

**APPROVED**

**By Olivia Yu at 2:16 pm, Jun 01, 2017**

NMOCD approves  
1RP-4419 for closure.

**1RP-4419**

**REMEDIATION REPORT**

**David Bilbrey 8 Inch Pipeline Release Site #1**

Lea County, New Mexico

**33° 31' 50.1276" North**

**103° 05' 23.5860" West**

LAI Project No. 15-0171-01

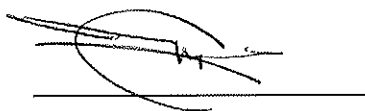
March 2, 2017

Prepared for:

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A handwritten signature in black ink, appearing to read 'Mark J. Larson', is written over a horizontal line.

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## 1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this report on behalf of Targa Midstream Services, LLC (Targa) for two (2) natural gas liquid releases from the David Bilbrey 8" pipeline in Unit K (NE/4, SW/4), Section 18, Township 9 South, Range 38 East, in Lea County, New Mexico (the Site). The Site is located about 22 miles northeast of Tatum, New Mexico. On August 24, 2016, the initial C-141 was submitted to the New Mexico Oil Conservation Division (OCD) District 1 which assigned the release remediation permit number 1RP-4419. Targa personnel exposed the pipeline to placed temporary clamps on the pipeline to mitigate the releases. The segment of pipeline with the temporary clamps was replaced following remediation. The geodetic position is 33° 31' 50.1276" North and 103° 05' 23.5860" West. Figure 1 presents a topographic map. Figure 2 presents an aerial map. Figure 3 presents a Site drawing.

### 1.1 Physical Setting

The surface elevation is about 3,970 feet above mean sea level (MSL) and topography is slightly undulating and regionally slopes to the southeast. No surface water features are present within 1 mile of the Site. The soils are designated as "Amarillo fine sandy loam, 0 to 1 percent slopes", consisting of loamy eolian deposits derived from reworking the Blackwater Draw (Pleistocene) and Ogallala (Pliocene) formations, in descending order. The soil developed over sandy clay loam that extends to depths greater than about 6 feet below ground surface (bgs).

Groundwater occurs at about 40 feet bgs according to records from the New Mexico Office of the State Engineer (NMOSE), and the nearest fresh water well is located in Unit F (SE/4, NW/4), Section 5, Township 9 South, Range 38 East about 2.5 miles north of the Site (L03881).

### 1.2 Recommended Remediation Action Levels

Recommended remediation action levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the New Mexico Oil Conservation Division (OCD) in "Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993":

<b>Criteria</b>	<b>Result</b>	<b>Score</b>
Depth-to-Groundwater	<50 feet	20
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0

The following RRAL apply to the release for ranking score: 20

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 100 mg/Kg



## 2.0 ASSESSMENT

On December 21, 2015, personnel from LAI collected soil samples using hand augers (HA-1 through HA-8) from the bottom and sidewalls of the excavation made by Targa to expose the pipeline and repair the release. The samples were screened for headspace vapors with a calibrated photoionization detector (PID) in 8 ounce glass jars sealed with aluminum foil. Soil vapor headspace readings were above the OCD soil screening level of 100 parts per million (ppm) in all but two (2) samples: HA-5 (72.50 ppm) and HA-8 (6.70 ppm). The samples were delivered under preservation and chain of custody to Trace Analysis in Lubbock, Texas and were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA SW-846 Method 8021B, total petroleum hydrocarbons (TPH) by Method 8015 including gasoline (GRO) and diesel (DRO) range organics and chloride by Method E300. The laboratory reported benzene above the RRAL of 10 milligrams per kilogram (mg/Kg) in sample HA-2 (12.00 mg/Kg). The laboratory reported BTEX and TPH above the RRAL of 50 mg/Kg and 100 mg/Kg, respectively, in samples HA-1, HA-2, HA-3, HA-4 and HA-7. Bottom samples HA-1 and HA-2 reported chloride at 1,870 mg/Kg and 3,150 mg/Kg, respectively, and above the OCD delineation limit of 250 mg/Kg.

On January 11 – 12, 2016 and February 3, 2016, LAI personnel collected soil samples from six (6) air rotary borings (SB-1 through SB-6) drilled by Scarborough Drilling, Inc. Borings SB-5 and SB-6 were drilled in close proximity to leak 1 and leak 2, respectively. The soil samples were analyzed by Trace for BTEX by EPA SW-846 Method 8021B, TPH by Method 8015 and chloride by Method E300. Benzene exceeded the RRAL (10 mg/Kg) in samples SB-5 at 10 feet (177 mg/Kg) and SB-6 at 10 feet (273 mg/Kg). The laboratory reported BTEX and TPH above the RRAL of 50 mg/Kg and 100 mg/Kg, respectively, in samples SB-5 at 10 feet and SB-6 at 10 feet. Sample SB-2 at 0 feet reported TPH above the RRAL. Chloride was delineated vertically to 250 mg/Kg in borings SB-5 and SB-6. Table 1 presents the investigation sample analytical data summary. Figure 3 presents the sample locations. Appendix A presents the laboratory report.

## 3.0 REMEDIATION

On March 10-11, 2016, Watson Construction Inc. (Watson), with supervision from LAI, excavated soil to approximately 12 feet bgs in the area of borings SB-5 and SB-6 where benzene exceeded the RRAL. On March 11, 2016, LAI personnel collected samples from the excavation bottom at about 12 feet bgs (SS-1, SS-2, SS-3 and SS-7) and sidewalls (SS-4, SS-5, SS-6, SS-8 and SS-9) from about 8 feet bgs. The samples were tested for headspace vapors with a PID and recorded low concentrations except bottom samples SS-2 (387 ppm) and SS-3 (828 ppm). Trace analyzed samples SS-2 and SS-3 for BTEX, TPH and chloride and reported benzene below the method reporting limit (RL) and BTEX below the RRAL. TPH was 20.0 mg/Kg in sample SS-2 and below the RL in sample SS-3. Chloride was 53.6 mg/Kg and 171 mg/kg in samples SS-2 and SS-3, respectively. Based on the PID readings additional the excavation was deepened to about 20 feet bgs on March 14, 2016. Samples were collected at 15, 18 and 20 feet bgs at SS-2 and SS-3, on March 14, 2016. The headspace readings ranged from 117 ppm in sample S-2, 20 feet to 503 ppm in sample S-2, 18 feet. The samples were analyzed by Trace and reported BTEX below the RRAL and TPH below the RL. Table 2a presents the preliminary remediation confirmation soil sample analytical data summary. Figure 3 presents the initial excavation and soil sample locations. Appendix A presents the laboratory report.

On March 16, 2016, LAI personnel collected final remediation confirmation samples from the excavation. Samples were collected from the sidewalls and bottom of the excavation. The samples were delivered under preservation and chain of custody to Permian Basin Environmental Lab (PBEL) in Midland, Texas. PBEL analyzed the samples for TPH by EPA SW-846 Method 8015 including gasoline (C6 to C12), diesel (>C12 to C28) and oil (>C28 to C35) range organics and chloride by Method 3000. TPH was below the RRAL in but ten (10) samples (SEW-15, EW-5, EW-10, EW-15, EW-20, NEW-10, NEW-20, NW-15 and SW-20). Table 2b presents the final remediation soil sample analytical data summary. Appendix a presents the laboratory report.

Between March 16 and 22, 2016, Watson, without approval from Targa or supervision from LAI, extended the excavation laterally (east and west) about 20 feet and deepened the excavation to about 23 feet bgs. On March 22, 2016, LAI personnel arrived at the Site to collect GPS coordinates and discovered Watson personnel excavating soil, and promptly shut down the operation. LAI personnel collected composite soil samples from six (6) soil piles (Pile 1 through Pile 6) scattered around the perimeter of the excavation. The samples were analyzed by PBEL for TPH and chloride and reported concentrations below the RRAL in but one sample (Pile 5). Table 2b presents the composite sample analytical data summary. Figure 4 presents the final excavation drawing and soil sample locations. Appendix A presents the laboratory reports. Appendix B presents photographs.

Gandy Construction (Gandy) replaced Watson for completing the remediation. On March 24, 2016, LAI personnel collected samples at locations from the final excavation where previous samples on March 16, 2016, reported TPH above the RAL, including the southeast corner (SEW-15), east side center (EW-5, EW-10, EW-15, and EW-20), northeast corner (NEW-10 and NEW-20), north side center (NW-15) and south side center (SW-20). The samples were submitted to Trace and analyzed for TPH by EPA SW-846 Method 8015, including GRO, DRO and ORO, and chloride. TPH in the final confirmation samples was below the RRAL (see Table 2b). Chloride was 351 mg/Kg in the bottom sample (Bottom-23) and was delineated to 250 mg/Kg (SB-5, 25 feet).

Soil from Pile 1 through Pile 4 and Pile 6 with additional clean soil acquired from the surface owner (David Bilbrey) to fill the excavation. Between April 19 and 25, 2016, Gandy transported approximately 900 cubic yards of soil from Pile 5 and additional soil removed from the southwest corner of the excavation to the Gandy Marley Landfill (NM1-19-0) located west of Tatum, in Chaves County, New Mexico. The surface will be seeded to the landowner's requirements. Appendix C presents the waste manifests.

## 4.0 CONCLUSION

Targa has remediated the releases below the RRAL and requests no further action for RP1-4419. Appendix D presents the initial and final C-141.

## TABLES

Table 1  
**Assessment Soil Sample Analytical Data Summary**  
**Targa Midstream Services, LLC, David Bilbrey 8" Pipeline Site #1**  
**Lea County, New Mexico**  
**1RP-4419**  
**33° 31' 50.1276" N 103° 05' 23.5860" W**

Sample	Collection Date	Location	Depth (Feet)	Status	PID (ppm)	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
OCD RRAL:						10	50				100	250*
Hand Auger Samples												
HA-1	12/21/2015	Bottom Leak (2)	5	In-situ	128.7	1.73	459.53	4,460	7,870	--	12,330	1,870
HA-2	12/21/2015	Bottom Leak (1)	5	In-situ	128.7	12.00	616.70	7,260	11,800	--	19,060	3,150
HA-3	12/21/2015	North Wall (2)	5	In-situ	129.4	1.56	308.06	4,150	11,200	--	15,350	<25.0
HA-4	12/21/2015	South Wall (2)	5	In-situ	129.2	<1.00	52.59	2,350	1,540	--	3,890	<25.0
HA-5	12/21/2015	North Wall (1)	5	In-situ	72.50	<0.004	0.06	<8.00	<50.0	--	<50.0	<25.0
HA-6	12/21/2015	South Wall (1)	5	In-situ	109.6	<0.0200	<0.0200	<4.00	<50.0	--	<50.0	45.80
HA-7	12/21/2015	East Wall	4	In-situ	128.7	9.08	655.08	6,450	9,790	--	16,240	73.50
HA-8	12/21/2015	West Wall	4	In-situ	6.70	<0.0200	<0.0200	<4.00	<50.0	--	<50.0	<25.0
Soil Boring Samples												
SB-1	1/11/2016	East	0	In-situ	13.6	-	-	-	-	-	-	-
	1/11/2016		5	In-situ	6.6	-	-	-	-	-	-	-
	1/11/2016		10	In-situ	10.8	-	-	-	-	-	-	-
	1/11/2016		15	In-situ	13.6	-	-	<4.00	<50.0	<50.0	<50.0	<25.0
	1/11/2016		20	In-situ	11.8	-	-	-	-	-	-	-
	1/11/2016		25	In-situ	13.1	-	-	-	-	-	-	-
SB-2	1/11/2016	North	0	In-situ	77.4	-	-	104	658	<250	762	73.7
	1/12/2016		5	In-situ	26.3	-	-	-	-	-	-	-
	1/12/2016		10	In-situ	14.6	-	-	<4.00	<50.0	<50.0	<50.0	25.5
	1/12/2016		15	In-situ	11.3	-	-	-	-	-	-	-
	1/12/2016		20	In-situ	9.3	-	-	-	-	-	-	-
	1/12/2016		25	In-situ	5.7	-	-	-	-	-	-	-
SB-3	1/12/2016	West	0	In-situ	29.8	-	-	-	-	-	-	-
	1/12/2016		5	In-situ	10.9	-	-	-	-	-	-	-
	1/12/2016		10	In-situ	7.1	-	-	-	-	-	-	-
	1/12/2016		15	In-situ	39.4	-	-	<4.00	<50.0	<50.0	<50.0	<25.0
	1/12/2016		20	In-situ	16.2	-	-	-	-	-	-	-
	1/12/2016		25	In-situ	15.1	-	-	-	-	-	-	-
SB-4	1/12/2016	South	0	In-situ	28.5	-	-	-	-	-	-	-

Table 1  
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 Lea County, New Mexico  
 1RP-4419  
 33° 31' 50.1276" N 103° 05' 23.5860" W

Sample	Collection Date	Location	Depth (Feet)	Status	PID (ppm)	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)	
OCD RRAL:						10	50					100	250*
	1/12/2016		5	In-situ	3.8	-	-	-	-	-	-	-	
	1/12/2016		10	In-situ	11.3	-	-	-	-	-	-	-	
	1/12/2016		15	In-situ	11.3	-	-	-	-	-	-	-	
	1/12/2016		20	In-situ	26.9	-	-	-	-	-	-	-	
	1/12/2016		25	In-situ	12.1	-	-	<4.00	<50.0	<50.0	<50.0	<25.0	
SB-5	2/3/2016	Leak 1	0	In-situ	-	-	-	-	-	-	-	-	
	2/3/2016		5	In-situ	-	-	-	-	-	-	-	-	
	2/3/2016		10	In-situ	128.4	177	798.8	4,930	4,880	<1,000	9,810	347	
	2/3/2016		15	In-situ	75.1	<0.0200	0.7	16.4	<50.0	<50.0	16.4	334	
	2/3/2016		20	In-situ	43.8	-	-	18.8	<50.0	<50.0	18.8	357	
	2/3/2016		25	In-situ	21.2	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	254	
SB-6	2/3/2016	Leak 2	0	In-situ	-	-	-	-	-	-	-	-	
	2/3/2016		5	In-situ	-	-	-	-	-	-	-	-	
	2/3/2016		10	In-situ	128.2	273	3,245	23,400	6,420	<1,000	29,820	274	
	2/3/2016		15	In-situ	107.8	0.0	1.8	17.0	<50.0	<50.0	17.0	32.8	
	2/3/2016		20	In-situ	8.7	<0.0200	0.2	<4.00	<50.0	<50.0	<50.0	33.1	
	2/3/2016		25	In-situ	1.8	-	-	-	-	-	-	-	
Soil Pile Samples													
S-1	1/19/2016	Site1 First Pile	--	Excavated	117.2	-	-	9.44	323	<50.0	332	27.0	
S-2	1/19/2016	Site1 North Pile	--	Excavated	75.8	-	-	<4.00	<50.0	<50.0	<50.0	<25.0	
S-3	1/19/2016	Site1 South Pile	--	Excavated	27.4	-	-	<4.00	<50.0	<50.0	<50.0	<25.0	
S-4	1/19/2016	New Exc. Pile	--	Excavated	2.6	-	-	<4.00	<50.0	<50.0	<50.0	<25.0	

Notes: Laboratory analysis performed by Trace Analysis, Inc., Lubbock, Texas, by EPA SW-846 Methods 8021B (BTEX), 8015 (TPH) and E300 (chloride)

Depth in feet below ground surface (bgs)

--: indicates that analysis was not performed

\*: indicates the OCD delineation level

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

**Bold and highlighted indicates that analyte was detected above OCD recommended remediation action level (RRAL)**

**Bold and highlighted indicates that analyte was detected above OCD delineation level**

Table 2a  
Preliminary Remediation Confirmation Soil Sample Analytical Data Summary  
Targa Midstream Services, LLC, David Bilbrey 8" Pipeline Site #1  
Lea County, New Mexico  
1RP-4419  
33° 31' 50.1276" N 103° 05' 23.5860" W

Sample	Collection Date	Location	Depth (Feet)	Status	PID (ppm)	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
<b>OCD RRAL:</b>											<b>100</b>	<b>250*</b>
SS-1	3/11/2016	Bottom	12	Excavated	9.7	--	--	--	--	--	--	--
SS-2	3/11/2016	Bottom	12	Excavated	387	<0.0200	2.66	20.0	<50.0	--	<b>20.0</b>	53.6
SS-3	3/11/2016	Sidewall	8	Excavated	828	<0.0200	0.4356	<4.00	<50.0	--	<50.0	171
SS-4	3/11/2016	Sidewall	8	Excavated	0.8	--	--	--	--	--	--	--
SS-5	3/11/2016	Sidewall	8	Excavated	68.1	--	--	--	--	--	--	--
SS-6	3/11/2016	Sidewall	8	Excavated	2.6	--	--	--	--	--	--	--
SS-7	3/11/2016	Bottom	12	Excavated	7.9	--	--	--	--	--	--	--
SS-8	3/11/2016	Sidewall	8	Excavated	6.1	--	--	--	--	--	--	--
SS-9	3/11/2016	Sidewall	8	Excavated	2.6	--	--	--	--	--	--	--
S-2	3/14/2016	Bottom	15	Excavated	144	0.102	0.737	<4.00	<50.0	--	<50.0	--
	3/14/2016	Bottom	18	Excavated	503	0.027	0.1237	<4.00	<50.0	--	<50.0	--
	3/14/2016	Bottom	20	Excavated	117	<0.0200	0.0229	<4.00	<50.0	--	<50.0	--
S-3	3/14/2016	Bottom	15	Excavated	186	<0.0200	<0.0200	<4.00	<50.0	--	<50.0	--
	3/14/2016	Bottom	18	Excavated	495	0.100	0.4699	<4.00	<50.0	--	<50.0	--
	3/14/2016	Bottom	20	Excavated	298	0.0604	0.185	<4.00	<50.0	--	<50.0	--
<b>Soil Pile</b>												
SP-1	3/11/2016	--	--	Excavated	--	--	--	--	--	--	--	249

Notes: Laboratory analysis performed by Trace Analysis, Inc., Lubbock, Texas, by EPA SW-846 Methods 8021B (BTEX), 8015 (TPH) and E300 (chloride)

Depth in feet below ground surface (bgs)

\*: indicates the OCD delineation level

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

P: Analysis pending

**Bold and highlighted denotes analyte concentration exceeds OCD recommended remediation action level (RRAL)**

**Bold and highlighted indicates that analyte was detected above OCD delineation level**

Table 2b  
Remediation Confirmation Soil Sample Analytical Data Summary  
Targa Midstream Services, LLC, David Bilbrey 8" Pipeline Site #1  
Lea County, New Mexico  
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33° 31' 50.1276" N 103° 05' 23.5860" W

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Sample	Collection Date	Location	Depth (Feet)	Status	PID (ppm)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
OCD RRAL:									100	250**
SWW-5	3/16/2016	Southwest Corner	10	Excavated	4.0	<29.4	<29.4	<29.4	<29.4	60.1
SWW-10	3/16/2016	Southwest Corner	10	Excavated	15.0	<27.8	<27.8	<27.8	<27.8	109
SWW-15	3/16/2016	Southwest Corner	15	Excavated	25.0	<29.1	<29.1	<29.1	<29.1	111
SWW-20	3/16/2016	Southwest Corner	20	In-situ	13.0	<28.4	59.0	<28.4	59.9	1,200
NWW-5	3/16/2016	Northwest Corner	5	Excavated	2.6	<27.2	46.8	34.1	80.9	16.1
NWW-10	3/16/2016	Northwest Corner	10	Excavated	2.0	<27.8	<27.8	<27.8	<27.8	56.9
NWW-15	3/16/2016	Northwest Corner	15	Excavated	4.6	<28.1	<28.1	<28.1	<28.1	5.46
NWW-20	3/16/2016	Northwest Corner	20	In-situ	0.8	<27.8	<27.8	<27.8	<27.8	11.8
WW-5	3/16/2016	West Side Center	5	Excavated	13.2	<27.8	48.3	<27.8	48.3	3.43
WW-10	3/16/2016	West Side Center	10	Excavated	6.1	<28.4	<28.4	<28.4	<28.4	7.33
WW-15	3/16/2016	West Side Center	15	Excavated	11.7	<28.7	<28.7	<28.7	<28.7	4.51
WW-20	3/16/2016	West Side Center	20	In-situ	13.3	<29.1	34.2	<29.1	34.2	7.85
SEW-5	3/16/2016	Southeast Corner	5	Excavated	6.1	<26.9	47.2	45.6	92.8	16.9
SEW-10	3/16/2016	Southeast Corner	10	Excavated	4.4	<29.1	<29.1	<29.1	<29.1	16.4
SEW-15	3/16/2016	Southeast Corner	15	Excavated	2.6	<27.5	90.9	57.5	148.4	10.7
*SE Wall 15	3/24/2016	Southeast Corner	15	In-situ	--	<4.00	<50.0	<50.0	<50.0	<25.0
SEW-20	3/16/2016	Southeast Corner	20	In-situ	36.0	<28.4	36.7	<28.4	36.7	111
EW-5	3/16/2016	East Side Center	5	Excavated	2.6	<26.9	126	57.8	183.8	5.70
EW-10	3/16/2016	East Side Center	10	Excavated	110.7	<27.5	79.0	40.5	119.5	7.14
EW-15	3/16/2016	East Side Center	15	Excavated	27.0	<27.5	70	33.8	104	9.63
EW-20	3/16/2016	East Side Center	20	Excavated	15.0	<27.2	102	33.1	135.1	25.5
*E Wall 20	3/24/2016	East Side Center	20	In-Situ	--	<4.00	<50.0	<50.0	<50.0	<25.0

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Table 2b  
Remediation Confirmation Soil Sample Analytical Data Summary  
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Lea County, New Mexico  
1RP-4419

Sample	Collection Date	Location	Depth (Feet)	Status	PID (ppm)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
<b>OCD RRAL:</b>									<b>100</b>	<b>250*</b>
<b>NEW-5</b>	3/16/2016	Northeast Corner	5	Excavated	4.4	<28.1	43.1	<28.1	<b>43.1</b>	19.9
<b>NEW-10</b>	3/16/2016	Northeast Corner	10	Excavated	9.2	<27.2	84.5	40.3	<b>124.8</b>	3.67
<b>NEW-15</b>	3/16/2016	Northeast Corner	15	Excavated	22.4	<27.5	50.1	<27.5	50.1	11.3
<b>NEW-20</b>	3/16/2016	Northeast Corner	20	Excavated	154	43.9	462	104	<b>610.9</b>	70.7
<b>*NE Wall 20</b>	3/24/2016	Northeast Corner	20	In-situ	--	<4.00	<50.0	<50.0	<50.0	<25.0
<b>NW-15</b>	3/16/2016	North Side Center	15	Excavated	87.2	<27.2	92.4	42.9	<b>135.3</b>	100
<b>*N Wall 15</b>	3/24/2016	North Side Center	15	In-situ	--	<4.00	<50.0	<50.0	<50.0	550
<b>NW-20</b>	3/16/2016	North Side Center	20	In-situ	36.2	<28.1	58.8	<28.1	<b>58</b>	12.0
<b>**N Wall 20</b>	3/24/2016	North Side Center	20	In-situ	--	<4.00	<50.0	<50.0	<50.0	1,900
<b>SW-15</b>	3/16/2016	South Side Center	15	Excavated	89.3	<27.8	56.5	<27.8	<b>56.5</b>	877
<b>SW-20</b>	3/16/2016	South Side Center	20	Excavated	53.9	<28.1	143	41.9	<b>184.9</b>	2,170
<b>**S Wall 20</b>	3/24/2016	South Side Center	20	In-situ	--	<4.00	<50.0	<50.0	<50.0	3,120
<b>Bottom-23</b>	3/16/2016	Center	23	In-situ	144.2	<28.4	61.3	32.1	<b>93.5</b>	351
<b>Soil Pile</b>										
Pile 1	3/23/2016	--	--	Excavated	--	<27.5	<27.5	<27.5	<27.5	9.52
Pile 2	3/23/2016	--	--	Excavated	--	<26.9	78.9	<26.9	78.9	75.4
Pile 3	3/23/2016	--	--	Excavated	--	<27.8	<27.8	<27.8	<27.8	365
Pile 4	3/23/2016	--	--	Excavated	--	<26.9	<26.9	<26.9	<26.9	8.44
Pile 5	3/24/2016	--	--	Excavated	--	<27.2	247	33.7	<b>281.7</b>	153
Pile 6	3/23/2016	--	--	Excavated	--	<27.5	<27.5	<27.5	<27.5	81.2
NE Pile	4/7/2016	--	--	Excavated	--	109	997	127	<b>1,233</b>	--

33° 31' 50.1276" N 103° 05' 23.5860" W

Page 3 of 3

Notes: Laboratory analysis performed by Permian Basin Environmental Lab by EPA SW-846 Methods 8021B (BTEX), 8015 (TPH) and E300 (chloride)



**Table 2b**  
**Remediation Confirmation Soil Sample Analytical Data Summary**  
**Targa Midstream Services, LLC, David Bilbrey 8" Pipeline Site #1**  
**Lea County, New Mexico**  
**1RP-4419**

\* Analysis performed by Trace Analysis, inc., Lubbock, Texas by EPA SW-846 Methods 8021B (BTEX), 8015 (TPH) and E300 (chloride)

Depth in feet below ground surface (bgs)

\*\*: indicates the OCD delineation level

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

P: Analysis pending

**Bold and highlighted denotes analyte concentration exceeds OCD recommended remediation action level (RRAL)**

## FIGURES

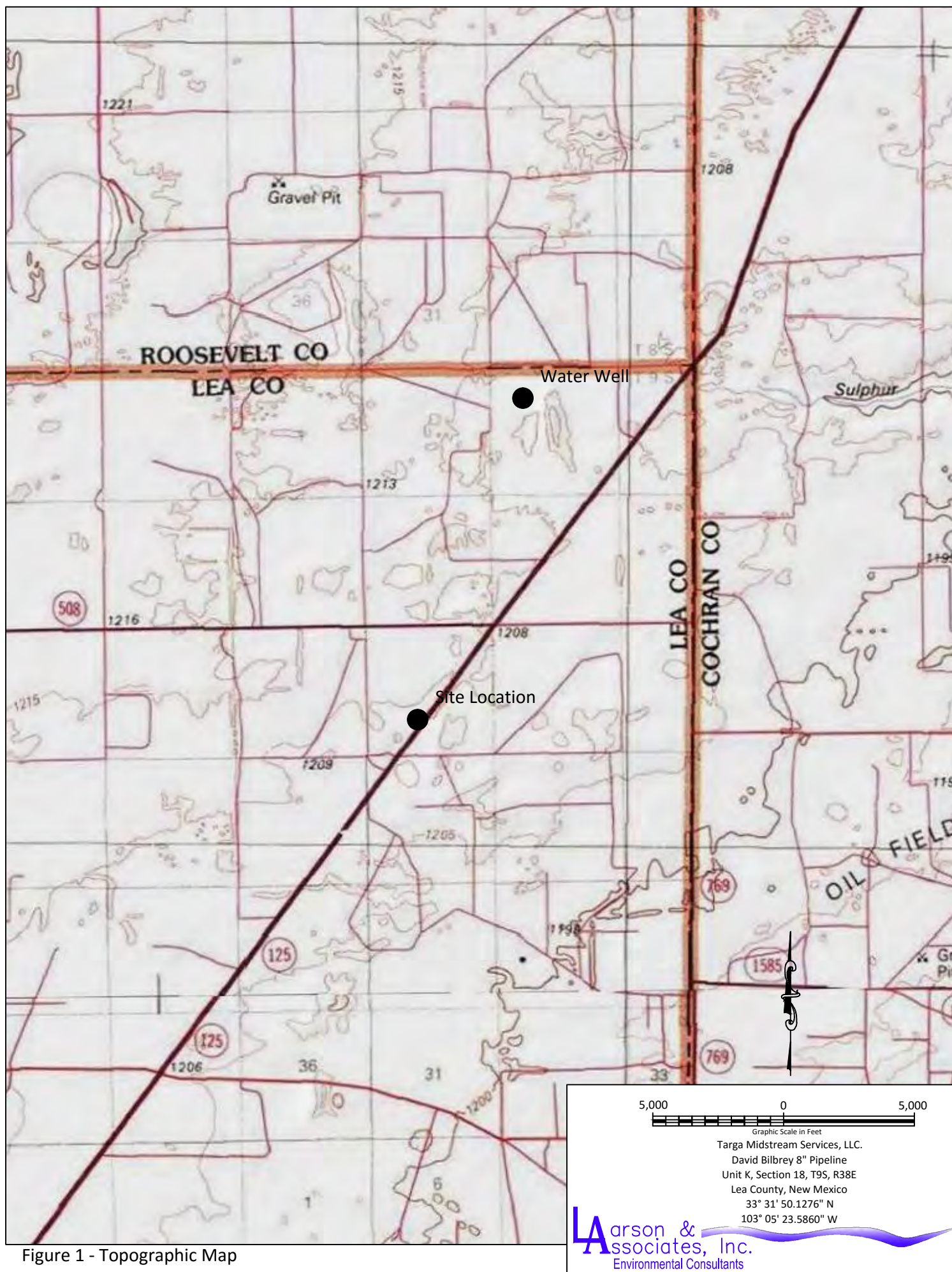






Figure 2a - Aerial Map

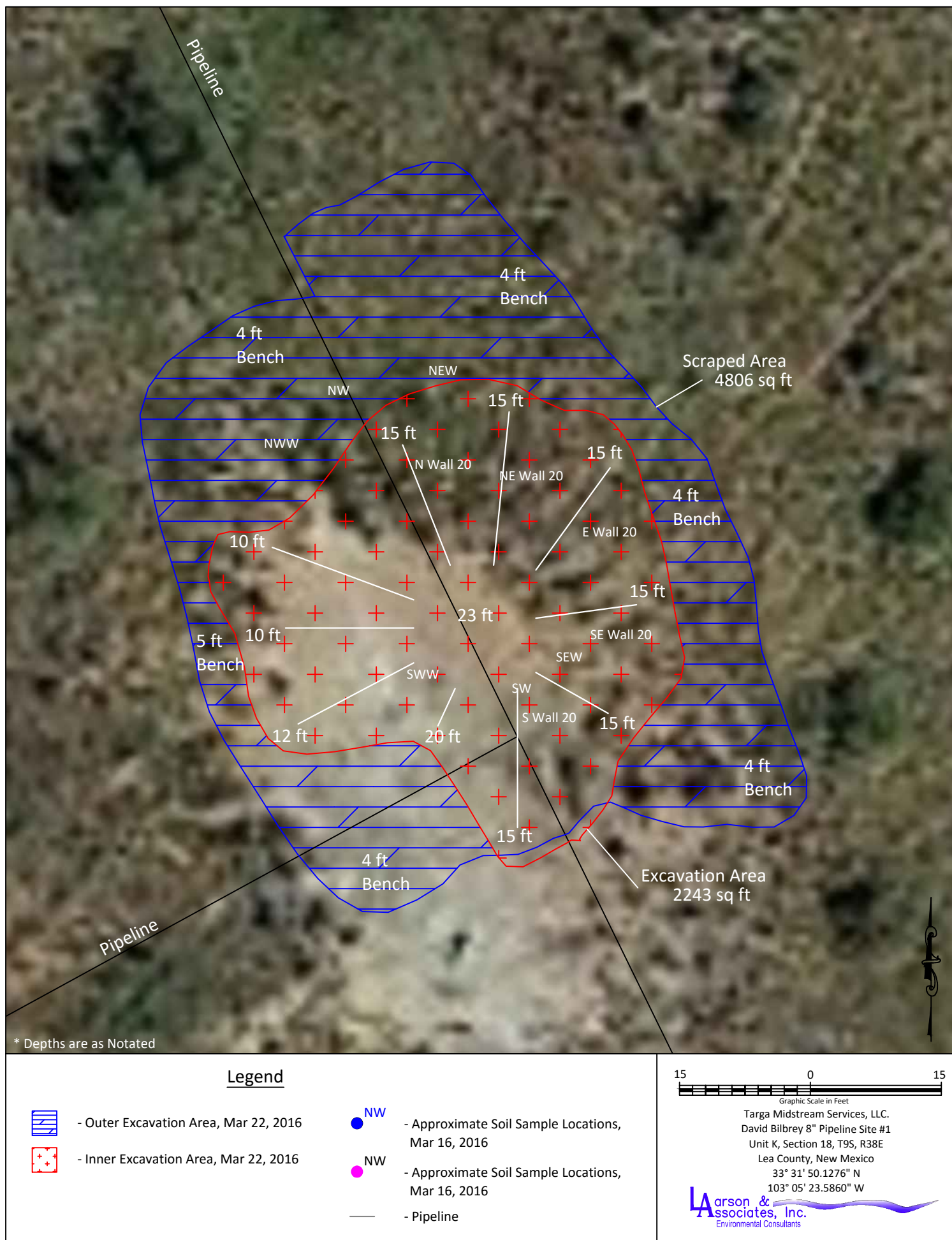


Figure 2 - Aerial Map

8.5" x 11"

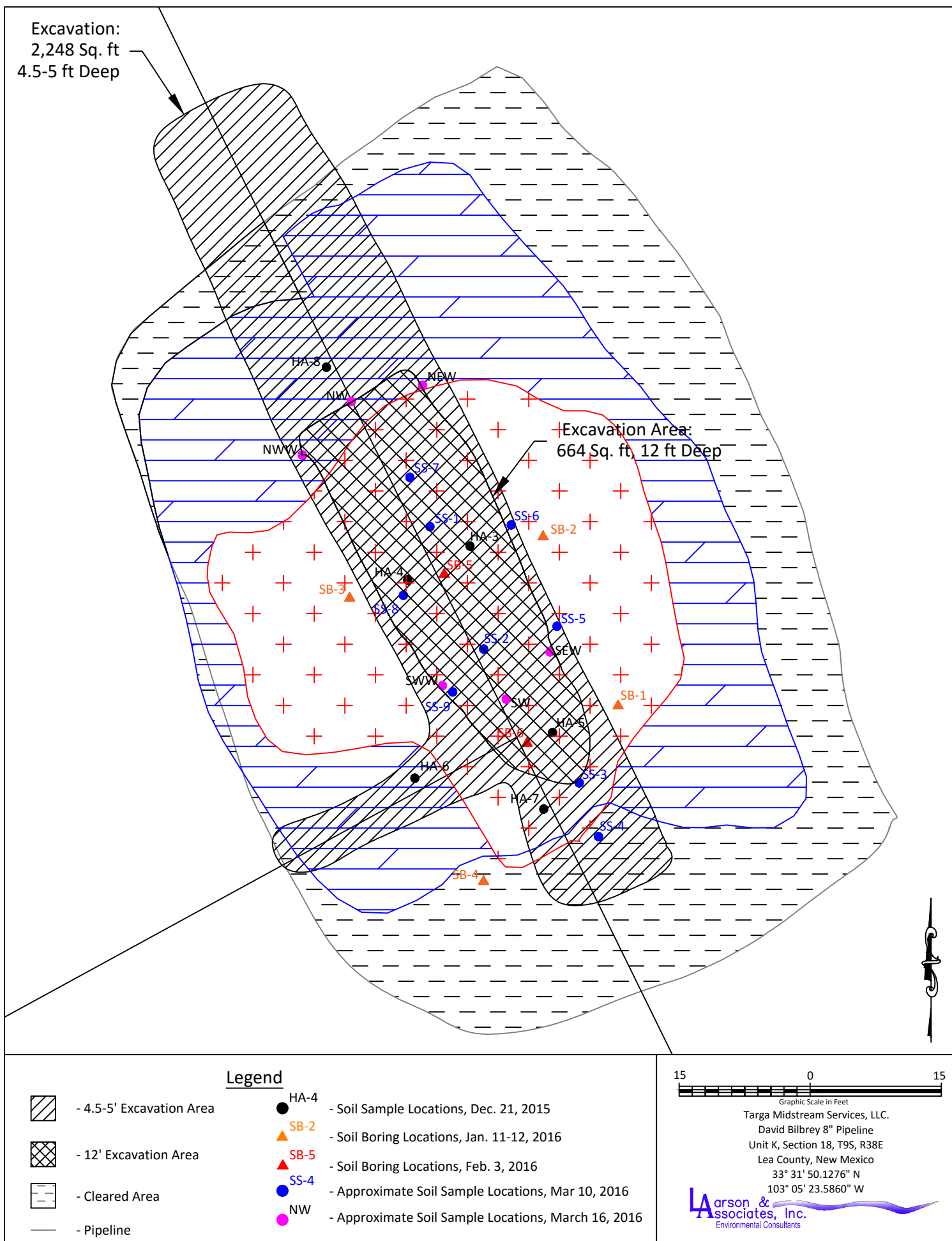


Figure 3 - Site Map Showing Initial Excavation and Soil Samples, March 16, 2016

8.5" x 11"



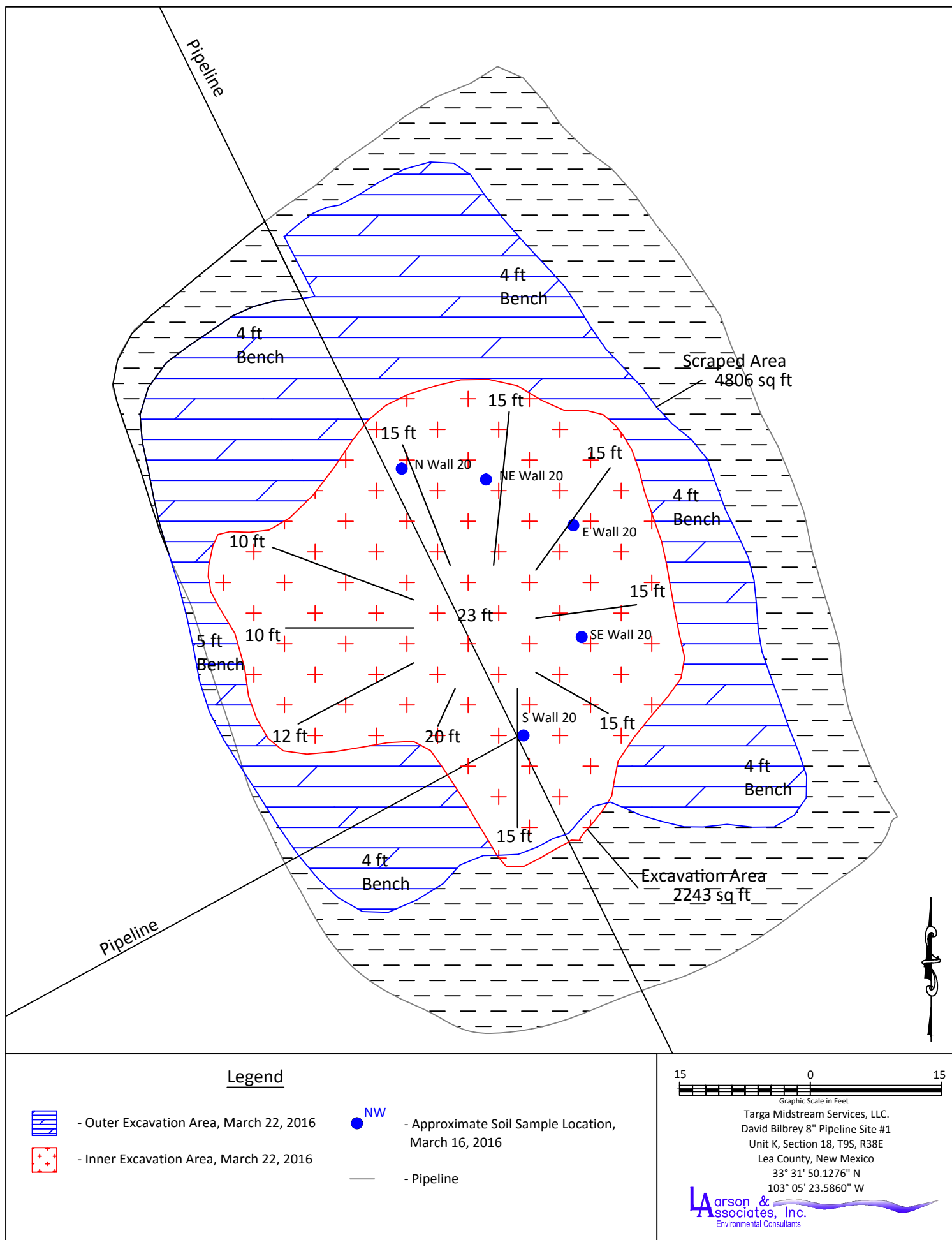


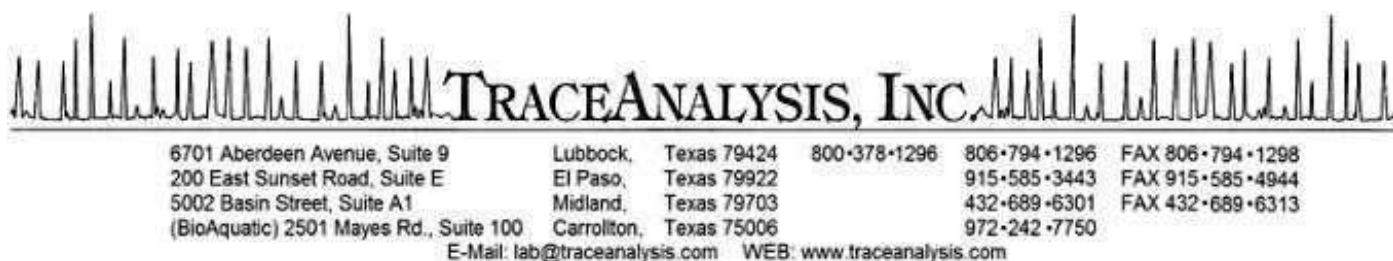
Figure 4 - Site Map Showing Final Excavation and Confirmation Soil Samples, March 16, 2016

8.5" x 11"

## **APPENDIX A**

### **Laboratory Reports**





## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

John White  
Larson and Associates, Inc.

Report Date: January 4, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 15122909



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

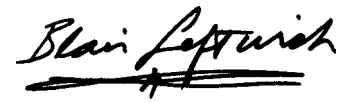
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
411056	HA-1	soil	2015-12-21	11:49	2015-12-29
411057	HA-2	soil	2015-12-21	11:55	2015-12-29
411058	HA-3	soil	2015-12-21	11:03	2015-12-29
411059	HA-4	soil	2015-12-21	11:07	2015-12-29
411060	HA-5	soil	2015-12-21	11:10	2015-12-29
411061	HA-6	soil	2015-12-21	11:16	2015-12-29
411062	HA-7	soil	2015-12-21	11:19	2015-12-29
411063	HA-8	soil	2015-12-21	11:24	2015-12-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a prominent "B" and "L". Below the signature, there are several horizontal strokes, possibly indicating a signature strip or a decorative underline.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Brian Pellam, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2015-12-29 and assigned to work order 15122909. Samples for work order 15122909 were received intact at a temperature of 4.9 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	107711	2015-12-30 at 12:58	127247	2015-12-30 at 12:58
Chloride (IC)	E 300.0	107731	2016-01-04 at 08:30	127272	2016-01-04 at 09:27
TPH DRO	S 8015 D	107712	2015-12-30 at 14:00	127252	2016-01-04 at 10:35
TPH GRO	S 8015 D	107711	2015-12-30 at 12:58	127248	2015-12-30 at 12:58

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15122909 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

# Analytical Report

## Sample: 411056 - HA-1

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 127247  
Prep Batch: 107711

Analytical Method: S 8021B  
Date Analyzed: 2015-12-30  
Sample Preparation: 2015-12-30

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	<b>1.73</b>	mg/Kg	50	0.0200
Toluene		1,2,3,4,5	<b>48.8</b>	mg/Kg	50	0.0200
Ethylbenzene		1,2,3,4,5	<b>190</b>	mg/Kg	50	0.0200
Xylene		1,2,3,4,5	<b>219</b>	mg/Kg	50	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	5.40	mg/Kg	50	2.00	270	77.1 - 120
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	11.9	mg/Kg	50	2.00	595	71.2 - 123

## Sample: 411056 - HA-1

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 127272  
Prep Batch: 107731

Analytical Method: E 300.0  
Date Analyzed: 2016-01-04  
Sample Preparation:

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,5	<b>1870</b>	mg/Kg	5	25.0

## Sample: 411056 - HA-1

Laboratory: Lubbock  
Analysis: TPH DRO  
QC Batch: 127252  
Prep Batch: 107712

Analytical Method: S 8015 D  
Date Analyzed: 2016-01-04  
Sample Preparation: 2015-12-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<b>7870</b>	mg/Kg	10	50.0

Report Date: January 4, 2016  
15-0171-01

Work Order: 15122909  
David Bilbrey 8" Pipeline

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	3	466	mg/Kg	10	25.0	1864	48.9 - 172

**Sample: 411056 - HA-1**

Laboratory: Lubbock  
Analysis: TPH GRO  
QC Batch: 127248  
Prep Batch: 107711

Analytical Method: S 8015 D  
Date Analyzed: 2015-12-30  
Sample Preparation: 2015-12-30

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	<b>4460</b>	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)		3	2.22	mg/Kg	50	2.00	111	76.5 - 130	
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	3	55.1	mg/Kg	50	2.00	2755	68.4 - 120

**Sample: 411057 - HA-2**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 127247  
Prep Batch: 107711

Analytical Method: S 8021B  
Date Analyzed: 2015-12-30  
Sample Preparation: 2015-12-30

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	<b>12.0</b>	mg/Kg	50	0.0200
Toluene		1,2,3,4,5	<b>73.7</b>	mg/Kg	50	0.0200
Ethylbenzene		1,2,3,4,5	<b>252</b>	mg/Kg	50	0.0200
Xylene		1,2,3,4,5	<b>279</b>	mg/Kg	50	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	22.3	mg/Kg	50	2.00	1115	77.1 - 120
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	16.2	mg/Kg	50	2.00	810	71.2 - 123

Report Date: January 4, 2016  
15-0171-01

Work Order: 15122909  
David Bilbrey 8" Pipeline

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**Sample: 411057 - HA-2**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-04	Analyzed By:	RL
QC Batch:	127272	Sample Preparation:		Prepared By:	RL
Prep Batch:	107731				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,5	<b>3150</b>	mg/Kg	10	25.0

**Sample: 411057 - HA-2**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-01-04	Analyzed By:	HJ
QC Batch:	127252	Sample Preparation:	2015-12-30	Prepared By:	HJ
Prep Batch:	107712				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<b>11800</b>	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	3	621	mg/Kg	10	25.0	2484	48.9 - 172

**Sample: 411057 - HA-2**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2015-12-30	Analyzed By:	MT
QC Batch:	127248	Sample Preparation:	2015-12-30	Prepared By:	MT
Prep Batch:	107711				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	<b>7260</b>	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)		3	2.39	mg/Kg	50	2.00	120	76.5 - 130	
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	3	97.5	mg/Kg	50	2.00	4875	68.4 - 120

Report Date: January 4, 2016  
15-0171-01

Work Order: 15122909  
David Bilbrey 8" Pipeline

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**Sample: 411058 - HA-3**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 127247

Prep Batch: 107711

Analytical Method: S 8021B

Date Analyzed: 2015-12-30

Sample Preparation: 2015-12-30

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	<b>1.56</b>	mg/Kg	50	0.0200
Toluene		1,2,3,4,5	<b>30.5</b>	mg/Kg	50	0.0200
Ethylbenzene		1,2,3,4,5	<b>135</b>	mg/Kg	50	0.0200
Xylene		1,2,3,4,5	<b>141</b>	mg/Kg	50	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	8.71	mg/Kg	50	2.00	436	77.1 - 120
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	10.4	mg/Kg	50	2.00	520	71.2 - 123

**Sample: 411058 - HA-3**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 127272

Prep Batch: 107731

Analytical Method: E 300.0

Date Analyzed: 2016-01-04

Sample Preparation:

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U	3,4,5	<25.0	mg/Kg	1	25.0

**Sample: 411058 - HA-3**

Laboratory: Lubbock

Analysis: TPH DRO

QC Batch: 127252

Prep Batch: 107712

Analytical Method: S 8015 D

Date Analyzed: 2016-01-04

Sample Preparation: 2015-12-30

Prep Method: N/A

Analyzed By: HJ

Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<b>11200</b>	mg/Kg	10	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	3	515	mg/Kg	10	25.0	2060	48.9 - 172



Report Date: January 4, 2016  
15-0171-01

Work Order: 15122909  
David Bilbrey 8" Pipeline

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**Sample: 411058 - HA-3**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2015-12-30	Analyzed By:	MT
QC Batch:	127248	Sample Preparation:	2015-12-30	Prepared By:	MT
Prep Batch:	107711				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	<b>4150</b>	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.21	mg/Kg	50	2.00	110	76.5 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	46.0	mg/Kg	50	2.00	2300	68.4 - 120

**Sample: 411059 - HA-4**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2015-12-30	Analyzed By:	MT
QC Batch:	127247	Sample Preparation:	2015-12-30	Prepared By:	MT
Prep Batch:	107711				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<1.00	mg/Kg	50	0.0200
Toluene		1,2,3,4,5	<b>1.99</b>	mg/Kg	50	0.0200
Ethylbenzene	U	1,2,3,4,5	<1.00	mg/Kg	50	0.0200
Xylene		1,2,3,4,5	<b>50.6</b>	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	4.36	mg/Kg	50	2.00	218	77.1 - 120
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	10.1	mg/Kg	50	2.00	505	71.2 - 123

**Sample: 411059 - HA-4**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-04	Analyzed By:	RL
QC Batch:	127272	Sample Preparation:		Prepared By:	RL
Prep Batch:	107731				

*continued ...*

Report Date: January 4, 2016  
15-0171-01

Work Order: 15122909  
David Bilbrey 8" Pipeline

Page Number: 10 of 29

*sample 411059 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U	3,4,5	<25.0	mg/Kg	1	25.0

**Sample: 411059 - HA-4**

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127252	Date Analyzed:	2016-01-04	Analyzed By:	HJ
Prep Batch:	107712	Sample Preparation:	2015-12-30	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<b>1540</b>	mg/Kg	2	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	3	105	mg/Kg	2	25.0	420	48.9 - 172

**Sample: 411059 - HA-4**

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	127248	Date Analyzed:	2015-12-30	Analyzed By:	MT
Prep Batch:	107711	Sample Preparation:	2015-12-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	<b>2350</b>	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)		3	2.58	mg/Kg	50	2.00	129	76.5 - 130	
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	3	64.2	mg/Kg	50	2.00	3210	68.4 - 120

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**Sample: 411060 - HA-5**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 127247

Prep Batch: 107711

Analytical Method: S 8021B

Date Analyzed: 2015-12-30

Sample Preparation: 2015-12-30

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Parameter	2	Flag	Cert	RL			
				Result	Units	Dilution	RL
Benzene		U	1,2,3,4,5	<0.0400	mg/Kg	2	0.0200
Toluene		U	1,2,3,4,5	<0.0400	mg/Kg	2	0.0200
Ethylbenzene			1,2,3,4,5	<b>0.0644</b>	mg/Kg	2	0.0200
Xylene			1,2,3,4,5	<0.0400	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.04	mg/Kg	2	2.00	102	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	2.06	mg/Kg	2	2.00	103	71.2 - 123

**Sample: 411060 - HA-5**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 127272

Prep Batch: 107731

Analytical Method: E 300.0

Date Analyzed: 2016-01-04

Sample Preparation:

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride		3,4,5	<25.0	mg/Kg	1	25.0

**Sample: 411060 - HA-5**

Laboratory: Lubbock

Analysis: TPH DRO

QC Batch: 127252

Prep Batch: 107712

Analytical Method: S 8015 D

Date Analyzed: 2016-01-04

Sample Preparation: 2015-12-30

Prep Method: N/A

Analyzed By: HJ

Prepared By: HJ

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	35.5	mg/Kg	1	25.0	142	48.9 - 172

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**Sample: 411060 - HA-5**

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	127248	Date Analyzed:	2015-12-30
Prep Batch:	107711	Sample Preparation:	2015-12-30
		Prep Method:	S 5035
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	3	1,2,3,4	<8.00	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.71	mg/Kg	2	2.00	86	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	2.05	mg/Kg	2	2.00	102	68.4 - 120

**Sample: 411061 - HA-6**

Laboratory:	Lubbock		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	127247	Date Analyzed:	2015-12-30
Prep Batch:	107711	Sample Preparation:	2015-12-30
		Prep Method:	S 5035
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.99	mg/Kg	1	2.00	100	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	1.92	mg/Kg	1	2.00	96	71.2 - 123

**Sample: 411061 - HA-6**

Laboratory:	Lubbock		
Analysis:	Chloride (IC)	Analytical Method:	E 300.0
QC Batch:	127272	Date Analyzed:	2016-01-04
Prep Batch:	107731	Sample Preparation:	
		Prep Method:	N/A
		Analyzed By:	RL
		Prepared By:	RL

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*sample 411061 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,5	<b>45.8</b>	mg/Kg	1	25.0

**Sample: 411061 - HA-6**

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127252	Date Analyzed:	2016-01-04	Analyzed By:	HJ
Prep Batch:	107712	Sample Preparation:	2015-12-30	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	35.1	mg/Kg	1	25.0	140	48.9 - 172

**Sample: 411061 - HA-6**

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	127248	Date Analyzed:	2015-12-30	Analyzed By:	MT
Prep Batch:	107711	Sample Preparation:	2015-12-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.86	mg/Kg	1	2.00	93	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	1.88	mg/Kg	1	2.00	94	68.4 - 120

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**Sample: 411062 - HA-7**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 127247

Prep Batch: 107711

Analytical Method: S 8021B

Date Analyzed: 2015-12-30

Sample Preparation: 2015-12-30

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	<b>9.08</b>	mg/Kg	100	0.0200
Toluene		1,2,3,4,5	<b>143</b>	mg/Kg	100	0.0200
Ethylbenzene		1,2,3,4,5	<b>270</b>	mg/Kg	100	0.0200
Xylene		1,2,3,4,5	<b>233</b>	mg/Kg	100	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	27.0	mg/Kg	100	2.00	1350	77.1 - 120
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	18.9	mg/Kg	100	2.00	945	71.2 - 123

**Sample: 411062 - HA-7**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 127272

Prep Batch: 107731

Analytical Method: E 300.0

Date Analyzed: 2016-01-04

Sample Preparation:

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,5	<b>73.5</b>	mg/Kg	1	25.0

**Sample: 411062 - HA-7**

Laboratory: Lubbock

Analysis: TPH DRO

QC Batch: 127252

Prep Batch: 107712

Analytical Method: S 8015 D

Date Analyzed: 2016-01-04

Sample Preparation: 2015-12-30

Prep Method: N/A

Analyzed By: HJ

Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<b>9790</b>	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	3	535	mg/Kg	10	25.0	2140	48.9 - 172

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**Sample: 411062 - HA-7**

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	127248	Date Analyzed:	2015-12-30
Prep Batch:	107711	Sample Preparation:	2015-12-30
		Prep Method:	S 5035
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	<b>6450</b>	mg/Kg	100	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.36	mg/Kg	100	2.00	118	76.5 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	146	mg/Kg	100	2.00	7300	68.4 - 120

**Sample: 411063 - HA-8**

Laboratory:	Lubbock		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	127247	Date Analyzed:	2015-12-30
Prep Batch:	107711	Sample Preparation:	2015-12-30
		Prep Method:	S 5035
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene		1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene		1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.89	mg/Kg	1	2.00	94	77.1 - 120
4-Bromofluorobenzene (4-BFB)		5	1.86	mg/Kg	1	2.00	93	71.2 - 123

**Sample: 411063 - HA-8**

Laboratory:	Lubbock		
Analysis:	Chloride (IC)	Analytical Method:	E 300.0
QC Batch:	127272	Date Analyzed:	2016-01-04
Prep Batch:	107731	Sample Preparation:	
		Prep Method:	N/A
		Analyzed By:	RL
		Prepared By:	RL

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*sample 411063 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U	3,4,5	<25.0	mg/Kg	1	25.0

**Sample: 411063 - HA-8**

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127252	Date Analyzed:	2016-01-04	Analyzed By:	HJ
Prep Batch:	107712	Sample Preparation:	2015-12-30	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	34.2	mg/Kg	1	25.0	137	48.9 - 172

**Sample: 411063 - HA-8**

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	127248	Date Analyzed:	2015-12-30	Analyzed By:	MT
Prep Batch:	107711	Sample Preparation:	2015-12-30	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.75	mg/Kg	1	2.00	88	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	1.79	mg/Kg	1	2.00	90	68.4 - 120



## Method Blanks

### Method Blank (1) QC Batch: 127247

QC Batch: 127247 Date Analyzed: 2015-12-30 Analyzed By: MT  
Prep Batch: 107711 QC Preparation: 2015-12-30 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.00444	mg/Kg	0.02
Toluene		1,2,3,4,5	<0.00457	mg/Kg	0.02
Ethylbenzene		1,2,3,4,5	<0.00762	mg/Kg	0.02
Xylene		1,2,3,4,5	<0.00367	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)	Q <sub>sr</sub>	Q <sub>sr</sub>	5	2.40	mg/Kg	1	2.00	120	77.1 - 120
4-Bromofluorobenzene (4-BFB)			5	2.36	mg/Kg	1	2.00	118	71.2 - 123

### Method Blank (1) QC Batch: 127248

QC Batch: 127248 Date Analyzed: 2015-12-30 Analyzed By: MT  
Prep Batch: 107711 QC Preparation: 2015-12-30 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.641	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.24	mg/Kg	1	2.00	112	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	2.18	mg/Kg	1	2.00	109	68.4 - 120

### Method Blank (1) QC Batch: 127252

QC Batch: 127252 Date Analyzed: 2016-01-04 Analyzed By: HJ  
Prep Batch: 107712 QC Preparation: 2015-12-30 Prepared By: HJ

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Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	<5.22	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	28.6	mg/Kg	1	25.0	114	48.9 - 172

**Method Blank (1)**      QC Batch: 127272

QC Batch: 127272  
Prep Batch: 107731

Date Analyzed: 2016-01-04  
QC Preparation: 2016-01-04

Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,5	<8.34	mg/Kg	25

## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 127247  
Prep Batch: 107711

Date Analyzed: 2015-12-30  
QC Preparation: 2015-12-30

Analyzed By: MT  
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.98	mg/Kg	1	2.00	<0.00444	99	68.7 - 120
Toluene		1,2,3,4,5	1.88	mg/Kg	1	2.00	<0.00457	94	76.1 - 120
Ethylbenzene		1,2,3,4,5	2.18	mg/Kg	1	2.00	<0.00762	109	74.8 - 120
Xylene		1,2,3,4,5	6.38	mg/Kg	1	6.00	<0.00367	106	75.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	1.97	mg/Kg	1	2.00	<0.00444	98	68.7 - 120	0	20
Toluene		1,2,3,4,5	1.90	mg/Kg	1	2.00	<0.00457	95	76.1 - 120	1	20
Ethylbenzene		1,2,3,4,5	2.21	mg/Kg	1	2.00	<0.00762	110	74.8 - 120	1	20
Xylene		1,2,3,4,5	6.46	mg/Kg	1	6.00	<0.00367	108	75.3 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	2.17	2.26	mg/Kg	1	2.00	108	113	77.1 - 120
4-Bromofluorobenzene (4-BFB)	5	2.22	2.22	mg/Kg	1	2.00	111	111	71.2 - 123

### Laboratory Control Spike (LCS-1)

QC Batch: 127248  
Prep Batch: 107711

Date Analyzed: 2015-12-30  
QC Preparation: 2015-12-30

Analyzed By: MT  
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	16.0	mg/Kg	1	20.0	<0.641	80	60.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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*control spikes continued ...*

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	18.3	mg/Kg	1	20.0	<0.641	92	60.3 - 120	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.89	1.90	mg/Kg	1	2.00	94	95	76.5 - 130
4-Bromofluorobenzene (4-BFB)	3	2.06	2.06	mg/Kg	1	2.00	103	103	68.4 - 120

#### Laboratory Control Spike (LCS-1)

QC Batch: 127252  
Prep Batch: 107712

Date Analyzed: 2016-01-04  
QC Preparation: 2015-12-30

Analyzed By: HJ  
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	567	mg/Kg	1	500	<5.22	113	60.9 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	587	mg/Kg	1	500	<5.22	117	60.9 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Tricosane	3	33.3	35.2	mg/Kg	1	25.0	133	141	48.9 - 172

#### Laboratory Control Spike (LCS-1)

QC Batch: 127272  
Prep Batch: 107731

Date Analyzed: 2016-01-04  
QC Preparation: 2016-01-04

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,5	252	mg/Kg	1	250	<8.34	101	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,5	253	mg/Kg	1	250	<8.34	101	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 410988

QC Batch: 127247  
Prep Batch: 107711

Date Analyzed: 2015-12-30  
QC Preparation: 2015-12-30

Analyzed By: MT  
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00444	94	61.8 - 120
Toluene		1,2,3,4,5	1.75	mg/Kg	1	2.00	<0.00457	88	64.6 - 122
Ethylbenzene		1,2,3,4,5	2.28	mg/Kg	1	2.00	<0.00762	114	62.2 - 130
Xylene		1,2,3,4,5	5.96	mg/Kg	1	6.00	<0.00367	99	62.2 - 126

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00444	94	61.8 - 120	0	20
Toluene		1,2,3,4,5	1.75	mg/Kg	1	2.00	<0.00457	88	64.6 - 122	0	20
Ethylbenzene		1,2,3,4,5	2.04	mg/Kg	1	2.00	<0.00762	102	62.2 - 130	11	20
Xylene		1,2,3,4,5	5.96	mg/Kg	1	6.00	<0.00367	99	62.2 - 126	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	2.12	2.13	mg/Kg	1	2	106	106	77.1 - 120
4-Bromofluorobenzene (4-BFB)	5	2.07	2.08	mg/Kg	1	2	104	104	71.2 - 123

### Matrix Spike (MS-1) Spiked Sample: 411060

QC Batch: 127248  
Prep Batch: 107711

Date Analyzed: 2015-12-30  
QC Preparation: 2015-12-30

Analyzed By: MT  
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	19.3	mg/Kg	2	20.0	1.61	88	25 - 139

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

*continued ...*

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David Bilbrey 8" Pipeline

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*matrix spikes continued ...*

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	20.0	mg/Kg	2	20.0	1.61	92	25 - 139	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.55	1.92	mg/Kg	2	2	78	96	76.5 - 130
4-Bromofluorobenzene (4-BFB)	3	1.74	2.12	mg/Kg	2	2	87	106	68.4 - 120

**Matrix Spike (MS-1)**    Spiked Sample: 410702

QC Batch: 127252  
Prep Batch: 107712

Date Analyzed: 2016-01-04  
QC Preparation: 2015-12-30

Analyzed By: HJ  
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	559	mg/Kg	1	500	<5.22	112	47.9 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	599	mg/Kg	1	500	<5.22	120	47.9 - 130	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	36.4	38.8	mg/Kg	1	25	146	155	48.9 - 172

**Matrix Spike (MS-1)**    Spiked Sample: 411063

QC Batch: 127272  
Prep Batch: 107731

Date Analyzed: 2016-01-04  
QC Preparation: 2016-01-04

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,5	269	mg/Kg	1	250	<8.34	108	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,5	255	mg/Kg	1	250	<8.34	102	80 - 120	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



## Calibration Standards

### Standard (CCV-1)

QC Batch: 127247

Date Analyzed: 2015-12-30

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.115	115	80 - 120	2015-12-30
Toluene		1,2,3,4,5	mg/kg	0.100	0.0880	88	80 - 120	2015-12-30
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0985	98	80 - 120	2015-12-30
Xylene		1,2,3,4,5	mg/kg	0.300	0.312	104	80 - 120	2015-12-30

### Standard (CCV-2)

QC Batch: 127247

Date Analyzed: 2015-12-30

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.113	113	80 - 120	2015-12-30
Toluene		1,2,3,4,5	mg/kg	0.100	0.0896	90	80 - 120	2015-12-30
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0988	99	80 - 120	2015-12-30
Xylene		1,2,3,4,5	mg/kg	0.300	0.292	97	80 - 120	2015-12-30

### Standard (CCV-1)

QC Batch: 127248

Date Analyzed: 2015-12-30

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	1.05	105	80 - 120	2015-12-30

### Standard (CCV-2)

QC Batch: 127248

Date Analyzed: 2015-12-30

Analyzed By: MT

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	1.09	109	80 - 120	2015-12-30

#### Standard (CCV-1)

QC Batch: 127252 Date Analyzed: 2016-01-04 Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	592	118	80 - 120	2016-01-04

#### Standard (CCV-2)

QC Batch: 127252 Date Analyzed: 2016-01-04 Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	570	114	80 - 120	2016-01-04

#### Standard (CCV-1)

QC Batch: 127272 Date Analyzed: 2016-01-04 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,5	mg/Kg	25.0	25.4	102	90 - 110	2016-01-04

#### Standard (CCV-2)

QC Batch: 127272 Date Analyzed: 2016-01-04 Analyzed By: RL

---

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,5	mg/Kg	25.0	25.6	102	90 - 110	2016-01-04

---

# Appendix

## Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

## Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5		2015-066	Lubbock

## Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.

---

F	Description
---	-------------

U	The analyte is not detected above the SDL
---	---

---

## Result Comments

- 1 Sample dilution due to hydrocarbons.
- 2 Sample dilution due to hydrocarbons.
- 3 Dilution due to hydrocarbons and turbidity.

## Attachments

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.

15122909

## CHAIN-OF-CUSTODY



507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

DATE: 12/28/2015 PAGE 1 OF 1  
LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: David Bilbrey 8" Pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Michael Sant

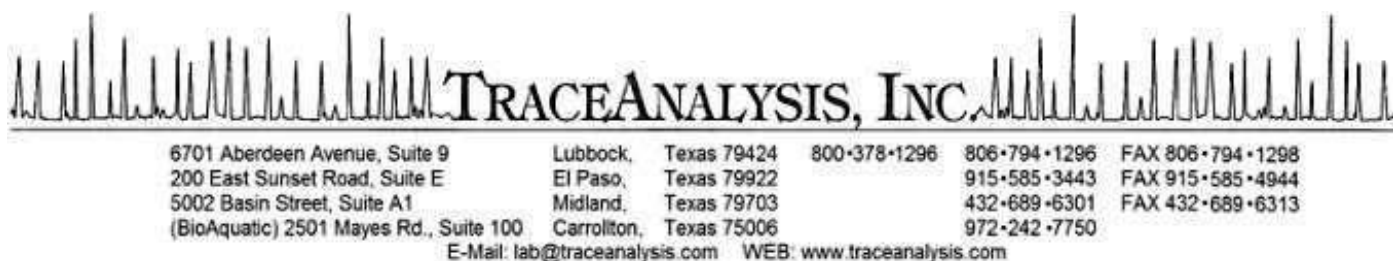
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES
						HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH □	ICE		
HA-1	11056	12/21	11:49	S	1					UNPRESERVED	
HA-2	057		11:55	S	1						
HA-3	058		11:03	S	1						
HA-4	059		11:07	S	1						
HA-5	060		11:10	S	1						
HA-6	061		11:16	S	1						
HA-7	062		11:19	S	1						
HA-8	063		11:24	S	1						
TOTAL											

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
<i>Michael Sant</i>	12/29/15 10:30		
<i>John White</i>	3:30 12/29/15		
<i>Quenda Wata</i>	12/29/15	<i>Quenda Wata</i>	3:20 pm

LABORATORY USE ONLY:
RECEIVING TEMP: <u>4.4/49</u> THERM #: <u>IR-3</u>
CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED
<input type="checkbox"/> CARRIER BILL # <u>Carbu</u>
<input checked="" type="checkbox"/> HAND DELIVERED <u>Times on janadonit match</u> <u>COO. 4/12/29/15</u>



## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Michael Gant  
Larson and Associates, Inc.

Report Date: January 15, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16011310



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

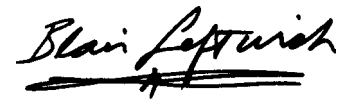
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
411571	SB-1 15'	soil	2015-01-11	13:22	2016-01-13
411574	SB-2 0'	soil	2015-01-12	08:45	2016-01-13
411576	SB-2 10'	soil	2015-01-12	08:57	2016-01-13
411583	SB-3 15'	soil	2015-01-12	10:07	2016-01-13
411590	SB-4 20'	soil	2015-01-12	11:32	2016-01-13

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 26 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is underlined with a thick, dark line.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Brian Pellam, Operations Manager



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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-01-13 and assigned to work order 16011310. Samples for work order 16011310 were received intact at a temperature of 3.3 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	107933	2016-01-14 at 14:00	127506	2016-01-14 at 15:39
Chloride (IC)	E 300.0	107944	2016-01-14 at 14:00	127517	2016-01-15 at 09:36
TPH DRO	S 8015 D	107892	2016-01-14 at 08:36	127464	2016-01-14 at 08:37
TPH GRO	S 8015 D	107882	2016-01-13 at 14:48	127462	2016-01-14 at 08:33
TPH GRO	S 8015 D	107893	2016-01-14 at 08:39	127493	2016-01-15 at 07:23
TPH ORO	S 8015 D	107892	2016-01-14 at 08:36	127465	2016-01-14 at 08:50

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16011310 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

# Analytical Report

## Sample: 411571 - SB-1 15'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-14	Analyzed By:	RL
QC Batch:	127506	Sample Preparation:		Prepared By:	RL
Prep Batch:	107933				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

## Sample: 411571 - SB-1 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-01-14	Analyzed By:	JL
QC Batch:	127464	Sample Preparation:	2016-01-14	Prepared By:	JL
Prep Batch:	107892				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			49.4	mg/Kg	1	50.0	99	70 - 130

## Sample: 411571 - SB-1 15'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-01-14	Analyzed By:	AK
QC Batch:	127462	Sample Preparation:	2016-01-13	Prepared By:	AK
Prep Batch:	107882				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130

*continued ...*

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*sample continued ...*

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

**Sample: 411571 - SB-1 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-01-14	Analyzed By:	JL
QC Batch:	127465	Sample Preparation:	2016-01-14	Prepared By:	JL
Prep Batch:	107892				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			49.4	mg/Kg	1	50.0	99	70 - 130
n-Triacontane			54.2	mg/Kg	1	50.0	108	37.1 - 162

**Sample: 411574 - SB-2 0'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-15	Analyzed By:	RL
QC Batch:	127517	Sample Preparation:		Prepared By:	RL
Prep Batch:	107944				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	73.7	mg/Kg	1	25.0

**Sample: 411574 - SB-2 0'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-01-14	Analyzed By:	JL
QC Batch:	127464	Sample Preparation:	2016-01-14	Prepared By:	JL
Prep Batch:	107892				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	658	mg/Kg	5	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	89.4	mg/Kg	5	50.0	179	70 - 130

**Sample: 411574 - SB-2 0'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 127493  
Prep Batch: 107893

Analytical Method: S 8015 D  
Date Analyzed: 2016-01-15  
Sample Preparation: 2016-01-14

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q <sub>r</sub> , Q <sub>s</sub>	3	<b>104</b>	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5.95	mg/Kg	1	2.00	298	70 - 130

**Sample: 411574 - SB-2 0'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 127465  
Prep Batch: 107892

Analytical Method: S 8015 D  
Date Analyzed: 2016-01-14  
Sample Preparation: 2016-01-14

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO			<b>0.00</b>	<250	<250	<250	<250		mg/Kg	5	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	89.4	mg/Kg	5	50.0	179	70 - 130
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	110	mg/Kg	5	50.0	220	37.1 - 162

**Sample: 411576 - SB-2 10'**

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 127506  
Prep Batch: 107933

Analytical Method: E 300.0  
Date Analyzed: 2016-01-14  
Sample Preparation:

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

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15-0171-01

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<b>25.5</b>	mg/Kg	1	25.0

**Sample: 411576 - SB-2 10'**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127464	Date Analyzed:	2016-01-14	Analyzed By:	JL
Prep Batch:	107892	Sample Preparation:	2016-01-14	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.6	mg/Kg	1	50.0	109	70 - 130

**Sample: 411576 - SB-2 10'**

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	127462	Date Analyzed:	2016-01-14	Analyzed By:	AK
Prep Batch:	107882	Sample Preparation:	2016-01-13	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

**Sample: 411576 - SB-2 10'**

Laboratory:	Midland				
Analysis:	TPH ORO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127465	Date Analyzed:	2016-01-14	Analyzed By:	JL
Prep Batch:	107892	Sample Preparation:	2016-01-14	Prepared By:	JL

*continued ...*

Report Date: January 15, 2016  
15-0171-01

Work Order: 16011310  
David Billbrey 8" Pipeline

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*sample 411576 continued ...*

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.6	mg/Kg	1	50.0	109	70 - 130
n-Triacontane			63.1	mg/Kg	1	50.0	126	37.1 - 162

**Sample: 411583 - SB-3 15'**

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	127506	Date Analyzed:	2016-01-14	Analyzed By:	RL
Prep Batch:	107933	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

**Sample: 411583 - SB-3 15'**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127464	Date Analyzed:	2016-01-14	Analyzed By:	JL
Prep Batch:	107892	Sample Preparation:	2016-01-14	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.6	mg/Kg	1	50.0	97	70 - 130



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**Sample: 411583 - SB-3 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-01-14	Analyzed By:	AK
QC Batch:	127462	Sample Preparation:	2016-01-13	Prepared By:	AK
Prep Batch:	107882				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

**Sample: 411583 - SB-3 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-01-14	Analyzed By:	JL
QC Batch:	127465	Sample Preparation:	2016-01-14	Prepared By:	JL
Prep Batch:	107892				

Parameter	Flag	Cert	MDL Result	SQL Result	PQL Result	RL Result	Units	Dilution	MDL	SQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.6	mg/Kg	1	50.0	97	70 - 130
n-Triacontane			56.7	mg/Kg	1	50.0	113	37.1 - 162

**Sample: 411590 - SB-4 20'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-15	Analyzed By:	RL
QC Batch:	127517	Sample Preparation:		Prepared By:	RL
Prep Batch:	107944				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

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**Sample: 411590 - SB-4 20'**

Laboratory:	Midland		
Analysis:	TPH DRO	Analytical Method:	S 8015 D
QC Batch:	127464	Date Analyzed:	2016-01-14
Prep Batch:	107892	Sample Preparation:	2016-01-14
		Prep Method:	N/A
		Analyzed By:	JL
		Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.5	mg/Kg	1	50.0	97	70 - 130

**Sample: 411590 - SB-4 20'**

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	127462	Date Analyzed:	2016-01-14
Prep Batch:	107882	Sample Preparation:	2016-01-13
		Prep Method:	S 5035
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

**Sample: 411590 - SB-4 20'**

Laboratory:	Midland		
Analysis:	TPH ORO	Analytical Method:	S 8015 D
QC Batch:	127465	Date Analyzed:	2016-01-14
Prep Batch:	107892	Sample Preparation:	2016-01-14
		Prep Method:	N/A
		Analyzed By:	JL
		Prepared By:	JL

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.5	mg/Kg	1	50.0	97	70 - 130

*continued ...*

*sample continued ...*

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			53.8	mg/Kg	1	50.0	108	37.1 - 162

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## Method Blanks

### Method Blank (1) QC Batch: 127462

QC Batch: 127462 Date Analyzed: 2016-01-14 Analyzed By: AK  
Prep Batch: 107882 QC Preparation: 2016-01-13 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

### Method Blank (1) QC Batch: 127464

QC Batch: 127464 Date Analyzed: 2016-01-14 Analyzed By: JL  
Prep Batch: 107892 QC Preparation: 2016-01-14 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		3	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130

### Method Blank (1) QC Batch: 127465

QC Batch: 127465 Date Analyzed: 2016-01-14 Analyzed By: JL  
Prep Batch: 107892 QC Preparation: 2016-01-14 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130
n-Triacontane			56.3	mg/Kg	1	50.0	113	37.1 - 162

**Method Blank (1)**      QC Batch: 127493

QC Batch: 127493  
Prep Batch: 107893

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.14	mg/Kg	1	2.00	107	70 - 130

**Method Blank (1)**      QC Batch: 127506

QC Batch: 127506  
Prep Batch: 107933

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<8.34	mg/Kg	25

**Method Blank (1)**      QC Batch: 127517

QC Batch: 127517  
Prep Batch: 107944

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<8.34	mg/Kg	25

## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 127462  
Prep Batch: 107882

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-13

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	21.8	mg/Kg	1	20.0	<2.32	109	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	25.5	mg/Kg	1	20.0	<2.32	128	70 - 130	16	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.96	mg/Kg	1	2.00	96	98	70 - 130
4-Bromofluorobenzene (4-BFB)	1.93	2.00	mg/Kg	1	2.00	96	100	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 127464  
Prep Batch: 107892

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: JL  
Prepared By: JL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	270	mg/Kg	1	250	<7.41	108	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	268	mg/Kg	1	250	<7.41	107	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	52.9	53.2	mg/Kg	1	50.0	106	106	70 - 130

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### Laboratory Control Spike (LCS-1)

QC Batch: 127465  
Prep Batch: 107892

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: JL  
Prepared By: JL

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	52.9	53.2	mg/Kg	1	50.0	106	106	70 - 130
n-Triacontane	52.7	53.8	mg/Kg	1	50.0	105	108	54.8 - 164

### Laboratory Control Spike (LCS-1)

QC Batch: 127493  
Prep Batch: 107893

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	20.5	mg/Kg	1	20.0	<2.32	102	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	18.1	mg/Kg	1	20.0	<2.32	90	70 - 130	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	2.03	mg/Kg	1	2.00	100	102	70 - 130
4-Bromofluorobenzene (4-BFB)	1.98	1.93	mg/Kg	1	2.00	99	96	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 127506  
Prep Batch: 107933

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	266	mg/Kg	1	250	<8.34	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	250	mg/Kg	1	250	<8.34	100	90 - 110	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch: 127517  
Prep Batch: 107944

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	237	mg/Kg	1	250	<8.34	95	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	238	mg/Kg	1	250	<8.34	95	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 411571

QC Batch: 127462  
Prep Batch: 107882

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-13

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	14.3	mg/Kg	1	20.0	<2.32	72	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	15.9	mg/Kg	1	20.0	<2.32	80	70 - 130	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.85	1.98	mg/Kg	1	2	92	99	70 - 130
4-Bromofluorobenzene (4-BFB)	2.00	2.15	mg/Kg	1	2	100	108	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 411590

QC Batch: 127464  
Prep Batch: 107892

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: JL  
Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	253	mg/Kg	1	250	<7.41	101	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	254	mg/Kg	1	250	<7.41	102	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	49.7	51.2	mg/Kg	1	50	99	102	70 - 130

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**Matrix Spike (MS-1)** Spiked Sample: 411590

QC Batch: 127465  
Prep Batch: 107892

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: JL  
Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO			0.00	mg/Kg	1	250	0	0	-

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD Limit
ORO			0.00	mg/Kg	1	250	0	0	-	0

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	49.7	51.2	mg/Kg	1	50	99	102	70 - 130
n-Triacontane	51.2	51.7	mg/Kg	1	50	102	103	10 - 258

**Matrix Spike (MS-1)** Spiked Sample: 411574

QC Batch: 127493  
Prep Batch: 107893

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Q <sub>s</sub>	Q <sub>s</sub>	3	118	mg/Kg	1	20.0	104	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD Limit
GRO	Q <sub>r</sub> , Q <sub>s</sub>	Q <sub>r</sub> , Q <sub>s</sub>	3	156	mg/Kg	1	20.0	104	260	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

				MS	MSD		Spike	MS	MSD	Rec.	
Surrogate				Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)				1.96	1.64	mg/Kg	1	2	98	82	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>		5.94	6.75	mg/Kg	1	2	297	338	70 - 130

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**Matrix Spike (xMS-1)** Spiked Sample: 411590

QC Batch: 127506  
Prep Batch: 107933

Date Analyzed: 2016-01-14  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Param			MS			Spike	Matrix		Rec.	
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	
Chloride	Qs	Qs	1,2,4	225	mg/Kg	2	250	45.2	72	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	259	mg/Kg	2	250	45.2	86	80 - 120	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 411590

QC Batch: 127517  
Prep Batch: 107944

Date Analyzed: 2016-01-15  
QC Preparation: 2016-01-14

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	266	mg/Kg	1	250	14.1	101	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	253	mg/Kg	1	250	14.1	96	80 - 120	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Calibration Standards

### Standard (CCV-1)

QC Batch: 127462

Date Analyzed: 2016-01-14

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	1.19	119	80 - 120	2016-01-14

### Standard (CCV-2)

QC Batch: 127462

Date Analyzed: 2016-01-14

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.819	82	80 - 120	2016-01-14

### Standard (CCV-1)

QC Batch: 127464

Date Analyzed: 2016-01-14

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	260	104	80 - 120	2016-01-14

### Standard (CCV-2)

QC Batch: 127464

Date Analyzed: 2016-01-14

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	267	107	80 - 120	2016-01-14

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**Standard (CCV-2)**

QC Batch: 127465

Date Analyzed: 2016-01-14

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.00	0	-	2016-01-14

**Standard (CCV-1)**

QC Batch: 127493

Date Analyzed: 2016-01-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	1.02	102	80 - 120	2016-01-15

**Standard (CCV-2)**

QC Batch: 127493

Date Analyzed: 2016-01-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	1.20	120	80 - 120	2016-01-15

**Standard (CCV-1)**

QC Batch: 127506

Date Analyzed: 2016-01-14

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.2	105	90 - 110	2016-01-14

**Standard (CCV-2)**

QC Batch: 127506

Date Analyzed: 2016-01-14

Analyzed By: RL

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David Billbrey 8" Pipeline

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	24.9	100	90 - 110	2016-01-14

#### Standard (CCV-1)

QC Batch: 127517

Date Analyzed: 2016-01-15

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	25.2	101	90 - 110	2016-01-15

#### Standard (CCV-2)

QC Batch: 127517

Date Analyzed: 2016-01-15

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	24.2	97	90 - 110	2016-01-15

## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

## **Attachments**

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.



WO# 16011310

# CHAIN-OF-CUSTODY

**Carson & Associates, Inc.**  
Environmental Consultants  
507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

DATE: 1/13/2016

PAGE 1 OF 2

PO #: \_\_\_\_\_ LAB WORK ORDER #:

PROJECT LOCATION OR NAME: David Bilbrey 8" Pipeline

LAI PROJECT #: 15-0171-01 COLLECTOR: Michael Cant

TRRP report? <input type="checkbox"/> Yes <input type="checkbox"/> No	TIME ZONE: Time zone/State: <u>MST/NM</u>	S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION				UNPRESERVED	ANALYSES	FIELD NOTES
									HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH	ICE			
					1/11	12:58	S	1							411568
					1/11	1:04	S	1							569
					1/11	1:09	S	1							570
					1/11	1:22	S	1							571
					1/11	1:33	S	1							572
					1/11	1:52	S	1							573
					1/12	8:45	S	1							574
					1/12	8:53	S	1							575
					1/12	8:57	S	1							576
					1/12	9:01	S	1							577
					1/12	9:15	S	1							578
					1/12	9:28	S	1							579
					1/12	9:44	S	1							580
					1/12	9:50	S	1							581
					1/12	10:00	S	1							582
TOTAL															

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 12:08</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 12:08</u>	TURN AROUND TIME NORMAL <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> 3 days
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 13:16</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 13:16</u>	
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 14:10</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>1/13/16 14:10</u>	
Trace Analysis Verbal report in 3 days				

LABORATORY USE ONLY:

RECEIVING TEMP: 3.3

THERM #: IR

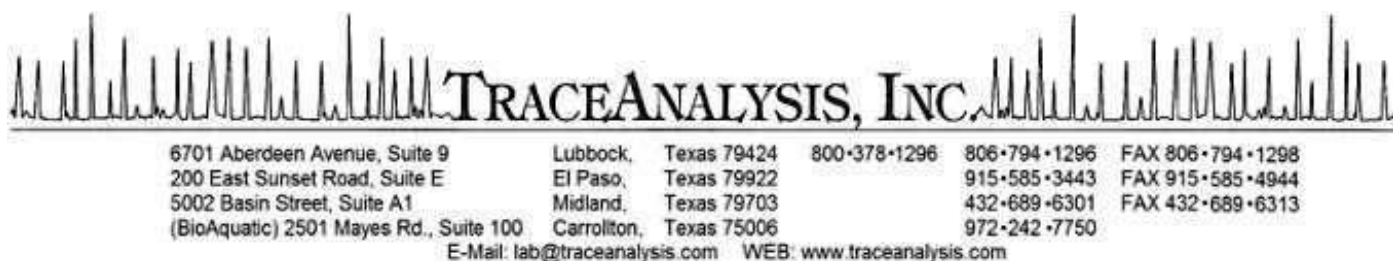
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

☐ CARRIER BILL # LS: 51314530

☒ HAND DELIVERED







## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Michael Gant  
Larson and Associates, Inc.

Report Date: January 26, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16012005



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-02

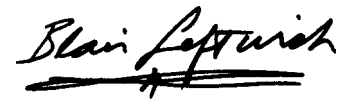
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
412099	S-1	soil	2016-01-19	13:20	2016-01-20
412100	S-2	soil	2016-01-19	13:28	2016-01-20
412101	S-3	soil	2016-01-19	13:36	2016-01-20
412102	S-4	soil	2016-01-19	14:05	2016-01-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 20 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style with a prominent flourish at the end. Below the signature is a horizontal line.

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Brian Pellam, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-01-20 and assigned to work order 16012005. Samples for work order 16012005 were received intact at a temperature of 5.8 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	108100	2016-01-22 at 13:00	127696	2016-01-22 at 15:20
Chloride (IC)	E 300.0	108123	2016-01-22 at 13:00	127716	2016-01-25 at 10:19
TPH DRO	S 8015 D	108049	2016-01-21 at 15:15	127640	2016-01-21 at 15:22
TPH GRO	S 8015 D	108017	2016-01-20 at 14:43	127608	2016-01-21 at 07:09
TPH ORO	S 8015 D	108049	2016-01-21 at 15:15	127641	2016-01-21 at 15:23

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16012005 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

# Analytical Report

## Sample: 412099 - S-1

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-25	Analyzed By:	RL
QC Batch:	127716	Sample Preparation:		Prepared By:	RL
Prep Batch:	108123				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>27.0</b>	mg/Kg	1	25.0

## Sample: 412099 - S-1

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-01-21	Analyzed By:	JL
QC Batch:	127640	Sample Preparation:	2016-01-21	Prepared By:	JL
Prep Batch:	108049				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<b>323</b>	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	75.2	mg/Kg	1	50.0	150	70 - 130

## Sample: 412099 - S-1

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-01-21	Analyzed By:	AK
QC Batch:	127608	Sample Preparation:	2016-01-20	Prepared By:	AK
Prep Batch:	108017				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr	5	<b>9.44</b>	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130

*continued ...*

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*sample continued ...*

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			2.38	mg/Kg	1	2.00	119	70 - 130

**Sample: 412099 - S-1**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-01-21	Analyzed By:	JL
QC Batch:	127641	Sample Preparation:	2016-01-21	Prepared By:	JL
Prep Batch:	108049				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	75.2	mg/Kg	1	50.0	150	70 - 130
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	105	mg/Kg	1	50.0	210	37.1 - 162

**Sample: 412100 - S-2**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-01-25	Analyzed By:	RL
QC Batch:	127716	Sample Preparation:		Prepared By:	RL
Prep Batch:	108123				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U	3,4,6	<25.0	mg/Kg	1	25.0

**Sample: 412100 - S-2**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-01-21	Analyzed By:	JL
QC Batch:	127640	Sample Preparation:	2016-01-21	Prepared By:	JL
Prep Batch:	108049				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0



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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			56.7	mg/Kg	1	50.0	113	70 - 130

**Sample: 412100 - S-2**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 127608  
Prep Batch: 108017

Analytical Method: S 8015 D  
Date Analyzed: 2016-01-21  
Sample Preparation: 2016-01-20

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	70 - 130

**Sample: 412100 - S-2**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 127641  
Prep Batch: 108049

Analytical Method: S 8015 D  
Date Analyzed: 2016-01-21  
Sample Preparation: 2016-01-21

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			56.7	mg/Kg	1	50.0	113	70 - 130
n-Triacontane			74.1	mg/Kg	1	50.0	148	37.1 - 162

**Sample: 412101 - S-3**

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 127716  
Prep Batch: 108123

Analytical Method: E 300.0  
Date Analyzed: 2016-01-25  
Sample Preparation:

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

**Sample: 412101 - S-3**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127640	Date Analyzed:	2016-01-21	Analyzed By:	JL
Prep Batch:	108049	Sample Preparation:	2016-01-21	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.6	mg/Kg	1	50.0	109	70 - 130

**Sample: 412101 - S-3**

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	127608	Date Analyzed:	2016-01-21	Analyzed By:	AK
Prep Batch:	108017	Sample Preparation:	2016-01-20	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.53	mg/Kg	1	2.00	76	70 - 130
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	70 - 130

**Sample: 412101 - S-3**

Laboratory:	Midland				
Analysis:	TPH ORO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	127641	Date Analyzed:	2016-01-21	Analyzed By:	JL
Prep Batch:	108049	Sample Preparation:	2016-01-21	Prepared By:	JL

*continued ...*

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sample 412101 continued ...

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.6	mg/Kg	1	50.0	109	70 - 130
n-Triacontane			70.2	mg/Kg	1	50.0	140	37.1 - 162

#### Sample: 412102 - S-4

Laboratory: Lubbock  
Analysis: Chloride (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 127696      Date Analyzed: 2016-01-22      Analyzed By: RL  
Prep Batch: 108100      Sample Preparation:      Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

#### Sample: 412102 - S-4

Laboratory: Midland  
Analysis: TPH DRO      Analytical Method: S 8015 D      Prep Method: N/A  
QC Batch: 127640      Date Analyzed: 2016-01-21      Analyzed By: JL  
Prep Batch: 108049      Sample Preparation: 2016-01-21      Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.3	mg/Kg	1	50.0	109	70 - 130

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**Sample: 412102 - S-4**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-01-21	Analyzed By:	AK
QC Batch:	127608	Sample Preparation:	2016-01-20	Prepared By:	AK
Prep Batch:	108017				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,Qs,U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	70 - 130

**Sample: 412102 - S-4**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-01-21	Analyzed By:	JL
QC Batch:	127641	Sample Preparation:	2016-01-21	Prepared By:	JL
Prep Batch:	108049				

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.3	mg/Kg	1	50.0	109	70 - 130
n-Triacontane			72.3	mg/Kg	1	50.0	145	37.1 - 162

Report Date: January 26, 2016  
15-0171-02

Work Order: 16012005  
David Bilbrey 8" Pipeline

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## Method Blanks

### Method Blank (1) QC Batch: 127608

QC Batch: 127608 Date Analyzed: 2016-01-21 Analyzed By: AK  
Prep Batch: 108017 QC Preparation: 2016-01-20 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

### Method Blank (1) QC Batch: 127640

QC Batch: 127640 Date Analyzed: 2016-01-21 Analyzed By: JL  
Prep Batch: 108049 QC Preparation: 2016-01-21 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			50.0	mg/Kg	1	50.0	100	70 - 130

### Method Blank (1) QC Batch: 127641

QC Batch: 127641 Date Analyzed: 2016-01-21 Analyzed By: JL  
Prep Batch: 108049 QC Preparation: 2016-01-21 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Report Date: January 26, 2016  
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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			50.0	mg/Kg	1	50.0	100	70 - 130
n-Triacontane			64.9	mg/Kg	1	50.0	130	37.1 - 162

**Method Blank (1)**      QC Batch: 127696

QC Batch: 127696  
Prep Batch: 108100

Date Analyzed: 2016-01-22  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<8.34	mg/Kg	25

**Method Blank (1)**      QC Batch: 127716

QC Batch: 127716  
Prep Batch: 108123

Date Analyzed: 2016-01-25  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<8.34	mg/Kg	25

## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 127608  
Prep Batch: 108017

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-20

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	21.0	mg/Kg	1	20.0	<1.76	105	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	21.5	mg/Kg	1	20.0	<1.76	108	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	1.99	mg/Kg	1	2.00	102	100	70 - 130
4-Bromofluorobenzene (4-BFB)	1.98	1.97	mg/Kg	1	2.00	99	98	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 127640  
Prep Batch: 108049

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-21

Analyzed By: JL  
Prepared By: JL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	272	mg/Kg	1	250	<7.41	109	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	280	mg/Kg	1	250	<7.41	112	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	58.1	57.7	mg/Kg	1	50.0	116	115	70 - 130

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### Laboratory Control Spike (LCS-1)

QC Batch: 127641  
Prep Batch: 108049

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-21

Analyzed By: JL  
Prepared By: JL

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	58.1	57.7	mg/Kg	1	50.0	116	115	70 - 130
n-Triacontane	66.0	65.4	mg/Kg	1	50.0	132	131	54.8 - 164

### Laboratory Control Spike (LCS-1)

QC Batch: 127696  
Prep Batch: 108100

Date Analyzed: 2016-01-22  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	256	mg/Kg	1	250	<8.34	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	259	mg/Kg	1	250	<8.34	104	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 127716  
Prep Batch: 108123

Date Analyzed: 2016-01-25  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	255	mg/Kg	1	250	<8.34	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	259	mg/Kg	1	250	<8.34	104	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 412102

QC Batch: 127608  
Prep Batch: 108017

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-20

Analyzed By: AK  
Prepared By: AK

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	Qs	5	6.60	mg/Kg	1	20.0	<1.76	33	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param			MSD		Dil.	Spike	Matrix	Rec.		RPD		
	F	C	Result	Units		Amount	Result	Rec.	Limit	RPD		
GRO	Q <sub>r</sub> , Q <sub>s</sub>	Q <sub>r</sub> , Q <sub>s</sub>	5	11.5	mg/Kg	1	20.0	<1.76	58	70 - 130	54	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	1.90	mg/Kg	1	2	100	95	70 - 130
4-Bromofluorobenzene (4-BFB)	2.01	2.03	mg/Kg	1	2	100	102	70 - 130

### Matrix Spike (xMS-1) Spiked Sample: 412097

QC Batch: 127640  
Prep Batch: 108049

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-21

Analyzed By: JL  
Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	248	mg/Kg	1	250	<7.41	99	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	252	mg/Kg	1	250	<7.41	101	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	54.4	52.8	mg/Kg	1	50	109	106	70 - 130

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**Matrix Spike (xMS-1)** Spiked Sample: 412097

QC Batch: 127641  
Prep Batch: 108049

Date Analyzed: 2016-01-21  
QC Preparation: 2016-01-21

Analyzed By: JL  
Prepared By: JL

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	54.4	52.8	mg/Kg	1	50	109	106	70 - 130
n-Triacontane	65.4	68.7	mg/Kg	1	50	131	137	10 - 258

**Matrix Spike (xMS-1)** Spiked Sample: 412121

QC Batch: 127696  
Prep Batch: 108100

Date Analyzed: 2016-01-22  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	1110	mg/Kg	50	250	827	113	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	Qs 3,4,6	1140	mg/Kg	50	250	827	125	80 - 120	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 412199

QC Batch: 127716  
Prep Batch: 108123

Date Analyzed: 2016-01-25  
QC Preparation: 2016-01-22

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	25.3	mg/Kg	0.1	25.0	5.11	81	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	27.2	mg/Kg	0.1	25.0	5.11	88	80 - 120	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Calibration Standards

### Standard (CCV-1)

QC Batch: 127608

Date Analyzed: 2016-01-21

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	1.05	105	80 - 120	2016-01-21

### Standard (CCV-2)

QC Batch: 127608

Date Analyzed: 2016-01-21

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.937	94	80 - 120	2016-01-21

### Standard (CCV-1)

QC Batch: 127640

Date Analyzed: 2016-01-21

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	286	114	80 - 120	2016-01-21

### Standard (CCV-2)

QC Batch: 127640

Date Analyzed: 2016-01-21

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	296	118	80 - 120	2016-01-21

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#### Standard (CCV-1)

QC Batch: 127696

Date Analyzed: 2016-01-22

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.6	102	90 - 110	2016-01-22

#### Standard (CCV-2)

QC Batch: 127696

Date Analyzed: 2016-01-22

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.5	102	90 - 110	2016-01-22

#### Standard (CCV-1)

QC Batch: 127716

Date Analyzed: 2016-01-25

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.9	104	90 - 110	2016-01-25

#### Standard (CCV-2)

QC Batch: 127716

Date Analyzed: 2016-01-25

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.7	103	90 - 110	2016-01-25

## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

---

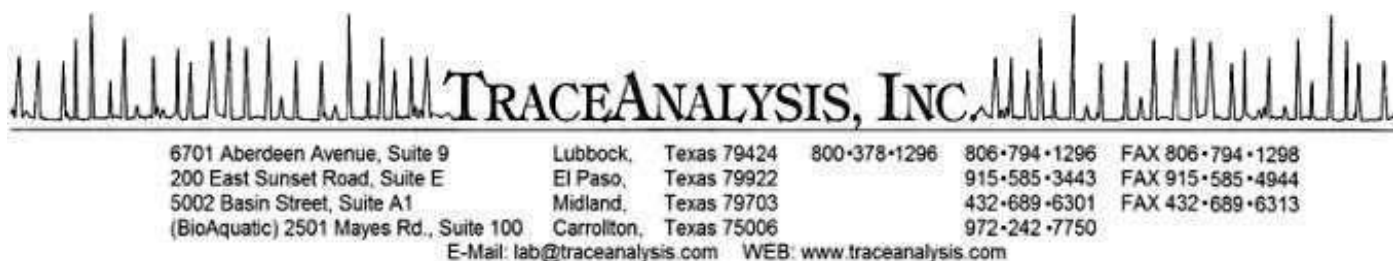
F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

---

**Attachments**

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.





## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Michael Gant  
Larson and Associates, Inc.

Report Date: February 11, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16020529



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

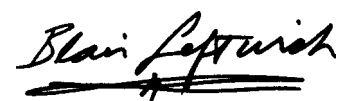
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
413838	SB-5-10'	soil	2016-02-03	10:39	2016-02-05
413839	SB-5-15'	soil	2016-02-03	10:45	2016-02-05
413840	SB-5-20'	soil	2016-02-03	10:55	2016-02-05
413842	SB-6-10'	soil	2016-02-03	11:20	2016-02-05
413843	SB-6-15'	soil	2016-02-03	11:24	2016-02-05
413844	SB-6-20'	soil	2016-02-03	11:45	2016-02-05

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is underlined with a thick, dark line.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Brian Pellam, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-02-05 and assigned to work order 16020529. Samples for work order 16020529 were received intact at a temperature of 4.1 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	108459	2016-02-10 at 12:02	128118	2016-02-11 at 10:20
Chloride (IC)	E 300.0	108453	2016-02-09 at 14:30	128088	2016-02-09 at 16:56
TPH DRO	S 8015 D	108423	2016-02-09 at 08:33	128063	2016-02-09 at 10:33
TPH GRO	S 8015 D	108459	2016-02-10 at 12:02	128119	2016-02-11 at 10:23
TPH ORO	S 8015 D	108423	2016-02-09 at 08:33	128064	2016-02-09 at 10:36

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16020529 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: February 11, 2016  
15-0171-01

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# Analytical Report

## Sample: 413838 - SB-5-10'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128118  
Prep Batch: 108459

Analytical Method: S 8021B  
Date Analyzed: 2016-02-11  
Sample Preparation: 2016-02-10

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	5	<b>177</b>	mg/Kg	50	0.0200
Toluene	Qr	5	<b>402</b>	mg/Kg	50	0.0200
Ethylbenzene	Qr	5	<b>143</b>	mg/Kg	50	0.0200
Xylene	Qr	5	<b>76.8</b>	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			89.5	mg/Kg	50	100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			100	mg/Kg	50	100	100	70 - 130

## Sample: 413838 - SB-5-10'

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 128088  
Prep Batch: 108453

Analytical Method: E 300.0  
Date Analyzed: 2016-02-09  
Sample Preparation:

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>347</b>	mg/Kg	5	25.0

## Sample: 413838 - SB-5-10'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 128063  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<b>4880</b>	mg/Kg	20	50.0

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15-0171-01

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	287	mg/Kg	20	50.0	574	70 - 130

**Sample: 413838 - SB-5-10'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 128119  
Prep Batch: 108459

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-11  
Sample Preparation: 2016-02-10

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	4930	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			97.5	mg/Kg	50	100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			123	mg/Kg	50	100	123	70 - 130

**Sample: 413838 - SB-5-10'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 128064  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<1000	<1000	<1000	mg/Kg	20	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	287	mg/Kg	20	50.0	574	70 - 130
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	292	mg/Kg	20	50.0	584	37.1 - 162

**Sample: 413839 - SB-5-15'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128118  
Prep Batch: 108459

Analytical Method: S 8021B  
Date Analyzed: 2016-02-11  
Sample Preparation: 2016-02-10

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Report Date: February 11, 2016  
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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Q <sub>r</sub>	5	<0.0200	mg/Kg	1	0.0200
Toluene	Q <sub>r</sub>	5	<b>0.0975</b>	mg/Kg	1	0.0200
Ethylbenzene	Q <sub>r</sub>	5	<b>0.325</b>	mg/Kg	1	0.0200
Xylene	Q <sub>r</sub>	5	<b>0.319</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	1	2.00	111	70 - 130

**Sample: 413839 - SB-5-15'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-02-09	Analyzed By:	RL
QC Batch:	128088	Sample Preparation:		Prepared By:	RL
Prep Batch:	108453				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>334</b>	mg/Kg	5	25.0

**Sample: 413839 - SB-5-15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-02-09	Analyzed By:	JL
QC Batch:	128063	Sample Preparation:	2016-02-09	Prepared By:	JL
Prep Batch:	108423				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130

**Sample: 413839 - SB-5-15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-02-11	Analyzed By:	AK
QC Batch:	128119	Sample Preparation:	2016-02-10	Prepared By:	AK
Prep Batch:	108459				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	<b>16.4</b>	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	2.98	mg/Kg	1	2.00	149	70 - 130

**Sample: 413839 - SB-5-15'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 128064  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MLQ Result	PQL Result	RL Result	Units	Dilution	MDL	MLQ	PQL	RL
ORO			<b>0.00</b>	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130
n-Triacontane			51.9	mg/Kg	1	50.0	104	37.1 - 162

**Sample: 413840 - SB-5-20'**

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 128088  
Prep Batch: 108453

Analytical Method: E 300.0  
Date Analyzed: 2016-02-09  
Sample Preparation:

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>357</b>	mg/Kg	5	25.0

**Sample: 413840 - SB-5-20'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 128063  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL



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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.3	mg/Kg	1	50.0	97	70 - 130

**Sample: 413840 - SB-5-20'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 128119  
Prep Batch: 108459

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-11  
Sample Preparation: 2016-02-10

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	18.8	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	3.36	mg/Kg	1	2.00	168	70 - 130

**Sample: 413840 - SB-5-20'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 128064  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.3	mg/Kg	1	50.0	97	70 - 130
n-Triacontane			52.9	mg/Kg	1	50.0	106	37.1 - 162

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**Sample: 413842 - SB-6-10'**

Laboratory: Midland

Analysis: BTEX

QC Batch: 128118

Prep Batch: 108459

Analytical Method: S 8021B

Date Analyzed: 2016-02-11

Sample Preparation: 2016-02-10

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Q <sub>r</sub>	5	<b>273</b>	mg/Kg	200	0.0200
Toluene	Q <sub>r</sub>	5	<b>966</b>	mg/Kg	200	0.0200
Ethylbenzene	Q <sub>r</sub>	5	<b>1410</b>	mg/Kg	200	0.0200
Xylene	Q <sub>r</sub>	5	<b>596</b>	mg/Kg	200	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			512	mg/Kg	200	400	128	70 - 130
4-Bromofluorobenzene (4-BFB)			484	mg/Kg	200	400	121	70 - 130

**Sample: 413842 - SB-6-10'**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 128088

Prep Batch: 108453

Analytical Method: E 300.0

Date Analyzed: 2016-02-09

Sample Preparation:

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>274</b>	mg/Kg	5	25.0

**Sample: 413842 - SB-6-10'**

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 128063

Prep Batch: 108423

Analytical Method: S 8015 D

Date Analyzed: 2016-02-09

Sample Preparation: 2016-02-09

Prep Method: N/A

Analyzed By: JL

Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<b>6420</b>	mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	296	mg/Kg	20	50.0	592	70 - 130

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**Sample: 413842 - SB-6-10'**

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	128119	Date Analyzed:	2016-02-11
Prep Batch:	108459	Sample Preparation:	2016-02-10
		Prep Method:	S 5035
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	<b>23400</b>	mg/Kg	200	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			346	mg/Kg	200	400	86	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	701	mg/Kg	200	400	175	70 - 130

**Sample: 413842 - SB-6-10'**

Laboratory:	Midland		
Analysis:	TPH ORO	Analytical Method:	S 8015 D
QC Batch:	128064	Date Analyzed:	2016-02-09
Prep Batch:	108423	Sample Preparation:	2016-02-09
		Prep Method:	N/A
		Analyzed By:	JL
		Prepared By:	JL

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			<b>0.00</b>	<1000	<1000	<1000	mg/Kg	20	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	296	mg/Kg	20	50.0	592	70 - 130
n-Triacontane	Qsr	Qsr	268	mg/Kg	20	50.0	536	37.1 - 162

**Sample: 413843 - SB-6-15'**

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	128118	Date Analyzed:	2016-02-11
Prep Batch:	108459	Sample Preparation:	2016-02-10
		Prep Method:	S 5035
		Analyzed By:	AK
		Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	5	<b>0.0216</b>	mg/Kg	1	0.0200
Toluene	Qr	5	<b>0.210</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	5	<b>0.895</b>	mg/Kg	1	0.0200

*continued ...*

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*sample 413843 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	Qr	5	<b>0.636</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.18	mg/Kg	1	2.00	109	70 - 130

**Sample: 413843 - SB-6-15'**

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	128088	Date Analyzed:	2016-02-09	Analyzed By:	RL
Prep Batch:	108453	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>32.8</b>	mg/Kg	1	25.0

**Sample: 413843 - SB-6-15'**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	128063	Date Analyzed:	2016-02-09	Analyzed By:	JL
Prep Batch:	108423	Sample Preparation:	2016-02-09	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			45.4	mg/Kg	1	50.0	91	70 - 130

**Sample: 413843 - SB-6-15'**

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	128119	Date Analyzed:	2016-02-11	Analyzed By:	AK
Prep Batch:	108459	Sample Preparation:	2016-02-10	Prepared By:	AK

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	<b>17.0</b>	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.37	mg/Kg	1	2.00	118	70 - 130

**Sample: 413843 - SB-6-15'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 128064  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			<b>0.00</b>	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			45.4	mg/Kg	1	50.0	91	70 - 130
n-Triacontane			49.5	mg/Kg	1	50.0	99	37.1 - 162

**Sample: 413844 - SB-6-20'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128118  
Prep Batch: 108459

Analytical Method: S 8021B  
Date Analyzed: 2016-02-11  
Sample Preparation: 2016-02-10

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,U	5	<0.0200	mg/Kg	1	0.0200
Toluene	Qr	5	<b>0.0270</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	5	<b>0.0427</b>	mg/Kg	1	0.0200
Xylene	Qr	5	<b>0.0927</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

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**Sample: 413844 - SB-6-20'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-02-09	Analyzed By:	RL
QC Batch:	128088	Sample Preparation:		Prepared By:	RL
Prep Batch:	108453				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<b>33.1</b>	mg/Kg	1	25.0

**Sample: 413844 - SB-6-20'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-02-09	Analyzed By:	JL
QC Batch:	128063	Sample Preparation:	2016-02-09	Prepared By:	JL
Prep Batch:	108423				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			52.2	mg/Kg	1	50.0	104	70 - 130

**Sample: 413844 - SB-6-20'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-02-11	Analyzed By:	AK
QC Batch:	128119	Sample Preparation:	2016-02-10	Prepared By:	AK
Prep Batch:	108459				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			2.14	mg/Kg	1	2.00	107	70 - 130

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**Sample: 413844 - SB-6-20'**

Laboratory: Midland  
Analysis: TPH ORO  
QC Batch: 128064  
Prep Batch: 108423

Analytical Method: S 8015 D  
Date Analyzed: 2016-02-09  
Sample Preparation: 2016-02-09

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			<b>0.00</b>	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			52.2	mg/Kg	1	50.0	104	70 - 130
n-Triacontane			57.3	mg/Kg	1	50.0	115	37.1 - 162

## Method Blanks

### Method Blank (1) QC Batch: 128063

QC Batch: 128063 Date Analyzed: 2016-02-09 Analyzed By: JL  
Prep Batch: 108423 QC Preparation: 2016-02-09 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130

### Method Blank (1) QC Batch: 128064

QC Batch: 128064 Date Analyzed: 2016-02-09 Analyzed By: JL  
Prep Batch: 108423 QC Preparation: 2016-02-09 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.9	mg/Kg	1	50.0	96	70 - 130
n-Triacontane			52.6	mg/Kg	1	50.0	105	37.1 - 162

### Method Blank (1) QC Batch: 128088

QC Batch: 128088 Date Analyzed: 2016-02-09 Analyzed By: RL  
Prep Batch: 108453 QC Preparation: 2016-02-09 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<8.34	mg/Kg	25



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**Method Blank (1)**      QC Batch: 128118

QC Batch: 128118  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.0100	mg/Kg	0.02
Toluene		5	<0.0156	mg/Kg	0.02
Ethylbenzene		5	<0.0151	mg/Kg	0.02
Xylene		5	<0.00430	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

**Method Blank (1)**      QC Batch: 128119

QC Batch: 128119  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

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## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 128063  
Prep Batch: 108423

Date Analyzed: 2016-02-09  
QC Preparation: 2016-02-09

Analyzed By: JL  
Prepared By: JL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	243	mg/Kg	1	250	<7.41	97	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	265	mg/Kg	1	250	<7.41	106	70 - 130	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	48.2	50.6	mg/Kg	1	50.0	96	101	70 - 130
n-Triacontane								

### Laboratory Control Spike (LCS-1)

QC Batch: 128064  
Prep Batch: 108423

Date Analyzed: 2016-02-09  
QC Preparation: 2016-02-09

Analyzed By: JL  
Prepared By: JL

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	48.2	50.6	mg/Kg	1	50.0	96	101	70 - 130
n-Triacontane	47.0	48.8	mg/Kg	1	50.0	94	98	54.8 - 164

### Laboratory Control Spike (LCS-1)

QC Batch: 128088  
Prep Batch: 108453

Date Analyzed: 2016-02-09  
QC Preparation: 2016-02-09

Analyzed By: RL  
Prepared By: RL

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	257	mg/Kg	1	250	<8.34	103	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	255	mg/Kg	1	250	<8.34	102	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch: 128118  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	2.02	mg/Kg	1	2.00	<0.0100	101	70 - 130
Toluene		5	2.05	mg/Kg	1	2.00	<0.0156	102	70 - 130
Ethylbenzene		5	2.18	mg/Kg	1	2.00	<0.0151	109	70 - 130
Xylene		5	6.02	mg/Kg	1	6.00	<0.00430	100	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	2.05	mg/Kg	1	2.00	<0.0100	102	70 - 130	2	20
Toluene		5	2.11	mg/Kg	1	2.00	<0.0156	106	70 - 130	3	20
Ethylbenzene		5	2.14	mg/Kg	1	2.00	<0.0151	107	70 - 130	2	20
Xylene		5	6.12	mg/Kg	1	6.00	<0.00430	102	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.98	1.85	mg/Kg	1	2.00	99	92	70 - 130
4-Bromofluorobenzene (4-BFB)	2.03	1.78	mg/Kg	1	2.00	102	89	70 - 130

#### Laboratory Control Spike (LCS-1)

QC Batch: 128119  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

Report Date: February 11, 2016  
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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	20.2	mg/Kg	1	20.0	<1.76	101	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	22.7	mg/Kg	1	20.0	<1.76	114	70 - 130	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			2.01	2.08	mg/Kg	1	2.00	100	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	1.91	mg/Kg	1	2.00	98	96	70 - 130

Report Date: February 11, 2016  
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## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 413844

QC Batch: 128063 Date Analyzed: 2016-02-09 Analyzed By: JL  
Prep Batch: 108423 QC Preparation: 2016-02-09 Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	256	mg/Kg	1	250	10.4	98	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	266	mg/Kg	1	250	10.4	102	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	46.9	48.6	mg/Kg	1	50	94	97	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 413844

QC Batch: 128064 Date Analyzed: 2016-02-09 Analyzed By: JL  
Prep Batch: 108423 QC Preparation: 2016-02-09 Prepared By: JL

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	46.9	48.6	mg/Kg	1	50	94	97	70 - 130
n-Triacontane	45.5	47.8	mg/Kg	1	50	91	96	10 - 258

### Matrix Spike (MS-1) Spiked Sample: 413937

QC Batch: 128088 Date Analyzed: 2016-02-09 Analyzed By: RL  
Prep Batch: 108453 QC Preparation: 2016-02-09 Prepared By: RL

Report Date: February 11, 2016  
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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	305	mg/Kg	1	250	23.1	113	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	314	mg/Kg	1	250	23.1	116	80 - 120	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 413844

QC Batch: 128118  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	Qs	5	1.24	mg/Kg	1	2.00	<0.0100	62
Toluene	Qs	Qs	5	1.34	mg/Kg	1	2.00	0.027	66
Ethylbenzene			5	1.53	mg/Kg	1	2.00	0.0427	74
Xylene	Qs	Qs	5	4.28	mg/Kg	1	6.00	0.0927	70

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr	5	1.89	mg/Kg	1	2.00	<0.0100	94	70 - 130	42
Toluene	Qr	Qr	5	2.14	mg/Kg	1	2.00	0.027	106	70 - 130	46
Ethylbenzene	Qr	Qr	5	2.57	mg/Kg	1	2.00	0.0427	126	70 - 130	51
Xylene	Qr	Qr	5	7.02	mg/Kg	1	6.00	0.0927	115	70 - 130	48

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.05	1.92	mg/Kg	1	2	102	96	70 - 130
4-Bromofluorobenzene (4-BFB)	2.15	1.82	mg/Kg	1	2	108	91	70 - 130

**Matrix Spike (MS-1)** Spiked Sample: 413844

QC Batch: 128119  
Prep Batch: 108459

Date Analyzed: 2016-02-11  
QC Preparation: 2016-02-10

Analyzed By: AK  
Prepared By: AK

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	21.3	mg/Kg	1	20.0	<1.76	106	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	19.3	mg/Kg	1	20.0	<1.76	96	70 - 130	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	1.89	mg/Kg	1	2	98	94	70 - 130
4-Bromofluorobenzene (4-BFB)	2.20	2.50	mg/Kg	1	2	110	125	70 - 130

## Calibration Standards

### Standard (CCV-1)

QC Batch: 128063

Date Analyzed: 2016-02-09

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	276	110	80 - 120	2016-02-09

### Standard (CCV-2)

QC Batch: 128063

Date Analyzed: 2016-02-09

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	262	105	80 - 120	2016-02-09

### Standard (CCV-3)

QC Batch: 128063

Date Analyzed: 2016-02-09

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	256	102	80 - 120	2016-02-09

### Standard (CCV-2)

QC Batch: 128064

Date Analyzed: 2016-02-09

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.0100	0	-	2016-02-09



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### Standard (CCV-3)

QC Batch: 128064

Date Analyzed: 2016-02-09

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.00	0	-	2016-02-09

### Standard (CCV-1)

QC Batch: 128088

Date Analyzed: 2016-02-09

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.8	103	90 - 110	2016-02-09

### Standard (CCV-2)

QC Batch: 128088

Date Analyzed: 2016-02-09

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.6	102	90 - 110	2016-02-09

### Standard (CCV-1)

QC Batch: 128118

Date Analyzed: 2016-02-11

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.104	104	80 - 120	2016-02-11
Toluene		5	mg/kg	0.100	0.105	105	80 - 120	2016-02-11
Ethylbenzene		5	mg/kg	0.100	0.107	107	80 - 120	2016-02-11
Xylene		5	mg/kg	0.300	0.307	102	80 - 120	2016-02-11

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### Standard (CCV-2)

QC Batch: 128118

Date Analyzed: 2016-02-11

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0982	98	80 - 120	2016-02-11
Toluene		5	mg/kg	0.100	0.103	103	80 - 120	2016-02-11
Ethylbenzene		5	mg/kg	0.100	0.101	101	80 - 120	2016-02-11
Xylene		5	mg/kg	0.300	0.286	95	80 - 120	2016-02-11

### Standard (CCV-1)

QC Batch: 128119

Date Analyzed: 2016-02-11

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.990	99	80 - 120	2016-02-11

### Standard (CCV-2)

QC Batch: 128119

Date Analyzed: 2016-02-11

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	1.19	119	80 - 120	2016-02-11

### Standard (CCV-3)

QC Batch: 128119

Date Analyzed: 2016-02-11

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	1.04	104	80 - 120	2016-02-11

## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

---

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

---

**Attachments**

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.

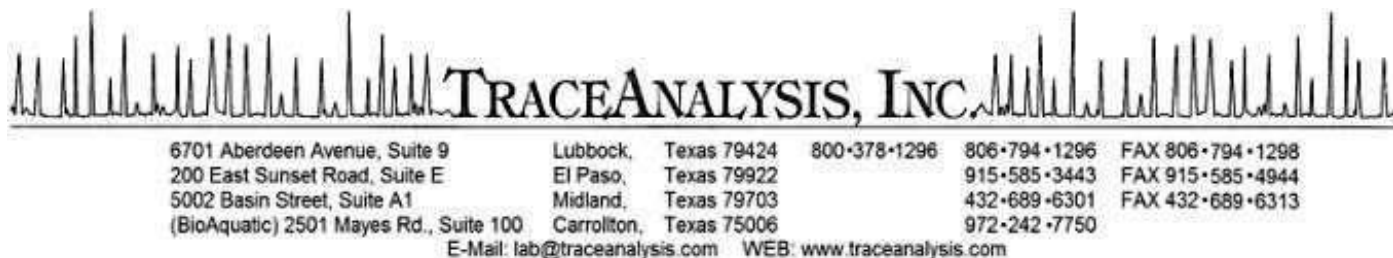
**Arson & Associates, Inc.**  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 2/4/2016 PAGE 1 OF 1  
PO #: \_\_\_\_\_ LAB WORK ORDER #: \_\_\_\_\_  
PROJECT LOCATION OR NAME: David Bilbrey 8" Pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Michael Cant

Data Reported to:

[illegible]



## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Michael Gant  
Larson and Associates, Inc.

Report Date: March 16, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16031402



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

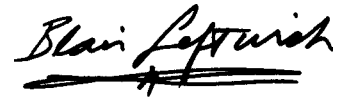
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
415880	SS-2	soil	2016-03-11	10:55	2016-03-14
415881	SS-3	soil	2016-03-11	11:20	2016-03-14
415888	SP-1	soil	2016-03-11	12:33	2016-03-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is underlined with a thick, dark stroke.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Johnny Grindstaff, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-03-14 and assigned to work order 16031402. Samples for work order 16031402 were received intact at a temperature of 5.7 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	109127	2016-03-15 at 09:55	128887	2016-03-16 at 09:21
Chloride (IC)	E 300.0	109163	2016-03-15 at 14:26	128896	2016-03-15 at 12:07
TPH DRO	S 8015 D	109153	2016-03-16 at 09:02	128884	2016-03-16 at 09:04
TPH GRO	S 8015 D	109127	2016-03-15 at 09:55	128889	2016-03-16 at 09:25

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16031402 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: March 16, 2016  
15-0171-01

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David Billbrey 8" Pipeline

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# Analytical Report

## Sample: 415880 - SS-2

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128887  
Prep Batch: 109127

Analytical Method: S 8021B  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.233</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>1.57</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.857</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.31	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.47	mg/Kg	1	2.00	124	70 - 130

## Sample: 415880 - SS-2

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 128896  
Prep Batch: 109163

Analytical Method: E 300.0  
Date Analyzed: 2016-03-15  
Sample Preparation: 2016-03-15

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<b>53.6</b>	mg/Kg	2	25.0

## Sample: 415880 - SS-2

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 128884  
Prep Batch: 109153

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-16

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	<50.0	mg/Kg	1	50.0

Report Date: March 16, 2016  
15-0171-01

Work Order: 16031402  
David Bilbrey 8" Pipeline

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			52.6	mg/Kg	1	50.0	105	70 - 130

**Sample: 415880 - SS-2**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 128889  
Prep Batch: 109127

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr, Qs	3	<b>20.0</b>	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.21	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			2.33	mg/Kg	1	2.00	116	70 - 130

**Sample: 415881 - SS-3**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128887  
Prep Batch: 109127

Analytical Method: S 8021B  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<0.0200	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.0806</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>0.196</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.159</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.16	mg/Kg	1	2.00	108	70 - 130
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	70 - 130

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**Sample: 415881 - SS-3**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-15	Analyzed By:	RL
QC Batch:	128896	Sample Preparation:	2016-03-15	Prepared By:	RL
Prep Batch:	109163				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1,2,4	171	mg/Kg	5	25.0

**Sample: 415881 - SS-3**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-16	Analyzed By:	JL
QC Batch:	128884	Sample Preparation:	2016-03-16	Prepared By:	JL
Prep Batch:	109153				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			49.4	mg/Kg	1	50.0	99	70 - 130

**Sample: 415881 - SS-3**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128889	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.23	mg/Kg	1	2.00	112	70 - 130

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Sample: 415888 - SP-1

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-15	Analyzed By:	RL
QC Batch:	128896	Sample Preparation:	2016-03-15	Prepared By:	RL
Prep Batch:	109163				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	249	mg/Kg	5	25.0

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## Method Blanks

### Method Blank (1) QC Batch: 128884

QC Batch: 128884 Date Analyzed: 2016-03-16 Analyzed By: JL  
Prep Batch: 109153 QC Preparation: 2016-03-16 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		3	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.4	mg/Kg	1	50.0	109	70 - 130

### Method Blank (1) QC Batch: 128887

QC Batch: 128887 Date Analyzed: 2016-03-16 Analyzed By: AK  
Prep Batch: 109127 QC Preparation: 2016-03-15 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		3	<0.0100	mg/Kg	0.02
Toluene		3	<0.0156	mg/Kg	0.02
Ethylbenzene		3	<0.0151	mg/Kg	0.02
Xylene		3	<0.00430	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

### Method Blank (1) QC Batch: 128889

QC Batch: 128889 Date Analyzed: 2016-03-16 Analyzed By: AK  
Prep Batch: 109127 QC Preparation: 2016-03-15 Prepared By: AK

Report Date: March 16, 2016  
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Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	70 - 130

**Method Blank (1)**      QC Batch: 128896

QC Batch: 128896  
Prep Batch: 109163

Date Analyzed: 2016-03-15  
QC Preparation: 2016-03-15

Analyzed By: RL  
Prepared By: LQ

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<8.34	mg/Kg	25

## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 128884  
Prep Batch: 109153

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: JL  
Prepared By: JL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	230	mg/Kg	1	250	<7.41	92	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	201	mg/Kg	1	250	<7.41	80	70 - 130	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	55.4	47.9	mg/Kg	1	50.0	111	96	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128887  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	2.11	mg/Kg	1	2.00	<0.0100	106	70 - 130
Toluene		3	2.01	mg/Kg	1	2.00	<0.0156	100	70 - 130
Ethylbenzene		3	2.05	mg/Kg	1	2.00	<0.0151	102	70 - 130
Xylene		3	6.10	mg/Kg	1	6.00	<0.00430	102	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	2.21	mg/Kg	1	2.00	<0.0100	110	70 - 130	5	20
Toluene		3	2.08	mg/Kg	1	2.00	<0.0156	104	70 - 130	3	20
Ethylbenzene		3	2.16	mg/Kg	1	2.00	<0.0151	108	70 - 130	5	20
Xylene		3	6.39	mg/Kg	1	6.00	<0.00430	106	70 - 130	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.13	2.14	mg/Kg	1	2.00	106	107	70 - 130
4-Bromofluorobenzene (4-BFB)	2.18	2.17	mg/Kg	1	2.00	109	108	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128889  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	17.4	mg/Kg	1	20.0	<1.76	87	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	18.0	mg/Kg	1	20.0	<1.76	90	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.02	2.03	mg/Kg	1	2.00	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)	1.76	1.76	mg/Kg	1	2.00	88	88	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128896  
Prep Batch: 109163

Date Analyzed: 2016-03-15  
QC Preparation: 2016-03-15

Analyzed By: RL  
Prepared By: LQ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	265	mg/Kg	1	250	<8.34	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	264	mg/Kg	1	250	<8.34	106	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 415880

QC Batch: 128884  
Prep Batch: 109153

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: JL  
Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	239	mg/Kg	1	250	48.2	76	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	272	mg/Kg	1	250	48.2	90	70 - 130	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	49.2	51.2	mg/Kg	1	50	98	102	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 415880

QC Batch: 128887  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	1.94	mg/Kg	1	2.00	<0.0100	97	70 - 130
Toluene	Q <sub>s</sub>	Q <sub>s</sub>	3	6.34	mg/Kg	1	2.00	0.2326	305
Ethylbenzene	Q <sub>s</sub>	Q <sub>s</sub>	3	26.8	mg/Kg	1	2.00	1.5687	1262
Xylene	Q <sub>s</sub>	Q <sub>s</sub>	3	26.0	mg/Kg	1	6.00	0.8574	419

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	1.98	mg/Kg	1	2.00	<0.0100	99	70 - 130	2	20
Toluene	Q <sub>r</sub>	Q <sub>r</sub>	3	2.18	mg/Kg	1	2.00	0.2326	97	70 - 130	98
Ethylbenzene	Q <sub>r</sub>	Q <sub>r</sub>	3	3.56	mg/Kg	1	2.00	1.5687	100	70 - 130	153
Xylene	Q <sub>r</sub>	Q <sub>r</sub>	3	7.68	mg/Kg	1	6.00	0.8574	114	70 - 130	109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			2.59	2.20	mg/Kg	1	2	130	110	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5.27	2.44	mg/Kg	1	2	264	122	70 - 130

**Matrix Spike (MS-1)** Spiked Sample: 415880

QC Batch: 128889  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs		3	55.1	mg/Kg	1	20.0	19.97	176	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD					Spike	Matrix	Rec.		RPD		
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
GRO	Q <sub>r</sub> , Q <sub>s</sub>	Q <sub>r</sub> , Q <sub>s</sub>	3	33.1	mg/Kg	1	20.0	19.97	66	70 - 130	50	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.92	1.99	mg/Kg	1	2	96	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.47	2.18	mg/Kg	1	2	124	109	70 - 130

**Matrix Spike (MS-1)** Spiked Sample: 415881

QC Batch: 128896  
Prep Batch: 109163

Date Analyzed: 2016-03-15  
QC Preparation: 2016-03-15

Analyzed By: RL  
Prepared By: LQ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1, 2, 4	454	mg/Kg	5	250	171	113	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F		C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Q <sub>s</sub>	Q <sub>s</sub>	1,2,4	496	mg/Kg	5	250	171	130	80 - 120	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Calibration Standards

### Standard (CCV-1)

QC Batch: 128884

Date Analyzed: 2016-03-16

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	208	83	80 - 120	2016-03-16

### Standard (CCV-2)

QC Batch: 128884

Date Analyzed: 2016-03-16

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	203	81	80 - 120	2016-03-16

### Standard (CCV-1)

QC Batch: 128887

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0976	98	80 - 120	2016-03-16
Toluene		3	mg/kg	0.100	0.0962	96	80 - 120	2016-03-16
Ethylbenzene		3	mg/kg	0.100	0.0948	95	80 - 120	2016-03-16
Xylene		3	mg/kg	0.300	0.282	94	80 - 120	2016-03-16

### Standard (CCV-2)

QC Batch: 128887

Date Analyzed: 2016-03-16

Analyzed By: AK

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.108	108	80 - 120	2016-03-16
Toluene		3	mg/kg	0.100	0.100	100	80 - 120	2016-03-16
Ethylbenzene		3	mg/kg	0.100	0.103	103	80 - 120	2016-03-16
Xylene		3	mg/kg	0.300	0.303	101	80 - 120	2016-03-16

#### Standard (CCV-1)

QC Batch: 128889

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.827	83	80 - 120	2016-03-16

#### Standard (CCV-2)

QC Batch: 128889

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.885	88	80 - 120	2016-03-16

#### Standard (CCV-1)

QC Batch: 128896

Date Analyzed: 2016-03-15

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.6	106	90 - 110	2016-03-15

#### Standard (CCV-2)

QC Batch: 128896

Date Analyzed: 2016-03-15

Analyzed By: RL

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.7	107	90 - 110	2016-03-15

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## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

## **Attachments**

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.



16031402

## CHAIN-OF-CUSTODY



507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 3/14/2016

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PO #: LAB WORK ORDER #:

PROJECT LOCATION OR NAME: David Biber 8" Pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Michael Gent

Data Reported to:

TRRP report?  
☐ Yes ☒ No

TIME ZONE:  
Time zone/State: TX

Field  
Sample I.D.

Lab #

Date

Time

Matrix

# of Containers

PRESERVATION

HCl

HNO<sub>3</sub>H<sub>2</sub>SO<sub>4</sub> NaOH

UNPRESERVED

P=PAINT  
SL=SLUDGE  
OT=OTHER

S=SOIL  
W=WATER  
A=AIR

ANALYSES

BTEX

8081 PESTICIDES

8082 PESTICIDES

8083 PESTICIDES

8084 PESTICIDES

8085 PESTICIDES

8086 PESTICIDES

8087 PESTICIDES

8088 PESTICIDES

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16031402

## CHAIN-OF-CUSTODY



507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

DATE: 3/14/2016 PAGE 1 OF 1  
PO #: \_\_\_\_\_ LAB WORK ORDER #: \_\_\_\_\_  
PROJECT LOCATION OR NAME: David B. Barry 8" Pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Michael Gent

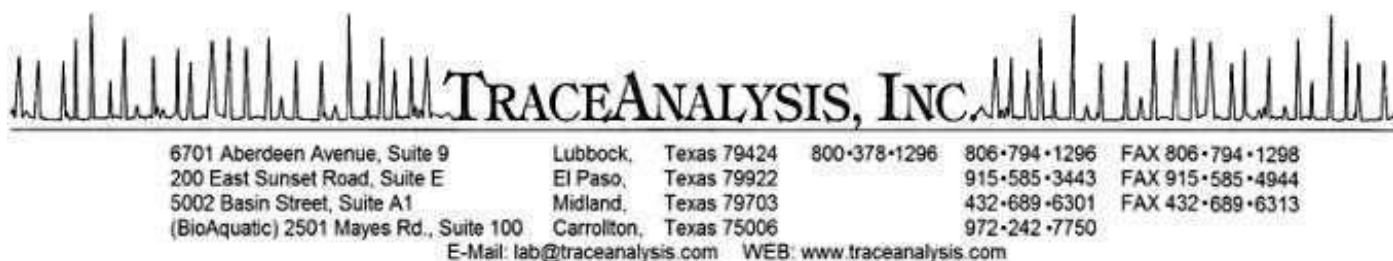
TRRP report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	TIME ZONE: Time zone/State: <u>TX</u>	Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES
								HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH □	ICE		
		SS-1		3/11/16	10:57	S	1						45879
		SS-2			10:55								880
		SS-3			11:20								881
		SS-4			12:27								882
		SS-5			11:43								883
		SS-6			12:10								884
		SS-7			12:15								885
		SS-8			12:17								886
		SS-9			12:20								887
		SR-1			12:33								Run 1-day 415' 888
TOTAL													
RELINQUISHED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 9:00</u> RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 9:00</u> RELINQUISHED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 15:30</u> RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 15:30</u> RELINQUISHED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 15:30</u> RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>3/14/16 15:30</u>													
RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>4/04/4</u> RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>4/04/4</u>													
RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>4/04/4</u> RECEIVED BY: (Signature) <u>[Signature]</u> DATE/TIME <u>4/04/4</u>													

## LABORATORY USE ONLY:

RECEIVING TEMP: 60/57 THERM #: 12-1  
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED  
☐ CARRIER BILL # 28 27525161  
☒ HAND DELIVERED

## TURN AROUND TIME

NORMAL ☐  
1 DAY ☐  
2 DAY ☒  
OTHER ☐ am



## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Travis Williams  
Larson and Associates, Inc.

Report Date: March 18, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16031501



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

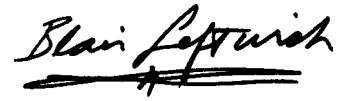
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
415914	S-2 15'	soil	2016-03-14	14:35	2016-03-15
415915	S-3 15'	soil	2016-03-14	14:45	2016-03-15
415916	S-2 18'	soil	2016-03-14	14:30	2016-03-15
415917	S-3 18'	soil	2016-03-14	14:40	2016-03-15
415918	S-2 20'	soil	2016-03-14	14:50	2016-03-15
415919	S-3 20'	soil	2016-03-14	14:55	2016-03-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is underlined with a thick, dark stroke.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Johnny Grindstaff, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-03-15 and assigned to work order 16031501. Samples for work order 16031501 were received intact at a temperature of -9.2 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	109127	2016-03-15 at 09:55	128887	2016-03-16 at 09:21
Chloride (IC)	E 300.0	109170	2016-03-16 at 09:00	128899	2016-03-16 at 09:06
Chloride (IC)	E 300.0	109171	2016-03-16 at 09:00	128900	2016-03-16 at 09:06
TPH DRO	S 8015 D	109153	2016-03-16 at 09:02	128884	2016-03-16 at 09:04
TPH GRO	S 8015 D	109127	2016-03-15 at 09:55	128889	2016-03-16 at 09:25

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16031501 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.



Report Date: March 18, 2016  
15-0171-01

Work Order: 16031501  
David Billbrey 8" Pipeline

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# Analytical Report

## Sample: 415914 - S-2 15'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128887  
Prep Batch: 109127

Analytical Method: S 8021B  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<b>0.102</b>	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.198</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>0.247</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.190</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.28	mg/Kg	1	2.00	114	70 - 130
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	1	2.00	111	70 - 130

## Sample: 415914 - S-2 15'

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 128899  
Prep Batch: 109170

Analytical Method: E 300.0  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-16

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<b>67.0</b>	mg/Kg	1	25.0

## Sample: 415914 - S-2 15'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 128884  
Prep Batch: 109153

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-16

Prep Method: N/A  
Analyzed By: JL  
Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		3	<50.0	mg/Kg	1	50.0



Report Date: March 18, 2016  
15-0171-01

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David Bilbrey 8" Pipeline

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			47.0	mg/Kg	1	50.0	94	70 - 130

**Sample: 415914 - S-2 15'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 128889  
Prep Batch: 109127

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.19	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

**Sample: 415915 - S-3 15'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 128887  
Prep Batch: 109127

Analytical Method: S 8021B  
Date Analyzed: 2016-03-16  
Sample Preparation: 2016-03-15

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	3	<0.0200	mg/Kg	1	0.0200
Toluene	Qr,U	3	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qr,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qr	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Report Date: March 18, 2016  
15-0171-01

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David Bilbrey 8" Pipeline

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**Sample: 415915 - S-3 15'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-16	Analyzed By:	RL
QC Batch:	128900	Sample Preparation:	2016-03-16	Prepared By:	RL
Prep Batch:	109171				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	513	mg/Kg	5	25.0

**Sample: 415915 - S-3 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-16	Analyzed By:	JL
QC Batch:	128884	Sample Preparation:	2016-03-16	Prepared By:	JL
Prep Batch:	109153				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			42.7	mg/Kg	1	50.0	85	70 - 130

**Sample: 415915 - S-3 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128889	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Report Date: March 18, 2016  
15-0171-01

Work Order: 16031501  
David Bilbrey 8" Pipeline

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**Sample: 415916 - S-2 18'**

Laboratory: Midland

Analysis: BTEX

QC Batch: 128887

Prep Batch: 109127

Analytical Method: S 8021B

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-15

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<b>0.0270</b>	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.0437</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>0.0297</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.0233</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

**Sample: 415916 - S-2 18'**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 128900

Prep Batch: 109171

Analytical Method: E 300.0

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-16

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<b>26.9</b>	mg/Kg	1	25.0

**Sample: 415916 - S-2 18'**

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 128884

Prep Batch: 109153

Analytical Method: S 8015 D

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-16

Prep Method: N/A

Analyzed By: JL

Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			48.0	mg/Kg	1	50.0	96	70 - 130

Report Date: March 18, 2016  
15-0171-01

Work Order: 16031501  
David Bilbrey 8" Pipeline

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**Sample: 415916 - S-2 18'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128889	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.02	mg/Kg	1	2.00	101	70 - 130
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	70 - 130

**Sample: 415917 - S-3 18'**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128887	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<b>0.100</b>	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.0909</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>0.166</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.113</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			2.11	mg/Kg	1	2.00	106	70 - 130

**Sample: 415917 - S-3 18'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-16	Analyzed By:	RL
QC Batch:	128900	Sample Preparation:	2016-03-16	Prepared By:	RL
Prep Batch:	109171				

*continued ...*

Report Date: March 18, 2016  
15-0171-01

Work Order: 16031501  
David Bilbrey 8" Pipeline

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*sample 415917 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<b>904</b>	mg/Kg	10	25.0

**Sample: 415917 - S-3 18'**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	128884	Date Analyzed:	2016-03-16	Analyzed By:	JL
Prep Batch:	109153	Sample Preparation:	2016-03-16	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			45.8	mg/Kg	1	50.0	92	70 - 130

**Sample: 415917 - S-3 18'**

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	128889	Date Analyzed:	2016-03-16	Analyzed By:	AK
Prep Batch:	109127	Sample Preparation:	2016-03-15	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

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**Sample: 415918 - S-2 20'**

Laboratory: Midland

Analysis: BTEX

QC Batch: 128887

Prep Batch: 109127

Analytical Method: S 8021B

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-15

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<0.0200	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.0229</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr,U	3	<0.0200	mg/Kg	1	0.0200
Xylene	Qr	3	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	70 - 130

**Sample: 415918 - S-2 20'**

Laboratory: Lubbock

Analysis: Chloride (IC)

QC Batch: 128900

Prep Batch: 109171

Analytical Method: E 300.0

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-16

Prep Method: N/A

Analyzed By: RL

Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<25.0	mg/Kg	1	25.0

**Sample: 415918 - S-2 20'**

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 128884

Prep Batch: 109153

Analytical Method: S 8015 D

Date Analyzed: 2016-03-16

Sample Preparation: 2016-03-16

Prep Method: N/A

Analyzed By: JL

Prepared By: JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			46.5	mg/Kg	1	50.0	93	70 - 130

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**Sample: 415918 - S-2 20'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128889	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

**Sample: 415919 - S-3 20'**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2016-03-16	Analyzed By:	AK
QC Batch:	128887	Sample Preparation:	2016-03-15	Prepared By:	AK
Prep Batch:	109127				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		3	<b>0.0604</b>	mg/Kg	1	0.0200
Toluene	Qr	3	<b>0.0396</b>	mg/Kg	1	0.0200
Ethylbenzene	Qr	3	<b>0.0281</b>	mg/Kg	1	0.0200
Xylene	Qr	3	<b>0.0340</b>	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

**Sample: 415919 - S-3 20'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-16	Analyzed By:	RL
QC Batch:	128900	Sample Preparation:	2016-03-16	Prepared By:	RL
Prep Batch:	109171				

*continued ...*

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*sample 415919 continued ...*

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1,2,4	<125	mg/Kg	5	25.0

**Sample: 415919 - S-3 20'**

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	128884	Date Analyzed:	2016-03-16	Analyzed By:	JL
Prep Batch:	109153	Sample Preparation:	2016-03-16	Prepared By:	JL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			49.5	mg/Kg	1	50.0	99	70 - 130

**Sample: 415919 - S-3 20'**

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	128889	Date Analyzed:	2016-03-16	Analyzed By:	AK
Prep Batch:	109127	Sample Preparation:	2016-03-15	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qr,U	3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	70 - 130



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## Method Blanks

### Method Blank (1) QC Batch: 128884

QC Batch: 128884 Date Analyzed: 2016-03-16 Analyzed By: JL  
Prep Batch: 109153 QC Preparation: 2016-03-16 Prepared By: JL

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		3	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			54.4	mg/Kg	1	50.0	109	70 - 130

### Method Blank (1) QC Batch: 128887

QC Batch: 128887 Date Analyzed: 2016-03-16 Analyzed By: AK  
Prep Batch: 109127 QC Preparation: 2016-03-15 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		3	<0.0100	mg/Kg	0.02
Toluene		3	<0.0156	mg/Kg	0.02
Ethylbenzene		3	<0.0151	mg/Kg	0.02
Xylene		3	<0.00430	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

### Method Blank (1) QC Batch: 128889

QC Batch: 128889 Date Analyzed: 2016-03-16 Analyzed By: AK  
Prep Batch: 109127 QC Preparation: 2016-03-15 Prepared By: AK

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Parameter	Flag	Cert	MDL Result	Units	RL
GRO		3	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	70 - 130

**Method Blank (1)**      QC Batch: 128899

QC Batch: 128899      Date Analyzed: 2016-03-16      Analyzed By: RL  
Prep Batch: 109170      QC Preparation: 2016-03-16      Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<8.34	mg/Kg	25

**Method Blank (1)**      QC Batch: 128900

QC Batch: 128900      Date Analyzed: 2016-03-16      Analyzed By: RL  
Prep Batch: 109171      QC Preparation: 2016-03-16      Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1,2,4	<8.34	mg/Kg	25

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## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 128884  
Prep Batch: 109153

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: JL  
Prepared By: JL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	230	mg/Kg	1	250	<7.41	92	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	201	mg/Kg	1	250	<7.41	80	70 - 130	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	55.4	47.9	mg/Kg	1	50.0	111	96	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128887  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	2.11	mg/Kg	1	2.00	<0.0100	106	70 - 130
Toluene		3	2.01	mg/Kg	1	2.00	<0.0156	100	70 - 130
Ethylbenzene		3	2.05	mg/Kg	1	2.00	<0.0151	102	70 - 130
Xylene		3	6.10	mg/Kg	1	6.00	<0.00430	102	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	2.21	mg/Kg	1	2.00	<0.0100	110	70 - 130	5	20
Toluene		3	2.08	mg/Kg	1	2.00	<0.0156	104	70 - 130	3	20
Ethylbenzene		3	2.16	mg/Kg	1	2.00	<0.0151	108	70 - 130	5	20
Xylene		3	6.39	mg/Kg	1	6.00	<0.00430	106	70 - 130	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.13	2.14	mg/Kg	1	2.00	106	107	70 - 130
4-Bromofluorobenzene (4-BFB)	2.18	2.17	mg/Kg	1	2.00	109	108	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128889  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		3	17.4	mg/Kg	1	20.0	<1.76	87	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		3	18.0	mg/Kg	1	20.0	<1.76	90	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.02	2.03	mg/Kg	1	2.00	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)	1.76	1.76	mg/Kg	1	2.00	88	88	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 128899  
Prep Batch: 109170

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	264	mg/Kg	1	250	<8.34	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	263	mg/Kg	1	250	<8.34	105	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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**Laboratory Control Spike (LCS-1)**

QC Batch: 128900  
Prep Batch: 109171

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	258	mg/Kg	1	250	<8.34	103	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	258	mg/Kg	1	250	<8.34	103	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 415880

QC Batch: 128884  
Prep Batch: 109153

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: JL  
Prepared By: JL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		3	239	mg/Kg	1	250	48.2	76	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		3	272	mg/Kg	1	250	48.2	90	70 - 130	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	49.2	51.2	mg/Kg	1	50	98	102	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 415880

QC Batch: 128887  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		3	1.94	mg/Kg	1	2.00	<0.0100	97	70 - 130
Toluene	Q <sub>s</sub>	Q <sub>s</sub>	3	6.34	mg/Kg	1	2.00	0.2326	305
Ethylbenzene	Q <sub>s</sub>	Q <sub>s</sub>	3	26.8	mg/Kg	1	2.00	1.5687	1262
Xylene	Q <sub>s</sub>	Q <sub>s</sub>	3	26.0	mg/Kg	1	6.00	0.8574	419

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		3	1.98	mg/Kg	1	2.00	<0.0100	99	70 - 130	2	20
Toluene	Q <sub>r</sub>	Q <sub>r</sub>	3	2.18	mg/Kg	1	2.00	0.2326	97	70 - 130	98
Ethylbenzene	Q <sub>r</sub>	Q <sub>r</sub>	3	3.56	mg/Kg	1	2.00	1.5687	100	70 - 130	153
Xylene	Q <sub>r</sub>	Q <sub>r</sub>	3	7.68	mg/Kg	1	6.00	0.8574	114	70 - 130	109

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			2.59	2.20	mg/Kg	1	2	130	110	70 - 130
4-Bromofluorobenzene (4-BFB)	Q <sub>sr</sub>	Q <sub>sr</sub>	5.27	2.44	mg/Kg	1	2	264	122	70 - 130

**Matrix Spike (MS-1)** Spiked Sample: 415880

QC Batch: 128889  
Prep Batch: 109127

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-15

Analyzed By: AK  
Prepared By: AK

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs		3	55.1	mg/Kg	1	20.0	19.97	176	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD					Spike	Matrix	Rec.		RPD		
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
GRO	Q <sub>r</sub> , Q <sub>s</sub>	Q <sub>r</sub> , Q <sub>s</sub>	3	33.1	mg/Kg	1	20.0	19.97	66	70 - 130	50	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.92	1.99	mg/Kg	1	2	96	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.47	2.18	mg/Kg	1	2	124	109	70 - 130

**Matrix Spike (MS-1)** Spiked Sample: 415914

QC Batch: 128899  
Prep Batch: 109170

Date Analyzed: 2016-03-16  
QC Preparation: 2016-03-16

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	303	mg/Kg	5	250	69.8149	93	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD				Spike	Matrix		Rec.			
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		1,2,4	316	mg/Kg	5	250	69.8149	98	80 - 120	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1)      Spiked Sample: 415915

QC Batch:    128900  
Prep Batch:  109171

Date Analyzed:    2016-03-16  
QC Preparation:    2016-03-16

Analyzed By:    RL  
Prepared By:    RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	719	mg/Kg	5	250	513	82	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1,2,4	771	mg/Kg	5	250	513	103	80 - 120	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



## Calibration Standards

### Standard (CCV-1)

QC Batch: 128884

Date Analyzed: 2016-03-16

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	208	83	80 - 120	2016-03-16

### Standard (CCV-2)

QC Batch: 128884

Date Analyzed: 2016-03-16

Analyzed By: JL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		3	mg/Kg	250	203	81	80 - 120	2016-03-16

### Standard (CCV-1)

QC Batch: 128887

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.0976	98	80 - 120	2016-03-16
Toluene		3	mg/kg	0.100	0.0962	96	80 - 120	2016-03-16
Ethylbenzene		3	mg/kg	0.100	0.0948	95	80 - 120	2016-03-16
Xylene		3	mg/kg	0.300	0.282	94	80 - 120	2016-03-16

### Standard (CCV-2)

QC Batch: 128887

Date Analyzed: 2016-03-16

Analyzed By: AK

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		3	mg/kg	0.100	0.108	108	80 - 120	2016-03-16
Toluene		3	mg/kg	0.100	0.100	100	80 - 120	2016-03-16
Ethylbenzene		3	mg/kg	0.100	0.103	103	80 - 120	2016-03-16
Xylene		3	mg/kg	0.300	0.303	101	80 - 120	2016-03-16

#### Standard (CCV-1)

QC Batch: 128889

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.827	83	80 - 120	2016-03-16

#### Standard (CCV-2)

QC Batch: 128889

Date Analyzed: 2016-03-16

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		3	mg/Kg	1.00	0.885	88	80 - 120	2016-03-16

#### Standard (CCV-1)

QC Batch: 128899

Date Analyzed: 2016-03-16

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.5	106	90 - 110	2016-03-16

#### Standard (CCV-2)

QC Batch: 128899

Date Analyzed: 2016-03-16

Analyzed By: RL

Report Date: March 18, 2016  
15-0171-01

Work Order: 16031501  
David Billbrey 8" Pipeline

Page Number: 25 of 27

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	25.9	104	90 - 110	2016-03-16

#### Standard (CCV-1)

QC Batch: 128900

Date Analyzed: 2016-03-16

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	25.9	104	90 - 110	2016-03-16

#### Standard (CCV-2)

QC Batch: 128900

Date Analyzed: 2016-03-16

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	25.8	103	90 - 110	2016-03-16

## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

## **Attachments**

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.

WO# 1603501

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 3-15-2016 PAGE 1 OF 1  
PO #: \_\_\_\_\_ LAB WORK ORDER #: 1603501  
PROJECT LOCATION OR NAME: David Bilbey 8" pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Tanya Williams

Data Reported to:

S=SOIL  
W=WATER  
A=AIR

P=PAINT  
SL=SLUDGE  
OT=OTHER

P=PAINT

PRESERVATION




ED HC

inert

Matrix

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## Tence, Analysis

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
10014 SCR 1213  
Midland, TX 79706**



# Analytical Report

**Prepared for:**

Mark Larson  
Larson & Associates, Inc.  
P.O. Box 50685  
Midland, TX 79710

Project: David Bilbrey 8" Pipeline

Project Number: 15-0171-01

Location: New Mexico

Lab Order Number: 6C17001



**NELAP/TCEQ # T104704156-13-3**

Report Date: 03/21/16

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SWW-10	6C17001-01	Soil	03/16/16 10:35	03-17-2016 08:45
SWW-15	6C17001-02	Soil	03/16/16 10:44	03-17-2016 08:45
SWW-20	6C17001-03	Soil	03/16/16 10:49	03-17-2016 08:45
SWW-5	6C17001-04	Soil	03/16/16 10:50	03-17-2016 08:45
NWW-10	6C17001-05	Soil	03/16/16 10:53	03-17-2016 08:45
NWW-15	6C17001-06	Soil	03/16/16 10:57	03-17-2016 08:45
NWW-20	6C17001-07	Soil	03/16/16 11:00	03-17-2016 08:45
NWW-5	6C17001-08	Soil	03/16/16 11:05	03-17-2016 08:45
WW-10	6C17001-09	Soil	03/16/16 11:11	03-17-2016 08:45
WW-15	6C17001-10	Soil	03/16/16 11:15	03-17-2016 08:45
WW-20	6C17001-11	Soil	03/16/16 11:16	03-17-2016 08:45
WW-5	6C17001-12	Soil	03/16/16 11:21	03-17-2016 08:45
Bottom-23	6C17001-13	Soil	03/16/16 13:57	03-17-2016 08:45
SEW-20	6C17001-14	Soil	03/16/16 14:00	03-17-2016 08:45
SEW-15	6C17001-15	Soil	03/16/16 14:02	03-17-2016 08:45
SEW-10	6C17001-16	Soil	03/16/16 14:05	03-17-2016 08:45
SEW-5	6C17001-17	Soil	03/16/16 14:06	03-17-2016 08:45
EW-20	6C17001-18	Soil	03/16/16 14:09	03-17-2016 08:45
EW-15	6C17001-19	Soil	03/16/16 14:12	03-17-2016 08:45
EW-10	6C17001-20	Soil	03/16/16 14:16	03-17-2016 08:45
EW-5	6C17001-21	Soil	03/16/16 14:20	03-17-2016 08:45
NEW-20	6C17001-22	Soil	03/16/16 14:22	03-17-2016 08:45
NEW-15	6C17001-23	Soil	03/16/16 14:25	03-17-2016 08:45
NEW-10	6C17001-24	Soil	03/16/16 14:28	03-17-2016 08:45
NEW-5	6C17001-25	Soil	03/16/16 14:30	03-17-2016 08:45
NW-20	6C17001-26	Soil	03/16/16 14:33	03-17-2016 08:45
NW-15	6C17001-27	Soil	03/16/16 14:37	03-17-2016 08:45
SW-20	6C17001-28	Soil	03/16/16 14:40	03-17-2016 08:45
SW-15	6C17001-29	Soil	03/16/16 14:43	03-17-2016 08:45



Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**SWW-10**  
**6C17001-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	109	5.56	mg/kg dry	5	P6C1808	03/18/16	03/18/16	EPA 300.0	
% Moisture	10.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M	
Surrogate: 1-Chlorooctane		89.7 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc	

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**SWW-15**  
**6C17001-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	111	1.16	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	14.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	29.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	29.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		87.4 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		95.2 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
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Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**SWW-20**  
**6C17001-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>1200</b>	5.68	mg/kg dry	5	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>12.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	<b>59.0</b>	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		93.4 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		98.7 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>59.0</b>	28.4	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
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Midland TX, 79710

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Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**SWW-5**  
**6C17001-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	60.1	5.88	mg/kg dry	5	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	15.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	29.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	29.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		78.6 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		85.6 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
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Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

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**NWW-10**  
**6C17001-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	56.9	1.11	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	10.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		90.2 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		96.8 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**NWW-15**  
**6C17001-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	5.46	1.12	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	11.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	28.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	28.1	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		84.0 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		90.6 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**NWW-20**  
**6C17001-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	11.8	1.11	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	10.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		80.5 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		85.9 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**NWW-5**  
**6C17001-08 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>16.1</b>	1.09	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>8.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.2	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	<b>46.8</b>	27.2	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	<b>34.1</b>	27.2	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		72.5 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		77.8 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>80.8</b>	27.2	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc



Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**WW-10**  
**6C17001-09 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	7.33	1.14	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	12.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	28.4	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		75.0 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		79.1 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**WW-15**  
**6C17001-10 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	4.51	1.15	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	13.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.7	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C12-C28	ND	28.7	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
>C28-C35	ND	28.7	mg/kg dry	1	P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: 1-Chlorooctane		70.6 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Surrogate: o-Terphenyl		74.4 %	70-130		P6C1705	03/17/16	03/17/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	03/17/16	03/17/16	calc

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Project Manager: Mark Larson

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**WW-20**  
**6C17001-11 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>7.85</b>	1.16	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>14.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>34.2</b>	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		85.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		95.0 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>34.2</b>	29.1	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**WW-5**  
**6C17001-12 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>3.43</b>	1.11	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>10.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>48.3</b>	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		94.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>48.3</b>	27.8	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**Bottom-23**  
**6C17001-13 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>351</b>	1.14	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>12.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	<b>61.3</b>	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	<b>32.1</b>	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		91.6 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		100 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>93.5</b>	28.4	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**SEW-20**  
**6C17001-14 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>111</b>	5.68	mg/kg dry	5	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>12.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>36.7</b>	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	28.4	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		96.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>36.7</b>	28.4	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**SEW-15**  
**6C17001-15 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>10.7</b>	1.10	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	<b>90.9</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	<b>57.5</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		94.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>148</b>	27.5	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**SEW-10**  
**6C17001-16 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	16.4	1.16	mg/kg dry	1	P6C1808	03/18/16	03/18/16	EPA 300.0
% Moisture	14.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	ND	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	29.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		81.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		89.9 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc



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**SEW-5**  
**6C17001-17 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>16.9</b>	1.08	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>7.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>47.2</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>45.6</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		97.4 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>92.8</b>	26.9	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**EW-20**  
**6C17001-18 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>25.5</b>	1.09	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>8.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	<b>102</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	<b>33.1</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		96.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>135</b>	27.2	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**EW-15**  
**6C17001-19 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>9.63</b>	1.10	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>70.0</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>33.8</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		88.3 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		93.9 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>104</b>	27.5	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**EW-10**  
**6C17001-20 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>7.14</b>	1.10	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>79.0</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>40.5</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		88.8 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		95.1 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>120</b>	27.5	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**EW-5**  
**6C17001-21 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>5.70</b>	1.08	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>7.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>126</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>57.8</b>	26.9	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		95.6 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		104 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>183</b>	26.9	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**NEW-20**  
**6C17001-22 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>70.7</b>	5.49	mg/kg dry	5	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>43.9</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>463</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>104</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		97.8 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		106 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>612</b>	27.5	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**NEW-15**  
**6C17001-23 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>11.3</b>	1.10	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>50.1</b>	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	27.5	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		79.4 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		86.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>50.1</b>	27.5	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**NEW-10**  
**6C17001-24 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>3.67</b>	1.09	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>8.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>84.5</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>40.3</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		92.1 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		99.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>125</b>	27.2	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc



Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**NEW-5**  
**6C17001-25 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>19.9</b>	5.62	mg/kg dry	5	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>11.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
> <b>C12-C28</b>	<b>43.1</b>	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		87.8 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		94.8 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>43.1</b>	28.1	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**NW-20**  
**6C17001-26 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	12.0	1.12	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
% Moisture	11.0	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	58.0	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		92.0 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		99.3 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	58.0	28.1	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**NW-15**  
**6C17001-27 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>100</b>	1.09	mg/kg dry	1	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>8.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	<b>92.4</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	<b>42.9</b>	27.2	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		88.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		95.3 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>135</b>	27.2	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**SW-20**  
**6C17001-28 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>2170</b>	11.2	mg/kg dry	10	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>11.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>ND</b>	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C12-C28</b>	<b>143</b>	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<b>&gt;C28-C35</b>	<b>41.9</b>	28.1	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		80.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		85.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>185</b>	28.1	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

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**SW-15**  
**6C17001-29 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>877</b>	5.56	mg/kg dry	5	P6C1809	03/18/16	03/18/16	EPA 300.0
<b>% Moisture</b>	<b>10.0</b>	0.1	%	1	P6C1703	03/17/16	03/17/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C12-C28	<b>56.5</b>	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: 1-Chlorooctane		90.2 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
Surrogate: o-Terphenyl		95.5 %	70-130		P6C2103	03/17/16	03/18/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>56.5</b>	27.8	mg/kg dry	1	[CALC]	03/17/16	03/18/16	calc

Larson & Associates, Inc.  
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Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
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**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch P6C1703 - *** DEFAULT PREP ***</b>										
<b>Blank (P6C1703-BLK1)</b>		Prepared & Analyzed: 03/17/16								
% Moisture	ND	0.1	%							
<b>Duplicate (P6C1703-DUP1)</b>		<b>Source: 6C16007-26</b>		Prepared & Analyzed: 03/17/16						
% Moisture	14.0	0.1	%		14.0			0.00	20	
<b>Duplicate (P6C1703-DUP2)</b>		<b>Source: 6C15004-01</b>		Prepared & Analyzed: 03/17/16						
% Moisture	1.0	0.1	%		1.0			0.00	20	
<b>Duplicate (P6C1703-DUP3)</b>		<b>Source: 6C15011-01</b>		Prepared & Analyzed: 03/17/16						
% Moisture	6.0	0.1	%		6.0			0.00	20	
<b>Duplicate (P6C1703-DUP4)</b>		<b>Source: 6C15011-02</b>		Prepared & Analyzed: 03/17/16						
% Moisture	5.0	0.1	%		5.0			0.00	20	
<b>Duplicate (P6C1703-DUP5)</b>		<b>Source: 6C16003-02</b>		Prepared & Analyzed: 03/17/16						
% Moisture	4.0	0.1	%		4.0			0.00	20	
<b>Duplicate (P6C1703-DUP6)</b>		<b>Source: 6C16005-08</b>		Prepared & Analyzed: 03/17/16						
% Moisture	9.0	0.1	%		10.0			10.5	20	
<b>Duplicate (P6C1703-DUP7)</b>		<b>Source: 6C17001-21</b>		Prepared & Analyzed: 03/17/16						
% Moisture	7.0	0.1	%		7.0			0.00	20	
<b>Batch P6C1808 - *** DEFAULT PREP ***</b>										
<b>Blank (P6C1808-BLK1)</b>		Prepared & Analyzed: 03/18/16								
Chloride	ND	1.00	mg/kg wet							

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Midland TX, 79710

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Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P6C1808 - \*\*\* DEFAULT PREP \*\*\***

<b>LCS (P6C1808-BS1)</b>				Prepared & Analyzed: 03/18/16						
Chloride	177	1.00	mg/kg wet	170		104	80-120			
<b>Duplicate (P6C1808-DUP1)</b>				<b>Source: 6C17001-01</b>		Prepared & Analyzed: 03/18/16				
Chloride	113	5.56	mg/kg dry		109			3.15	20	
<b>Duplicate (P6C1808-DUP2)</b>				<b>Source: 6C17001-11</b>		Prepared & Analyzed: 03/18/16				
Chloride	8.53	1.16	mg/kg dry		7.85			8.37	20	

**Batch P6C1809 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6C1809-BLK1)</b>				Prepared & Analyzed: 03/18/16						
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P6C1809-BS1)</b>				Prepared & Analyzed: 03/18/16						
Chloride	177	1.00	mg/kg wet	170		104	80-120			
<b>LCS Dup (P6C1809-BSD1)</b>				Prepared & Analyzed: 03/18/16						
Chloride	178	1.00	mg/kg wet	170		105	80-120	0.688	20	
<b>Duplicate (P6C1809-DUP1)</b>				<b>Source: 6C17001-21</b>		Prepared & Analyzed: 03/18/16				
Chloride	5.03	1.08	mg/kg dry		5.70			12.4	20	
<b>Duplicate (P6C1809-DUP2)</b>				<b>Source: 6C15006-05</b>		Prepared & Analyzed: 03/18/16				
Chloride	2230	10.8	mg/kg dry		2280			2.15	20	

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Midland TX, 79710

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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P6C2103 - TX 1005**

**Blank (P6C2103-BLK1)**

Prepared: 03/17/16 Analyzed: 03/18/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	73.9		"	100		73.9	70-130			
Surrogate: o-Terphenyl	40.5		"	50.0		81.1	70-130			

**LCS (P6C2103-BS1)**

Prepared: 03/17/16 Analyzed: 03/18/16

C6-C12	791	25.0	mg/kg wet	1000		79.1	75-125			
>C12-C28	968	25.0	"	1000		96.8	75-125			
Surrogate: 1-Chlorooctane	117		"	100		117	70-130			
Surrogate: o-Terphenyl	51.7		"	50.0		103	70-130			

**LCS Dup (P6C2103-BSD1)**

Prepared: 03/17/16 Analyzed: 03/18/16

C6-C12	758	25.0	mg/kg wet	1000		75.8	75-125	4.18	20	
>C12-C28	941	25.0	"	1000		94.1	75-125	2.92	20	
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	50.4		"	50.0		101	70-130			

**Matrix Spike (P6C2103-MS1)**

Source: 6C17001-29

Prepared: 03/17/16 Analyzed: 03/18/16

C6-C12	1020	27.8	mg/kg dry	1110	ND	92.2	75-125			
>C12-C28	1200	27.8	"	1110	56.5	103	75-125			
Surrogate: 1-Chlorooctane	135		"	111		122	70-130			
Surrogate: o-Terphenyl	58.5		"	55.6		105	70-130			

**Matrix Spike Dup (P6C2103-MSD1)**

Source: 6C17001-29

Prepared: 03/17/16 Analyzed: 03/18/16

C6-C12	1070	27.8	mg/kg dry	1110	ND	96.3	75-125	4.39	20	
>C12-C28	1240	27.8	"	1110	56.5	107	75-125	3.47	20	
Surrogate: 1-Chlorooctane	139		"	111		125	70-130			
Surrogate: o-Terphenyl	60.0		"	55.6		108	70-130			



Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### Notes and Definitions

BULK Samples received in Bulk soil containers  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date:

3/21/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

**Varson & Associates, Inc.**  
Environmental Consultants

507 N. Marientfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

Data Reported to:

DATE: 3/11/16 PAGE 1 OF 2  
PO #: \_\_\_\_\_ LAB WORK ORDER #: 16011001  
PROJECT LOCATION OR NAME: David Gilbreys 8" Pipeline  
LAI PROJECT #: 15-0171-01 COLLECTOR: Trewn's Cellar

Page 36 of 37

[illegible]

Data Reported to:

DATE: 3/17/16 PAGE 2 OF 2  
PO #: 16C17001 LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: David Silberry 8" Pipeline  
LAI PROJECT #: 15-Q171-Q1 COLLECTOR: Travis Cullerton

## CHAIN-OF-CUSTODY

TRRP report?		P-P-AINT		PRESERVATION		ANALYSES		FIELD NOTES	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	SL=SLUDGE OT=OTHER		HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/>	ICE	UNPRESERVED	
TIME ZONE: Time zone/State:									
Field Sample I.D.		Lab #	Date	Time	Matrix	# of Containers			
SEW-16	16	3/16/16	2:05	3	1	X			
SEW-5	17		2:06						
EW-20	18		2:09						
EW-15	19		2:14						
EW-10	20		2:16						
EW-5	21		2:20						
NEW-20	22		2:22						
NEW-15	23		2:25						
NEW-10	24		2:28						
NEW-5	25		2:30						
NEW-20	26		2:33						
NEW-15	27		2:37						
SW-20	28		2:40						
SW-15	29		2:43						
TOTAL									
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		TURN AROUND TIME		LABORATORY USE ONLY:	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		NORMAL <input type="checkbox"/>		RECEIVING TEMP: <u>5.5</u> THERM #: <u>41</u>	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		1 DAY <input type="checkbox"/>		CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		2 DAY <input checked="" type="checkbox"/>		CARRIER BILL # _____	
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		OTHER <input type="checkbox"/>		HAND DELIVERED <input type="checkbox"/>	

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
10014 SCR 1213  
Midland, TX 79706**



# Analytical Report

**Prepared for:**

Mark Larson  
Larson & Associates, Inc.  
P.O. Box 50685  
Midland, TX 79710

Project: David Bilbrey 8" Pipeline

Project Number: 15-0171-01

Location: New Mexico

Lab Order Number: 6C24005



NELAP/TCEQ # T104704156-13-3

Report Date: 04/01/16

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 1	6C24005-01	Soil	03/23/16 12:27	03-24-2016 09:15
Pile 2	6C24005-02	Soil	03/23/16 12:43	03-24-2016 09:15
Pile 3	6C24005-03	Soil	03/23/16 12:50	03-24-2016 09:15
Pile 4	6C24005-04	Soil	03/23/16 13:01	03-24-2016 09:15
Pile 5	6C24005-05	Soil	03/23/16 12:56	03-24-2016 09:15
Pile 6	6C24005-06	Soil	03/23/16 12:54	03-24-2016 09:15

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**Pile 1**  
**6C24005-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	9.52	1.10	mg/kg dry	1	P6C3102	03/30/16	03/30/16	EPA 300.0
% Moisture	9.0	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		82.7 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		85.0 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc

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P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Pile 2**

**6C24005-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	75.4	5.38	mg/kg dry	5	P6C3102	03/30/16	03/30/16	EPA 300.0
% Moisture	7.0	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	78.9	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	ND	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		81.9 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		84.1 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	78.9	26.9	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Pile 3**  
**6C24005-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	365	5.56	mg/kg dry	5	P6D0104	03/31/16	03/31/16	EPA 300.0
% Moisture	10.0	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	ND	27.8	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	ND	27.8	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		89.2 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		93.4 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc



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Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Pile 4**  
**6C24005-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	8.44	1.08	mg/kg dry	1	P6D0104	03/31/16	03/31/16	EPA 300.0
% Moisture	7.0	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	ND	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	ND	26.9	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		103 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		108 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Pile 5**  
**6C24005-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>153</b>	10.9	mg/kg dry	10	P6D0104	03/31/16	03/31/16	EPA 300.0
<b>% Moisture</b>	<b>8.0</b>	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.2	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	<b>247</b>	27.2	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	<b>33.7</b>	27.2	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		84.6 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		87.8 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>281</b>	27.2	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Pile 6**  
**6C24005-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	81.2	5.49	mg/kg dry	5	P6D0104	03/31/16	03/31/16	EPA 300.0
% Moisture	9.0	0.1	%	1	P6C2901	03/29/16	03/29/16	% calculation

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C12-C28	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
>C28-C35	ND	27.5	mg/kg dry	1	P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: 1-Chlorooctane		97.7 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Surrogate: o-Terphenyl		101 %	70-130		P6C2801	03/29/16	03/29/16	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	03/29/16	03/29/16	calc

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch P6C2901 - *** DEFAULT PREP ***</b>										
<b>Blank (P6C2901-BLK1)</b>				Prepared & Analyzed: 03/29/16						
% Moisture	ND	0.1	%							
<b>Duplicate (P6C2901-DUP1)</b>				Source: 6C23013-01 Prepared & Analyzed: 03/29/16						
% Moisture	4.0	0.1	%		4.0			0.00	20	
<b>Duplicate (P6C2901-DUP2)</b>				Source: 6C23014-20 Prepared & Analyzed: 03/29/16						
% Moisture	7.0	0.1	%		7.0			0.00	20	
<b>Duplicate (P6C2901-DUP3)</b>				Source: 6C24006-01 Prepared & Analyzed: 03/29/16						
% Moisture	11.0	0.1	%		11.0			0.00	20	
<b>Duplicate (P6C2901-DUP4)</b>				Source: 6C28004-03 Prepared & Analyzed: 03/29/16						
% Moisture	15.0	0.1	%		15.0			0.00	20	
<b>Duplicate (P6C2901-DUP5)</b>				Source: 6C28005-01 Prepared & Analyzed: 03/29/16						
% Moisture	9.0	0.1	%		8.0			11.8	20	
<b>Batch P6C3102 - *** DEFAULT PREP ***</b>										
<b>Blank (P6C3102-BLK1)</b>				Prepared & Analyzed: 03/30/16						
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P6C3102-BS1)</b>				Prepared & Analyzed: 03/30/16						
Chloride	184	1.00	mg/kg wet	200		91.8	80-120			
<b>LCS Dup (P6C3102-BSD1)</b>				Prepared & Analyzed: 03/30/16						
Chloride	189	1.00	mg/kg wet	200		94.6	80-120	2.98	20	

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Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P6C3102 - \*\*\* DEFAULT PREP \*\*\***

<b>Duplicate (P6C3102-DUP1)</b>		<b>Source: 6C23014-07</b>			Prepared & Analyzed: 03/30/16					
Chloride	235	1.06	mg/kg dry		226			4.16	20	
<b>Duplicate (P6C3102-DUP2)</b>		<b>Source: 6C23014-17</b>			Prepared & Analyzed: 03/30/16					
Chloride	1610	5.43	mg/kg dry		1600			0.746	20	
<b>Matrix Spike (P6C3102-MS1)</b>		<b>Source: 6C23014-07</b>			Prepared & Analyzed: 03/30/16					
Chloride	372	1.06	mg/kg dry	160	226	91.9	80-120			

**Batch P6D0104 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P6D0104-BLK1)</b>		Prepared & Analyzed: 03/31/16								
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P6D0104-BS1)</b>		Prepared & Analyzed: 03/31/16								
Chloride	191	1.00	mg/kg wet	200		95.4	80-120			
<b>LCS Dup (P6D0104-BSD1)</b>		Prepared & Analyzed: 03/31/16								
Chloride	196	1.00	mg/kg wet	200		97.8	80-120	2.54	20	
<b>Duplicate (P6D0104-DUP1)</b>		<b>Source: 6C24005-03</b>			Prepared & Analyzed: 03/31/16					
Chloride	424	5.56	mg/kg dry		365			14.9	20	
<b>Duplicate (P6D0104-DUP2)</b>		<b>Source: 6C28003-02</b>			Prepared & Analyzed: 03/31/16					
Chloride	389	1.05	mg/kg dry		382			1.68	20	

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Midland TX, 79710

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Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P6C2801 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P6C2801-BLK1)**

Prepared & Analyzed: 03/29/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	96.1		"	100		96.1	70-130			
Surrogate: o-Terphenyl	49.3		"	50.0		98.7	70-130			

**LCS (P6C2801-BS1)**

Prepared & Analyzed: 03/29/16

C6-C12	729	25.0	mg/kg wet	750		97.1	75-125			
>C12-C28	859	25.0	"	750		115	75-125			
Surrogate: 1-Chlorooctane	106		"	100		106	70-130			
Surrogate: o-Terphenyl	40.4		"	50.0		80.8	70-130			

**LCS Dup (P6C2801-BSD1)**

Prepared & Analyzed: 03/29/16

C6-C12	713	25.0	mg/kg wet	750		95.0	75-125	2.20	20	
>C12-C28	834	25.0	"	750		111	75-125	2.90	20	
Surrogate: 1-Chlorooctane	106		"	100		106	70-130			
Surrogate: o-Terphenyl	42.7		"	50.0		85.4	70-130			

**Matrix Spike (P6C2801-MS1)**

Source: 6C24003-01

Prepared: 03/29/16 Analyzed: 03/30/16

C6-C12	4150	139	mg/kg dry	833	4230	NR	75-125			QM-05
>C12-C28	19500	139	"	833	18300	151	75-125			QM-05
Surrogate: 1-Chlorooctane	136		"	111		123	70-130			
Surrogate: o-Terphenyl	65.6		"	55.6		118	70-130			

**Matrix Spike Dup (P6C2801-MSD1)**

Source: 6C24003-01

Prepared: 03/29/16 Analyzed: 03/30/16

C6-C12	4170	139	mg/kg dry	833	4230	NR	75-125	NR	20	QM-05
>C12-C28	19700	139	"	833	18300	174	75-125	13.8	20	QM-05
Surrogate: 1-Chlorooctane	137		"	111		124	70-130			
Surrogate: o-Terphenyl	67.2		"	55.6		121	70-130			

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### Notes and Definitions

QM-05     The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

DET        Analyte DETECTED

ND        Analyte NOT DETECTED at or above the reporting limit

NR        Not Reported

dry        Sample results reported on a dry weight basis

RPD        Relative Percent Difference

LCS        Laboratory Control Spike

MS        Matrix Spike

Dup        Duplicate

Report Approved By:



Date:

4/1/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Data Reported to:

DATE: 3/24/2016 PAGE 1 OF 1  
PO #: 6624005 LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: 15-0171-01 David Bilbre  
LAI PROJECT #: 15-0171-01 COLLECTOR: M. Chad Co

## CHAIN-OF-CUSTODY

TRRP report? <input type="checkbox"/> Yes <input type="checkbox"/> No		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		TIME ZONE: Time zone/State: <u>MST/AM</u>		PRESERVATION		ANALYSES		FIELD NOTES	
Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/>	ICE	UNPRESERVED	BTEX <input type="checkbox"/> MTBE <input type="checkbox"/>	TRPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/>	FIELD NOTES
Pile 1	1	3/23	12:37	S	1						X	X	
Pile 2	2	3/23	12:43	S	1						X	X	
Pile 3	3	3/23	12:50	S	1						X	X	
Pile 4	4	3/23	1:01	S	1						X	X	
Pile 5	5	3/23	12:56	S	1						X	X	
Pile 6	6	3/23	12:54	S	1						X	X	
TOTAL													

RELINQUISHED BY: (Signature) [Signature] DATE/TIME 3/24/16 9:15 RECEIVED BY: (Signature) [Signature]

RELINQUISHED BY: (Signature) [Signature] DATE/TIME 3/24/16 9:15 RECEIVED BY: (Signature) [Signature]

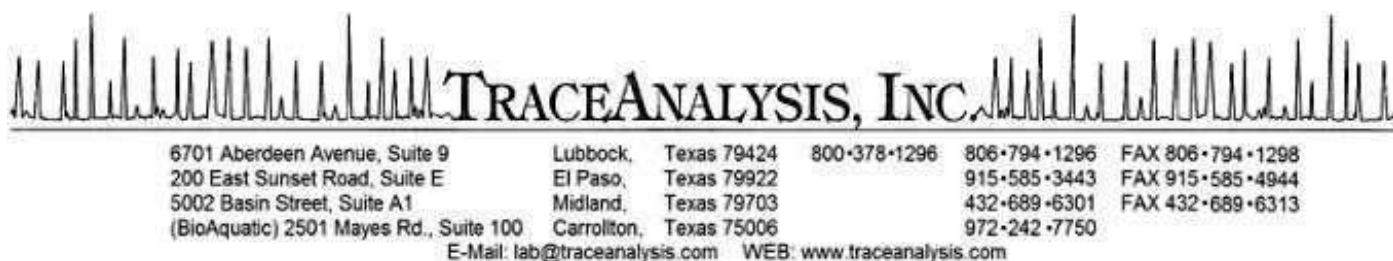
RELINQUISHED BY: (Signature)

DATE/TIME 3/24/16 9:15 RECEIVED BY: (Signature) [Signature]

TURN AROUND TIME  
NORMAL ☒  
1 DAY ☐  
2 DAY ☐  
OTHER ☐

LABORATORY USE ONLY  
RECEIVING TEMP: 54 THERM #: 21  
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED  
☐ CARRIER BILL #         
☐ HAND DELIVERED





## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

# Analytical and Quality Control Report

Michael Gant  
Larson and Associates, Inc.

Report Date: March 31, 2016

P. O. Box 50685  
Midland, TX, 79710

Work Order: 16032817



Project Name: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01

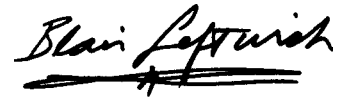
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
416516	S Wall 20'	soil	2016-03-24	11:17	2016-03-28
416517	NE Wall 20'	soil	2016-03-24	11:45	2016-03-28
416518	SE Wall 15'	soil	2016-03-24	11:22	2016-03-28
416519	N Wall 20'	soil	2016-03-24	11:40	2016-03-28
416520	N Wall 15'	soil	2016-03-24	11:34	2016-03-28
416521	E Wall 20'	soil	2016-03-24	11:25	2016-03-28

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is underlined with a thick, dark line.

---

Dr. Blair Leftwich, Director  
James Taylor, Assistant Director  
Johnny Grindstaff, Operations Manager

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## Case Narrative

Samples for project David Bilbrey 8" Pipeline were received by TraceAnalysis, Inc. on 2016-03-28 and assigned to work order 16032817. Samples for work order 16032817 were received intact at a temperature of -7.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	109385	2016-03-29 at 15:00	129143	2016-03-29 at 15:23
Chloride (IC)	E 300.0	109387	2016-03-29 at 15:00	129144	2016-03-30 at 08:47
TPH DRO	S 8015 D	109409	2016-03-30 at 15:00	129165	2016-03-31 at 10:31
TPH GRO	S 8015 D	109352	2016-03-29 at 14:54	129118	2016-03-30 at 07:38
TPH ORO	S 8015 D	109409	2016-03-30 at 15:00	129166	2016-03-31 at 10:33

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 16032817 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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# Analytical Report

## Sample: 416516 - S Wall 20'

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-29	Analyzed By:	RL
QC Batch:	129143	Sample Preparation:	2016-03-29	Prepared By:	RL
Prep Batch:	109385				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	3120	mg/Kg	50	25.0

## Sample: 416516 - S Wall 20'

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129165	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	33.5	mg/Kg	1	25.0	134	58.2 - 150

## Sample: 416516 - S Wall 20'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-30	Analyzed By:	AK
QC Batch:	129118	Sample Preparation:		Prepared By:	AK
Prep Batch:	109352				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.17	mg/Kg	1	2.00	108	70 - 130

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*sample continued ...*

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

**Sample: 416516 - S Wall 20'**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129166	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	MDL Result	MDL	ML Result	ML	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	ML	PQL	RL
ORO	Qc,U		<7.48		<50.0		<50.0		<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			29.8	mg/Kg	1	25.0	119	70 - 130
n-Triacontane	Qsr	Qsr	32.6	mg/Kg	1	25.0	130	70 - 130

**Sample: 416517 - NE Wall 20'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-29	Analyzed By:	RL
QC Batch:	129143	Sample Preparation:	2016-03-29	Prepared By:	RL
Prep Batch:	109385				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

**Sample: 416517 - NE Wall 20'**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129165	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	32.5	mg/Kg	1	25.0	130	58.2 - 150

**Sample: 416517 - NE Wall 20'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 129118  
Prep Batch: 109352

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-30  
Sample Preparation:

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.68	mg/Kg	1	2.00	84	70 - 130

**Sample: 416517 - NE Wall 20'**

Laboratory: Lubbock  
Analysis: TPH ORO  
QC Batch: 129166  
Prep Batch: 109409

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-31  
Sample Preparation: 2016-03-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	MDL	PQL Result	PQL	RL Result	RL	Units	Dilution	MDL	MQL	PQL	RL
ORO	QC,U		<7.48	<50.0	<50.0	<50.0	<50.0		mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			30.1	mg/Kg	1	25.0	120	70 - 130
n-Triacontane	Qsr	Qsr	34.5	mg/Kg	1	25.0	138	70 - 130

**Sample: 416518 - SE Wall 15'**

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 129144  
Prep Batch: 109387

Analytical Method: E 300.0  
Date Analyzed: 2016-03-30  
Sample Preparation: 2016-03-29

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL



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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

**Sample: 416518 - SE Wall 15'**

Laboratory: Lubbock  
Analysis: TPH DRO  
QC Batch: 129165  
Prep Batch: 109409

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-31  
Sample Preparation: 2016-03-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	30.6	mg/Kg	1	25.0	122	58.2 - 150

**Sample: 416518 - SE Wall 15'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 129118  
Prep Batch: 109352

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-30  
Sample Preparation:

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

**Sample: 416518 - SE Wall 15'**

Laboratory: Lubbock  
Analysis: TPH ORO  
QC Batch: 129166  
Prep Batch: 109409

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-31  
Sample Preparation: 2016-03-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

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sample 416518 continued ...

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	QC,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			29.6	mg/Kg	1	25.0	118	70 - 130
n-Triacontane	Qsr	Qsr	34.0	mg/Kg	1	25.0	136	70 - 130

#### Sample: 416519 - N Wall 20'

Laboratory: Lubbock  
Analysis: Chloride (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 129143      Date Analyzed: 2016-03-29      Analyzed By: RL  
Prep Batch: 109385      Sample Preparation: 2016-03-29      Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	1900	mg/Kg	5	25.0

#### Sample: 416519 - N Wall 20'

Laboratory: Lubbock  
Analysis: TPH DRO      Analytical Method: S 8015 D      Prep Method: N/A  
QC Batch: 129165      Date Analyzed: 2016-03-31      Analyzed By: HJ  
Prep Batch: 109409      Sample Preparation: 2016-03-30      Prepared By: HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	32.6	mg/Kg	1	25.0	130	58.2 - 150

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**Sample: 416519 - N Wall 20'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 129118  
Prep Batch: 109352

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-30  
Sample Preparation:

Prep Method: S 5035  
Analyzed By: AK  
Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.09	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

**Sample: 416519 - N Wall 20'**

Laboratory: Lubbock  
Analysis: TPH ORO  
QC Batch: 129166  
Prep Batch: 109409

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-31  
Sample Preparation: 2016-03-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	Qc,Qs,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			31.6	mg/Kg	1	25.0	126	70 - 130
n-Triacontane	Qsr	Qsr	35.8	mg/Kg	1	25.0	143	70 - 130

**Sample: 416520 - N Wall 15'**

Laboratory: Lubbock  
Analysis: Chloride (IC)  
QC Batch: 129143  
Prep Batch: 109385

Analytical Method: E 300.0  
Date Analyzed: 2016-03-29  
Sample Preparation: 2016-03-29

Prep Method: N/A  
Analyzed By: RL  
Prepared By: RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	550	mg/Kg	5	25.0

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**Sample: 416520 - N Wall 15'**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129165	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	32.3	mg/Kg	1	25.0	129	58.2 - 150

**Sample: 416520 - N Wall 15'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-30	Analyzed By:	AK
QC Batch:	129118	Sample Preparation:		Prepared By:	AK
Prep Batch:	109352				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.13	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

**Sample: 416520 - N Wall 15'**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH ORO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129166	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	QC,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			32.1	mg/Kg	1	25.0	128	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	34.6	mg/Kg	1	25.0	138	70 - 130

**Sample: 416521 - E Wall 20'**

Laboratory:	Lubbock	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2016-03-29	Analyzed By:	RL
QC Batch:	129143	Sample Preparation:	2016-03-29	Prepared By:	RL
Prep Batch:	109385				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	<25.0	mg/Kg	1	25.0

**Sample: 416521 - E Wall 20'**

Laboratory:	Lubbock	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2016-03-31	Analyzed By:	HJ
QC Batch:	129165	Sample Preparation:	2016-03-30	Prepared By:	HJ
Prep Batch:	109409				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	33.0	mg/Kg	1	25.0	132	58.2 - 150

**Sample: 416521 - E Wall 20'**

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2016-03-30	Analyzed By:	AK
QC Batch:	129118	Sample Preparation:		Prepared By:	AK
Prep Batch:	109352				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	5	<4.00	mg/Kg	1	4.00

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130

**Sample: 416521 - E Wall 20'**

Laboratory: Lubbock  
Analysis: TPH ORO  
QC Batch: 129166  
Prep Batch: 109409

Analytical Method: S 8015 D  
Date Analyzed: 2016-03-31  
Sample Preparation: 2016-03-30

Prep Method: N/A  
Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	MDL	MDL	MDL	Units	Dilution	MDL	MDL	MDL	MDL
ORO	QC,U		<7.48	<50.0	<50.0	<50.0	mg/Kg	1	7.48	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q <sub>sr</sub>	Q <sub>sr</sub>	32.6	mg/Kg	1	25.0	130	70 - 130
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	37.2	mg/Kg	1	25.0	149	70 - 130

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## Method Blanks

### Method Blank (1) QC Batch: 129118

QC Batch: 129118 Date Analyzed: 2016-03-30 Analyzed By: AK  
Prep Batch: 109352 QC Preparation: 2016-03-29 Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<1.76	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

### Method Blank (1) QC Batch: 129143

QC Batch: 129143 Date Analyzed: 2016-03-29 Analyzed By: RL  
Prep Batch: 109385 QC Preparation: 2016-03-29 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<8.34	mg/Kg	25

### Method Blank (1) QC Batch: 129144

QC Batch: 129144 Date Analyzed: 2016-03-30 Analyzed By: RL  
Prep Batch: 109387 QC Preparation: 2016-03-29 Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<8.34	mg/Kg	25

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**Method Blank (1)**      QC Batch: 129165

QC Batch: 129165  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	<8.47	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	26.5	mg/Kg	1	25.0	106	58.2 - 150

**Method Blank (1)**      QC Batch: 129166

QC Batch: 129166  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<7.48	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			26.5	mg/Kg	1	25.0	106	70 - 130
n-Triacontane			30.4	mg/Kg	1	25.0	122	70 - 130



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## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 129118  
Prep Batch: 109352

Date Analyzed: 2016-03-30  
QC Preparation: 2016-03-29

Analyzed By: AK  
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	17.0	mg/Kg	1	20.0	<1.76	85	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	19.2	mg/Kg	1	20.0	<1.76	96	70 - 130	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	2.11	mg/Kg	1	2.00	100	106	70 - 130
4-Bromofluorobenzene (4-BFB)	1.67	1.78	mg/Kg	1	2.00	84	89	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 129143  
Prep Batch: 109385

Date Analyzed: 2016-03-29  
QC Preparation: 2016-03-29

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	249	mg/Kg	1	250	<8.34	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	249	mg/Kg	1	250	<8.34	100	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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### Laboratory Control Spike (LCS-1)

QC Batch: 129144  
Prep Batch: 109387

Date Analyzed: 2016-03-30  
QC Preparation: 2016-03-29

Analyzed By: RL  
Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	245	mg/Kg	1	250	<8.34	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	246	mg/Kg	1	250	<8.34	98	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 129165  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	560	mg/Kg	1	500	<8.47	112	68.5 - 136

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	550	mg/Kg	1	500	<8.47	110	68.5 - 136	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	3	30.2	29.8	mg/Kg	1	25.0	121	119	58.2 - 150

### Laboratory Control Spike (LCS-1)

QC Batch: 129166  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO	Q <sub>s</sub>	Q <sub>s</sub>	<7.48	mg/Kg	1	500	<7.48	0	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
ORO	Q <sub>s</sub>	Q <sub>s</sub>	<7.48	mg/Kg	1	500	<7.48	0	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	30.2	29.8	mg/Kg	1	25.0	121	119	70 - 130
n-Triacontane	26.9	26.2	mg/Kg	1	25.0	108	105	70 - 130

## Matrix Spikes

### Matrix Spike (MS-1) Spiked Sample: 416517

QC Batch: 129118  
Prep Batch: 109352

Date Analyzed: 2016-03-30  
QC Preparation: 2016-03-29

Analyzed By: AK  
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	15.2	mg/Kg	1	20.0	<1.76	76	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		5	15.9	mg/Kg	1	20.0	<1.76	80	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	1.89	mg/Kg	1	2	100	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.75	mg/Kg	1	2	95	88	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 416451

QC Batch: 129143  
Prep Batch: 109385

Date Analyzed: 2016-03-29  
QC Preparation: 2016-03-29

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	291	mg/Kg	1	250	17.6	109	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	282	mg/Kg	1	250	17.6	106	80 - 120	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: March 31, 2016  
15-0171-01

Work Order: 16032817  
David Billbrey 8" Pipeline

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**Matrix Spike (xMS-1)** Spiked Sample: 416451

QC Batch: 129144  
Prep Batch: 109387

Date Analyzed: 2016-03-30  
QC Preparation: 2016-03-29

Analyzed By: RL  
Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	285	mg/Kg	1	250	13.8	108	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	272	mg/Kg	1	250	13.8	103	80 - 120	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 416519

QC Batch: 129165  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	542	mg/Kg	1	500	<8.47	108	49.3 - 138

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	528	mg/Kg	1	500	<8.47	106	49.3 - 138	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	34.7	35.2	mg/Kg	1	25	139	141	58.2 - 150

**Matrix Spike (MS-1)** Spiked Sample: 416519

QC Batch: 129166  
Prep Batch: 109409

Date Analyzed: 2016-03-31  
QC Preparation: 2016-03-30

Analyzed By: HJ  
Prepared By: HJ

Report Date: March 31, 2016  
15-0171-01

Work Order: 16032817  
David Billbrey 8" Pipeline

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Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO	Q <sub>s</sub>	Q <sub>s</sub>		<7.48	mg/Kg	1	500	<7.48	0	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
ORO	Q <sub>s</sub>	Q <sub>s</sub>		<7.48	mg/Kg	1	500	<7.48	0	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	Q <sub>sr</sub>	Q <sub>sr</sub>	34.1	34.9	mg/Kg	1	25	136	140	70 - 130

## Calibration Standards

### Standard (CCV-1)

QC Batch: 129118

Date Analyzed: 2016-03-30

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.894	89	80 - 120	2016-03-30

### Standard (CCV-2)

QC Batch: 129118

Date Analyzed: 2016-03-30

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.879	88	80 - 120	2016-03-30

### Standard (CCV-1)

QC Batch: 129143

Date Analyzed: 2016-03-29

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.1	100	90 - 110	2016-03-29

### Standard (CCV-2)

QC Batch: 129143

Date Analyzed: 2016-03-29

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.9	100	90 - 110	2016-03-29

Report Date: March 31, 2016  
15-0171-01

Work Order: 16032817  
David Bilbrey 8" Pipeline

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#### Standard (CCV-1)

QC Batch: 129144

Date Analyzed: 2016-03-30

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	25.1	100	90 - 110	2016-03-30

#### Standard (CCV-2)

QC Batch: 129144

Date Analyzed: 2016-03-30

Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.6	98	90 - 110	2016-03-30

#### Standard (CCV-1)

QC Batch: 129165

Date Analyzed: 2016-03-31

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	558	112	80 - 120	2016-03-31

#### Standard (CCV-2)

QC Batch: 129165

Date Analyzed: 2016-03-31

Analyzed By: HJ

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	572	114	80 - 120	2016-03-31

#### Standard (CCV-1)

QC Batch: 129166

Date Analyzed: 2016-03-31

Analyzed By: HJ



Param		Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO	qc	qc		mg/Kg	500	0.00	0	80 - 120	2016-03-31

Standard (CCV-2)

QC Batch: 129166

Date Analyzed: 2016-03-31

Analyzed By: HJ

Param		Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO	qc	qc		mg/Kg	500	0.00	0	80 - 120	2016-03-31

## Appendix

### Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2015-066	Lubbock

### Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

---

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

---

**Attachments**

The scanned attachments will follow this page.  
Please note, each attachment may consist of more than one page.

WO#: 16032817

CHAIN-OF-CUSTODY

**Arson & Associates, Inc.**  
Environmental Consultants  
507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 3/28/2016 PAGE 1 OF 1  
LAB WORK ORDER #:  
PROJECT LOCATION OR NAME: David Bilbrey 8" Pipeline  
LAI PROJECT #: JS-0171-01 COLLECTOR: Michael Gant

Data Reported to:

TRRP report? <input type="checkbox"/> Yes <input type="checkbox"/> No	S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER	# of Containers	PRESERVATION			Matrix	Time	Date	Lab #	Field Sample I.D.	TIME ZONE: Time zone/State: <u>MST/NM</u>
				HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH □						
			1				S	3/24	11:17		Swall 20'	
			1				S	3/24	11:45		NE wall 20'	
			1				S	3/24	11:22		SE wall 15'	
			1				S	3/24	11:40		N wall 20'	
			1				S	3/24	11:34		N wall 15'	
			1				S	3/24	11:25		E wall 20'	
TOTAL												

ANALYSES	TRPH 418.1 □	TRPH 1005 □	TRPH 1006 □	8081 PESTICIDES □	8082 PCBs □	TCLP - METALS (RCRA) □	TCLP - PEST □	LEAD - METALS (RCRA) □	RCI □	TDS □	BH □	EXPLOSIVES □	CHLORIDES □	300.0 □	FIELD NOTES
BTEX □	X	X	X												416516
DIESEL - MOD 8015 □	X	X	X												517
VOC 8260 □	X	X	X												518
SVOC 8270 □	X	X	X												519
8081 PESTICIDES □	X	X	X												520
TCLP - METALS (RCRA) □	X	X	X												521
TCLP - PEST □															
LEAD - METALS (RCRA) □															
RCI □															
TDS □															
BH □															
EXPLOSIVES □															
CHLORIDES □															
300.0 □															

RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
<i>Michael Gant</i>	3/28 15:15	<i>Michael Gant</i>	3/28 15:15	<i>Michael Gant</i>	3/28 15:15
<i>Michael Gant</i>	3/28 15:18	<i>Michael Gant</i>	3/28 15:18	<i>Michael Gant</i>	3/28 15:18
<i>Michael Gant</i>	3/28 15:18	<i>Michael Gant</i>	3/28 15:18	<i>Michael Gant</i>	3/28 15:18

LABORATORY USE ONLY:	TURN AROUND TIME	CUSTOMER USE ONLY:
RECEIVING TEMP: <u>7.4</u>	NORMAL <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	RECEIVING TEMP: <u>7.4</u>
CUSTOMER SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED		CUSTOMER SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED
CARRIER BILL # <u>LS 27571520</u>		CARRIER BILL # <u>LS 27571520</u>
HAND DELIVERED <input checked="" type="checkbox"/>		HAND DELIVERED <input checked="" type="checkbox"/>

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
10014 SCR 1213  
Midland, TX 79706**



# Analytical Report

**Prepared for:**

Mark Larson  
Larson & Associates, Inc.  
P.O. Box 50685  
Midland, TX 79710

Project: David Bilbrey 8" Pipeline

Project Number: 15-0171-01

Location: New Mexico

Lab Order Number: 6D08002



NELAP/TCEQ # T104704156-13-3

Report Date: 04/13/16

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NE Soil Pile	6D08002-01	Soil	04/07/16 12:00	04-07-2016 17:00

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**NE Soil Pile**  
**6D08002-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	6.0	0.1	%	1	P6D1203	04/12/16	04/12/16	% calculation
------------	-----	-----	---	---	---------	----------	----------	---------------

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	109	26.6	mg/kg dry	1	P6D1204	04/11/16	04/11/16	TPH 8015M	
>C12-C28	997	26.6	mg/kg dry	1	P6D1204	04/11/16	04/11/16	TPH 8015M	
>C28-C35	127	26.6	mg/kg dry	1	P6D1204	04/11/16	04/11/16	TPH 8015M	
Surrogate: 1-Chlorooctane		124 %	70-130		P6D1204	04/11/16	04/11/16	TPH 8015M	
Surrogate: o-Terphenyl		130 %	70-130		P6D1204	04/11/16	04/11/16	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	1230	26.6	mg/kg dry	1	[CALC]	04/11/16	04/11/16	calc	

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P6D1203 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P6D1203-BLK1)**

Prepared: 04/12/16 Analyzed: 04/13/16

% Moisture	ND	0.1	%							
------------	----	-----	---	--	--	--	--	--	--	--

**Duplicate (P6D1203-DUP1)**

Source: 6D08004-05

Prepared: 04/12/16 Analyzed: 04/13/16

% Moisture	6.0	0.1	%		6.0			0.00	20	
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**Duplicate (P6D1203-DUP2)**

Source: 6D08011-01

Prepared: 04/12/16 Analyzed: 04/13/16

% Moisture	11.0	0.1	%		10.0			9.52	20	
------------	------	-----	---	--	------	--	--	------	----	--



Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch P6D1204 - TX 1005**

**Blank (P6D1204-BLK1)**

Prepared & Analyzed: 04/11/16

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	59.6		"	50.0		119	70-130			

**LCS (P6D1204-BS1)**

Prepared & Analyzed: 04/11/16

C6-C12	794	25.0	mg/kg wet	1000		79.4	75-125			
>C12-C28	883	25.0	"	1000		88.3	75-125			
Surrogate: 1-Chlorooctane	119		"	100		119	70-130			
Surrogate: o-Terphenyl	56.3		"	50.0		113	70-130			

**LCS Dup (P6D1204-BSD1)**

Prepared & Analyzed: 04/11/16

C6-C12	770	25.0	mg/kg wet	1000		77.0	75-125	3.07	20	
>C12-C28	843	25.0	"	1000		84.3	75-125	4.65	20	
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	57.2		"	50.0		114	70-130			

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: David Bilbrey 8" Pipeline  
Project Number: 15-0171-01  
Project Manager: Mark Larson

Fax: (432) 687-0456

### Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

4/13/2016

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

507 N. Marientfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

**Data Reported to:**

DATE: 4/11/2016  
PO #: \_\_\_\_\_  
PROJECT LOCATION OR  
LAI PROJECT #: \_\_\_\_\_

LAB WORK ORDER #  
E: 15-0121-01

COLLECTOR:

TRRP report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER	
TIME ZONE: Time zone/State: MM/DDST		Lab #		Date	
Field Sample I.D. NES-1 Pile		417		12:00	
Matrix		S		1	
# of Containers		HCl		HNO <sub>3</sub>	
H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/>		ICE		UNPRESERVED	
ANALYSES		BTEX <input type="checkbox"/> MTBE <input type="checkbox"/>		TRPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/>	
GASOLINE MOD 8015 <input checked="" type="checkbox"/>		DIESEL - MOD 8015 <input checked="" type="checkbox"/>		VOC 8260 <input type="checkbox"/>	
SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HCLPAH <input type="checkbox"/>		8081 PESTICIDES <input type="checkbox"/> 8151 HERBICIDES <input type="checkbox"/>		8082 PCBs <input type="checkbox"/>	
TCLP - METALS (RCRA) <input type="checkbox"/> TCLP VOC <input type="checkbox"/>		TCLP - PEST <input type="checkbox"/> HERB <input type="checkbox"/> Semi-VOC <input type="checkbox"/>		TOTAL METALS (RCRA) <input type="checkbox"/> OTHER LIST <input type="checkbox"/>	
LEAD - TOTAL <input type="checkbox"/> D.W. 200.8 <input type="checkbox"/> TCLP <input type="checkbox"/>		RCI <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/>		TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/>	
PH <input type="checkbox"/> HEXAVALENT CHROMIUM <input type="checkbox"/>		EXPLOSIVES <input type="checkbox"/> PCHLORATE <input type="checkbox"/>		CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/>	
FIE					
TURN AROUND TIME		NORMAL <input type="checkbox"/>		1 DAY <input type="checkbox"/>	
2 DAY <input checked="" type="checkbox"/>		OTHER <input type="checkbox"/>			
LABORATORY USE ONLY:		RECEIVING TEMP: 6.0		THERM #: 1	
CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/>		CARRIER BILL #		HAND DELIVERED <input type="checkbox"/>	

## **APPENDIX B**

### **Photographs**

## PHOTOGRAPHS



Leak Repair and Initial Soil Samples Viewing North, December 22, 2015



Leak Repair and Initial Soil Samples Viewing South, December 22, 2015



**PHOTOGRAPHS**



Excavation by Watson Construction Viewing North, March 23, 2016



Excavation by Watson Construction Viewing South, March 23, 2016

## PHOTOGRAPHS



Excavation Backfilling Viewing South, April 8, 2016  
Note: staining in center removed prior to backfilling



Excavation Backfilling Viewing North, April 8, 2016



**PHOTOGRAPHS**



Excavation Backfilling Viewing East, April 8, 2016



Finished Excavation Viewing North, April 26, 2016



**PHOTOGRAPHS**



Finished Excavation Viewing South, April 26, 2016

## **APPENDIX C**

### **Waste Manifests**



**Gandy Marley, Inc.**

P.O. Box 1658 Roswell, NM 88202

Phone 575-347-0434 Fax 575-347-0435

**Targa Midstream Services**

**PO Box 1689**

**Lovington, NM 88260**

**4/27/2018**

**Detailed Report of material for Invoices 23885 thru 23886**

**EXEMPT OCO**

**Origin: DAVID BILBREY**

<b>Date:</b>	<b>Ticket No:</b>	<b>Description</b>	<b>Transporter:</b>	<b>Cell:</b>	<b>Units</b>	<b>Unit Type:</b>
4/19/2018	31701		Gandy Inc.	LF	20	YARDS
4/19/2018	31702		Gandy Inc.	LF	20	YARDS
4/19/2018	31703		Gandy Inc.	LF	20	YARDS
4/19/2018	31704		Gandy Inc.	LF	20	YARDS
4/19/2018	31705		Gandy Inc.	LF	20	YARDS
4/19/2018	31706		Gandy Inc.	LF	20	YARDS
4/19/2018	31707		Gandy Inc.	LF	20	YARDS
4/19/2018	31708		Gandy Inc.	LF	20	YARDS
4/19/2018	31709		Gandy Inc.	LF	20	YARDS
4/19/2018	31710		Gandy Inc.	LF	20	YARDS
4/20/2018	31711		Gandy Inc.	LF	20	YARDS
4/20/2018	31712		Gandy Inc.	LF	20	YARDS
4/20/2018	31713		Gandy Inc.	LF	20	YARDS
4/20/2018	31714		Gandy Inc.	LF	20	YARDS
4/20/2018	31717		Gandy Inc.	LF	20	YARDS
4/20/2018	31718		Gandy Inc.	LF	20	YARDS
4/20/2018	31719		Gandy Inc.	LF	20	YARDS
4/20/2018	31720		Gandy Inc.	LF	20	YARDS
4/20/2018	31721		Gandy Inc.	LF	20	YARDS
4/20/2018	31722		Gandy Inc.	LF	20	YARDS
4/20/2018	31723		Gandy Inc.	LF	20	YARDS
4/20/2018	31724		Gandy Inc.	LF	20	YARDS
4/20/2018	31725		Gandy Inc.	LF	20	YARDS
4/20/2018	31726		Gandy Inc.	LF	20	YARDS
4/20/2018	31727		Gandy Inc.	LF	20	YARDS
4/20/2018	31728		Gandy Inc.	LF	20	YARDS
4/20/2018	31729		Gandy Inc.	LF	20	YARDS
4/20/2018	31730		Gandy Inc.	LF	20	YARDS
4/21/2018	31731		Gandy Inc.	LF	20	YARDS
4/21/2018	31732		Gandy Inc.	LF	20	YARDS



Targa Midstream Services  
PO Box 1689  
Lovington, NM 88260

4/27/2016

**Gandy Marley, Inc.**

P.O. Box 1658 Roswell, NM 88202

Phone 575-347-0434 Fax 575-347-0435

**Detailed Report of material for Invoices 23885 thru 23885**

4/21/2016 31733	Gandy Inc.	LF	20	YARDS
4/21/2016 31734	Gandy Inc.	LF	20	YARDS
4/21/2016 31735	Gandy Inc.	LF	20	YARDS
4/21/2016 31736	Gandy Inc.	LF	20	YARDS
4/21/2016 31737	Gandy Inc.	LF	20	YARDS
4/21/2016 31738	Gandy Inc.	LF	20	YARDS
4/21/2016 31739	Gandy Inc.	LF	20	YARDS
4/21/2016 31740	Gandy Inc.	LF	20	YARDS
4/21/2016 31741	Gandy Inc.	LF	20	YARDS
4/21/2016 31742	Gandy Inc.	LF	20	YARDS
4/21/2016 31743	Gandy Inc.	LF	20	YARDS
4/25/2016 31744	Gandy Inc.	LF	20	YARDS
4/25/2016 31745	Gandy Inc.	LF	20	YARDS
4/25/2016 31746	Gandy Inc.	LF	20	YARDS
4/25/2016 31751	Gandy Inc.	LF	20	YARDS

**DAVID BILBREY Total YARDS.**

**900 YARDS**

**EXEMPT OCD Total YARDS.**

**900 YARDS**

**EXEMPT OCD Total Units.**

**900 Units**

**Targa Midstream Services Total Units.**

**900 Units**

# GANDY-MARLEY, INC.

P.O. Box 165B  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31701

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 1057 AM/PM

DATE: 04-19-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GMD

Canary - Shipper

Pink - GMD

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31702

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BIRBY

TRANSPORTER COMPANY: GANDY

TIME: 1033 AM/PM

DATE: 04-19-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL [ ] YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1978, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GLO

Canary - Shipper

Pink - GLO

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31703

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 11:09 AM/PM

DATE: 04-19-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil  
☐ BS&W content: \_\_\_\_\_

☐ C-117 No.: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Mark Casper

FACILITY REPRESENTATIVE: g Toeten

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31704

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 11:15 AM PM

DATE: 04-19-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ BS&W content: \_\_\_\_\_

Description: OILY

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GLO

Canary - Shipper

Pink - GLO

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31705

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 11:38 AM PM

DATE: 04-19-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE. CONSERVATION AND RECOVERY ACT OF 1978, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GMB

Canary - Shipper

Pink - GMB

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31706

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 2:23 AM/PM

DATE: 04-19-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL [ ] : YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE. CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statomant at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - Old

Canary - Shipper

Pink - GM

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31707

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 2:23 AM ☒ PM

DATE: 04-19-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: David Bilbrey

FACILITY REPRESENTATIVE: J. Tolton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31708

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 2:31 AM/PM

DATE: 04-19-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §8901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GJM

Canary - Shipper

Pink - GJM

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31709

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBRY

TRANSPORTER COMPANY: GANDY

TIME: 2:45 AM (PM)

DATE: 04-19-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: 341 820

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §8901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31710

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 2:45 AM (PM)

DATE: 04-19-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GLE

Canary - Shipper

Pink - GLE

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31711

LEASE OPERATOR/SHIPPER/COMPANY: TRAGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:21 AM/PM

DATE: 04-20-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL [ ] : YARDS 20 : CELLS 4F : [ ]

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Rudy Sanchez

FACILITY REPRESENTATIVE: J. Tilton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1858  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31712

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:21 AM/PM

DATE: 04-20-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1978, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31713

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9 29 AM/PM

DATE: 04-20-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: 241821

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - QMI

Canary - Shipper

Pink - QMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31714

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:41 ~~AM~~ PM

DATE: 04-20-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: Oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# 4F : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - G11

Canary - Shipper

Pink - G11

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1858  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31717

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:57 AM/PM

DATE: 04-20-16 VEHICLE NO.: 371

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: OILY

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE:

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1858  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31718

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 10:01 AM PM

DATE: 04-20-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: OILY

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# 4F : ☐ : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Norma Corder

FACILITY REPRESENTATIVE: J. Toetson

White - OMI

Canary - Shipper

Pink - OMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31719

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:27 AM PM

DATE: 04-20-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: Oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement of the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Rudolph Sanchez

FACILITY REPRESENTATIVE: J. T. Totten

White - QM

Canary - Shipper

Pink - QM

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1858  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31720

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:27AM (PM)

DATE: 04-20-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: Bilby

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ :

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVEN: Disco Jones

FACILITY REPRESENTATIVE: J. Tilton

White - GUN

Canary - Shipper

Pink - GUN

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31721

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:49 AM PM

DATE: 04-20-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Norma Curcio

FACILITY REPRESENTATIVE: J. Tolton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31722

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:51 AM (PM)

DATE: 04-20-16

VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: 241 821

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1978, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GMD

Canary - Shipper

Pink - GMD

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31723

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 1:05 AM (PM)

DATE: 04-20-16 VEHICLE NO.: 353 DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ : \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - G&M

Canary - Shipper

Pink - G&M

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31724

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: Gandy

TIME: 1:13 AM (PM)

DATE: 04-20-16 VEHICLE NO.: 377

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

### OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

~~THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.~~

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31725

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 3:27 AM PM

DATE: 04-20-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: OILY

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Let In

FACILITY REPRESENTATIVE: J Tolton

White - GLE

Canary - Shipper

Pink - GLE

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31726

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 3:39 AM PM

DATE: 04-20-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §5901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Rudy Sand

FACILITY REPRESENTATIVE: J. Tector

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31727

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 3:39 AM PM

DATE: 04-20-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31728

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREG

TRANSPORTER COMPANY: GANDY

TIME: 3:51 AM PM

DATE: 04-20-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

### OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6001, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Norma Casas

FACILITY REPRESENTATIVE: g. Tolson

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31729

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 4:01 AM (PM)

DATE: 04-20-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: Oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Chris Price

FACILITY REPRESENTATIVE: J. Teeton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31730

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 4:17 AM PM

DATE: 04-20-16 VEHICLE NO.: 371

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: OILY

COMPANY CONTACT:

VOLUME OF MATERIAL [ ]: YARDS 20 : CELL# LF : [ ] \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: J. Tolton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31731

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:27 AM PM

DATE: 04-21-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 25 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Rudy Sanchez

FACILITY REPRESENTATIVE: J. Tolton

White - G&M

Canary - Shipper

Pink - G&M

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31732

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 927 AM/PM

DATE: 04-21-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

Driver: 

FACILITY REPRESENTATIVE: 

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31733

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:31 AM PM

DATE: 04-21-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

### OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: 241 S22

☐ BS&W content:

Description: Oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE. CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §8901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31734

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:33 AM PM

DATE: 04-21-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Chris Rose

FACILITY REPRESENTATIVE: J Toeton

White - GMI

Canary - Shipper

Black - GMS

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31735

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:41 AM PM

DATE: 04-21-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Younis Curnu

FACILITY REPRESENTATIVE: J. Tolton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31736

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:31 AM/PM

DATE: 04-21-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL [ ]: YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §8901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Rudy Land

FACILITY REPRESENTATIVE: J. Tooten

White - QM

Canary - Shipper

Pink - QM

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31737

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 12:31 AM/PM

DATE: 04-21-16 VEHICLE NO.: 376

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL [ ]: YARDS 20 : CELLS LF : [ ] \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31738

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 1257 AM/PM

DATE: 04-21-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: RIKY

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: 

FACILITY REPRESENTATIVE: 

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31739

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 1:09 AM PM

DATE: 04-21-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

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DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31740

LEASE OPERATOR/SHIPPER/COMPANY: TARGO MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 1:09 AM (PM)

DATE: 04-21-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1970, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Volinda Cerezo

FACILITY REPRESENTATIVE: g Tieton

White - GMD

Canary - Shipper

Pink - GMD

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31741

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBRY

TRANSPORTER COMPANY: GANDY

TIME: 3:39 AM/PM

DATE: 04-21-16 VEHICLE NO.: 353

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO. BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GLS

Canary - Shipper

Pink - GMS

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31742

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 3:47 AM/PM

DATE: 04-21-16 VEHICLE NO.: 369

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: Oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

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DRIVER: \_\_\_\_\_

FACILITY REPRESENTATIVE: \_\_\_\_\_

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31743

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 3:49 AM PM

DATE: 04-21-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Norma Cruz

FACILITY REPRESENTATIVE: J. T. Tilton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31744

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:17 AMPM

DATE: 04-25-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

### OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELL# LF : ☐ \_\_\_\_\_

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: Disa Roca

FACILITY REPRESENTATIVE: J. Treton

White - GMR

Canary - Shipper

Pink - GMR

Gold - Transporter

# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31745

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 11:57 (AM/PM)

DATE: 04-25-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oily

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ : YARDS 20 : CELLS LF : ☐ :

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Demo Cerna

FACILITY REPRESENTATIVE: J Tolton

White - GM

Canary - Shipper

Pink - OMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31746

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILGREY

TRANSPORTER COMPANY: GANDY

TIME: 12:07AM PM

DATE: 04-25-16 VEHICLE NO.: 368

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.: \_\_\_\_\_

☐ BS&W content: \_\_\_\_\_

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL [ ]: YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE. CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §5901, et seq., THE NM HEALTH AND SAF. CODE, §381.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY-MARLEY, INC.'S FACILITY FOR DISPOSAL.

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DRIVER: David Bilgrey

FACILITY REPRESENTATIVE: J. Tolton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter



# GANDY-MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 31751

LEASE OPERATOR/SHIPPER/COMPANY: TARGA MIDSTREAM

LEASE NAME: DAVID BILBREY

TRANSPORTER COMPANY: GANDY

TIME: 9:07 AM PM

DATE: 04-25-16 VEHICLE NO.: 346

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCB

☐ Other Material:

☒ Contaminated soil

☐ C-117 No.:

☐ BS&W content:

Description: oil

COMPANY CONTACT:

VOLUME OF MATERIAL ☐ YARDS 20 : CELL# LF : ☐

AS A CONDITION TO GANDY-MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: Norman Pearson

FACILITY REPRESENTATIVE: R. Teton

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

## **APPENDIX D**

### **Initial and Final 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**

Form C-141  
By JKeys at 10:46 am, Aug 29, 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	Targa Midstream Services	Contact	Ralph England
Address	P.O. Box 1689, Lovington, NM 88260	Telephone No.	575-441-4653
Facility Name	David Bilbrey 8" Pipeline - Site #1	Facility Type	Natural Gas Pipeline
Surface Owner	David Bilbrey	Mineral Owner	API No.

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	18	9S	38E	1433	S	2153	W	Lea

Latitude 33°31'51.49"N Longitude 103° 5'25.23"W

#### NATURE OF RELEASE

Type of Release	Natural Gas Condensate	Volume of Release	5-10 bbls	Volume Recovered	0
Source of Release	8 inch steel pipeline	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	12/2015
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.\*  
N/A

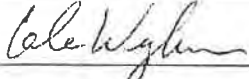

#### Describe Cause of Problem and Remedial Action Taken.\*

The release was caused by corrosion of an 8" steel line transporting natural gas. Release area was sampled on December 21, 2015 by Larson & Associates, Inc. The horizontal and vertical extents were delineated with borings. Lab results indicated impact to about 15 feet bgs. Soil was excavated to about 23 feet bgs.

#### Describe Area Affected and Cleanup Action Taken.\*

Soil was excavated to about 23 feet bgs and disposed at Gandy Marley Landfill (NM-711-1-0019). Please see attached lab results from samples collected on March 16 and 24, 2016 and samples location map (Figure 3).

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Calvin Wrangham	Approved by Environmental Specialist: 		
Title: EHS Manager	Approval Date: 08/29/2016	Expiration Date: 10/29/2016	
E-mail Address: Calvin.Wrangham@targaresources.com	Conditions of Approval: Discrete samples only. Delineate and remediate per NMOCD guidelines.	Attached <input type="checkbox"/> IRP 4419	
Date: 8/19/2016	Phone: 432-688-0542		

\* Attach Additional Sheets If Necessary

nJXK1624238519  
pJXK1624238710

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

Form C-141  
Revised August 8, 2011

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	Targa Midstream Services, LLC.	Contact	Ralph England
Address	P.O. Box 1689, Lovington, NM 88260	Telephone No.	575-441-4653
Facility Name	David Bilbrey 8" Pipeline - Site #1	Facility Type	Natural Gas Pipeline
Surface Owner	David Bilbrey	Mineral Owner	
		API No.	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	18	9S	38E	1433	N	2153	W	Lea

**Latitude** 33°32'4.71" N **Longitude** 103°5'32.62" W

**NATURE OF RELEASE**

Type of Release	Natural Gas Condensate	Volume of Release	5-10 bbls	Volume Recovered	0
Source of Release	8 inch steel pipeline	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	12/2015
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.* N/A		<div><b>APPROVED</b> <b>By Olivia Yu at 2:36 pm, Jun 01, 2017</b></div>			


**Describe Cause of Problem and Remedial Action Taken.\***

The release was caused by corrosion of an 8" steel line transporting natural gas. Release area was sampled on December 21, 2015 by Larson & Associates, Inc. The horizontal and vertical extents were delineated to 25 feet bgs with borings. Soil samples were collected every 5 feet. Lab results indicated impact to about 15 feet bgs. Soil was excavated to about 23 feet bgs.

**Describe Area Affected and Cleanup Action Taken.\***

Impacted soil was excavated to approximately 23 feet bgs. Discrete samples from walls and bottom of excavation below RRAL. Chloride delineated vertically to 250 mg/Kg. Composite soil samples were collected from 4 of 5 soil piles was below RRAL for TPH and chloride. Contaminated soil from Pile 5 was disposed at Gandy Marley Landfill (NM-711-1-0019). Excavation was filled with soil from Piles 1 through 4 and additional soil acquired from landowner used to backfill the excavation. Targa personnel seeded the site based off the landowner's recommendations. No further action requested.

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.

		<b>OIL CONSERVATION DIVISION</b>	
Signature:		Approved by Environmental Specialist: 	
Printed Name:	Cal Wrangham	Approval Date:	6/1/2017
Title:	EHS Manager	Expiration Date:	xx/xx/xxxx
E-mail Address:	CalvinWrangham@targaresources.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date:	9/8/2016	Phone:	432-688-0542

\* Attach Additional Sheets If Necessary

1RP-4419