.6'		3/8/2016	1245	1	x								Soil	x							x					x		
	Sample-3	2'		3/8/2016	1317	1	x								Soil	x							x					x		
	Sample-3	6'		3/8/2016	1350	1	x								Soil	x							x					x		
	Sample-3	10'		3/8/2016	1433	1	x								Soil	x							x					x		
	Sample-4	2'		3/8/2016	1501	1	x								Soil	x							x					x		

Special Instructions:

Bill to Rose Slade at Energy Transfer. TPH Extended 35

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:	8.7°C	

Relinquished by: <u><i>Nikki Green</i></u>	Date: <u>3/8/16</u>	Time: <u>1630</u>	Received by: <u><i>[Signature]</i></u>	Date: <u>3/9/16</u>	Time: <u>1630</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: ELOT:	Date:	Time:

# Xenco Laboratories

The 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

Pg 2 of 2

Project Manager: Nikki Green  
Company Name: TRC Solutions, Inc  
Company Address: 2057 Commerce  
City/State/Zip: Midland, TX 79703  
Telephone No: 432.520.7720  
Sampler Signature: *Nikki Green*

Project Name: Energy Transfer Boyd 4" Historical  
Project #: \_\_\_\_\_  
Project Loc: Lea County, NM  
PO #: \_\_\_\_\_  
Report Format:  Standard  TRRP  NPDES

Fax No: 432.520.7701  
e-mail: ngreen@trcsolutions.com  
rose.slade@energytransfer.com

(lab use only)  
ORDER #: 526570

Analyze For:  
TCLP:  
TOTAL:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers								Matrix		TPH: 418.1 6015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Bn Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX: 4021B300 or BTEX 8280	RCI	N.O.R.M.	Chlorides E.300.1	RUSH TAT (Pre-Schedule) 34, 46, 72 hrs	Standard TAT
								Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Sed														
	Sample-4	6'		3/8/2016	1536	1	X																X								X
	Sample-4	10'		3/8/2016	1549	1	X																X								X
	Sample-5	2'		3/8/2016	1601	1	X																X								X
	Sample-5	6'		3/8/2016	1615	1	X																X								X
	Sample-5	10'		3/8/2016	1645	1	X																X								X
	Sample-6 Surface			3/8/2016	1650	1	X																								X
	Sample-7 Surface			3/8/2016	1655	1	X																								X
	Sample-8 Surface			3/8/2016	1700	1	X																								X

**Special Instructions:**  
Bill to Rose Slade at Energy Transfer, TPH Extended 35

Relinquished by: <u><i>Nikki Green</i></u>	Date: <u>3/9/16</u>	Time: <u>1630</u>	Received by: <u><i>[Signature]</i></u>	Date: <u>3/9/16</u>	Time: <u>1630</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: ELOT:	Date:	Time:

**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: 8.7°C



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 03/09/2016 04:30:00 PM

Work Order #: 526570

Acceptable Temperature Range: 0 - 6 degC  
 Air and Metal samples Acceptable Range: Ambient  
 Temperature Measuring device used : r8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	8.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#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 subcontract to xenco houston
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Carley Owens  
 Carley Owens

Date: 03/10/2016

Checklist reviewed by: Kelsey Brooks  
 Kelsey Brooks

Date: 03/10/2016



# Analytical Report 528239

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical**

**14-APR-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534-15-1)

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

Xenco-Atlanta (EPA Lab Code: GA00046):  
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135)  
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)



14-APR-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **528239**  
**Energy Transfer Boyd 4" Historical**  
Project Address: Lea County, NM

**Nikki Green:**

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) 528239. 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. 528239 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,

**Kelsey Brooks**  
Project 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 - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 528239



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample -1 @ 21'	S	04-05-16 10:45	- 21 ft	528239-001
T-SSW-1 @ 6'	S	04-05-16 11:09	- 6 ft	528239-002
T-NSW-1@7'	S	04-05-16 11:34	- 7 ft	528239-003
T-WSW-1 @11'	S	04-05-16 11:45	- 11 ft	528239-004
Sample-2 @ 20'	S	04-05-16 14:00	- 20 ft	528239-005
Sample-10 @ 2.5'	S	04-05-16 15:00	- 2.5 ft	528239-006
T-SSW-2 @7'	S	04-06-16 10:00	- 7 ft	528239-007
T-ESW-1 @ 5'	S	04-06-16 10:30	- 5 ft	528239-008
T-ESW-1 @ 10'	S	04-06-16 10:50	- 10 ft	528239-009
T-ESW-1 @16'	S	04-06-16 11:20	- 16 ft	528239-010
T-NSW-2 @ 16'	S	04-06-16 13:30	- 16 ft	528239-011
T-NSW-3 @4'	S	04-06-16 14:00	- 4 ft	528239-012
T-ESW-2 @ 4'	S	04-06-16 14:25	- 4 ft	528239-013
T-ESW-3 @4'	S	04-06-16 14:45	- 4 ft	528239-014
T-ESW-4 @ 4'	S	04-06-16 15:20	- 4 ft	528239-015



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: <b>Sample -1 @ 21'</b>	Matrix: Soil	Sample Depth: 21 ft
Lab Sample Id: 528239-001	Date Collected: 04.05.16 10.45	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.07	2.00	0.341	mg/kg	04.13.16 21:01		1

Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.86	mg/kg	04.11.16 19:47	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.86	mg/kg	04.11.16 19:47	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.86	mg/kg	04.11.16 19:47	U	1
Total TPH	PHC635	ND		9.86	mg/kg	04.11.16 19:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 130	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 15.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 18:18	U	1
Toluene	108-88-3	ND	0.00199	0.000994	mg/kg	04.11.16 18:18	U	1
Ethylbenzene	100-41-4	ND	0.00199	0.000487	mg/kg	04.11.16 18:18	U	1
m_p-Xylenes	179601-23-1	ND	0.00199	0.00169	mg/kg	04.11.16 18:18	U	1
o-Xylene	95-47-6	ND	0.00298	0.000840	mg/kg	04.11.16 18:18	U	1
Total Xylenes	1330-20-7	ND		0.000840	mg/kg	04.11.16 18:18	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 18:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		



**Certificate of Analytical Results**  
528239



**TRC Solutions, Inc, Midland, TX**  
Energy Transfer Boyd 4" Historical

Sample Id: T-SSW-1 @ 6' Matrix: Soil Sample Depth: 6 ft  
 Lab Sample Id: 528239-002 Date Collected: 04.05.16 11.09 Date Received: 04.08.16 15.23  
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
 Analyst: MNR % Moist: Tech: MNR  
 Seq Number: 992431 Date Prep: 04.13.16 16.00  
 Prep seq: 707674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.0	10.0	1.70	mg/kg	04.13.16 21:42		5

Analytical Method: TPH By SW8015B Mod Prep Method: 1005  
 Analyst: ARM % Moist: Tech: ARM  
 Seq Number: 992219 Date Prep: 04.11.16 15.00  
 Prep seq: 707587

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.85	mg/kg	04.11.16 21:11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.85	mg/kg	04.11.16 21:11	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.85	mg/kg	04.11.16 21:11	U	1
Total TPH	PHC635	ND		9.85	mg/kg	04.11.16 21:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 130	%		
o-Terphenyl	104	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: PJB % Moist: Tech: PJB  
 Seq Number: 992159 Date Prep: 04.11.16 15.00  
 Prep seq: 707546

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 19:07	U	1
Toluene	108-88-3	ND	0.00198	0.000992	mg/kg	04.11.16 19:07	U	1
Ethylbenzene	100-41-4	ND	0.00198	0.000486	mg/kg	04.11.16 19:07	U	1
m_p-Xylenes	179601-23-1	ND	0.00198	0.00169	mg/kg	04.11.16 19:07	U	1
o-Xylene	95-47-6	ND	0.00298	0.000839	mg/kg	04.11.16 19:07	U	1
Total Xylenes	1330-20-7	ND		0.000839	mg/kg	04.11.16 19:07	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 19:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	80 - 120	%		
4-Bromofluorobenzene	113	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-NSW-1@7'	Matrix: Soil	Sample Depth: 7 ft
Lab Sample Id: 528239-003	Date Collected: 04.05.16 11.34	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3.65	2.00	0.341	mg/kg	04.13.16 22:02		1

Analytical Method: TPH By SW8015B Mod	Prep Method: 1005
Analyst: ARM	% Moist:
Seq Number: 992219	Date Prep: 04.11.16 15.00
	Prep seq: 707587

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.87	mg/kg	04.11.16 21:38	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.87	mg/kg	04.11.16 21:38	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.87	mg/kg	04.11.16 21:38	U	1
Total TPH	PHC635	ND		9.87	mg/kg	04.11.16 21:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 130	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: PJB	% Moist:
Seq Number: 992159	Date Prep: 04.11.16 15.00
	Prep seq: 707546

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 19:23	U	1
Toluene	108-88-3	ND	0.00200	0.000998	mg/kg	04.11.16 19:23	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000489	mg/kg	04.11.16 19:23	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 19:23	U	1
o-Xylene	95-47-6	ND	0.00299	0.000844	mg/kg	04.11.16 19:23	U	1
Total Xylenes	1330-20-7	ND		0.000844	mg/kg	04.11.16 19:23	U	
Total BTEX		ND		0.000335	mg/kg	04.11.16 19:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-WSW-1 @11'	Matrix: Soil	Sample Depth: 11 ft
Lab Sample Id: 528239-004	Date Collected: 04.05.16 11.45	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	35.6	10.0	1.70	mg/kg	04.13.16 22:22		5

Analytical Method: TPH By SW8015B Mod	Prep Method: 1005	
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.87	mg/kg	04.11.16 22:06	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	51.7	15.0	9.87	mg/kg	04.11.16 22:06		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.87	mg/kg	04.11.16 22:06	U	1
<b>Total TPH</b>	<b>PHC635</b>	<b>51.7</b>		<b>9.87</b>	<b>mg/kg</b>	<b>04.11.16 22:06</b>		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 130	%		
o-Terphenyl	118	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B	
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 15.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 19:40	U	1
Toluene	108-88-3	ND	0.00198	0.000992	mg/kg	04.11.16 19:40	U	1
Ethylbenzene	100-41-4	ND	0.00198	0.000486	mg/kg	04.11.16 19:40	U	1
m_p-Xylenes	179601-23-1	ND	0.00198	0.00169	mg/kg	04.11.16 19:40	U	1
o-Xylene	95-47-6	ND	0.00298	0.000839	mg/kg	04.11.16 19:40	U	1
Total Xylenes	1330-20-7	ND		0.000839	mg/kg	04.11.16 19:40	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 19:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: <b>Sample-2 @ 20'</b>	Matrix: Soil	Sample Depth: 20 ft
Lab Sample Id: 528239-005	Date Collected: 04.05.16 14.00	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	32.3	2.00	0.341	mg/kg	04.13.16 22:42		1

Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	444	15.0	9.86	mg/kg	04.11.16 22:34		1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	1920	15.0	9.86	mg/kg	04.11.16 22:34		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	26.1	15.0	9.86	mg/kg	04.11.16 22:34		1
<b>Total TPH</b>	PHC635	<b>2390</b>		9.86	mg/kg	04.11.16 22:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 130	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 15.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0264	0.00149	0.000333	mg/kg	04.11.16 21:33		1
Toluene	108-88-3	0.0132	0.00199	0.000994	mg/kg	04.11.16 21:33		1
Ethylbenzene	100-41-4	0.160	0.00199	0.000487	mg/kg	04.11.16 21:33		1
m_p-Xylenes	179601-23-1	0.315	0.00199	0.00169	mg/kg	04.11.16 21:33		1
o-Xylene	95-47-6	0.0590	0.00298	0.000840	mg/kg	04.11.16 21:33		1
<b>Total Xylenes</b>	1330-20-7	<b>0.374</b>		0.000840	mg/kg	04.11.16 21:33		
<b>Total BTEX</b>		<b>0.574</b>		0.000333	mg/kg	04.11.16 21:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	80 - 120	%		
4-Bromofluorobenzene	115	80 - 120	%		





# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

**Sample Id:** Sample-10 @ 2.5'      **Matrix:** Soil      **Sample Depth:** 2.5 ft  
**Lab Sample Id:** 528239-006      **Date Collected:** 04.05.16 15.00      **Date Received:** 04.08.16 15.23  
**Analytical Method:** Inorganic Anions by EPA 300/300.1      **Prep Method:** E300P  
**Analyst:** MNR      **% Moist:**      **Tech:** MNR  
**Seq Number:** 992431      **Date Prep:** 04.13.16 16.00  
    **Prep seq:** 707674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	40.9	10.0	1.70	mg/kg	04.13.16 23:03		5

**Analytical Method:** TPH By SW8015B Mod      **Prep Method:** 1005  
**Analyst:** ARM      **% Moist:**      **Tech:** ARM  
**Seq Number:** 992219      **Date Prep:** 04.11.16 15.00  
    **Prep seq:** 707587

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.88	mg/kg	04.11.16 23:02	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.88	mg/kg	04.11.16 23:02	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.88	mg/kg	04.11.16 23:02	U	1
Total TPH	PHC635	ND		9.88	mg/kg	04.11.16 23:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 130	%		
o-Terphenyl	113	70 - 135	%		

**Analytical Method:** BTEX by EPA 8021B      **Prep Method:** 5030B  
**Analyst:** PJB      **% Moist:**      **Tech:** PJB  
**Seq Number:** 992159      **Date Prep:** 04.11.16 15.00  
    **Prep seq:** 707546

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 19:56	U	1
Toluene	108-88-3	ND	0.00199	0.000994	mg/kg	04.11.16 19:56	U	1
Ethylbenzene	100-41-4	ND	0.00199	0.000487	mg/kg	04.11.16 19:56	U	1
m_p-Xylenes	179601-23-1	ND	0.00199	0.00169	mg/kg	04.11.16 19:56	U	1
o-Xylene	95-47-6	ND	0.00298	0.000840	mg/kg	04.11.16 19:56	U	1
Total Xylenes	1330-20-7	ND		0.000840	mg/kg	04.11.16 19:56	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 19:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-SSW-2 @7'	Matrix: Soil	Sample Depth: 7 ft
Lab Sample Id: 528239-007	Date Collected: 04.06.16 10.00	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	99.0	20.0	3.41	mg/kg	04.14.16 00:03		10

Analytical Method: TPH By SW8015B Mod	Prep Method: 1005
Analyst: ARM	% Moist:
Seq Number: 992219	Date Prep: 04.11.16 15.00
	Prep seq: 707587

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.86	mg/kg	04.11.16 23:30	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.86	mg/kg	04.11.16 23:30	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.86	mg/kg	04.11.16 23:30	U	1
Total TPH	PHC635	ND		9.86	mg/kg	04.11.16 23:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 130	%		
o-Terphenyl	108	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: PJB	% Moist:
Seq Number: 992159	Date Prep: 04.11.16 15.00
	Prep seq: 707546

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 20:12	U	1
Toluene	108-88-3	ND	0.00200	0.000998	mg/kg	04.11.16 20:12	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000489	mg/kg	04.11.16 20:12	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 20:12	U	1
o-Xylene	95-47-6	ND	0.00299	0.000844	mg/kg	04.11.16 20:12	U	1
Total Xylenes	1330-20-7	ND		0.000844	mg/kg	04.11.16 20:12	U	
Total BTEX		ND		0.000335	mg/kg	04.11.16 20:12	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-ESW-1 @ 5'	Matrix: Soil	Sample Depth: 5 ft
Lab Sample Id: 528239-008	Date Collected: 04.06.16 10.30	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	875	100	17.0	mg/kg	04.14.16 00:24		50

Analytical Method: TPH By SW8015B Mod	Prep Method: 1005	
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.85	mg/kg	04.11.16 23:59	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.85	mg/kg	04.11.16 23:59	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.85	mg/kg	04.11.16 23:59	U	1
Total TPH	PHC635	ND		9.85	mg/kg	04.11.16 23:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 130	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B	
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 15.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 20:28	U	1
Toluene	108-88-3	ND	0.00198	0.000992	mg/kg	04.11.16 20:28	U	1
Ethylbenzene	100-41-4	ND	0.00198	0.000486	mg/kg	04.11.16 20:28	U	1
m,p-Xylenes	179601-23-1	ND	0.00198	0.00169	mg/kg	04.11.16 20:28	U	1
o-Xylene	95-47-6	ND	0.00298	0.000839	mg/kg	04.11.16 20:28	U	1
Total Xylenes	1330-20-7	ND		0.000839	mg/kg	04.11.16 20:28	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 20:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

**Sample Id:** T-ESW-1 @ 10'      **Matrix:** Soil      **Sample Depth:** 10 ft  
**Lab Sample Id:** 528239-009      **Date Collected:** 04.06.16 10.50      **Date Received:** 04.08.16 15.23  
**Analytical Method:** Inorganic Anions by EPA 300/300.1      **Prep Method:** E300P  
**Analyst:** MNR      **% Moist:**      **Tech:** MNR  
**Seq Number:** 992431      **Date Prep:** 04.13.16 16.00  
    **Prep seq:** 707674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	168	40.0	6.82	mg/kg	04.14.16 00:44		20

**Analytical Method:** TPH By SW8015B Mod      **Prep Method:** 1005  
**Analyst:** ARM      **% Moist:**      **Tech:** ARM  
**Seq Number:** 992219      **Date Prep:** 04.11.16 15.00  
    **Prep seq:** 707587

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.85	mg/kg	04.12.16 00:27	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	58.8	15.0	9.85	mg/kg	04.12.16 00:27		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.85	mg/kg	04.12.16 00:27	U	1
<b>Total TPH</b>	<b>PHC635</b>	<b>58.8</b>		<b>9.85</b>	<b>mg/kg</b>	<b>04.12.16 00:27</b>		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 130	%		
o-Terphenyl	122	70 - 135	%		

**Analytical Method:** BTEX by EPA 8021B      **Prep Method:** 5030B  
**Analyst:** PJB      **% Moist:**      **Tech:** PJB  
**Seq Number:** 992159      **Date Prep:** 04.11.16 15.00  
    **Prep seq:** 707546

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 20:45	U	1
Toluene	108-88-3	ND	0.00200	0.000998	mg/kg	04.11.16 20:45	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000489	mg/kg	04.11.16 20:45	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 20:45	U	1
o-Xylene	95-47-6	ND	0.00299	0.000844	mg/kg	04.11.16 20:45	U	1
Total Xylenes	1330-20-7	ND		0.000844	mg/kg	04.11.16 20:45	U	
Total BTEX		ND		0.000335	mg/kg	04.11.16 20:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-ESW-1 @16'	Matrix: Soil	Sample Depth: 16 ft
Lab Sample Id: 528239-010	Date Collected: 04.06.16 11.20	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	14.1	10.0	1.70	mg/kg	04.14.16 01:04		5

Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.85	mg/kg	04.12.16 00:56	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.85	mg/kg	04.12.16 00:56	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.85	mg/kg	04.12.16 00:56	U	1
Total TPH	PHC635	ND		9.85	mg/kg	04.12.16 00:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 130	%		
o-Terphenyl	113	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 15.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 21:00	U	1
Toluene	108-88-3	ND	0.00200	0.000998	mg/kg	04.11.16 21:00	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000489	mg/kg	04.11.16 21:00	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 21:00	U	1
o-Xylene	95-47-6	ND	0.00299	0.000844	mg/kg	04.11.16 21:00	U	1
Total Xylenes	1330-20-7	ND		0.000844	mg/kg	04.11.16 21:00	U	
Total BTEX		ND		0.000335	mg/kg	04.11.16 21:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



**Certificate of Analytical Results**  
**528239**



**TRC Solutions, Inc, Midland, TX**  
**Energy Transfer Boyd 4" Historical**

Sample Id: T-NSW-2 @ 16' Matrix: Soil Sample Depth: 16 ft  
 Lab Sample Id: 528239-011 Date Collected: 04.06.16 13.30 Date Received: 04.08.16 15.23  
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P  
 Analyst: MNR % Moist: Tech: MNR  
 Seq Number: 992431 Date Prep: 04.13.16 16.00  
 Prep seq: 707674

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1440	100	17.0	mg/kg	04.14.16 01:25		50

Analytical Method: TPH By SW8015B Mod Prep Method: 1005  
 Analyst: ARM % Moist: Tech: ARM  
 Seq Number: 992219 Date Prep: 04.11.16 15.00  
 Prep seq: 707587

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.87	mg/kg	04.12.16 01:52	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.87	mg/kg	04.12.16 01:52	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.87	mg/kg	04.12.16 01:52	U	1
Total TPH	PHC635	ND		9.87	mg/kg	04.12.16 01:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 130	%		
o-Terphenyl	96	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: PJB % Moist: Tech: PJB  
 Seq Number: 992159 Date Prep: 04.11.16 15.00  
 Prep seq: 707546

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.12.16 12:44	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/kg	04.12.16 12:44	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000490	mg/kg	04.12.16 12:44	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.12.16 12:44	U	1
o-Xylene	95-47-6	ND	0.00300	0.000845	mg/kg	04.12.16 12:44	U	1
Total Xylenes	1330-20-7	ND		0.000845	mg/kg	04.12.16 12:44	U	
Total BTEX		ND		0.000335	mg/kg	04.12.16 12:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	80 - 120	%		
4-Bromofluorobenzene	103	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-NSW-3 @4'	Matrix: Soil	Sample Depth: 4 ft
Lab Sample Id: 528239-012	Date Collected: 04.06.16 14.00	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	246	20.0	3.41	mg/kg	04.14.16 02:05		10

Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.86	mg/kg	04.12.16 02:21	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.86	mg/kg	04.12.16 02:21	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.86	mg/kg	04.12.16 02:21	U	1
Total TPH	PHC635	ND		9.86	mg/kg	04.12.16 02:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 130	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992302	Date Prep: 04.11.16 20.00	
	Prep seq: 707618	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00149	0.000333	mg/kg	04.11.16 23:42	U	1
Toluene	108-88-3	ND	0.00199	0.000994	mg/kg	04.11.16 23:42	U	1
Ethylbenzene	100-41-4	ND	0.00199	0.000487	mg/kg	04.11.16 23:42	U	1
m_p-Xylenes	179601-23-1	ND	0.00199	0.00169	mg/kg	04.11.16 23:42	U	1
o-Xylene	95-47-6	ND	0.00298	0.000840	mg/kg	04.11.16 23:42	U	1
Total Xylenes	1330-20-7	ND		0.000840	mg/kg	04.11.16 23:42	U	
Total BTEX		ND		0.000333	mg/kg	04.11.16 23:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



# Certificate of Analytical Results

## 528239



### TRC Solutions, Inc, Midland, TX Energy Transfer Boyd 4" Historical

Sample Id: T-ESW-2 @ 4'	Matrix: Soil	Sample Depth: 4 ft
Lab Sample Id: 528239-013	Date Collected: 04.06.16 14.25	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	304	20.0	3.41	mg/kg	04.14.16 02:25		10

Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.87	mg/kg	04.12.16 02:49	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.87	mg/kg	04.12.16 02:49	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.0	9.87	mg/kg	04.12.16 02:49	U	1
Total TPH	PHC635	ND		9.87	mg/kg	04.12.16 02:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 130	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992302	Date Prep: 04.11.16 20.00	
	Prep seq: 707618	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 23:58	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/kg	04.11.16 23:58	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000490	mg/kg	04.11.16 23:58	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 23:58	U	1
o-Xylene	95-47-6	ND	0.00300	0.000845	mg/kg	04.11.16 23:58	U	1
Total Xylenes	1330-20-7	ND		0.000845	mg/kg	04.11.16 23:58	U	
Total BTEX		ND		0.000335	mg/kg	04.11.16 23:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		





**Certificate of Analytical Results**  
**528239**



**TRC Solutions, Inc, Midland, TX**  
**Energy Transfer Boyd 4" Historical**

Sample Id: T-ESW-3 @4'	Matrix: Soil	Sample Depth: 4 ft
Lab Sample Id: 528239-014	Date Collected: 04.06.16 14.45	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	321	40.0	6.82	mg/kg	04.14.16 02:46		20

Sample Id: T-ESW-4 @ 4'	Matrix: Soil	Sample Depth: 4 ft
Lab Sample Id: 528239-015	Date Collected: 04.06.16 15.20	Date Received: 04.08.16 15.23
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: MNR	% Moist:	Tech: MNR
Seq Number: 992431	Date Prep: 04.13.16 16.00	
	Prep seq: 707674	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	361	20.0	3.41	mg/kg	04.14.16 03:06		10



**Certificate of Analytical Results**  
**528239**



**TRC Solutions, Inc, Midland, TX**  
**Energy Transfer Boyd 4" Historical**

Sample Id: 707546-1-BLK	Matrix: Solid	Sample Depth:
Lab Sample Id: 707546-1-BLK	Date Collected:	Date Received:
Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: PJB	% Moist:	Tech: PJB
Seq Number: 992159	Date Prep: 04.11.16 11.00	
	Prep seq: 707546	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 12:26	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/kg	04.11.16 12:26	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000490	mg/kg	04.11.16 12:26	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 12:26	U	1
o-Xylene	95-47-6	ND	0.00300	0.000845	mg/kg	04.11.16 12:26	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Sample Id: 707587-1-BLK	Matrix: Solid	Sample Depth:
Lab Sample Id: 707587-1-BLK	Date Collected:	Date Received:
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 992219	Date Prep: 04.11.16 15.00	
	Prep seq: 707587	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.88	mg/kg	04.11.16 18:20	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.88	mg/kg	04.11.16 18:20	U	1
Total TPH	PHC635	ND		9.88	mg/kg	04.11.16 18:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	117	70 - 130	%		
o-Terphenyl	121	70 - 135	%		



**Certificate of Analytical Results**  
**528239**



**TRC Solutions, Inc, Midland, TX**  
**Energy Transfer Boyd 4" Historical**

Sample Id: <b>707618-1-BLK</b>	Matrix: <b>Solid</b>	Sample Depth:
Lab Sample Id: <b>707618-1-BLK</b>	Date Collected:	Date Received:
Analytical Method: <b>BTEX by EPA 8021B</b>	% Moist:	Prep Method: <b>5030B</b>
Analyst: <b>PJB</b>	Date Prep: <b>04.11.16 20.00</b>	Tech: <b>PJB</b>
Seq Number: <b>992302</b>	Prep seq: <b>707618</b>	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00150	0.000335	mg/kg	04.11.16 23:25	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/kg	04.11.16 23:25	U	1
Ethylbenzene	100-41-4	ND	0.00200	0.000490	mg/kg	04.11.16 23:25	U	1
m_p-Xylenes	179601-23-1	ND	0.00200	0.00170	mg/kg	04.11.16 23:25	U	1
o-Xylene	95-47-6	ND	0.00300	0.000845	mg/kg	04.11.16 23:25	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Sample Id: <b>707674-1-BLK</b>	Matrix: <b>Solid</b>	Sample Depth:
Lab Sample Id: <b>707674-1-BLK</b>	Date Collected:	Date Received:
Analytical Method: <b>Inorganic Anions by EPA 300/300.1</b>	% Moist:	Prep Method: <b>E300P</b>
Analyst: <b>MNR</b>	Date Prep: <b>04.13.16 16.00</b>	Tech: <b>MNR</b>
Seq Number: <b>992431</b>	Prep seq: <b>707674</b>	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	2.00	0.341	mg/kg	04.13.16 20:00	U	1



**XENCO Laboratories**  
**CHRONOLOGY OF HOLDING TIMES**



Analytical Method : Inorganic Anions by EPA 300/300.1

Client : TRC Solutions, Inc

Work Order #: 528239

Project ID: \_\_\_\_\_

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
Sample -1 @ 21'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
T-SSW-1 @ 6'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
T-NSW-1@7'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
T-WSW-1 @11'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
Sample-2 @ 20'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
Sample-10 @ 2.5'	Apr. 5, 2016	Apr. 8, 2016				Apr.13, 2016	28	8	P
T-SSW-2 @7'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-1 @ 5'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-1 @ 10'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-1 @16'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-NSW-2 @ 16'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-NSW-3 @4'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-2 @ 4'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-3 @4'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P
T-ESW-4 @ 4'	Apr. 6, 2016	Apr. 8, 2016				Apr.14, 2016	28	8	P



**XENCO Laboratories**  
**CHRONOLOGY OF HOLDING TIMES**



Analytical Method : TPH By SW8015B Mod

Client : TRC Solutions, Inc

Work Order #: 528239

Project ID: \_\_\_\_\_

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
Sample -1 @ 21'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
T-SSW-1 @ 6'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
T-NSW-1@7'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
T-WSW-1 @11'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
Sample-2 @ 20'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
Sample-10 @ 2.5'	Apr. 5, 2016	Apr. 8, 2016	Apr. 11, 2016	14	6	Apr.11, 2016	14	0	P
T-SSW-2 @7'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.11, 2016	14	0	P
T-ESW-1 @ 5'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.11, 2016	14	0	P
T-ESW-1 @ 10'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.12, 2016	14	1	P
T-ESW-1 @16'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.12, 2016	14	1	P
T-NSW-2 @ 16'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.12, 2016	14	1	P
T-NSW-3 @4'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.12, 2016	14	1	P
T-ESW-2 @ 4'	Apr. 6, 2016	Apr. 8, 2016	Apr. 11, 2016	14	5	Apr.12, 2016	14	1	P



**XENCO Laboratories**  
**CHRONOLOGY OF HOLDING TIMES**



Analytical Method : BTEX by EPA 8021B

Client : TRC Solutions, Inc

Work Order #: 528239

Project ID: \_\_\_\_\_

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
Sample-1 @ 21'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
T-SSW-1 @ 6'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
T-NSW-1@7'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
T-WSW-1 @11'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
Sample-2 @ 20'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
Sample-10 @ 2.5'	Apr. 5, 2016	Apr. 8, 2016				Apr.11, 2016	14	6	P
T-SSW-2 @7'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P
T-ESW-1 @ 5'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P
T-ESW-1 @ 10'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P
T-ESW-1 @16'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P
T-NSW-2 @ 16'	Apr. 6, 2016	Apr. 8, 2016				Apr.12, 2016	14	6	P
T-NSW-3 @4'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P
T-ESW-2 @ 4'	Apr. 6, 2016	Apr. 8, 2016				Apr.11, 2016	14	5	P

F = These samples were analyzed outside the recommended holding time.

P = Samples analyzed within the recommended holding time.



# Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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1211 W Florida Ave, Midland, TX 79701	(210) 509-3334	(210) 509-3335
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



Analytical Log

Analytical Method: BTEX by EPA 8021B  
Project Name: Energy Transfer Boyd 4" Historical  
Client Name: TRC Solutions, Inc

Batch #: 992159  
Project ID: \_\_\_\_\_  
WO Number: 528239

<b>Client Sample Id</b>	<b>Lab Sample Id</b>	<b>QC Types</b>
<u>Sample -1 @ 21'</u>	<u>528239-001</u>	<u>SMP</u>
<u>Sample-10 @ 2.5'</u>	<u>528239-006</u>	<u>SMP</u>
<u>Sample-2 @ 20'</u>	<u>528239-005</u>	<u>SMP</u>
<u>T-ESW-1 @ 10'</u>	<u>528239-009</u>	<u>SMP</u>
<u>T-ESW-1 @ 5'</u>	<u>528239-008</u>	<u>SMP</u>
<u>T-ESW-1 @16'</u>	<u>528239-010</u>	<u>SMP</u>
<u>T-NSW-1@7'</u>	<u>528239-003</u>	<u>SMP</u>
<u>T-NSW-2 @ 16'</u>	<u>528239-011</u>	<u>SMP</u>
<u>T-SSW-1 @ 6'</u>	<u>528239-002</u>	<u>SMP</u>
<u>T-SSW-2 @7'</u>	<u>528239-007</u>	<u>SMP</u>
<u>T-WSW-1 @11'</u>	<u>528239-004</u>	<u>SMP</u>
_____	<u>528243-002 S</u>	<u>MS</u>
_____	<u>528243-002 SD</u>	<u>MSD</u>
_____	<u>707546-1-BKS</u>	<u>BKS</u>
_____	<u>707546-1-BLK</u>	<u>BLK</u>
_____	<u>707546-1-BSD</u>	<u>BSD</u>





Analytical Log

Analytical Method: TPH By SW8015B Mod  
Project Name: Energy Transfer Boyd 4" Historical  
Client Name: TRC Solutions, Inc

Batch #: 992219  
Project ID: \_\_\_\_\_  
WO Number: 528239

<b>Client Sample Id</b>	<b>Lab Sample Id</b>	<b>QC Types</b>
<u>Sample -1 @ 21'</u>	<u>528239-001</u>	<u>SMP</u>
<u>Sample-10 @ 2.5'</u>	<u>528239-006</u>	<u>SMP</u>
<u>Sample-2 @ 20'</u>	<u>528239-005</u>	<u>SMP</u>
<u>T-ESW-1 @ 10'</u>	<u>528239-009</u>	<u>SMP</u>
<u>T-ESW-1 @ 5'</u>	<u>528239-008</u>	<u>SMP</u>
<u>T-ESW-1 @16'</u>	<u>528239-010</u>	<u>SMP</u>
<u>T-ESW-2 @ 4'</u>	<u>528239-013</u>	<u>SMP</u>
<u>T-NSW-1@7'</u>	<u>528239-003</u>	<u>SMP</u>
<u>T-NSW-2 @ 16'</u>	<u>528239-011</u>	<u>SMP</u>
<u>T-NSW-3 @4'</u>	<u>528239-012</u>	<u>SMP</u>
<u>T-SSW-1 @ 6'</u>	<u>528239-002</u>	<u>SMP</u>
<u>T-SSW-2 @7'</u>	<u>528239-007</u>	<u>SMP</u>
<u>T-WSW-1 @11'</u>	<u>528239-004</u>	<u>SMP</u>
_____	<u>528239-001 S</u>	<u>MS</u>
_____	<u>528239-001 SD</u>	<u>MSD</u>
_____	<u>707587-1-BKS</u>	<u>BKS</u>
_____	<u>707587-1-BLK</u>	<u>BLK</u>
_____	<u>707587-1-BSD</u>	<u>BSD</u>



Analytical Log

Analytical Method: BTEX by EPA 8021B  
Project Name: Energy Transfer Boyd 4" Historical  
Client Name: TRC Solutions, Inc

Batch #: 992302  
Project ID: \_\_\_\_\_  
WO Number: 528239

<b>Client Sample Id</b>	<b>Lab Sample Id</b>	<b>QC Types</b>
<u>T-ESW-2 @ 4'</u>	<u>528239-013</u>	<u>SMP</u>
<u>T-NSW-3 @4'</u>	<u>528239-012</u>	<u>SMP</u>
_____	<u>528239-013 S</u>	<u>MS</u>
_____	<u>528239-013 SD</u>	<u>MSD</u>
_____	<u>707618-1-BKS</u>	<u>BKS</u>
_____	<u>707618-1-BLK</u>	<u>BLK</u>
_____	<u>707618-1-BSD</u>	<u>BSD</u>



Analytical Log

Analytical Method: Inorganic Anions by EPA 300/300.1  
Project Name: Energy Transfer Boyd 4" Historical  
Client Name: TRC Solutions, Inc

Batch #: 992431  
Project ID: \_\_\_\_\_  
WO Number: 528239

<b>Client Sample Id</b>	<b>Lab Sample Id</b>	<b>QC Types</b>
<u>Sample -1 @ 21'</u>	<u>528239-001</u>	<u>SMP</u>
<u>Sample-10 @ 2.5'</u>	<u>528239-006</u>	<u>SMP</u>
<u>Sample-2 @ 20'</u>	<u>528239-005</u>	<u>SMP</u>
<u>T-ESW-1 @ 10'</u>	<u>528239-009</u>	<u>SMP</u>
<u>T-ESW-1 @ 5'</u>	<u>528239-008</u>	<u>SMP</u>
<u>T-ESW-1 @16'</u>	<u>528239-010</u>	<u>SMP</u>
<u>T-ESW-2 @ 4'</u>	<u>528239-013</u>	<u>SMP</u>
<u>T-ESW-3 @4'</u>	<u>528239-014</u>	<u>SMP</u>
<u>T-ESW-4 @ 4'</u>	<u>528239-015</u>	<u>SMP</u>
<u>T-NSW-1@7'</u>	<u>528239-003</u>	<u>SMP</u>
<u>T-NSW-2 @ 16'</u>	<u>528239-011</u>	<u>SMP</u>
<u>T-NSW-3 @4'</u>	<u>528239-012</u>	<u>SMP</u>
<u>T-SSW-1 @ 6'</u>	<u>528239-002</u>	<u>SMP</u>
<u>T-SSW-2 @7'</u>	<u>528239-007</u>	<u>SMP</u>
<u>T-WSW-1 @11'</u>	<u>528239-004</u>	<u>SMP</u>
_____	<u>528239-001 S</u>	<u>MS</u>
_____	<u>528239-011 S</u>	<u>MS</u>
_____	<u>707674-1-BKS</u>	<u>BKS</u>
_____	<u>707674-1-BLK</u>	<u>BLK</u>
_____	<u>707674-1-BSD</u>	<u>BSD</u>



# Form 2 - Surrogate Recoveries

**Project Name: Energy Transfer Boyd 4" Historical**

**Work Orders :** 528239,

**Project ID:**

**Lab Batch #:** 992159

**Sample:** 707546-1-BKS / BKS

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 11:05

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

**Lab Batch #:** 992159

**Sample:** 707546-1-BSD / BSD

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 11:21

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

**Lab Batch #:** 992159

**Sample:** 528243-002 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 04/11/16 11:37

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

**Lab Batch #:** 992159

**Sample:** 528243-002 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 04/11/16 11:54

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

**Lab Batch #:** 992159

**Sample:** 707546-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 12:26

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



# Form 2 - Surrogate Recoveries

**Project Name: Energy Transfer Boyd 4" Historical**

**Work Orders :** 528239,

**Project ID:**

**Lab Batch #:** 992302

**Sample:** 707618-1-BKS / BKS

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 22:05

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

**Lab Batch #:** 992302

**Sample:** 707618-1-BSD / BSD

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 22:20

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

**Lab Batch #:** 992302

**Sample:** 528239-013 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 04/11/16 22:37

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

**Lab Batch #:** 992302

**Sample:** 528239-013 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 04/11/16 22:53

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

**Lab Batch #:** 992302

**Sample:** 707618-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 04/11/16 23:25

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

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



# Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical

Work Orders : 528239,

Project ID:

Lab Batch #: 992219

Sample: 707587-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/11/16 18:20

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-130	
o-Terphenyl	60.5	50.0	121	70-135	

Lab Batch #: 992219

Sample: 707587-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/11/16 18:50

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-130	
o-Terphenyl	61.6	50.0	123	70-135	

Lab Batch #: 992219

Sample: 707587-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/11/16 19:19

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-130	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 992219

Sample: 528239-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/11/16 20:15

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-130	
o-Terphenyl	53.9	50.0	108	70-135	

Lab Batch #: 992219

Sample: 528239-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/11/16 20:42

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.8	118	70-130	
o-Terphenyl	54.4	49.9	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: Energy Transfer Boyd 4" Historical**

**Work Order #: 528239**

**Project ID:**

**Analyst: PJB**

**Date Prepared: 04/11/2016**

**Date Analyzed: 04/11/2016**

**Lab Batch ID: 992159**

**Sample: 707546-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000335	0.100	0.0968	97	0.100	0.0922	92	5	70-130	35	
Toluene	<0.00100	0.100	0.0967	97	0.100	0.0935	94	3	70-130	35	
Ethylbenzene	<0.000490	0.100	0.105	105	0.100	0.101	101	4	71-129	35	
m_p-Xylenes	<0.00170	0.200	0.205	103	0.200	0.199	100	3	70-135	35	
o-Xylene	<0.000845	0.100	0.0975	98	0.100	0.0949	95	3	71-133	35	

**Analyst: PJB**

**Date Prepared: 04/11/2016**

**Date Analyzed: 04/11/2016**

**Lab Batch ID: 992302**

**Sample: 707618-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000335	0.100	0.0981	98	0.100	0.0854	85	14	70-130	35	
Toluene	<0.00100	0.100	0.0991	99	0.100	0.0855	86	15	70-130	35	
Ethylbenzene	<0.000490	0.100	0.107	107	0.100	0.0952	95	12	71-129	35	
m_p-Xylenes	<0.00170	0.200	0.213	107	0.200	0.189	95	12	70-135	35	
o-Xylene	<0.000845	0.100	0.103	103	0.100	0.0926	93	11	71-133	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



## BS / BSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical**

**Work Order #: 528239**

**Project ID:**

**Analyst: MNR**

**Date Prepared: 04/13/2016**

**Date Analyzed: 04/13/2016**

**Lab Batch ID: 992431**

**Sample: 707674-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>Inorganic Anions by EPA 300/300.1</b>	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
<b>Analytes</b>											
Chloride	<0.341	50.0	49.4	99	50.0	49.7	99	1	90-110	20	

**Analyst: ARM**

**Date Prepared: 04/11/2016**

**Date Analyzed: 04/11/2016**

**Lab Batch ID: 992219**

**Sample: 707587-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>TPH By SW8015B Mod</b>	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
<b>Analytes</b>											
C6-C10 Gasoline Range Hydrocarbons	<9.88	1000	931	93	1000	931	93	0	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<9.88	1000	1010	101	1000	994	99	2	75-125	25	

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: Energy Transfer Boyd 4" Historical**



Work Order #: 528239  
 Lab Batch #: 992431  
 Date Analyzed: 04/13/2016  
 QC- Sample ID: 528239-001 S  
 Reporting Units: mg/kg

Date Prepared: 04/13/2016  
 Batch #: 1

Project ID:  
 Analyst: MNR  
 Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	9.07	50.0	56.7	95	80-120	

Lab Batch #: 992431  
 Date Analyzed: 04/14/2016  
 QC- Sample ID: 528239-011 S  
 Reporting Units: mg/kg

Date Prepared: 04/13/2016  
 Batch #: 1

Analyst: MNR  
 Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1440	2500	3900	98	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: Energy Transfer Boyd 4" Historical

Work Order #: 528239  
 Lab Batch ID: 992159  
 Date Analyzed: 04/11/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 528243-002 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 04/11/2016      Analyst: PJB

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000333	0.0992	0.103	104	0.100	0.0755	76	31	70-130	35	
Toluene	<0.000992	0.0992	0.106	107	0.100	0.0745	75	35	70-130	35	
Ethylbenzene	<0.000486	0.0992	0.116	117	0.100	0.0801	80	37	71-129	35	F
m_p-Xylenes	<0.00169	0.198	0.229	116	0.200	0.161	81	35	70-135	35	
o-Xylene	<0.000839	0.0992	0.110	111	0.100	0.0873	87	23	71-133	35	

Lab Batch ID: 992302  
 Date Analyzed: 04/11/2016  
 Reporting Units: mg/kg

QC- Sample ID: 528239-013 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 04/11/2016      Analyst: PJB

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000335	0.0998	0.0739	74	0.0992	0.0726	73	2	70-130	35	
Toluene	<0.000998	0.0998	0.0748	75	0.0992	0.0719	72	4	70-130	35	
Ethylbenzene	<0.000489	0.0998	0.0817	82	0.0992	0.0803	81	2	71-129	35	
m_p-Xylenes	<0.00170	0.200	0.163	82	0.198	0.160	81	2	70-135	35	
o-Xylene	<0.000844	0.0998	0.0790	79	0.0992	0.0780	79	1	71-133	35	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



### Form 3 - MS / MSD Recoveries



Project Name: Energy Transfer Boyd 4" Historical

Work Order #: 528239  
 Lab Batch ID: 992219  
 Date Analyzed: 04/11/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 528239-001 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 04/11/2016      Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<9.88	1000	849	85	998	858	86	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<9.88	1000	904	90	998	898	90	1	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Attachment A Laboratory Data Package Cover Page

Project Name: **Energy Transfer Boyd 4" Histo** Laboratory Number: **528239**

This Data package consists of: Laboratory Batch No(s)

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate Recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs) and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.
- Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

**Check, if applicable:** [ ] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [ ] TCEQ or [ ] \_\_\_\_\_ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

**Kelsey Brooks**  
Name (Printed)

  
Signature

**Project Manager**  
Official Title (printed)

**14-APR-16**  
Date

A1

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

<b>Attachment A (cont'd): Laboratory Review Checklist: Exception Reports</b>	
Laboratory Name: XENCO LABORATORIES	LRC Date: 14-APR-16
Project Name: Energy Transfer Boyd 4" Historical	Laboratory Job Number: 528239
Reviewer Name: KEB	Batch Number(s) :
ER# 1	DESCRIPTION

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).



**TRC Solutions, Inc, Midland, TX**  
Energy Transfer Boyd 4" Historical

# Xenco Laboratories

The Environmental Lab of Texas

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

528239

12600 West I-20 East  
Odessa, Texas 79765

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

Project Manager: Nikki Green

Project Name: Energy Transfer Boyd 4" Historical

Company Name: TRC Solutions, Inc

Project #: \_\_\_\_\_

Company Address: 2057 Commerce

Project Loc: Lea County, NM

City/State/Zip: Midland, TX 79703

PO #: \_\_\_\_\_

Telephone No: 432.520.7720

Fax No: 432.520.7701

Report Format:  Standard  TRRP  NPDES

Sampler Signature: *Nikki Green*

e-mail: nrgreen@trcsolutions.com  
rose.slade@energytransfer.com

(lab use only)  
ORDER #:

Analyze For:									
TCLP:									
TOTAL:									

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers								Matrix	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 9021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Ice	HNO3	HCl	H2SO4	NaOH	NH3/S2O3	None	Other (Specify)															
	Sample-1 @ 21'			4/5/2016	1045	1	x								Soil	x							x					x		
	T-SSW-1 @ 6'			4/5/2016	1109	1	x								Soil	x							x					x		
	T-NSW-1 @ 7'			4/5/2016	1134	1	x								Soil	x							x					x		
	T-WSW-1 @ 11'			4/5/2016	1145	1	x								Soil	x							x					x		
	Sample-2 @ 20'			4/5/2016	1400	1	x								Soil	x							x					x		
	Sample-10 @ 2.5'			4/5/2016	1500	1	x								Soil	x							x					x		
	T-SSW-2 @ 7'			4/6/2016	1000	1	x								Soil	x							x					x		
	T-ESW-1 @ 5'			4/6/2016	1030	1	x								Soil	x							x					x		
	T-ESW-1 @ 10'			4/6/2016	1050	1	x								Soil	x							x					x		
	T-ESW-1 @ 16'			4/6/2016	1120	1	x								Soil	x							x					x		

Special Instructions: Bill to Rose Slade at Energy Transfer. TPH Extended 35

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? <input type="checkbox"/> UPS <input type="checkbox"/> DHL <input type="checkbox"/> FedEx <input type="checkbox"/> Lone Star		
Temperature Upon FC/F:0	13°C	IR ID: R-8
Corrected Temp:	13°C	

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Nikki Green</u>	<u>4/8/16</u>	<u>3:23 PM</u>	<u>[Signature]</u>	<u>4-8-16</u>	<u>3:23</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time







**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 04/08/2016 03:23:00 PM

Work Order #: 528239

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	13
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron Date: 04/11/2016  
 Mary Negron

Checklist reviewed by: Kelsey Brooks Date: 04/11/2016  
 Kelsey Brooks

# Analytical Report 532437

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**07-JUL-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



07-JUL-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **532437**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 532437. 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. 532437 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,

**Kelsey Brooks**  
Project 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 - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 532437



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West Excavation Floor-1 @ 20'	S	06-27-16 13:00	- 20 ft	532437-001
West Excavation SSW-1 @ 19'	S	06-27-16 13:05	- 19 ft	532437-002
West Excavation NSW-1 @ 19'	S	06-27-16 13:10	- 19 ft	532437-003
West Excavation ESW-1 @ 19'	S	06-27-16 13:15	- 19 ft	532437-004
West Excavation Floor-2 @ 20'	S	06-27-16 13:20	- 20 ft	532437-005
West Excavation SSW-2 @ 19'	S	06-27-16 13:25	- 19 ft	532437-006
West Excavation NSW-2 @ 19'	S	06-27-16 13:30	- 19 ft	532437-007
West Excavation Floor-3 @ 20'	S	06-27-16 13:35	- 20 ft	532437-008
West Excavation SSW-3 @ 19'	S	06-27-16 13:40	- 19 ft	532437-009
West Excavation NSW-3 @ 19'	S	06-27-16 13:45	- 19 ft	532437-010
West Excavation WSW-3 @ 19'	S	06-27-16 13:50	- 19 ft	532437-011
West Excavation Floor-4 @ 20'	S	06-27-16 13:55	- 20 ft	532437-012
West Excavation ESW-4 @ 19'	S	06-27-16 14:00	- 19 ft	532437-013
West Excavation WSW-4 @ 19'	S	06-27-16 14:05	- 19 ft	532437-014
West Excavation NSW-4 @ 19'	S	06-27-16 14:10	- 19 ft	532437-015
West Excavation Floor-5 @ 15'	S	06-27-16 14:15	- 15 ft	532437-016



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 532437

Report Date: 07-JUL-16  
Date Received: 06/28/2016

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### **Sample receipt non conformances and comments:**

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### **Sample receipt non conformances and comments per sample:**

None



# Certificate of Analysis Summary 532437

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Tue Jun-28-16 01:45 pm  
 Report Date: 07-JUL-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	532437-001	532437-002	532437-003	532437-004	532437-005	532437-006
	<i>Field Id:</i>	West Excavation Floor-1 @	West Excavation SSW-1 @	West Excavation NSW-1 @	West Excavation ESW-1 @	West Excavation Floor-2 @	West Excavation SSW-2 @
	<i>Depth:</i>	20 ft	19 ft	19 ft	19 ft	20 ft	19 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-27-16 13:00	Jun-27-16 13:05	Jun-27-16 13:10	Jun-27-16 13:15	Jun-27-16 13:20	Jun-27-16 13:25
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-01-16 18:00	Jul-01-16 18:00	Jul-01-16 18:00	Jul-01-16 18:00	Jul-01-16 18:00	Jul-01-16 18:00
	<i>Analyzed:</i>	Jul-02-16 00:48	Jul-02-16 00:56	Jul-02-16 01:19	Jul-02-16 01:27	Jul-02-16 01:35	Jul-02-16 01:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		212 10.0	179 50.0	229 50.0	1600 100	221 50.0	ND 10.0
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00
	<i>Analyzed:</i>	Jun-29-16 01:17	Jun-29-16 01:41	Jun-29-16 02:05	Jun-29-16 02:54	Jun-29-16 03:18	Jun-29-16 03:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	25.7 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	583 15.0
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	609 15.0

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

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

Kelsey Brooks  
 Project Manager



# Certificate of Analysis Summary 532437

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Tue Jun-28-16 01:45 pm  
 Report Date: 07-JUL-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	532437-007	532437-008	532437-009	532437-010	532437-011	532437-012
	<i>Field Id:</i>	West Excavation NSW-2 @	West Excavation Floor-3 @	West Excavation SSW-3 @	West Excavation NSW-3 @	West Excavation WSW-3 @	West Excavation Floor-4 @
	<i>Depth:</i>	19 ft	20 ft	19 ft	19 ft	19 ft	20 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-27-16 13:30	Jun-27-16 13:35	Jun-27-16 13:40	Jun-27-16 13:45	Jun-27-16 13:50	Jun-27-16 13:55
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-01-16 18:00	Jul-01-16 18:00	Jul-01-16 18:00	Jul-06-16 10:00	Jul-06-16 10:00	Jul-06-16 10:00
	<i>Analyzed:</i>	Jul-02-16 01:50	Jul-02-16 01:58	Jul-02-16 02:06	Jul-06-16 15:36	Jul-06-16 15:44	Jul-06-16 15:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		160 10.0	153 50.0	314 50.0	141 10.0	806 100	204 50.0
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00	Jun-28-16 16:00
	<i>Analyzed:</i>	Jun-29-16 04:05	Jun-29-16 04:28	Jun-29-16 04:52	Jun-29-16 05:17	Jun-29-16 05:42	Jun-29-16 06:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0

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

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Kelsey Brooks  
 Project Manager





# Certificate of Analysis Summary 532437

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Tue Jun-28-16 01:45 pm  
 Report Date: 07-JUL-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	532437-013	532437-014	532437-015	532437-016		
	<i>Field Id:</i>	West Excavation ESW-4 @	West Excavation WSW-4 @	West Excavation NSW-4 @	West Excavation Floor-5 @		
	<i>Depth:</i>	19 ft	19 ft	19 ft	15 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jun-27-16 14:00	Jun-27-16 14:05	Jun-27-16 14:10	Jun-27-16 14:15		
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-06-16 10:00	Jul-06-16 12:00	Jul-06-16 12:00	Jul-06-16 12:00		
	<i>Analyzed:</i>	Jul-06-16 16:00	Jul-06-16 19:07	Jul-06-16 18:43	Jul-06-16 19:14		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		156 50.0	278 100	529 50.0	264 50.0		
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Jun-29-16 14:00	Jun-29-16 14:00	Jun-29-16 14:00	Jun-29-16 14:00		
	<i>Analyzed:</i>	Jun-29-16 18:19	Jun-29-16 18:46	Jun-29-16 19:12	Jun-29-16 19:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0		
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0		
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0		
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.0		

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

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Kelsey Brooks  
 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 quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 532437, 532437

Project ID:

Lab Batch #: 997172

Sample: 532437-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 01:17

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	99.9	96	70-130	
o-Terphenyl	44.1	50.0	88	70-135	

Lab Batch #: 997172

Sample: 532437-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 01:41

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.7	98	70-130	
o-Terphenyl	45.5	49.9	91	70-135	

Lab Batch #: 997172

Sample: 532437-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 02:05

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.0	99.7	95	70-130	
o-Terphenyl	41.1	49.9	82	70-135	

Lab Batch #: 997172

Sample: 532437-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 02:54

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.2	99.9	94	70-130	
o-Terphenyl	43.4	50.0	87	70-135	

Lab Batch #: 997172

Sample: 532437-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 03:18

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.8	98	70-130	
o-Terphenyl	45.6	49.9	91	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 532437, 532437

Project ID:

Lab Batch #: 997172

Sample: 532437-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 03:41

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-130	
o-Terphenyl	48.1	49.9	96	70-135	

Lab Batch #: 997172

Sample: 532437-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 04:05

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.9	99	70-130	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 997172

Sample: 532437-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 04:28

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-130	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 997172

Sample: 532437-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 04:52

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.5	100	100	70-130	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 997172

Sample: 532437-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 05:17

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-130	
o-Terphenyl	45.9	50.0	92	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 532437, 532437

Project ID:

Lab Batch #: 997172

Sample: 532437-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 05:42

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	99.8	98	70-130	
o-Terphenyl	45.8	49.9	92	70-135	

Lab Batch #: 997172

Sample: 532437-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 06:06

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.9	97	70-130	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 997250

Sample: 532437-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 18:19

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-130	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 997250

Sample: 532437-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 18:46

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-130	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 997250

Sample: 532437-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 19:12

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	99.8	97	70-130	
o-Terphenyl	48.2	49.9	97	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 532437, 532437

Project ID:

Lab Batch #: 997250

Sample: 532437-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 19:38

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-130	
o-Terphenyl	51.1	49.9	102	70-135	

Lab Batch #: 997172

Sample: 710459-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/28/16 13:32

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-130	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 997250

Sample: 710500-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/29/16 14:19

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-130	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 997172

Sample: 710459-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/28/16 13:56

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-130	
o-Terphenyl	61.9	50.0	124	70-135	

Lab Batch #: 997250

Sample: 710500-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/29/16 14:45

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-130	
o-Terphenyl	58.7	50.0	117	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 532437, 532437

Project ID:

Lab Batch #: 997172

Sample: 710459-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/28/16 14:20

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-130	
o-Terphenyl	59.6	50.0	119	70-135	

Lab Batch #: 997250

Sample: 710500-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/29/16 15:12

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-130	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 997172

Sample: 532336-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/28/16 15:06

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.9	127	70-130	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 997250

Sample: 532368-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/29/16 16:05

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-130	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 997172

Sample: 532336-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/28/16 15:30

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-130	
o-Terphenyl	55.1	50.0	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: Energy Transfer Boyd 4" Historical (West)**

**Work Orders :** 532437, 532437

**Project ID:**

**Lab Batch #:** 997250

**Sample:** 532368-021 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 06/29/16 16:32

**SURROGATE RECOVERY STUDY**

<b>TPH By SW8015B Mod</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1-Chlorooctane	109	99.7	109	70-130	
o-Terphenyl	46.1	49.9	92	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: Energy Transfer Boyd 4" Historical (West)**

**Work Order #:** 532437, 532437

**Project ID:**

**Analyst:** MNR

**Date Prepared:** 07/01/2016

**Date Analyzed:** 07/01/2016

**Lab Batch ID:** 997472

**Sample:** 710609-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

Inorganic Anions by EPA 300/300.1	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
<b>Analytes</b>											
Chloride	<10.0	250	235	94	250	232	93	1	90-110	20	

**Analyst:** MNR

**Date Prepared:** 07/06/2016

**Date Analyzed:** 07/06/2016

**Lab Batch ID:** 997589

**Sample:** 710653-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

Inorganic Anions by EPA 300/300.1	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
<b>Analytes</b>											
Chloride	<10.0	250	236	94	250	232	93	2	90-110	20	

**Analyst:** MNR

**Date Prepared:** 07/06/2016

**Date Analyzed:** 07/06/2016

**Lab Batch ID:** 997612

**Sample:** 710654-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

Inorganic Anions by EPA 300/300.1	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
<b>Analytes</b>											
Chloride	<10.0	250	236	94	250	228	91	3	90-110	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: Energy Transfer Boyd 4" Historical (West)**

**Work Order #:** 532437, 532437

**Project ID:**

**Analyst:** ARM

**Date Prepared:** 06/28/2016

**Date Analyzed:** 06/28/2016

**Lab Batch ID:** 997172

**Sample:** 710459-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	966	97	1000	903	90	7	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	997	100	1000	962	96	4	75-125	25	

**Analyst:** ARM

**Date Prepared:** 06/29/2016

**Date Analyzed:** 06/29/2016

**Lab Batch ID:** 997250

**Sample:** 710500-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	991	99	1000	1040	104	5	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1100	110	1000	1080	108	2	75-125	25	

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: Energy Transfer Boyd 4" Historical (W)



Work Order #: 532437

Lab Batch #: 997472

Date Analyzed: 07/02/2016

QC- Sample ID: 532595-002 S

Reporting Units: mg/kg

Project ID:

Date Prepared: 07/01/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	177	1250	1300	90	80-120	

Lab Batch #: 997472

Date Analyzed: 07/01/2016

QC- Sample ID: 532690-002 S

Reporting Units: mg/kg

Date Prepared: 07/01/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	879	2500	3290	96	80-120	

Lab Batch #: 997589

Date Analyzed: 07/06/2016

QC- Sample ID: 532769-001 S

Reporting Units: mg/kg

Date Prepared: 07/06/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	945	2500	3210	91	80-120	

Lab Batch #: 997589

Date Analyzed: 07/06/2016

QC- Sample ID: 532769-011 S

Reporting Units: mg/kg

Date Prepared: 07/06/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1190	2500	3550	94	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 Recoveries

Project Name: Energy Transfer Boyd 4" Historical (W)



Work Order #: 532437

Lab Batch #: 997612

Date Analyzed: 07/07/2016

QC- Sample ID: 532368-009 S

Reporting Units: mg/kg

Date Prepared: 07/06/2016

Batch #: 1

Project ID:

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	441	261	635	74	80-120	X

Lab Batch #: 997612

Date Analyzed: 07/06/2016

QC- Sample ID: 532437-015 S

Reporting Units: mg/kg

Date Prepared: 07/06/2016

Batch #: 1

Analyst: MNR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	529	1250	1620	87	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: Energy Transfer Boyd 4" Historical (West)

Work Order #: 532437  
 Lab Batch ID: 997172  
 Date Analyzed: 06/28/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 532336-006 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 06/28/2016      Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	213	999	1040	83	1000	1060	85	2	75-125	25	
C10-C28 Diesel Range Hydrocarbons	22.0	999	972	95	1000	966	94	1	75-125	25	

Lab Batch ID: 997250  
 Date Analyzed: 06/29/2016  
 Reporting Units: mg/kg

QC- Sample ID: 532368-021 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 06/29/2016      Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<15.6	1040	887	85	1040	880	85	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.6	1040	1010	97	1040	1010	97	0	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Sample Duplicate Recovery

**Project Name: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 532437

**Lab Batch #:** 997472 **Project ID:**  
**Date Analyzed:** 07/02/2016 00:32 **Date Prepared:** 07/01/2016 **Analyst:** MNR  
**QC- Sample ID:** 532595-002 D **Batch #:** 1 **Matrix:** Soil  
**Reporting Units:** mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	177	1450	156	20	F

**Lab Batch #:** 997472 **Date Prepared:** 07/01/2016 **Analyst:** MNR  
**Date Analyzed:** 07/01/2016 22:43 **Batch #:** 1 **Matrix:** Soil  
**QC- Sample ID:** 532690-002 D  
**Reporting Units:** mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	879	896	2	20	

**Lab Batch #:** 997589 **Date Prepared:** 07/06/2016 **Analyst:** MNR  
**Date Analyzed:** 07/06/2016 11:20 **Batch #:** 1 **Matrix:** Soil  
**QC- Sample ID:** 532769-001 D  
**Reporting Units:** mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	945	943	0	20	

**Lab Batch #:** 997589 **Date Prepared:** 07/06/2016 **Analyst:** MNR  
**Date Analyzed:** 07/06/2016 14:03 **Batch #:** 1 **Matrix:** Soil  
**QC- Sample ID:** 532769-011 D  
**Reporting Units:** mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	1190	1240	4	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



# Sample Duplicate Recovery



Project Name: Energy Transfer Boyd 4" Historical (West)

Work Order #: 532437

Lab Batch #: 997612

Project ID:

Date Analyzed: 07/07/2016 07:37

Date Prepared: 07/06/2016

Analyst: MNR

QC- Sample ID: 532368-009 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	441	440	0	20	

Lab Batch #: 997612

Date Analyzed: 07/06/2016 18:51

Date Prepared: 07/06/2016

Analyst: MNR

QC- Sample ID: 532437-015 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	529	502	5	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

# Xenco Laboratories

The 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

1 of 2

Project Manager: Nikki Green  
Company Name: TRC Solutions, Inc  
Company Address: 2057 Commerce  
City/State/Zip: Midland, TX 79703  
Telephone No: 432.520.7720 Fax No: 432.520.7701  
Sampler Signature: Nikki Green e-mail: ngreen@trcsolutions.com  
rose.slade@energytransfer.com

Project Name: Energy Transfer Boyd 4" Historical (west)  
Project #: \_\_\_\_\_  
Project Loc: Lea County, NM  
PO #: \_\_\_\_\_  
Report Format:  Standard  TRRP  NPDES

(lab use only)  
ORDER #: 532437

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Preservation & # of Containers										Matrix		Analyze For:										RUSH TAT (Pre-Schedule) 24, 48, 72 hrs							
							Total # of Containers		Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DWE=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid	NP=Non-Portable Specify Other	TPH: 418.1	TPH: TX 1005 TX 1008	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX B021B15030 or BTEX B260	RCI		N.O.R.M.	Chlorides E 300.1					
							1	2																								TPH: 8015M	8015B	TCLP:	TOTAL:	
	West Excavation Floor-1 @ 20'			6/27/2016	1300	1	x																							X						X
	West Excavation SSW-1 @ 19'			6/27/2016	1305	1	x																							X					X	
	West Excavation NSW-1 @ 19'			6/27/2016	1310	1	x																							X					X	
	West Excavation ESW-1 @ 19'			6/27/2016	1315	1	x																							X					X	
	West Excavation Floor-2 @ 20'			6/27/2016	1320	1	x																							X					X	
	West Excavation SSW-2 @ 19'			6/27/2016	1325	1	x																							X					X	
	West Excavation NSW-2 @ 19'			6/27/2016	1330	1	x																							X					X	
	West Excavation Floor-3 @ 20'			6/27/2016	1335	1	x																							X					X	
	West Excavation SSW-3 @ 19'			6/27/2016	1340	1	x																							X					X	
	West Excavation NSW-3 @ 19'			6/27/2016	1345	1	x																							X					X	
	West Excavation WSW-3 @ 19'			6/27/2016	1350	1	x																							X					X	

Special Instructions: **Bill to Rose Slade at Energy Transfer. TPH Extended 35**

Relinquished by: <u>Nikki Green</u>	Date: <u>6/28</u>	Time: <u>1:45pm</u>	Received by: <u>NAM</u>	Date: <u>6/28/16</u>	Time: <u>1:45pm</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by ELOT:	Date:	Time:

Temp: -3.0 IR ID: R-8  
COR: -3.0  
Corrected Temp: -3.0

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	Y	N
Temperature Upon Receipt:	<u>-1.3</u> °C	



# Xenco Laboratories

The 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

*2 of 2*

Project Manager: Nikki Green  
 Company Name: TRC Solutions, Inc  
 Company Address: 2057 Commerce  
 City/State/Zip: Midland, TX 79703  
 Telephone No: 432.520.7720 Fax No: 432.520.7701  
 Sampler Signature: *Nikki Green* e-mail: ngreen@trcsolutions.com  
rose.slade@energytransfer.com

Project Name: Energy Transfer Boyd 4" Historical (west)  
 Project #: \_\_\_\_\_  
 Project Loc: Lea County, NM  
 PO #: \_\_\_\_\_  
 Report Format:  Standard  TRRP  NPDES

(lab use only)

ORDER #: 532437

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filled	Total #. of Containers	Preservation & # of Containers											Matrix	Analyze For:	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT														
								Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1	TPH: TX 1005					TPH: TX 1008	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8200	RCI	N.O.R.M.	Chlorides E 300.1			
	West Excavation Floor-4 @ 20'			4/6/2016	1355	1	x									Soil	x																			
	West Excavation ESW-4 @ 19'			4/6/2016	1400	1	x									Soil	x																			
	West Excavation WSW-4 @ 19'			4/6/2016	1405	1	x									Soil	x																			
	West Excavation NSW-4 @ 19'			4/6/2016	1410	1	x									Soil	x																			
	West Excavation Floor-5 @ 15'			4/6/2016	1415	1	x									Soil	x																			

**Special Instructions:**

Bill to Rose Slade at Energy Transfer. TPH Extended 35

Relinquished by:	Date	Time	Received by:	Date	Time
<i>Nikki Green</i>	6/20	1:45pm	<i>Ma Z...</i> Xenco	6/20	1:45
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:		

Temp: -0.3°C IR ID:R-8  
 Corrected Temp: -0.3°C

**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:	<u>-0.3 °C</u>	



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 06/28/2016 01:45:00 PM

Work Order #: 532437

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-.3
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron Date: 06/28/2016  
 Mary Negron

Checklist reviewed by: Kelsey Brooks Date: 06/29/2016  
 Kelsey Brooks

# Analytical Report 532595

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**06-JUL-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



06-JUL-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **532595**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 532595. 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. 532595 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,

**Kelsey Brooks**  
Project 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 - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 532595



TRC Solutions, Inc, Midland, TX  
Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West Excavation Floor-6 @25'	S	06-28-16 13:00	- 25 ft	532595-001
West Excavation Stockpile-1	S	06-28-16 13:30		532595-002



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 532595

Report Date: 06-JUL-16  
Date Received: 06/29/2016

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 532595

Report Date: 06-JUL-16  
Date Received: 06/29/2016

---

Batch: LBA-997472 Inorganic Anions by EPA 300/300.1

Lab Sample ID 532690-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. WO in the analytical batch are: 532398,532595,532437

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 532595

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Date Received in Lab: Wed Jun-29-16 12:10 pm

Project Id:

Report Date: 06-JUL-16

Contact: Nikki Green

Project Manager: Kelsey Brooks

Project Location: Lea County, NM

<i>Analysis Requested</i>	<i>Lab Id:</i>	532595-001	532595-002				
	<i>Field Id:</i>	West Excavation Floor-6 @	West Excavation Stockpile-1				
	<i>Depth:</i>	25 ft					
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	Jun-28-16 13:00	Jun-28-16 13:30				
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-01-16 18:00	Jul-01-16 18:00				
	<i>Analyzed:</i>	Jul-02-16 00:17	Jul-02-16 00:25				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Chloride		ND 10.0	177 50.0				
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Jun-30-16 13:30	Jun-30-16 13:30				
	<i>Analyzed:</i>	Jun-30-16 18:00	Jun-30-16 18:23				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
C6-C10 Gasoline Range Hydrocarbons		174 15.0	ND 14.9				
C10-C28 Diesel Range Hydrocarbons		1980 15.0	ND 14.9				
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 14.9				
Total TPH		2150 15.0	ND 14.9				

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

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

Kelsey Brooks  
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 quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



**Form 2 - Surrogate Recoveries**  
**Project Name: Energy Transfer Boyd 4" Historical (West)**

**Work Orders :** 532595,

**Project ID:**

**Lab Batch #:** 997250

**Sample:** 532595-001 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 06/30/16 18:00

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-130	
o-Terphenyl	59.4	50.0	119	70-135	

**Lab Batch #:** 997250

**Sample:** 532595-002 / SMP

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 06/30/16 18:23

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.7	99.6	93	70-130	
o-Terphenyl	41.1	49.8	83	70-135	

**Lab Batch #:** 997250

**Sample:** 710500-1-BLK / BLK

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 06/29/16 14:19

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-130	
o-Terphenyl	52.2	50.0	104	70-135	

**Lab Batch #:** 997250

**Sample:** 710500-1-BKS / BKS

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 06/29/16 14:45

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-130	
o-Terphenyl	58.7	50.0	117	70-135	

**Lab Batch #:** 997250

**Sample:** 710500-1-BSD / BSD

**Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

**Date Analyzed:** 06/29/16 15:12

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-130	
o-Terphenyl	59.2	50.0	118	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: Energy Transfer Boyd 4" Historical (West)**

**Work Orders :** 532595,

**Project ID:**

**Lab Batch #:** 997250

**Sample:** 532368-021 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 06/29/16 16:05

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-130	
o-Terphenyl	45.1	50.0	90	70-135	

**Lab Batch #:** 997250

**Sample:** 532368-021 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 06/29/16 16:32

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.7	109	70-130	
o-Terphenyl	46.1	49.9	92	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: Energy Transfer Boyd 4" Historical (West)**

**Work Order #: 532595**

**Project ID:**

**Analyst: MNR**

**Date Prepared: 07/01/2016**

**Date Analyzed: 07/01/2016**

**Lab Batch ID: 997472**

**Sample: 710609-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>Inorganic Anions by EPA 300/300.1</b>	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
<b>Analytes</b>											
Chloride	<10.0	250	235	94	250	232	93	1	90-110	20	

**Analyst: ARM**

**Date Prepared: 06/29/2016**

**Date Analyzed: 06/29/2016**

**Lab Batch ID: 997250**

**Sample: 710500-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

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

<b>TPH By SW8015B Mod</b>	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
<b>Analytes</b>											
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	991	99	1000	1040	104	5	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1100	110	1000	1080	108	2	75-125	25	

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: Energy Transfer Boyd 4" Historical (W)

Work Order #: 532595  
Lab Batch #: 997472  
Date Analyzed: 07/02/2016  
QC- Sample ID: 532595-002 S  
Reporting Units: mg/kg

Date Prepared: 07/01/2016  
Batch #: 1

Project ID:  
Analyst: MNR  
Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	177	1250	1300	90	80-120	

Lab Batch #: 997472  
Date Analyzed: 07/01/2016  
QC- Sample ID: 532690-002 S  
Reporting Units: mg/kg

Date Prepared: 07/01/2016  
Batch #: 1

Analyst: MNR  
Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	879	2500	3290	96	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: Energy Transfer Boyd 4" Historical (West)

Work Order #: 532595  
 Lab Batch ID: 997250  
 Date Analyzed: 06/29/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 532368-021 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 06/29/2016      Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<15.6	1040	887	85	1040	880	85	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.6	1040	1010	97	1040	1010	97	0	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Sample Duplicate Recovery

**Project Name: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 532595

Lab Batch #: 997472	Date Prepared: 07/01/2016	Project ID:
Date Analyzed: 07/02/2016 00:32	Analyst: MNR	
QC- Sample ID: 532595-002 D	Batch #: 1	Matrix: Soil
Reporting Units: mg/kg		

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	177	1450	156	20	F

Lab Batch #: 997472	Date Prepared: 07/01/2016	Analyst: MNR
Date Analyzed: 07/01/2016 22:43	Batch #: 1	Matrix: Soil
QC- Sample ID: 532690-002 D		
Reporting Units: mg/kg		

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	879	896	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**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 06/29/2016 12:10:00 PM

Work Order #: 532595

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.3
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron Date: 06/30/2016  
 Mary Negron

Checklist reviewed by: Kelsey Brooks Date: 06/30/2016  
 Kelsey Brooks

# Analytical Report 533510

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**20-JUL-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



20-JUL-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **533510**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 533510. 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. 533510 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,

**Kelsey Brooks**  
Project Manager

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## Sample Cross Reference 533510



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West Excavation Floor-6 @32'	S	07-15-16 15:00	- 32 ft	533510-001
ESW-6 @28'	S	07-15-16 15:15	- 28 ft	533510-002



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 533510

Report Date: 20-JUL-16  
Date Received: 07/18/2016

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analysis Summary 533510

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Mon Jul-18-16 12:07 pm  
 Report Date: 20-JUL-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	533510-001	533510-002			
	<i>Field Id:</i>	West Excavation Floor-6 @3	ESW-6 @28'			
	<i>Depth:</i>	32 ft	28 ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Jul-15-16 15:00	Jul-15-16 15:15			
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-19-16 17:00	Jul-19-16 17:00			
	<i>Analyzed:</i>	Jul-19-16 19:54	Jul-19-16 20:01			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		46.0 10.0	39.8 10.0			
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Jul-18-16 13:00	Jul-18-16 13:00			
	<i>Analyzed:</i>	Jul-18-16 17:47	Jul-18-16 19:14			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0			
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0			
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 15.0			
Total TPH		ND 15.0	ND 15.0			

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

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Kelsey Brooks  
 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 quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 533510,

Project ID:

Lab Batch #: 998275

Sample: 533510-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/18/16 17:47

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.8	99.9	91	70-130	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 998275

Sample: 533510-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/18/16 19:14

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.5	99.7	89	70-130	
o-Terphenyl	45.2	49.9	91	70-135	

Lab Batch #: 998275

Sample: 711071-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/18/16 16:21

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	100	87	70-130	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 998275

Sample: 711071-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/18/16 16:49

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-130	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 998275

Sample: 711071-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/18/16 17:19

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-130	
o-Terphenyl	47.7	50.0	95	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: Energy Transfer Boyd 4" Historical (West)**

**Work Orders :** 533510,

**Project ID:**

**Lab Batch #:** 998275

**Sample:** 533510-001 S / MS

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 07/18/16 18:17

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-130	
o-Terphenyl	50.3	50.0	101	70-135	

**Lab Batch #:** 998275

**Sample:** 533510-001 SD / MSD

**Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

**Date Analyzed:** 07/18/16 18:46

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-130	
o-Terphenyl	53.2	50.0	106	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: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 533510

Project ID:

Analyst: MNR

Date Prepared: 07/19/2016

Date Analyzed: 07/19/2016

Lab Batch ID: 998344

Sample: 711135-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

Inorganic Anions by EPA 300/300.1	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	<10.0	250	266	106	250	270	108	1	90-110	20	

Analyst: ARM

Date Prepared: 07/18/2016

Date Analyzed: 07/18/2016

Lab Batch ID: 998275

Sample: 711071-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	865	87	1000	852	85	2	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	980	98	1000	970	97	1	75-125	25	

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: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 533510  
 Lab Batch ID: 998344  
 Date Analyzed: 07/19/2016  
 Reporting Units: mg/kg

Project ID:

QC- Sample ID: 533504-009 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 07/19/2016      Analyst: MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	<10.0	250	263	105	250	253	101	4	80-120	20	

Lab Batch ID: 998275      QC- Sample ID: 533510-001 S      Batch #: 1      Matrix: Soil  
 Date Analyzed: 07/18/2016      Date Prepared: 07/18/2016      Analyst: ARM  
 Reporting Units: mg/kg

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<15.0	1000	818	82	999	834	83	2	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	926	93	999	929	93	0	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 07/18/2016 12:07:41 PM

Work Order #: 533510

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron Date: 07/18/2016  
 Mary Negron

Checklist reviewed by: Kelsey Brooks Date: 07/18/2016  
 Kelsey Brooks

# Analytical Report 533724

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**26-JUL-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



26-JUL-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **533724**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 533724. 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. 533724 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,

**Kelsey Brooks**  
Project Manager

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

*Certified and approved by numerous States and Agencies.*

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## Sample Cross Reference 533724



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW AH-1 @5'	S	07-20-16 09:00	- 5 ft	533724-001
NW AH-1 @10'	S	07-20-16 09:30	- 10 ft	533724-002
NW AH-1 @15'	S	07-20-16 09:45	- 15 ft	533724-003
NC AH-1 @5'	S	07-20-16 10:00	- 5 ft	533724-004
NC AH-1 @10'	S	07-20-16 10:30	- 10 ft	533724-005
NC AH-1 @15'	S	07-20-16 10:45	- 15 ft	533724-006
NE AH-1 @5'	S	07-20-16 11:00	- 5 ft	533724-007
NE AH-1 @10'	S	07-20-16 11:45	- 10 ft	533724-008
NE AH-1 @15'	S	07-20-16 13:30	- 15 ft	533724-009





## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 533724

Report Date: 26-JUL-16  
Date Received: 07/21/2016

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 533724

Report Date: 26-JUL-16  
Date Received: 07/21/2016

---

Batch: LBA-998660 Inorganic Anions by EPA 300/300.1

Lab Sample ID 533724-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 533724-001, -002, -003, -004, -005, -006, -007, -008, -009.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 533724

TRC Solutions, Inc, Midland, TX



Project Name: Energy Transfer Boyd 4" Historical (West)

Date Received in Lab: Thu Jul-21-16 10:50 am

Project Id:

Contact: Nikki Green

Report Date: 26-JUL-16

Project Location: Lea County, NM

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	533724-001	533724-002	533724-003	533724-004	533724-005	533724-006
	<i>Field Id:</i>	NW AH-1 @5'	NW AH-1 @10'	NW AH-1 @15'	NC AH-1 @5'	NC AH-1 @10'	NC AH-1 @15'
	<i>Depth:</i>	5 ft	10 ft	15 ft	5 ft	10 ft	15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-20-16 09:00	Jul-20-16 09:30	Jul-20-16 09:45	Jul-20-16 10:00	Jul-20-16 10:30	Jul-20-16 10:45
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-25-16 12:00	Jul-25-16 12:00	Jul-25-16 12:00	Jul-25-16 12:00	Jul-25-16 12:00	Jul-25-16 12:00
	<i>Analyzed:</i>	Jul-25-16 17:16	Jul-25-16 17:24	Jul-26-16 11:47	Jul-25-16 17:55	Jul-25-16 18:03	Jul-25-16 18:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		712 10.0	284 10.0	271 10.0	881 10.0	355 10.0	155 10.0

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

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

Kelsey Brooks  
Project Manager



# Certificate of Analysis Summary 533724

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Thu Jul-21-16 10:50 am  
 Report Date: 26-JUL-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	533724-007	533724-008	533724-009			
	<i>Field Id:</i>	NE AH-1 @5'	NE AH-1 @10'	NE AH-1 @15'			
	<i>Depth:</i>	5 ft	10 ft	15 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jul-20-16 11:00	Jul-20-16 11:45	Jul-20-16 13:30			
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Jul-25-16 12:00	Jul-25-16 12:00	Jul-25-16 12:00			
	<i>Analyzed:</i>	Jul-25-16 18:18	Jul-25-16 18:26	Jul-25-16 18:34			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		764 10.0	352 10.0	308 10.0			

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

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

Kelsey Brooks  
 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 quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
1211 W Florida Ave, Midland, TX 79701	(210) 509-3334	(210) 509-3335
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



## Form 3 - MS / MSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical (West)**

**Work Order # :** 533724  
**Lab Batch ID:** 998660  
**Date Analyzed:** 07/25/2016  
**Reporting Units:** mg/kg

**Project ID:**

**QC- Sample ID:** 533522-081 S      **Batch #:** 1      **Matrix:** Soil  
**Date Prepared:** 07/25/2016      **Analyst:** MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	4820	12500	18600	110	12500	17700	103	5	80-120	20	

**Lab Batch ID:** 998660  
**Date Analyzed:** 07/25/2016  
**Reporting Units:** mg/kg

**QC- Sample ID:** 533724-009 S      **Batch #:** 1      **Matrix:** Soil

**Date Prepared:** 07/25/2016      **Analyst:** MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	308	250	526	87	250	516	83	2	80-120	20	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 Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

# Xenco Laboratories

The 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

533724

Project Manager: Nikki Green

Project Name: Energy Transfer Boyd 4" Historical (west)

Company Name: TRC Solutions, Inc

Project #: \_\_\_\_\_

Company Address: 2057 Commerce

Project Loc: Lea County, NM

City/State/Zip: Midland, TX 79703

PO #: \_\_\_\_\_

Telephone No: 432.520.7720

Fax No: 432.520.7701

Report Format:  Standard  TRRP  NPDES

Sampler Signature: *Nikki Green* e-mail: ngreen@trcsolutions.com

rose.slade@energytransfer.com

Analyze For:

(lab use only)

ORDER #:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers												Matrix														
								Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B		TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , 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 E 300.1	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT	
	NW AH-1 @ 5'			7/20/2016	900		1	x																							X			X
	NW AH-1 @ 10'			7/20/2016	930		1	x																							X		x	
	NW AH-1 @ 15'			7/20/2016	945		1	x																						X		x		
	NC AH-1 @ 5'			7/20/2016	1000		1	x																						X		x		
	NC AH-1 @ 10'			7/20/2016	1030		1	x																						X		x		
	NC AH-1 @ 15'			7/20/2016	1045		1	x																						X		x		
	NE AH-1 @ 5'			7/20/2016	1100		1	x																						X		x		
	NE AH-1 @ 10'			7/20/2016	1145		1	x																						X		x		
	NE AH-1 @ 15'			7/20/2016	1330		1	x																						X		x		

Special Instructions:

Bill to Rose Slade at Energy Transfer.

Relinquished by:	Date	Time	Received by:	Date	Time	Relinquished by:	Date	Time	Received by:	Date	Time	Relinquished by:	Date	Time	Received by ELOT:	Temp:	IR ID:R-8	Corrected Temp:	Temperature Upon Receipt:
<u>Nikki Green</u>	<u>7/21/16</u>	<u>10:50</u>	<u>Ma 2m</u>	<u>7/21/16</u>	<u>10:50</u>											<u>6.0°C</u>		<u>6.0°C</u>	<u>6.0°C</u>



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 07/21/2016 10:50:00 AM

Work Order #: 533724

Acceptable Temperature Range: 0 - 6 degC  
 Air and Metal samples Acceptable Range: Ambient  
 Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	No
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negrón Date: 07/21/2016  
 Mary Negrón

Checklist reviewed by: Kelsey Brooks Date: 07/22/2016  
 Kelsey Brooks



# Analytical Report 536493

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**15-SEP-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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15-SEP-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **536493**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 536493. 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. 536493 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,

**Kelsey Brooks**  
Project Manager

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## Sample Cross Reference 536493



TRC Solutions, Inc, Midland, TX  
Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NE Wall @ 4'	S	09-08-16 12:05	- 4 ft	536493-001



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 536493

Report Date: 15-SEP-16  
Date Received: 09/09/2016

---

**Sample receipt non conformances and comments:**



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 536493

Report Date: 15-SEP-16  
Date Received: 09/09/2016

---

---

**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analysis Summary 536493

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Fri Sep-09-16 11:45 am  
 Report Date: 15-SEP-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	536493-001				
	<i>Field Id:</i>	NE Wall @ 4'				
	<i>Depth:</i>	4 ft				
	<i>Matrix:</i>	SOIL				
	<i>Sampled:</i>	Sep-08-16 12:05				
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Sep-14-16 12:30				
	<i>Analyzed:</i>	Sep-14-16 17:09				
	<i>Units/RL:</i>	mg/kg RL				
Chloride		423 10.0				

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

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Kelsey Brooks  
 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 quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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4147 Greenbriar Dr, Stafford, TX 77477  
 9701 Harry Hines Blvd , Dallas, TX 75220  
 5332 Blackberry Drive, San Antonio TX 78238  
 1211 W Florida Ave, Midland, TX 79701  
 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	





## BS / BSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical (West)**

**Work Order #:** 536493

**Project ID:**

**Analyst:** MNR

**Date Prepared:** 09/14/2016

**Date Analyzed:** 09/14/2016

**Lab Batch ID:** 1001739

**Sample:** 713714-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

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

Inorganic Anions by EPA 300/300.1	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
<b>Analytes</b>											
Chloride	<10.0	250	258	103	250	260	104	1	90-110	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



## Form 3 - MS / MSD Recoveries



**Project Name: Energy Transfer Boyd 4" Historical (West)**

**Work Order # :** 536493  
**Lab Batch ID:** 1001739  
**Date Analyzed:** 09/14/2016  
**Reporting Units:** mg/kg

**Project ID:**

**QC- Sample ID:** 536557-001 S      **Batch #:** 1      **Matrix:** Soil  
**Date Prepared:** 09/14/2016      **Analyst:** MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	822	250	1090	107	250	1070	99	2	90-110	20	

**Lab Batch ID:** 1001739  
**Date Analyzed:** 09/15/2016  
**Reporting Units:** mg/kg

**QC- Sample ID:** 536744-001 S      **Batch #:** 1      **Matrix:** Soil  
**Date Prepared:** 09/14/2016      **Analyst:** MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	11400	5000	16200	96	5000	16500	102	2	90-110	20	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 09/09/2016 11:45:00 AM

Work Order #: 536493

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 09/09/2016  
 Jessica Kramer

Checklist reviewed by: Kelsey Brooks Date: 09/09/2016  
 Kelsey Brooks

# Analytical Report 538137

for  
**TRC Solutions, Inc**

**Project Manager: Nikki Green**  
**Energy Transfer Boyd 4" Historical (West)**

**11-OCT-16**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab code: TX00122):  
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)  
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)  
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)  
Xenco-San Antonio: Texas (T104704534)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



11-OCT-16

Project Manager: **Nikki Green**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **538137**  
**Energy Transfer Boyd 4" Historical (West)**  
Project Address: Lea County, NM

**Nikki Green:**

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) 538137. 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.

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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,

**Kelsey Brooks**  
Project Manager

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## Sample Cross Reference 538137



TRC Solutions, Inc, Midland, TX

Energy Transfer Boyd 4" Historical (West)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Confirmation Floor-1 @ 32'	S	10-05-16 08:35	- 32 ft	538137-001
Confirmation Floor-2 @ 28'	S	10-05-16 08:36	- 28 ft	538137-002
Confirmation Floor-3 @ 20'	S	10-05-16 08:52	- 20 ft	538137-003
Confirmation SW-1 @ 19'	S	10-05-16 08:58	- 19 ft	538137-004
Confirmation SW-2 @ 19'	S	10-05-16 09:01	- 19 ft	538137-005
Confirmation Floor-4 @ 20'	S	10-05-16 09:04	- 20 ft	538137-006
Confirmation Floor-5 @ 20'	S	10-05-16 09:06	- 20 ft	538137-007
Confirmation EW-1 @ 19'	S	10-05-16 09:08	- 19 ft	538137-008
Confirmation EW-2 @ 19'	S	10-05-16 09:11	- 19 ft	538137-009
Confirmation EW-3 @ 19'	S	10-05-16 09:14	- 19 ft	538137-010
Confirmation NW-1 @ 19'	S	10-05-16 09:18	- 19 ft	538137-011
Confirmation Floor-7 @ 20'	S	10-05-16 09:19	- 20 ft	538137-012
Confirmation Floor-6 @ 20'	S	10-05-16 09:21	- 20 ft	538137-013
Confirmation NW-2 @ 19'	S	10-05-16 09:24	- 19 ft	538137-014
Confirmation WW-1 @ 19'	S	10-05-16 09:27	- 19 ft	538137-015
Confirmation WW-2 @ 19'	S	10-05-16 09:34	- 19 ft	538137-016
Confirmation NW-3 @ 7.5'	S	10-05-16 09:45	- 7.5 ft	538137-017
Confirmation NW-4 @ 10'	S	10-05-16 09:46	- 10 ft	538137-018
Confirmation NW-5 @ 12'	S	10-05-16 09:48	- 12 ft	538137-019
Confirmation WW-3 @ 19'	S	10-05-16 09:55	- 19 ft	538137-020



## CASE NARRATIVE



*Client Name: TRC Solutions, Inc*

*Project Name: Energy Transfer Boyd 4" Historical (West)*

Project ID:  
Work Order Number(s): 538137

Report Date: 11-OCT-16  
Date Received: 10/05/2016

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3001510 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





# Certificate of Analysis Summary 538137

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Oct-05-16 01:56 pm  
 Report Date: 11-OCT-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	538137-001	538137-002	538137-003	538137-004	538137-005	538137-006
	<i>Field Id:</i>	Confirmation Floor-1 @ 32'	Confirmation Floor-2 @ 28'	Confirmation Floor-3 @ 20'	Confirmation SW-1 @ 19'	Confirmation SW-2 @ 19'	Confirmation Floor-4 @ 20'
	<i>Depth:</i>	32 ft	28 ft	20 ft	19 ft	19 ft	20 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-05-16 08:35	Oct-05-16 08:36	Oct-05-16 08:52	Oct-05-16 08:58	Oct-05-16 09:01	Oct-05-16 09:04
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30
	<i>Analyzed:</i>	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150
Toluene		ND 0.00200	ND 0.00198	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200
Ethylbenzene		ND 0.00200	ND 0.00198	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200
m_p-Xylenes		ND 0.00200	ND 0.00198	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200
o-Xylene		ND 0.00299	ND 0.00298	ND 0.00298	ND 0.00299	ND 0.00300	ND 0.00299
Total Xylenes		ND 0.00200	ND 0.00198	ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200
Total BTEX		ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00
	<i>Analyzed:</i>	Oct-07-16 18:16	Oct-07-16 18:23	Oct-07-16 18:30	Oct-07-16 18:52	Oct-07-16 19:13	Oct-07-16 19:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		13.3 5.00	ND 5.00	ND 5.00	679 5.00	10.6 5.00	21.8 5.00
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00
	<i>Analyzed:</i>	Oct-05-16 17:58	Oct-05-16 19:31	Oct-05-16 19:56	Oct-05-16 20:20	Oct-05-16 20:45	Oct-05-16 21:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 14.9	ND 15.0	ND 15.0	ND 15.0	ND 15.0

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

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Kelsey Brooks  
 Project Manager



# Certificate of Analysis Summary 538137

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Oct-05-16 01:56 pm  
 Report Date: 11-OCT-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	538137-007	538137-008	538137-009	538137-010	538137-011	538137-012
	<i>Field Id:</i>	Confirmation Floor-5 @ 20'	Confirmation EW-1 @ 19'	Confirmation EW-2 @ 19'	Confirmation EW-3 @ 19'	Confirmation NW-1 @ 19'	Confirmation Floor-7 @ 20'
	<i>Depth:</i>	20 ft	19 ft	19 ft	19 ft	19 ft	20 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-05-16 09:06	Oct-05-16 09:08	Oct-05-16 09:11	Oct-05-16 09:14	Oct-05-16 09:18	Oct-05-16 09:19
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30
	<i>Analyzed:</i>	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00149	ND 0.00150
Toluene		ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00199	ND 0.00200
Ethylbenzene		ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00199	ND 0.00200
m_p-Xylenes		ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00199	ND 0.00200
o-Xylene		ND 0.00298	ND 0.00298	ND 0.00299	ND 0.00300	ND 0.00299	ND 0.00299
Total Xylenes		ND 0.00198	ND 0.00199	ND 0.00200	ND 0.00200	ND 0.00199	ND 0.00200
Total BTEX		ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00149	ND 0.00150
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 14:00	Oct-07-16 16:00	Oct-07-16 16:00
	<i>Analyzed:</i>	Oct-07-16 19:27	Oct-07-16 19:34	Oct-07-16 19:41	Oct-07-16 19:48	Oct-07-16 20:30	Oct-07-16 20:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		134 5.00	808 5.00	383 5.00	671 5.00	124 5.00	ND 5.00
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00
	<i>Analyzed:</i>	Oct-05-16 21:35	Oct-05-16 22:01	Oct-05-16 22:26	Oct-05-16 22:51	Oct-05-16 23:44	Oct-06-16 00:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0

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Kelsey Brooks  
Project Manager



# Certificate of Analysis Summary 538137

TRC Solutions, Inc, Midland, TX



Project Name: Energy Transfer Boyd 4" Historical (West)

Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Oct-05-16 01:56 pm  
 Report Date: 11-OCT-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	538137-013	538137-014	538137-015	538137-016	538137-017	538137-018
	<i>Field Id:</i>	Confirmation Floor-6 @ 20'	Confirmation NW-2 @ 19'	Confirmation WW-1 @ 19'	Confirmation WW-2 @ 19'	Confirmation NW-3 @ 7.5'	Confirmation NW-4 @ 10'
	<i>Depth:</i>	20 ft	19 ft	19 ft	19 ft	7.5 ft	10 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-05-16 09:21	Oct-05-16 09:24	Oct-05-16 09:27	Oct-05-16 09:34	Oct-05-16 09:45	Oct-05-16 09:46
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30	Oct-05-16 18:30
	<i>Analyzed:</i>	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03	Oct-06-16 16:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00149
Toluene		ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00199
Ethylbenzene		ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00199
m_p-Xylenes		ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00199
o-Xylene		ND 0.00298	ND 0.00299	ND 0.00298	ND 0.00300	ND 0.00299	ND 0.00298
Total Xylenes		ND 0.00199	ND 0.00199	ND 0.00198	ND 0.00200	ND 0.00200	ND 0.00199
Total BTEX		ND 0.00149	ND 0.00149	ND 0.00149	ND 0.00150	ND 0.00150	ND 0.00149
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Oct-07-16 16:00	Oct-07-16 16:00	Oct-07-16 16:00	Oct-07-16 16:00	Oct-07-16 16:00	Oct-07-16 16:00
	<i>Analyzed:</i>	Oct-07-16 20:58	Oct-07-16 21:06	Oct-07-16 21:13	Oct-07-16 21:34	Oct-07-16 21:41	Oct-07-16 21:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		11.3 5.00	263 5.00	86.0 5.00	272 5.00	16.8 5.00	21.1 5.00
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00	Oct-05-16 15:00
	<i>Analyzed:</i>	Oct-06-16 00:35	Oct-06-16 01:00	Oct-06-16 01:26	Oct-06-16 01:53	Oct-06-16 02:18	Oct-06-16 02:43
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0	ND 15.0

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Kelsey Brooks  
 Project Manager



# Certificate of Analysis Summary 538137

TRC Solutions, Inc, Midland, TX

Project Name: Energy Transfer Boyd 4" Historical (West)



Project Id:  
 Contact: Nikki Green  
 Project Location: Lea County, NM

Date Received in Lab: Wed Oct-05-16 01:56 pm  
 Report Date: 11-OCT-16  
 Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	538137-019	538137-020			
	<i>Field Id:</i>	Confirmation NW-5 @ 12'	Confirmation WW-3 @ 19'			
	<i>Depth:</i>	12 ft	19 ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Oct-05-16 09:48	Oct-05-16 09:55			
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Oct-05-16 18:30	Oct-05-16 18:30			
	<i>Analyzed:</i>	Oct-06-16 16:03	Oct-06-16 16:03			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		ND 0.00149	ND 0.00150			
Toluene		ND 0.00198	ND 0.00200			
Ethylbenzene		ND 0.00198	ND 0.00200			
m_p-Xylenes		ND 0.00198	ND 0.00200			
o-Xylene		ND 0.00298	ND 0.00299			
Total Xylenes		ND 0.00198	ND 0.00200			
Total BTEX		ND 0.00149	ND 0.00150			
<b>Inorganic Anions by EPA 300/300.1</b>	<i>Extracted:</i>	Oct-07-16 16:00	Oct-07-16 16:00			
	<i>Analyzed:</i>	Oct-07-16 21:55	Oct-07-16 22:02			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		116 5.00	2670 25.0			
<b>TPH By SW8015B Mod</b>	<i>Extracted:</i>	Oct-05-16 15:00	Oct-05-16 15:00			
	<i>Analyzed:</i>	Oct-06-16 03:09	Oct-06-16 03:35			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
C6-C10 Gasoline Range Hydrocarbons		ND 15.0	ND 14.9			
C10-C28 Diesel Range Hydrocarbons		ND 15.0	ND 14.9			
Total TPH		ND 15.0	ND 14.9			

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Kelsey Brooks  
 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 quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* 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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(432) 563-1800	(432) 563-1713
(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001470

Sample: 538137-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 17:58

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.9	108	70-130	
o-Terphenyl	59.5	50.0	119	70-135	

Lab Batch #: 3001470

Sample: 538137-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 19:31

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.6	102	70-130	
o-Terphenyl	56.4	49.8	113	70-135	

Lab Batch #: 3001470

Sample: 538137-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 19:56

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-130	
o-Terphenyl	59.7	49.9	120	70-135	

Lab Batch #: 3001470

Sample: 538137-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 20:20

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.7	109	70-130	
o-Terphenyl	59.7	49.9	120	70-135	

Lab Batch #: 3001470

Sample: 538137-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 20:45

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-130	
o-Terphenyl	58.7	49.9	118	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001470

Sample: 538137-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 21:11

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-130	
o-Terphenyl	59.1	50.0	118	70-135	

Lab Batch #: 3001470

Sample: 538137-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 21:35

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.9	108	70-130	
o-Terphenyl	58.5	50.0	117	70-135	

Lab Batch #: 3001470

Sample: 538137-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 22:01

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-130	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 3001470

Sample: 538137-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 22:26

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-130	
o-Terphenyl	56.2	50.0	112	70-135	

Lab Batch #: 3001470

Sample: 538137-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 22:51

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-130	
o-Terphenyl	59.3	49.9	119	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001470

Sample: 538137-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 23:44

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-130	
o-Terphenyl	56.5	49.9	113	70-135	

Lab Batch #: 3001470

Sample: 538137-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 00:10

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-130	
o-Terphenyl	57.1	49.9	114	70-135	

Lab Batch #: 3001470

Sample: 538137-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 00:35

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-130	
o-Terphenyl	57.3	49.9	115	70-135	

Lab Batch #: 3001470

Sample: 538137-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 01:00

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-130	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 3001470

Sample: 538137-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 01:26

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.7	107	70-130	
o-Terphenyl	58.9	49.9	118	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: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001470

Sample: 538137-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 01:53

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-130	
o-Terphenyl	56.9	50.0	114	70-135	

Lab Batch #: 3001470

Sample: 538137-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 02:18

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-130	
o-Terphenyl	57.3	49.9	115	70-135	

Lab Batch #: 3001470

Sample: 538137-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 02:43

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.9	104	70-130	
o-Terphenyl	56.2	50.0	112	70-135	

Lab Batch #: 3001470

Sample: 538137-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 03:09

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-130	
o-Terphenyl	56.4	49.9	113	70-135	

Lab Batch #: 3001470

Sample: 538137-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 03:35

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.6	106	70-130	
o-Terphenyl	57.6	49.8	116	70-135	

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



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001510

Sample: 538137-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 3001510

Sample: 538137-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0358	0.0300	119	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 3001510

Sample: 538137-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 3001510

Sample: 538137-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 3001510

Sample: 538137-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	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: Energy Transfer Boyd 4" Historical (West)**

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001510

Sample: 538137-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 3001510

Sample: 538137-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 3001510

Sample: 538137-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 3001510

Sample: 538137-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 3001510

Sample: 538137-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001510

Sample: 538137-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 3001510

Sample: 538137-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 3001510

Sample: 538137-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0346	0.0300	115	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 3001510

Sample: 538137-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 3001510

Sample: 538137-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

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



## Form 2 - Surrogate Recoveries

Project Name: Energy Transfer Boyd 4" Historical (West)

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001510

Sample: 538137-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/06/16 16:03

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 3001510

Sample: 538137-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/06/16 16:03

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 3001510

Sample: 538137-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/06/16 16:03

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 3001510

Sample: 538137-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/06/16 16:03

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 3001510

Sample: 538137-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/06/16 16:03

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	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: Energy Transfer Boyd 4" Historical (West)**

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001470

Sample: 714620-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/16 16:23

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-130	
o-Terphenyl	61.7	50.0	123	70-135	

Lab Batch #: 3001510

Sample: 714644-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 3001470

Sample: 714620-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/16 16:55

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-130	
o-Terphenyl	63.6	50.0	127	70-135	

Lab Batch #: 3001510

Sample: 714644-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0347	0.0300	116	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 3001470

Sample: 714620-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/16 17:26

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-130	
o-Terphenyl	63.2	50.0	126	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: Energy Transfer Boyd 4" Historical (West)**

Work Orders : 538137, 538137

Project ID:

Lab Batch #: 3001510

Sample: 714644-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 3001470

Sample: 538137-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 18:29

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.9	125	70-130	
o-Terphenyl	61.6	50.0	123	70-135	

Lab Batch #: 3001510

Sample: 538137-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 3001470

Sample: 538137-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/16 18:59

**SURROGATE RECOVERY STUDY**

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.8	128	70-130	
o-Terphenyl	63.1	49.9	126	70-135	

Lab Batch #: 3001510

Sample: 538137-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/06/16 16:03

**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	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: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 538137, 538137

Project ID:

Analyst: PJB

Date Prepared: 10/05/2016

Date Analyzed: 10/06/2016

Lab Batch ID: 3001510

Sample: 714644-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00150	0.100	0.0807	81	0.100	0.0830	83	3	70-130	35	
Toluene	<0.00200	0.100	0.0844	84	0.100	0.0843	84	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0870	87	0.100	0.0860	86	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.184	92	0.200	0.183	92	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0848	85	0.100	0.0847	85	0	71-133	35	

Analyst: MNR

Date Prepared: 10/07/2016

Date Analyzed: 10/07/2016

Lab Batch ID: 3001661

Sample: 714720-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	270	108	250	258	103	5	90-110	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: Energy Transfer Boyd 4" Historical (West)**

Work Order #: 538137, 538137

Project ID:

Analyst: MNR

Date Prepared: 10/07/2016

Date Analyzed: 10/07/2016

Lab Batch ID: 3001666

Sample: 714722-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

Inorganic Anions by EPA 300/300.1	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	<5.00	250	274	110	250	274	110	0	90-110	20	

Analyst: ARM

Date Prepared: 10/05/2016

Date Analyzed: 10/05/2016

Lab Batch ID: 3001470

Sample: 714620-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

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

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	971	97	1000	980	98	1	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1030	103	1000	1010	101	2	75-125	25	

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: Energy Transfer Boyd 4" Historical (West)

Work Order #: 538137  
 Lab Batch ID: 3001510  
 Date Analyzed: 10/06/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 538137-002 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 10/05/2016      Analyst: PJB

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00149	0.0994	0.0776	78	0.0998	0.0785	79	1	70-130	35	
Toluene	<0.00199	0.0994	0.0774	78	0.0998	0.0783	78	1	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0797	80	0.0998	0.0798	80	0	71-129	35	
m_p-Xylenes	<0.00199	0.199	0.168	84	0.200	0.168	84	0	70-135	35	
o-Xylene	<0.00298	0.0994	0.0777	78	0.0998	0.0780	78	0	71-133	35	

Lab Batch ID: 3001661  
 Date Analyzed: 10/07/2016  
 Reporting Units: mg/kg

QC- Sample ID: 538137-003 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 10/07/2016      Analyst: MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	<5.00	250	273	109	250	273	109	0	90-110	20	

Lab Batch ID: 3001661  
 Date Analyzed: 10/07/2016  
 Reporting Units: mg/kg

QC- Sample ID: 538139-009 S      Batch #: 1      Matrix: Soil  
 Date Prepared: 10/07/2016      Analyst: MNR

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 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
Chloride	97.3	250	344	99	250	346	99	1	90-110	20	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



### Form 3 - MS / MSD Recoveries



Project Name: Energy Transfer Boyd 4" Historical (West)

Work Order #: 538137  
 Lab Batch ID: 3001666  
 Date Analyzed: 10/07/2016  
 Reporting Units: mg/kg

Project ID:  
 QC- Sample ID: 538137-011 S Batch #: 1 Matrix: Soil  
 Date Prepared: 10/07/2016 Analyst: MNR

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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
Chloride	124	250	381	103	250	389	106	2	90-110	20	

Lab Batch ID: 3001470  
 Date Analyzed: 10/05/2016  
 Reporting Units: mg/kg

QC- Sample ID: 538137-001 S Batch #: 1 Matrix: Soil  
 Date Prepared: 10/05/2016 Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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-C10 Gasoline Range Hydrocarbons	<15.0	999	954	95	998	1040	104	9	75-125	25	
C10-C28 Diesel Range Hydrocarbons	<15.0	999	1020	102	998	1010	101	1	75-125	25	

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

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



# Xenco Laboratories

The 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

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Project Manager: Nikki Green  
Company Name: TRC Solutions, Inc  
Company Address: 2057 Commerce  
City/State/Zip: Midland, TX 79703  
Telephone No: 432.520.7720 Fax No: 432.520.7701  
Sampler Signature: Matthew Green e-mail: ngreen@trcsolutions.com  
rozanne11@windstream.net

Project Name: Energy Transfer Boyd 4" Historical (west)  
Project #: \_\_\_\_\_  
Project Loc: Lea County, NM  
PO #: \_\_\_\_\_

Report Format:  Standard  TRRP  NPDES  
3 DAY

(lab use only)  
ORDER #: 5880137

LAB # (lab use only) \_\_\_\_\_  
FIELD CODE \_\_\_\_\_

Analyze For:		TCLP:		TOTAL:	
TPH: 418.1	8015B				
TPH: TX 1005	TX 1008				
Calcium (Ca, Mg, Na, K)					
Anions (Cl, SO4, Alkalinity)					
SAR / ESP / CEC					
Metals: As Ag Ba Cd Cr Pb Hg Se					
Volatiles					
Semivolatiles					
ETEX 802/BR030 or BTEX 8260					
RCI					
N.O.R.M.					
Chlorides E 300.1					
RUSH TAT (Pre-Schedule) 24, 48, 72 hrs					
Standard TAT					

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers										Matrix	TPH: 418.1	TPH: TX 1005	TPH: TX 1008	Calcium (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	ETEX 802/BR030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	DW=Drinking Water	SL=Sludge																
	Confirmation Floor-7 @ 20'			10/5/2016	919	1		X																X						X			
	Confirmation Floor-6 @ 20'			10/5/2016	921	1		X																X						X			
	Confirmation NW-2 @ 19'			10/5/2016	924	1		X																X						X			
	Confirmation WW-1 @ 19'			10/5/2016	927	1		X																X						X			
	Confirmation WW-2 @ 19'			10/5/2016	934	1		X																X						X			
	Confirmation NW-3 @ 7.5'			10/5/2016	945	1		X																X						X			
	Confirmation NW-4 @ 10'			10/5/2016	946	1		X																X						X			
	Confirmation NW-5 @ 12'			10/5/2016	948	1		X																X						X			
	Confirmation WW-3 @ 19'			10/5/2016	955	1		X																X						X			

**Special Instructions:**

Bill to Rose Slade at Energy Transfer.

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Matthew Green</u>	<u>10-5-16</u>	<u>1400</u>	<u>JREAMER</u>	<u>10-5-16</u>	<u>1556</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

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	Y N
Temperature Upon	
Temp: <u>IRID:R-8</u>	
C/F: <u>01.4°C</u>	
Corrected Temp: <u>0</u>	



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: TRC Solutions, Inc

Date/ Time Received: 10/05/2016 01:56:00 PM

Work Order #: 538137

Acceptable Temperature Range: 0 - 6 degC  
 Air and Metal samples Acceptable Range: Ambient  
 Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	11.4
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 10/05/2016  
 Jessica Kramer

Checklist reviewed by: Kelsey Brooks Date: 10/05/2016  
 Kelsey Brooks

Appendix B  
Photographs

**Client:** ETC Field Services, LLC  
**Project Name:** Boyd 4 Inch Historical West

**Prepared by:** TRC Environmental Corp.  
**Location:** Lea County, NM

**Photograph No. 1**

**Date:**  
March 17, 2016

**Description:**  
Looking southeast  
View of excavation  
following previous  
contractor field  
activities.



**Photograph No. 2**

**Date:**  
April 6, 2016

**Description:**  
Looking northwest  
View of initial  
delineation  
activities.





**Photographic Documentation**

**Client:** ETC Field Services, LLC  
**Project Name:** Boyd 4 Inch Historical West

**Prepared by:** TRC Environmental Corp.  
**Location:** Lea County, NM

**Photograph No. 3**

**Date:**  
September 2, 2016

**Description:**  
Looking north  
View of excavated  
area.



**Photograph No. 4**

**Date:**  
September 2, 2016

**Description:**  
Looking northwest  
View of excavated  
area.



Appendix C  
Sundance Services Disposal Manifests  
(On enclosed disk)

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

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

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

**RECEIVED**  
By JKeyes at 12:18 pm, May 12, 2016

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

Initial Report  Final Report

Name of Company: E.T.C. Field Services	Contact: Rose Slade
Address: P.O. Box 1226 Jal, NM 88252	Telephone No.: 210-403-6525 or 432.940.5147
Facility Name: Boyd 4 Inch (Historical) West	Facility Type: Natural Gas Gathering
Surface Owner: Irwin Boyd	Mineral Owner: Federal

#### LOCATION OF RELEASE

Unit Letter "P"	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23	22 S	37 E					Lea

Latitude: N32.372074° Longitude: W103.127151°

#### NATURE OF RELEASE

Type of Release: Crude oil, Produced water, & Natural Gas	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: 4 inch steel pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A release occurred on the 4" inch lateral pipeline and the release is historical.

Describe Area Affected and Cleanup Action Taken.\* From September 18, 2012 through December 11, 2013, a previous contractor excavated approximately 587 cubic yards (cy) of impacted soil from the area of impact. Impacted soil was transported to Sundance Services, Inc., in Eunice, NM. The area excavated by the previous contractor was left exposed and is referred to as, the existing remediation project. On January 29, 2016, six (6) preliminary soil status samples were collected from the existing excavation to determine the current levels of impact at the Release Site. Based on the field observations, it was determined the analytical results from soil samples collected on January 219, 2016 were likely not an accurate representation of the remaining soil impact at the Release Site.

On March 8, 2016, a hand auger was utilized to collect additional soil samples for laboratory analysis. In addition, three (3) surface soil samples were collected from near or on the caliche well pad located immediately south of the Release Site. Based on the analytical results of soil samples collected on March 8, 2016, ETC conducted a soil investigation activities designed to vertically and horizontally delineate the Release Site.:

After completion of the soil investigation, a meeting was scheduled with the NMOCD Hobbs District Office and the property landowner. It was agreed the Release Site will be excavated to 20' bgs and the impacted soil will be transported offsite to a NMOCD approved disposal site. An appropriate number of soil samples will be collected and analyzed for concentrations of BTEX, TPH and Chloride. On completion of the remediation activities, ETC will request NMOCD permission to backfill the excavation and a Remediation Summary and Site Closure Request will be submitted to the NMOCD. The site will be restored to its proper vegetative state when completed.

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.

#### OIL CONSERVATION DIVISION

Signature: <i>Rose L. Slade</i>	Approved by NMOCD: <i>[Signature]</i>	
Printed Name: Rose L. Slade	Approval Date: 05/12/2016	Expiration Date: 07/12/2016
Title: Senior Environmental Specialist	Conditions of Approval: Discrete samples only Delineate and remediate per NMOCD guidelines	
E-mail Address: rose.slade@energytransfer.com	Attached <input type="checkbox"/> IRP 4277 nJXK1613344072 pJXK1613344207	

Date:5/11/2016	Phone: 210.403.6525	
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