

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.L.P.	Contact Chuck Tolsma
Address P.O. Box 1909, Eunice, New Mexico 88231	Telephone No. 575-394-2516
Facility Name Parks 4 inch	Facility Type Natural Gas gathering system
Surface Owner Irvin Boyd	Mineral Owner Chevron
API No. Near 30-025-10434	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	23	22S	37E					Lea

Latitude 32.37946 Longitude 103.13977

**NATURE OF RELEASE**

Type of Release Natural Gas	Volume of Release 600mcf	Volume Recovered none
Source of Release Steel Pipeline (corrosion)	Date and Hour of Occurrence unknown	Date and Hour of Discovery 2/4/2013
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

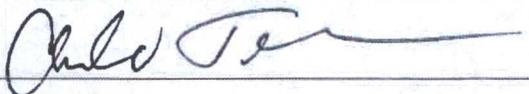
Corrosion in 4" steel pipeline caused leaks. Pipeline was shut-in and section of line replaced with poly pipe. Soil was excavated to approximately 16' below ground surface and disposed at Sundance Services(Parabo) Eunice, New Mexico.

Describe Area Affected and Cleanup Action Taken.\*

Soil was excavated from area (75'x75'). On July 31,2013, Larson and Associates collected several samples from bottom and sidewalls of the excavation for BTEX, TPH, and chloride by laboratory methods SW-8021B, SW-8015 AND E300, resectively.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:	
Printed Name: Chuck Tolsma	Approval Date:	Expiration Date:
Title: Field Supervisor	Conditions of Approval:	
E-mail Address:	Attached <input type="checkbox"/>	
Date: 8/8/13	Phone: 575-631-5424	

DUE TO LIMITED EXTENT OF RESIDUAL  
CONTAMINATION AND PERCEIVED EXTREME  
DEPTH TO CW PROVIDED BY BORINGS EXCAVATION  
BACKFILLING IS APPROVED

*Jeffrey Sekim*

Environmental Specialist

NMOC-DIST 1

11/22/13

HOBBS OCD

NOV 22 2013

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## RELEASE INVESTIGATION REPORT

Parks 4 – Inch Pipeline

1RP-9-13-2956

Lea County, New Mexico

LAI Project No. 13-0116-01

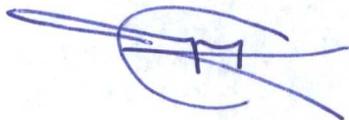
October 2013

Prepared for:

Targa Midstream Services, LLC  
6 Desta Drive, Suite 3300  
Midland, Texas 79705

Prepared by:

Larson & Associates, Inc.  
507 North Marienfeld, Suite 200  
Midland, Texas 79701



Mark J. Larson  
Certified Professional Geologist No. 10490



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October 24, 2013

HOBBS OCD

VIA EMAIL: [GeoffreyR.Leking@state.nm.us](mailto:GeoffreyR.Leking@state.nm.us)

NOV 22 2013

Mr. Geoffrey R. Leking  
Environmental Engineer  
New Mexico Oil Conservation Division - District 1  
1625 N. French Drive  
Hobbs, New Mexico 88240

RECEIVED

Re: **1RP-9-13-2956 - Release Investigation Report, Parks 4-Inch Pipeline, Targa Midstream Services, LLC  
Unit E (SW/4, NW/4), Section 23, Township 22 South, Range 37 East, Lea County, New Mexico, October 2013**

Dear Geoffrey:

The enclosed report is submitted to the New Mexico Oil Conservation Division (OCD) on behalf of Targa Midstream Services, LLC (Targa) by Larson & Associates, Inc. (LAI), to present the investigation and remediation of a natural gas liquids release from 4-inch pipeline ("Parks 4") d east) in Unit E (SW/4, NW/4), Section 23, Township 22 South, Range 37 East in Lea County, New Mexico. Your approval for closing the excavation is requested. The initial C-141 is presented in Appendix D. The final C-141 will be submitted after filling the excavation. Kindly forward the approved closure request to Mr. Cal Wrangham, 6 Desta Drive, Suite 3300, Midland, Texas 79705. You may contact Mr. Wrangham by phone at 432-688-0542 or by email at [CalvinWrangham@targaresources.com](mailto:CalvinWrangham@targaresources.com). I may be reached at (432) 6876-0901 or by email at [mark@laenvironmental.com](mailto:mark@laenvironmental.com).

Sincerely,

**Larson & Associates, Inc.**

A handwritten signature in blue ink, appearing to read 'M. Larson', with a large flourish extending to the right.

Mark J. Larson, P.G.  
(432) 687-0901  
[mark@laenvironmental.com](mailto:mark@laenvironmental.com)

cc: Cal Wrangham - Targa  
David McQuade - Targa

Encl.

## 1.0 EXECUTIVE SUMMARY

This report is submitted to the New Mexico Oil Conservation Division (OCD) District 1, in Hobbs, New Mexico, on behalf of Targa Midstream Services, LLC (Targa), to present the investigation and remediation of a natural gas liquid (NGL) release from the Parks 4 inch pipeline (Site). The Site is located in Unit E (SW/4, NW/4), Section 23, Township 22 South, Range 37 east, in Lea County, New Mexico. The geodetic position is north 32° 22' 46.56" and west 103° 08' 23.65". The release was discovered on February 4, 2013. The initial C-141 was submitted to the OCD on August 8, 2013. The estimated volume of the release was approximately 600 mcf of natural gas and was caused by external corrosion of the steel pipe. Targa personnel replaced the steel pipe with approximately 100 feet of poly pipe. Approximately 700 cubic yards of soil was excavated from the Site and disposed at Sundance Services located east of Eunice, New Mexico. Remediation project (RP) number 1RP-9-13-2956 was assigned to the release by OCD.

On July 31, 2013, personnel from Larson & Associates, Inc. (LAI) collected bottom and sidewall samples from the excavation. The samples were delivered under preservation and chain of custody to Permian Basin Environmental Laboratory (PBELAB) and analyzed for benzene, toluene, ethyl benzene, xylenes (BTEX) by method SW0846-8021B, total petroleum hydrocarbons (TPH), including gasoline (GRO), diesel (DRO) and oil (ORO) range organics by method SW-846-8015 and chloride by method E300. Benzene and BTEX were below the method detection limit (MDL) and TPH was 3,354 milligrams per kilogram (mg/Kg) in sample SWW-10 collected from the west sidewall at about 10 feet below ground surface (bgs). Chloride was 786 mg/kg and 255 mg/Kg in sidewall samples SWN-6 and SWW-6, respectively, and 282 mg/kg in bottom sample BSPLS-5.

On September 4, 2013, Scarborough Drilling, Inc. (SDI) used an air rotary rig and jam tube sampler to collect soil samples from two borings (BH-1 and BH-2) that were drilled near the west side of the excavation (BH-1) and about 20 feet west of the excavation (BH-2). The soil samples were collected about every 5 feet (0, 5, 10, 15, 20, 25, 30, 40 and 50) for field headspace and analysis. The headspace analysis was performed with a calibrated Thermo Model 580 photoionization detector (PID). PID readings exceeded 100 parts per million (ppm) in samples BH-1, 10 (232 ppm), 15 (272 ppm) and 20 (170 ppm) feet bgs and were analyzed for BTEX by method SW-846-8021B. Samples were analyzed for TPH by method SW-846-8015 and chloride by E300. Benzene and BTEX were below the OCD recommended remediation action levels (RRAL) of 10 and 50 mg/Kg, respectively. TPH exceeded the RRAL of 5,000 mg/Kg in samples BH-1, 15 feet (5,820 mg/Kg) and BH-1, 20 feet (6,490 mg/Kg). Groundwater was not observed in the borings after about 48 hours therefore it is concluded the groundwater is not present in the Ogallala formation at this location. The borings were plugged with bentonite.

Targa requests permission to fill the excavation with clean soil. The surface will be seeded to a seed blend recommended for the area. A final report will be submitted to the OCD upon completion of the excavation backfilling.

## 2.0 INTRODUCTION

Larson & Associates, Inc. (LAI) submits this report to the New Mexico Oil Conservation Division (OCD) on behalf of Targa Midstream Services, LLC (Targa) to present the analysis of soil samples collected from an excavation and borings (BH-1 and BH-2) at the Parks 4 inch pipeline release (Site). The volume of the release was estimated at 600 mcf of natural gas. Targa submitted an initial C-141 August 8, 2013. The OCD assigned remediation project number 1RP-9-13-2956 to the release. The Site is located in Unit E (SW/4, NW/4), Section 23, Township 22 South, Range 37 east, in Lea County, New Mexico. The geodetic position is north 32° 22' 46.56" and west 103° 08' 23.65". Figure 1 presents a location and topographic map. Figure 2 presents an aerial map.

### 2.1 Initial Response

Targa personnel discovered the release on February 4, 2013 which was caused by external corrosion of the 4" steel pipe. The steel pipe was replaced with about 100 feet of poly pipe. Environmental Plus, Inc., located in Eunice, New Mexico, excavated approximately 770 cubic yards of soil which was disposed at Sundance Services (NM-1-0003) located east of Eunice, New Mexico. Soil was excavated to a maximum depth of about 16 feet below ground surface (bgs) from an area measuring about 75 x 75 feet. Figure 3 presents a Site drawing.

### 2.2 Setting

The Site is located about 3.5 miles southeast of Eunice, New Mexico. The surface elevation is approximately 3,345 feet above mean sea level (MSL) and slopes gently to the southeast. The soil is designated "Berino-Cacique loamy sands, 0 to 3 percent slopes (Be)" with an "A" horizon of brown to reddish brown loamy and fine loamy sand. The "B" horizon is reddish brown to yellowish red heavy fine sandy loam to sandy clay loam. The "C" horizon, between about 29 and 60 inches, is soft to strongly cemented caliche. The soil is typically used for range and wildlife habitat.

According to the *Geologic Map of New Mexico* and the *Geologic Atlas of Texas, Hobbs Sheet* the surface geology is comprised of Holocene to mid-Pleistocene age wind-blown sand. This material was derived principally from reworking the underlying Blackwater Draw and Ogallala formations. The Ogallala formation is comprised of fluvial sand, silt, clay and localized gravel, with indistinct to massive crossbeds. In the Eunice area, the Ogallala formation consists mainly of unconsolidated to poorly consolidated, very fine to medium-grained quartz sand and gravel, with minor amount of silt and clay.

An upper-most unit, the Blackwater Draw formation, consists of reddish brown, very fine to fine grained eolian sand with minor amounts of clay and caliche. Locally the "C" horizon of the Berino-Cacique loamy sands, 0 to 3 percent slopes, is called the caprock or caliche. The caliche forms a hard, erosion resistant, pedogenic calcrete that is about 22 feet thick. The Ogallala formation is underlain by the Chile formation (Triassic) of the Dockum Group. The Chinle formation is comprised of clay, silty clay, shale and sandstone and is the lower boundary for groundwater in the Ogallala formation.

On September 4, 2013, LAI personnel supervised drilling two (2) soil borings (BH-1 and BH-2) at the Site. The borings were drilled to about 51 feet bgs and encountered the Chinle formation at about 48 bgs. The borings were gauged for groundwater which was not observed approximately 48 hours after drilling therefore it is concluded that groundwater is not present in the Ogallala formation at this location.

## 3.0 INVESTIGATION

### 3.1 Soil Samples

On July 31, 2013, LAI personnel used a stainless steel hand auger to collect soil samples from the excavation sidewalls and bottom. Sixteen (16) sidewall and five (5) bottom samples were collected in 4 ounce glass jars that were submitted under preservation and chain of custody to Permian Basin Environmental Lab (PBELAB), a National Environmental Laboratory Accreditation Programs (NELAP) accredited laboratory, located in Midland, Texas. The laboratory analyzed the samples for benzene, toluene, ethyl benzene, xylenes (BTEX) by method SW-846-8021B, total petroleum hydrocarbon (TPH) including gasoline (GRO), diesel (DRO) and oil (ORO) range hydrocarbons by method SW-846-8015 and chloride by method E300. Table 1 presents an analytical data summary. Figure 4 presents a soil sample location map. Appendix A presents the laboratory report.

Referring to Table 1, BTEX was not reported at concentrations above the method detection limit (MDL). TPH was below the method detection limit (MDL) except sample SWW-10 which was collected from the west sidewall at about 10 feet bgs and reported TPH at 3,354 milligrams per kilogram (mg/Kg). Chloride exceeded 250 mg/Kg in sidewall samples SWN-6 (786 mg/Kg) and SWW-6 (255 mg/Kg) and bottom sample BSPLS-5 (282 mg/Kg).

### 3.2 Soil Borings

On September 4, 2013, Scarborough Drilling, Inc. (SDI) used an air rotary rig and jam tube sampler to collect soil samples from two (2) locations near the west edge of the excavation (BH-1) and about 20 feet west of the excavation (BH-2). The borings were drilled to approximately 51 feet bgs and the Chinle formation (redbed) was encountered at 48 feet bgs. Groundwater was not observed in the borings after about 48 hours therefore it is concluded that groundwater is not present in the Ogallala formation at this location. The borings were plugged with bentonite. Soil boring logs were prepared according to the Unified Soil Classification System (USCS). Figure 4 presents the boring locations. Appendix B presents the boring logs.

Soil samples were collected at ground surface and about every 5 feet thereafter (5, 10, 15, 20, 25, 30, 40 and 50 feet bgs). The samples were collected in 4 ounce glass sample jars that were labeled and delivered under preservation and chain of custody to PBELAB. Duplicate samples were collected in 8 ounce glass jars for headspace analysis which was performed with a calibrated Thermo Model 580 photoionization detector (PID). PID readings exceeded 100 parts per million (ppm) in samples BH-1 at 10 (232 ppm), 15 (272 ppm) and 20 (170 ppm) feet which were analyzed by the laboratory for BTEX and TPH. Samples from BH-1 (5 feet) and BH-2 (10, 15 and 20 feet) were also analyzed for TPH. All samples were analyzed for chloride. Table 2 presents the analytical data summary. Appendix A presents the laboratory report.

Referring to Table 2, benzene was 0.00274 and 0.00170 mg/Kg, in samples BH-1, 10 and 15 feet. Benzene was less than the MDL in sample BH-1, 20 feet. BTEX was 0.05630, 0.06160 and 0.01262 mg/Kg in samples BH-1, 10, 15 and 20 feet. TPH was less than the MDL (<30 mg/Kg), 4,750, 5,820, 6,490 and 240 mg/Kg in samples BH-1, 5, 10, 15, 20 and 25 feet, respectively. Chloride ranged from 15.1 mg/Kg (BH-2, 15 feet) to 205 mg/Kg (BH-2, 25 feet).

## 4.0 CONCLUSIONS

Remediation action levels were calculated for benzene, BTEX and TPH using criteria established by the OCD (*Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993*) based on the following:

Ranking Criteria	Result	Ranking Score
Depth-to-Groundwater	>100 feet	0
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
	<b>Total Score:</b>	<b>0</b>

The remediation action levels for benzene, TBTEX and TPH are 10 mg/kg, 50 mg/kg and 5,000 mg/kg (TPH), respectively.

The following conclusions are based on the OCD recommended remediation action level (RRAL):

- Benzene and BTEX are below the RRAL in all soil samples;
- TPH exceeds the RRAL (5,000 mg/Kg), in samples BH-1, 15 feet (5,820 mg/Kg) and BH-1, 20 feet (6,490 mg/Kg);
- Chloride was delineated vertically and horizontally to 250 mg/Kg.

## 5.0 RECOMMENDATIONS

Targa requests no further action for the release and permission to fill the excavation with clean soil. The surface will be seeded to a seed blend recommended for the area. A final report, including final C-141, will be submitted to the OCD upon completion of the excavation backfilling. Appendix C presents photographs. Appendix D presents the initial C-141.

Table 1  
 Excavation Soil Sample Analytical Data Summary  
 Targa Midstream Services, L.P., Parks 4" Pipeline Release  
 Unit K (NE/4, SW/4), Section 23, Township 22 South, Range 37 East  
 Lea County, New Mexico

Location	Sample	Depth Feet BGS	Date	Status	Chloride (mg/Kg)	10					50					Total TPH (mg/Kg)
						Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Oil (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Oil (mg/Kg)	
<b>OCD RRAL:</b>																
Sidewall - North	SWN-2	2	7/31/2013	In-Situ	104	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	
	SWN-6	6	7/31/2013	In-Situ	786	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	
	SWN-10	10	7/31/2013	In-Situ	52.6	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	
Sidewall - South	SWS-2	2	7/31/2013	In-Situ	123	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	
	SWS-6	6	7/31/2013	In-Situ	15.2	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	<27.8	<27.8	<27.8	<27.8	
	SWS-10	10	7/31/2013	In-Situ	133	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	
	SWS-15	15	7/31/2013	In-Situ	24.1	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	
Sidewall - East	SWE-2	2	7/31/2013	In-Situ	12.4	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	<28.7	<28.7	<28.7	<28.7	
	SWE-6	6	7/31/2013	In-Situ	12.6	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	
	SWE-10	10	7/31/2013	In-Situ	71.0	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	<26.9	<26.9	<26.9	<26.9	
	SWE-15	15	7/31/2013	In-Situ	40.9	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	<26.6	
Sidewall- Northeast	SWNE-6	6	7/31/2013	In-Situ	23.0	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	<27.5	<27.5	<27.5	<27.5	
	ESE-17	17	7-31-103	In-Situ	23.1	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	<29.1	<29.1	<29.1	<29.1	
Sidewall - West	SWW-2	2	7/31/2013	In-Situ	32.6	<0.00103	<0.00206	<25.8	55.6	<25.8	55.6	<25.8	<25.8	<25.8	<26.0	
	SWW-6	6	7/31/2013	In-Situ	255	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	
	SWW-10	10	7/31/2013	In-Situ	142	<0.00101	<0.00202	96.5	2,910	96.5	2,910	347	3,354	3,354		

Table 1  
 Excavation Soil Sample Analytical Data Summary  
 Targa Midstream Services, L.P., Parks 4" Pipeline Release  
 Unit K (NE/4, SW/4), Section 23, Township 22 South, Range 37 East  
 Lea County, New Mexico

Location	Sample	Depth Feet BGS	Date	Status	Chloride (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Oil (mg/Kg)	Total TPH (mg/Kg)
<b>OCD RRAL:</b>											
					<b>10</b>	<b>50</b>	<b>5,000</b>				
Bottom - West	BSW-10	10	7/31/2013	In-Situ	140	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6
Bottom - Pipeline North	NPL	6	7/31/2013	In-Situ	<b>14.8</b>	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3
South	BSPLS-5	5	7/31/2013	In-Situ	<b>282</b>	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8
	BSPL-8	8	7/31/2013	In-Situ	<b>14.6</b>	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6
	BSPL-17	17	7/31/2013	In-Situ	<b>18.7</b>	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5

Notes: All samples analyzed by Permian Basin Environmental Lab, LP, Midland, Texas  
 Samples analyzed via EPA method SW-8021B (BTEX), SW-8015M (TPH) and E-300 (chloride).  
 Depth measurements are in feet below ground surface (bgs).  
 All concentrations are in milligrams per kilogram (mg/kg) equivalent to parts per million (ppm).  
**Bold denotes analyte detected at concentration above the test method detection limit**

Table 2  
 Borehole Soil Sample Analytical Data Summary  
 Targa Midstream Services, L.P., Parks 4" Pipeline Release  
 Unit K (NE/4, SW/4), Section 23, Township 22 South, Range 37 East  
 Lea County, New Mexico

Location	Depth Feet BGS	Date	PID (ppm)	Status	Chloride (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	C12-C28 (mg/Kg)	C28-C35 (mg/Kg)	Total TPH (mg/Kg)	
<b>OCD RRAL:</b>												
			<b>100</b>									<b>5,000</b>
BH-1	0-1	9/4/2013	1.8	In-situ	22.7	--	--	--	--	--	--	
	5-6	9/4/2013	0.0	In-situ	23.1	--	--	<30.5	<30.5	<30.5	<30.5	
	10-11	9/4/2013	232	In-situ	60.8	<b>0.00274</b>	<b>0.05630</b>	<b>284</b>	<b>4000</b>	<b>469</b>	<b>4750</b>	
	15-16	9/4/2013	272	In-situ	32.0	<b>0.00170</b>	<b>0.06160</b>	<b>553</b>	<b>4680</b>	<b>583</b>	<b>5820</b>	
	20-21	9/4/2013	170	In-situ	38.5	<0.00122	<b>0.01262</b>	<b>276</b>	<b>5520</b>	<b>695</b>	<b>6490</b>	
	25-26	9/4/2013	80.1	In-situ	47.0	--	--	<b>37</b>	<b>124</b>	<b>79</b>	<b>240</b>	
	30-31	9/4/2013	0.0	In-situ	62.6	--	--	--	--	--	--	
	40-41	9/4/2013	0.0	In-situ	24.2	--	--	--	--	--	--	
	50-51	9/4/2013	0.0	In-situ	35.0	--	--	--	--	--	--	
	BH-2	0-1	9/4/2013	1.7	In-situ	17.6	--	--	--	--	--	--
5-6		9/4/2013	1.4	In-situ	160.0	--	--	--	--	--	--	
10-11		9/4/2013	1.3	In-situ	75.7	--	--	<26.6	<26.6	<26.6	<79.8	
15-16		9/4/2013	1.3	In-situ	15.1	--	--	<25.8	<25.8	<25.8	<77.3	
20-21		9/4/2013	1.1	In-situ	25.9	--	--	<26.9	<26.9	<26.9	<80.6	
25-25		9/4/2013	1.0	In-situ	205.0	--	--	--	--	--	--	
30-31		9/4/2013	1.1	In-situ	54.8	--	--	--	--	--	--	
40-41	9/4/2013	1.0	In-situ	72.6	--	--	--	--	--	--		
50-51	9/4/2013	1.1	In-situ	33.8	--	--	--	--	--	--		

Notes: All samples analyzed by Permian Basin Environmental Lab, LP, Midland, Texas  
 Samples analyzed via EPA method SW-8021B (BTEX), SW-8015M (TPH) and E-300 (chloride).  
 Depth measurements are in feet below ground surface (bgs).

All concentrations are in milligrams per kilogram (mg/Kg) equivalent to parts per million (ppm).

**Bold denotes analyte detected at concentration above the method detection limit**

**Bold and highlighted denotes analyte detected at concentration above OCD recommended remediation action level (RRAL)**

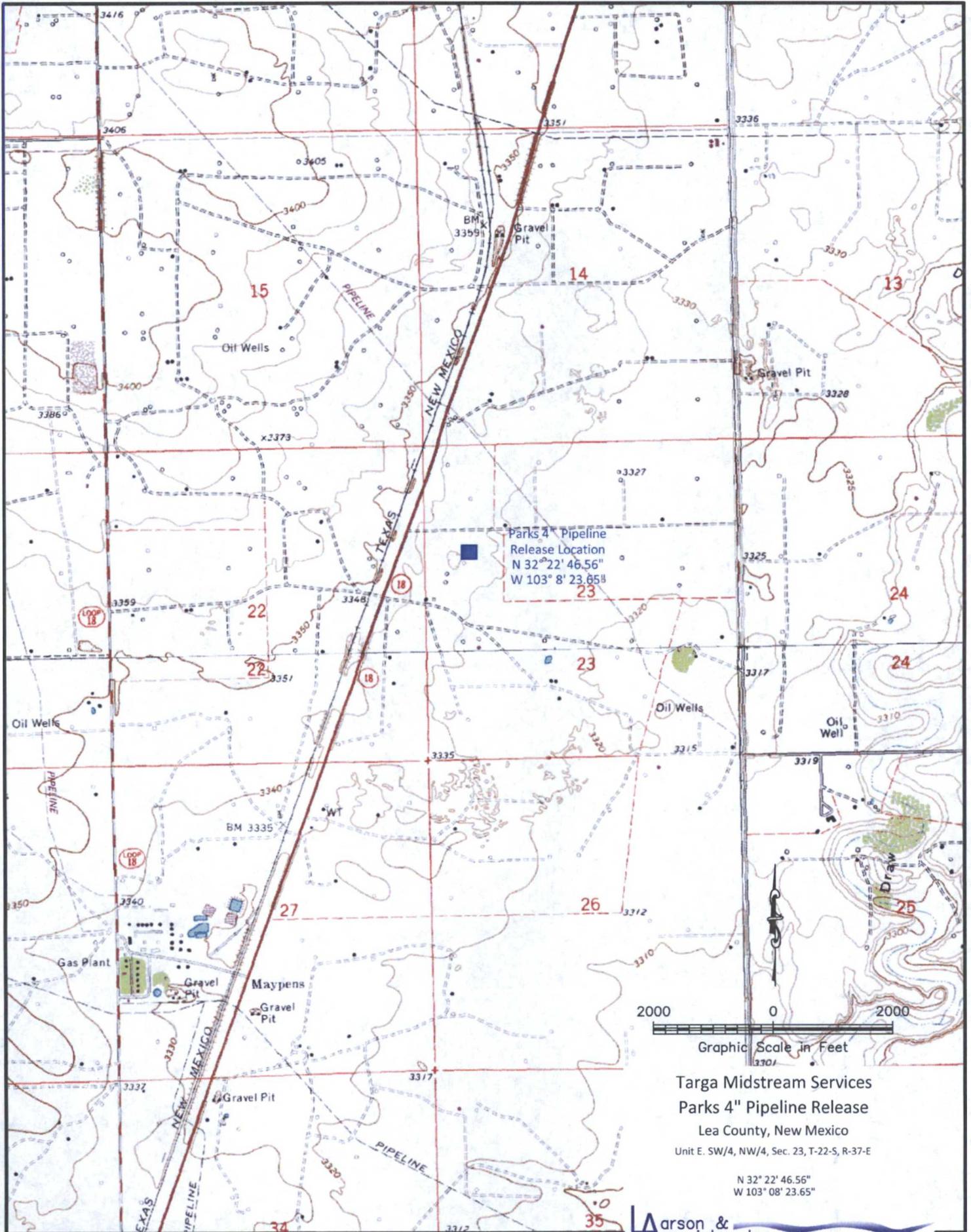


Figure 1 - Topographic Map

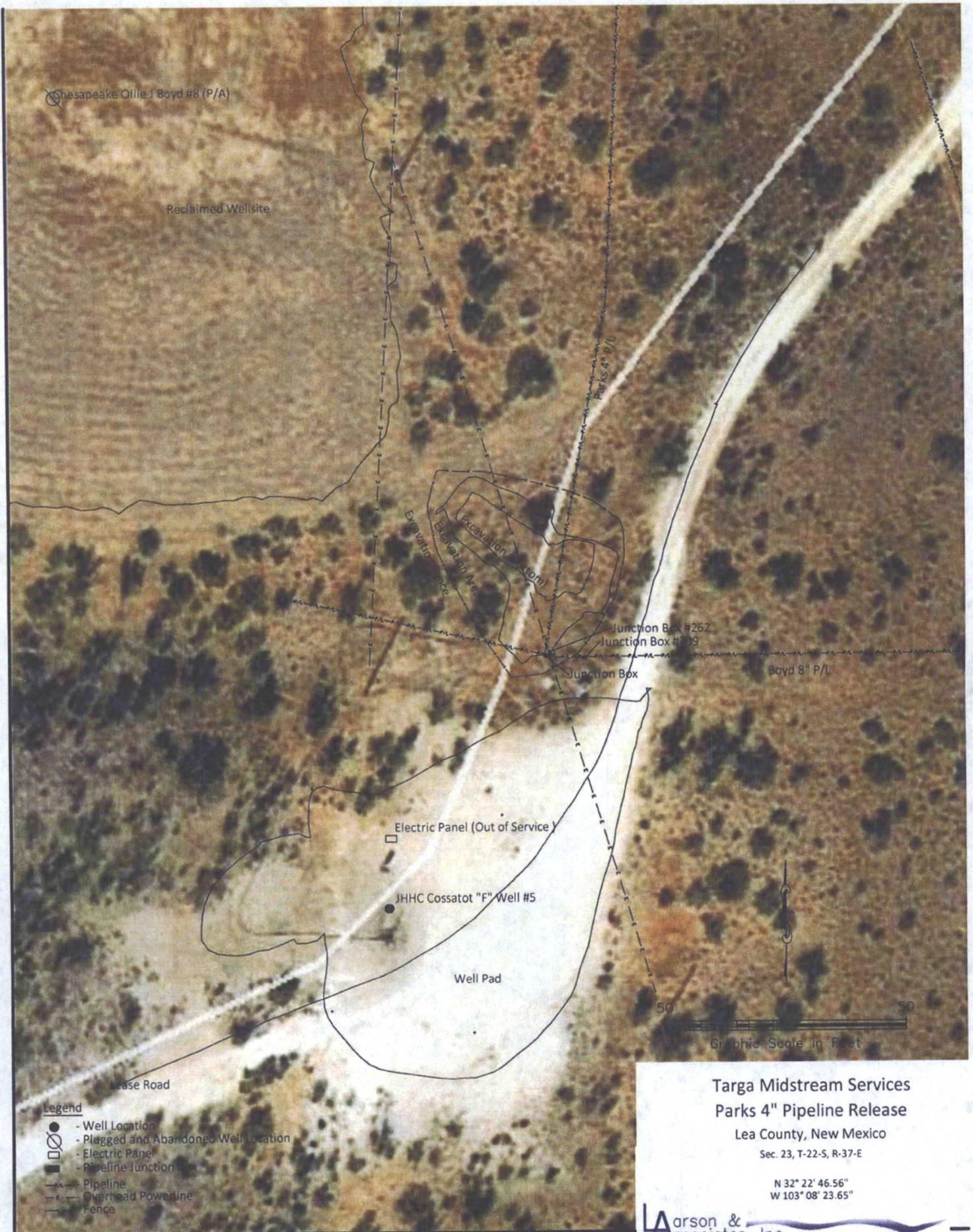
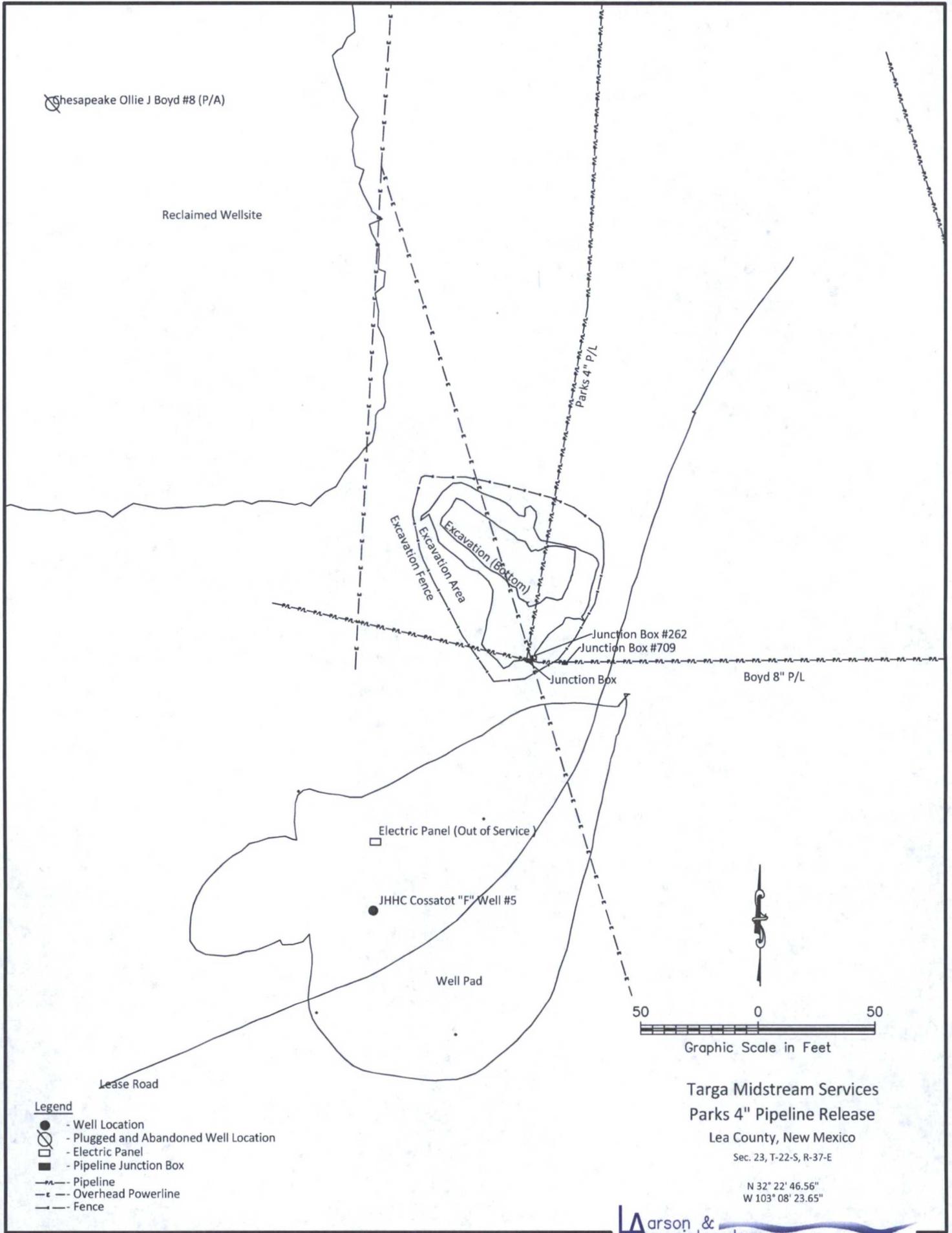


Figure 2 - Aerial Map



Chesapeake Ollie J Boyd #8 (P/A)

Reclaimed Wellsite

Parks 4" P/L

Excavation Fence  
Excavation Area  
Excavation (Bottom)

Junction Box #262  
Junction Box #709

Junction Box

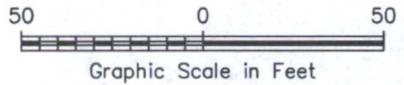
Boyd 8" P/L

Electric Panel (Out of Service)

JHHC Cossatot "F" Well #5

Well Pad

Lease Road



Targa Midstream Services  
Parks 4" Pipeline Release

Lea County, New Mexico

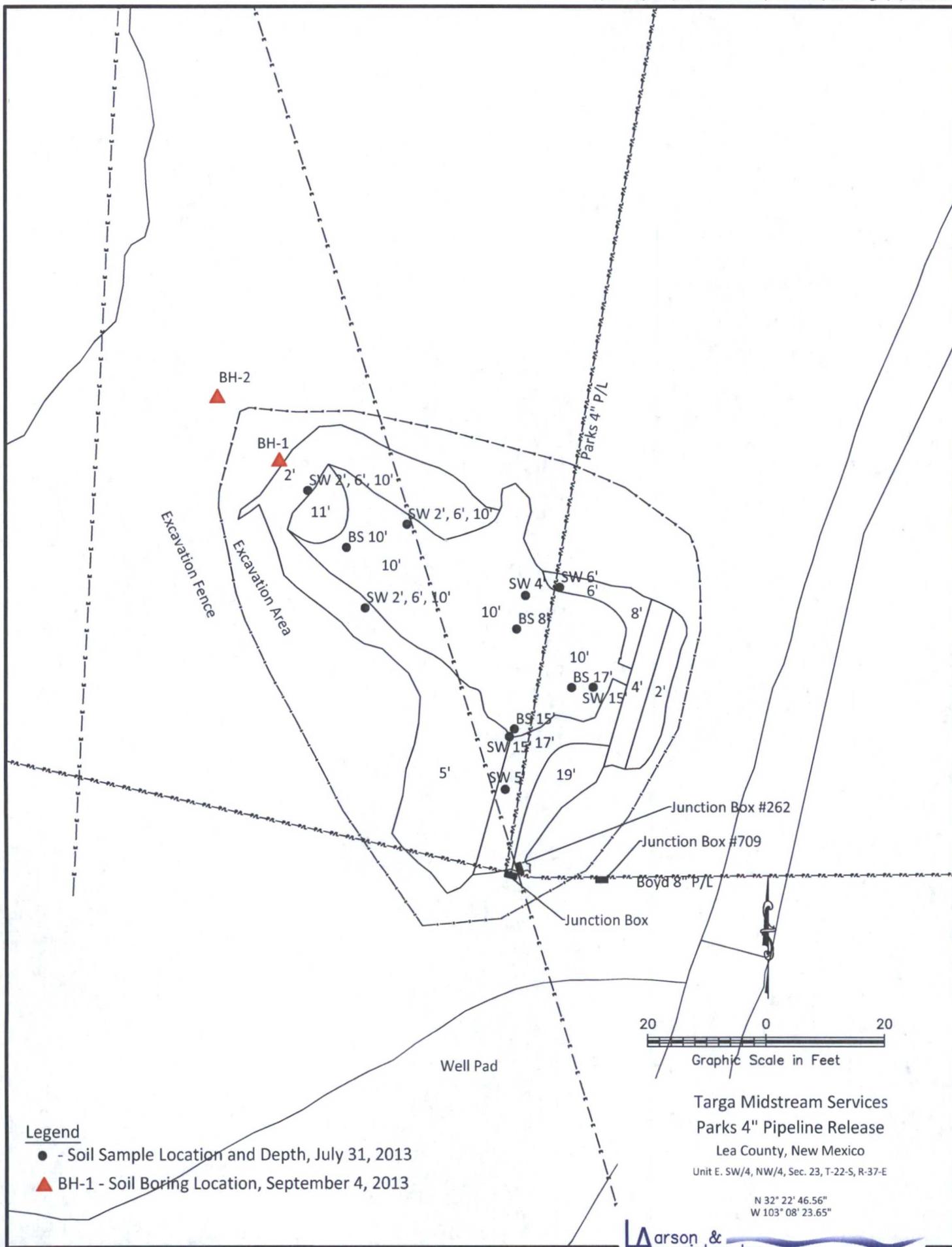
Sec. 23, T-22-S, R-37-E

N 32° 22' 46.56"  
W 103° 08' 23.65"

Legend

- - Well Location
- ⊗ - Plugged and Abandoned Well Location
- - Electric Panel
- - Pipeline Junction Box
- - Pipeline
- - - - Overhead Powerline
- - - - Fence

Figure 3 - Site Map



**Legend**

- - Soil Sample Location and Depth, July 31, 2013
- ▲ BH-1 - Soil Boring Location, September 4, 2013

Targa Midstream Services  
 Parks 4" Pipeline Release  
 Lea County, New Mexico  
 Unit E. SW/4, NW/4, Sec. 23, T-22-S, R-37-E

N 32° 22' 46.56"  
 W 103° 08' 23.65"

**L**arson &  
 Associates, Inc.  
 Environmental Consultants

Figure 4 - Soil Sample and Boring Location Map

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
10014 SCR 1213  
Midland, TX 79706**

***PBELAB***

## Analytical Report

**Prepared for:**

Coty Woolf  
Larson & Associates, Inc.  
P.O. Box 50685  
Midland, TX 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01

Location:

Lab Order Number: 3G31004



NELAP/TCEQ # T104704156-12-1

Report Date: 08/06/13

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SWW-6	3G31004-01	Soil	07/31/13 09:50	07-31-2013 16:10
SWW-10	3G31004-02	Soil	07/31/13 09:45	07-31-2013 16:10
SWW-2	3G31004-03	Soil	07/31/13 09:55	07-31-2013 16:10
SWS-10	3G31004-04	Soil	07/31/13 10:00	07-31-2013 16:10
SWN-6	3G31004-05	Soil	07/31/13 10:15	07-31-2013 16:10
SWS-6	3G31004-06	Soil	07/31/13 10:05	07-31-2013 16:10
SWS-2	3G31004-07	Soil	07/31/13 10:10	07-31-2013 16:10
SWN-10	3G31004-08	Soil	07/31/13 10:15	07-31-2013 16:10
SWE-6	3G31004-09	Soil	07/31/13 10:35	07-31-2013 16:10
SWE-10	3G31004-10	Soil	07/31/13 10:30	07-31-2013 16:10
SWNE-6	3G31004-11	Soil	07/31/13 10:25	07-31-2013 16:10
BSW-10	3G31004-12	Soil	07/31/13 11:10	07-31-2013 16:10
SWN-2	3G31004-13	Soil	07/31/13 10:20	07-31-2013 16:10
SWE-2	3G31004-14	Soil	07/31/13 10:40	07-31-2013 16:10
NPL	3G31004-15	Soil	07/31/13 10:45	07-31-2013 16:10
ESE-17	3G31004-16	Soil	07/31/13 10:50	07-31-2013 16:10
BSPL-17	3G31004-17	Soil	07/31/13 10:52	07-31-2013 16:10
BSPL-8	3G31004-18	Soil	07/31/13 11:05	07-31-2013 16:10
SWS-15	3G31004-19	Soil	07/31/13 11:00	07-31-2013 16:10
SWE-15	3G31004-20	Soil	07/31/13 10:57	07-31-2013 16:10
BSPLS-5	3G31004-21	Soil	07/31/13 11:15	07-31-2013 16:10

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWW-6**  
**3G31004-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00104	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Toluene	ND	0.00208	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		49.0 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		81.8 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	255	1.04	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		85.9 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		94.1 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	78.1	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Permian Basin Environmental Lab, L.P.

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10014 SCR 1213 Midland, TX 79706 432-686-7235

Page 3 of 34

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWW-10**  
**3G31004-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Permian Basin Environmental Lab, L.P.</b>									
<b>Organics by GC</b>									
Benzene	ND	0.00101	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Toluene	ND	0.00202	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		86.5 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		74.9 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	S-GC
<b>General Chemistry Parameters by EPA / Standard Methods</b>									
Chloride	142	1.01	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	1.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	
<b>Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M</b>									
C6-C12	96.5	25.3	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	2910	25.3	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	347	25.3	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		90.7 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		87.5 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	3350	75.8	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWW-2**  
**3G31004-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00103	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Toluene	ND	0.00206	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		75.9 %		75-125	P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		54.4 %		75-125	P3H0105	08/01/13	08/01/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	32.6	1.03	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	25.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	55.6	25.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		96.6 %		70-130	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		107 %		70-130	P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	77.3	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWS-10**  
**3G31004-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3H0105	08/01/13	08/01/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		59.1 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		83.9 %	75-125		P3H0105	08/01/13	08/01/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	133	1.06	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		91.2 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		98.8 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWN-6**  
**3G31004-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00102	mg/kg dry	1	P3H0105	08/01/13	08/02/13	EPA 8021B	
Toluene	ND	0.00204	mg/kg dry	1	P3H0105	08/01/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P3H0105	08/01/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P3H0105	08/01/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P3H0105	08/01/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		67.7 %	75-125		P3H0105	08/01/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		79.5 %	75-125		P3H0105	08/01/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	786	1.02	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	2.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	25.5	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		92.9 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	76.5	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWS-6**  
**3G31004-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Toluene	ND	0.00222	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		81.9 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		56.2 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	15.2	1.11	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	10.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		101 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		112 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	83.3	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWS-2**  
**3G31004-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Permian Basin Environmental Lab, L.P.</b>									
<b>Organics by GC</b>									
Benzene	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00208	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		81.8 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		56.1 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
<b>General Chemistry Parameters by EPA / Standard Methods</b>									
Chloride	123	1.04	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	
<b>Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M</b>									
C6-C12	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: 1-Chlorooctane		87.5 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Surrogate: o-Terphenyl		93.8 %	70-130		P3H0203	08/01/13	08/01/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	78.1	mg/kg dry	1	[CALC]	08/01/13	08/01/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
 P.O. Box 50685  
 Midland TX, 79710

Project: Parks 4/Targa  
 Project Number: 13-0116-01  
 Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWN-10**  
**3G31004-08 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00114	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00227	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		57.2 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		82.1 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	52.6	1.14	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	12.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		89.0 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		97.5 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	85.2	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWE-6**  
**3G31004-09 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		56.8 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		82.1 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	12.6	1.06	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		85.0 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		94.9 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWE-10**  
**3G31004-10 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00108	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00215	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		46.7 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		79.1 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	71.0	1.08	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	7.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.9	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		87.1 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	80.6	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWNE-6**  
**3G31004-11 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00220	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		49.4 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		82.2 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	23.0	1.10	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	9.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		87.4 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		94.0 %	70-130		P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	82.4	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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**BSW-10**  
**3G31004-12 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		85.9 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		51.9 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	140	1.06	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		87.3 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		93.1 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWN-2**  
**3G31004-13 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00102	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00204	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		80.2 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		48.8 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	104	1.02	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	2.0	0.1	%	1	P3H0201	08/01/13	08/02/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	25.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		93.4 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		102 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	76.5	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWE-2**  
**3G31004-14 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00115	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00230	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		53.1 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		84.5 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	12.4	1.15	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	13.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.7	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		90.3 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		98.1 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	86.2	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**NPL**  
**3G31004-15 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00101	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00202	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		83.7 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		50.5 %		75-125	P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	14.8	1.01	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	1.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	25.3	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		94.1 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		105 %		70-130	P3H0204	08/01/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	75.8	mg/kg dry	1	[CALC]	08/01/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**ESE-17**  
**3G31004-16 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00116	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00233	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		83.9 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		54.4 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	23.1	1.16	mg/kg dry	1	P3H0202	08/01/13	08/02/13	EPA 300.0	
% Moisture	14.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	29.1	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		84.8 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		88.4 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	87.2	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BSPL-17**  
**3G31004-17 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00220	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		83.2 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		52.6 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	18.7	1.10	mg/kg dry	1	P3H0205	08/02/13	08/05/13	EPA 300.0	
% Moisture	9.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		97.4 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		103 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	82.4	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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10014 SCR 1213 Midland, TX 79706 432-686-7235

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BSPL-8**  
**3G31004-18 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		82.4 %	75-125		P3H0503	08 02 13	08 02 13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		54.2 %	75-125		P3H0503	08 02 13	08 02 13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	14.6	1.06	mg/kg dry	1	P3H0205	08/02/13	08/05/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		89.3 %	70-130		P3H0506	08 02 13	08 02 13	TPH 8015M	
Surrogate: o-Terphenyl		97.9 %	70-130		P3H0506	08 02 13	08 02 13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

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**SWS-15**  
**3G31004-19 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Toluene	ND	0.00208	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P3H0503	08/02/13	08/02/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		56.4 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		84.7 %	75-125		P3H0503	08/02/13	08/02/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	24.1	1.04	mg/kg dry	1	P3H0205	08/02/13	08/05/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.0	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		92.6 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		102 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	78.1	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**SWE-15**  
**3G31004-20 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		58.9 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		91.2 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	40.9	1.06	mg/kg dry	1	P3H0205	08/02/13	08/05/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		93.6 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BSPLS-5**  
**3G31004-21 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Toluene	ND	0.00222	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P3H0503	08/02/13	08/03/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		85.1 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		54.3 %	75-125		P3H0503	08/02/13	08/03/13	EPA 8021B	S-GC

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	282	1.11	mg/kg dry	1	P3H0205	08/02/13	08/05/13	EPA 300.0	
% Moisture	10.0	0.1	%	1	P3H0501	08/05/13	08/05/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.8	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: 1-Chlorooctane		77.6 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Surrogate: o-Terphenyl		83.3 %	70-130		P3H0506	08/02/13	08/02/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	83.3	mg/kg dry	1	[CALC]	08/02/13	08/02/13	calc	

Permian Basin Environmental Lab, L.P.

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Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**Organics by GC - 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 P3H0105 - General Preparation (GC)**

**Blank (P3H0105-BLK1)**

Prepared & Analyzed: 08/01/13

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	38.2		ug/kg	60.0		63.7	75-125			
Surrogate: 1,4-Difluorobenzene	47.1		"	60.0		78.5	75-125			

**LCS (P3H0105-BS1)**

Prepared & Analyzed: 08/01/13

Benzene	0.105	0.00100	mg/kg wet	0.100		105	80-120			
Toluene	0.0953	0.00200	"	0.100		95.3	80-120			
Ethylbenzene	0.0960	0.00100	"	0.100		96.0	80-120			
Xylene (p/m)	0.210	0.00200	"	0.200		105	80-120			
Xylene (o)	0.0810	0.00100	"	0.100		81.0	80-120			
Surrogate: 1,4-Difluorobenzene	51.5		ug/kg	60.0		85.8	75-125			
Surrogate: 4-Bromofluorobenzene	49.6		"	60.0		82.6	75-125			

**LCS Dup (P3H0105-BS1)**

Prepared & Analyzed: 08/01/13

Benzene	0.105	0.00100	mg/kg wet	0.100		105	80-120	0.0955	20	
Toluene	0.0938	0.00200	"	0.100		93.8	80-120	1.65	20	
Ethylbenzene	0.0978	0.00100	"	0.100		97.8	80-120	1.80	20	
Xylene (p/m)	0.216	0.00200	"	0.200		108	80-120	2.89	20	
Xylene (o)	0.0834	0.00100	"	0.100		83.4	80-120	2.85	20	
Surrogate: 1,4-Difluorobenzene	51.2		ug/kg	60.0		85.3	75-125			
Surrogate: 4-Bromofluorobenzene	53.1		"	60.0		88.6	75-125			

**Matrix Spike (P3H0105-MS1)**

Source: 3G31004-01

Prepared: 08/01/13 Analyzed: 08/02/13

Benzene	0.0444	0.00104	mg/kg dry	0.104	ND	42.6	80-120			QM-07
Toluene	0.0388	0.00208	"	0.104	ND	37.3	80-120			QM-07
Ethylbenzene	0.0302	0.00104	"	0.104	ND	29.0	80-120			QM-07
Xylene (p/m)	0.0493	0.00208	"	0.208	ND	23.7	80-120			QM-07
Xylene (o)	0.0189	0.00104	"	0.104	ND	18.2	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	30.6		ug/kg	60.0		50.9	75-125			S-GC
Surrogate: 1,4-Difluorobenzene	45.0		"	60.0		75.0	75-125			

Permian Basin Environmental Lab, L.P.

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Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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**Organics by GC - 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 P3H0105 - General Preparation (GC)**

**Matrix Spike Dup (P3H0105-MSD1)**

Source: 3G31004-01

Prepared: 08/01/13 Analyzed: 08/02/13

Benzene	0.0686	0.00104	mg/kg dry	0.104	ND	65.8	80-120	42.8	20	QM-07
Toluene	0.0546	0.00208	"	0.104	ND	52.4	80-120	33.7	20	QM-07
Ethylbenzene	0.0453	0.00104	"	0.104	ND	43.5	80-120	40.1	20	QM-07
Xylene (p/m)	0.0959	0.00208	"	0.208	ND	46.1	80-120	64.3	20	QM-07
Xylene (o)	0.0358	0.00104	"	0.104	ND	34.4	80-120	61.6	20	QM-07
Surrogate: 4-Bromofluorobenzene	45.5		ug/kg	60.0		75.9	75-125			
Surrogate: 1,4-Difluorobenzene	52.1		"	60.0		86.8	75-125			

**Batch P3H0503 - General Preparation (GC)**

**Blank (P3H0503-BLK1)**

Prepared & Analyzed: 08/02/13

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.0479		"	0.0600		79.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.0328		"	0.0600		54.7	75-125			S-GC

**LCS (P3H0503-BS1)**

Prepared & Analyzed: 08/02/13

Benzene	0.0975	0.00100	mg/kg wet	0.100		97.5	80-120			
Toluene	0.0876	0.00200	"	0.100		87.6	80-120			
Ethylbenzene	0.0880	0.00100	"	0.100		88.0	80-120			
Xylene (p/m)	0.193	0.00200	"	0.200		96.3	80-120			
Xylene (o)	0.0816	0.00100	"	0.100		81.6	80-120			
Surrogate: 4-Bromofluorobenzene	0.0508		"	0.0600		84.7	75-125			
Surrogate: 1,4-Difluorobenzene	0.0557		"	0.0600		92.8	75-125			

Permian Basin Environmental Lab, L.P.

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Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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**Organics by GC - 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 P3H0503 - General Preparation (GC)**

**LCS Dup (P3H0503-BSD1)**

Prepared & Analyzed: 08/02/13

Benzene	0.0978	0.00100	mg/kg wet	0.100		97.8	80-120	0.287	20	
Toluene	0.0878	0.00200	"	0.100		87.8	80-120	0.251	20	
Ethylbenzene	0.0895	0.00100	"	0.100		89.5	80-120	1.67	20	
Xylene (p/m)	0.196	0.00200	"	0.200		97.9	80-120	1.61	20	
Xylene (o)	0.0828	0.00100	"	0.100		82.8	80-120	1.48	20	
Surrogate: 1,4-Difluorobenzene	0.0559		"	0.0600		93.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.0519		"	0.0600		86.4	75-125			

**Matrix Spike (P3H0503-MS1)**

Source: 3G31004-21

Prepared: 08/02/13 Analyzed: 08/03/13

Benzene	0.0696	0.00111	mg/kg dry	0.111	ND	62.6	80-120			QM-05
Toluene	0.0558	0.00222	"	0.111	ND	50.2	80-120			QM-05
Ethylbenzene	0.0271	0.00111	"	0.111	ND	24.4	80-120			QM-05
Xylene (p/m)	0.0966	0.00222	"	0.222	ND	43.5	80-120			QM-05
Xylene (o)	0.0419	0.00111	"	0.111	ND	37.8	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	0.0591		"	0.0667		88.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.0504		"	0.0667		75.6	75-125			

**Matrix Spike Dup (P3H0503-MSD1)**

Source: 3G31004-21

Prepared: 08/02/13 Analyzed: 08/03/13

Benzene	0.0462	0.00111	mg/kg dry	0.111	ND	41.6	80-120	40.4	20	QM-05
Toluene	0.0370	0.00222	"	0.111	ND	33.3	80-120	40.6	20	QM-05
Ethylbenzene	0.0165	0.00111	"	0.111	ND	14.8	80-120	48.8	20	QM-05
Xylene (p/m)	0.0611	0.00222	"	0.222	ND	27.5	80-120	45.0	20	QM-05
Xylene (o)	0.0292	0.00111	"	0.111	ND	26.3	80-120	35.8	20	QM-05
Surrogate: 4-Bromofluorobenzene	0.0466		"	0.0667		69.9	75-125			QM-05
Surrogate: 1,4-Difluorobenzene	0.0566		"	0.0667		84.8	75-125			

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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 P3H0201 - *** DEFAULT PREP ***</b>										
<b>Blank (P3H0201-BLK1)</b> Prepared: 08/01/13 Analyzed: 08/02/13										
% Moisture	ND	0.1	%							
<b>Duplicate (P3H0201-DUP1)</b> Source: 3H01006-01 Prepared: 08/01/13 Analyzed: 08/02/13										
% Moisture	37.0	0.1	%		39.0			5.26	20	
<b>Duplicate (P3H0201-DUP2)</b> Source: 3H01009-03 Prepared: 08/01/13 Analyzed: 08/02/13										
% Moisture	13.0	0.1	%		14.0			7.41	20	
<b>Batch P3H0202 - *** DEFAULT PREP ***</b>										
<b>Blank (P3H0202-BLK1)</b> Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P3H0202-BS1)</b> Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	106	1.00	mg/kg wet	125		85.0	80-120			
<b>LCS Dup (P3H0202-BSD1)</b> Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	106	1.00	mg/kg wet	125		85.2	80-120	0.188	20	
<b>Duplicate (P3H0202-DUP1)</b> Source: 3G31004-01 Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	256	1.04	mg/kg dry		255			0.464	20	
<b>Matrix Spike (P3H0202-MS1)</b> Source: 3G31004-01 Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	271	1.04	mg/kg dry	13.0	255	119	80-120			
<b>Matrix Spike (P3H0202-MS2)</b> Source: 3G31004-11 Prepared: 08/01/13 Analyzed: 08/02/13										
Chloride	144	1.10	mg/kg dry	137	23.0	88.2	80-120			

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Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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 P3H0205 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P3H0205-BLK1)</b> Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P3H0205-BS1)</b> Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	10.8		mg/kg Wet	10.0		108	80-120			
<b>LCS Dup (P3H0205-BSD1)</b> Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	10.8		mg/kg Wet	10.0		108	80-120	0.121	20	
<b>Duplicate (P3H0205-DUP1)</b> Source: 3G31004-17 Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	20.4	1.10	mg/kg dry		18.7			8.49	20	
<b>Duplicate (P3H0205-DUP2)</b> Source: 3H01011-04 Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	158	1.04	mg/kg dry		161			1.42	20	
<b>Matrix Spike (P3H0205-MS1)</b> Source: 3G31004-17 Prepared: 08/02/13 Analyzed: 08/05/13										
Chloride	184	1.10	mg/kg dry	137	18.7	120	80-120			

**Batch P3H0501 - \*\*\* DEFAULT PREP \*\*\***

<b>Blank (P3H0501-BLK1)</b> Prepared & Analyzed: 08/05/13										
% Moisture	ND	0.1	%							
<b>Duplicate (P3H0501-DUP1)</b> Source: 3G31004-14 Prepared & Analyzed: 08/05/13										
% Moisture	12.0	0.1	%		13.0			8.00	20	

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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
<b>Batch P3H0203 - TX 1005</b>										
<b>Blank (P3H0203-BLK1)</b>										
Prepared & Analyzed: 08/01/13										
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	154		"	200		77.0	70-130			
Surrogate: o-Terphenyl	88.4		"	100		88.4	70-130			
<b>LCS (P3H0203-BS1)</b>										
Prepared & Analyzed: 08/01/13										
C6-C12	936	25.0	mg/kg wet	1000		93.6	75-125			
>C12-C28	1040	25.0	"	1000		104	75-125			
Surrogate: 1-Chlorooctane	160		"	200		80.0	70-130			
Surrogate: o-Terphenyl	81.3		"	100		81.3	70-130			
<b>LCS Dup (P3H0203-BSD1)</b>										
Prepared & Analyzed: 08/01/13										
C6-C12	885	25.0	mg/kg wet	1000		88.5	75-125	5.61	20	
>C12-C28	994	25.0	"	1000		99.4	75-125	4.83	20	
Surrogate: 1-Chlorooctane	152		"	200		75.9	70-130			
Surrogate: o-Terphenyl	76.6		"	100		76.6	70-130			
<b>Matrix Spike (P3H0203-MS1)</b>										
Source: 3G31004-01 Prepared & Analyzed: 08/01/13										
C6-C12	941	26.0	mg/kg dry	1040	ND	90.4	75-125			
>C12-C28	963	26.0	"	1040	ND	92.5	75-125			
Surrogate: 1-Chlorooctane	98.9		"	104		95.0	70-130			
Surrogate: o-Terphenyl	44.1		"	52.1		84.6	70-130			
<b>Matrix Spike Dup (P3H0203-MSD1)</b>										
Source: 3G31004-01 Prepared & Analyzed: 08/01/13										
C6-C12	883	26.0	mg/kg dry	1040	ND	84.8	75-125	6.39	20	
>C12-C28	985	26.0	"	1040	ND	94.6	75-125	2.26	20	
Surrogate: 1-Chlorooctane	105		"	104		101	70-130			
Surrogate: o-Terphenyl	47.8		"	52.1		91.8	70-130			

Permian Basin Environmental Lab, L.P.

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.*

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Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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	Limit	RPD	RPD Limit	Notes
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**Batch P3H0204 - TX 1005**

**Blank (P3H0204-BLK1)**

Prepared: 08/01/13 Analyzed: 08/02/13

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	60.0		"	50.0		120	70-130			

**LCS (P3H0204-BS1)**

Prepared & Analyzed: 08/01/13

C6-C12	988	25.0	mg/kg wet	1000		98.8	75-125			
>C12-C28	1120	25.0	"	1000		112	75-125			
Surrogate: 1-Chlorooctane	117		"	100		117	70-130			
Surrogate: o-Terphenyl	54.3		"	50.0		109	70-130			

**LCS Dup (P3H0204-BSD1)**

Prepared & Analyzed: 08/01/13

C6-C12	939	25.0	mg/kg wet	1000		93.9	75-125	5.16	20	
>C12-C28	1090	25.0	"	1000		109	75-125	3.22	20	
Surrogate: 1-Chlorooctane	112		"	100		112	70-130			
Surrogate: o-Terphenyl	51.1		"	50.0		102	70-130			

**Duplicate (P3H0204-DUP1)**

Source: 3H01009-01

Prepared: 08/01/13 Analyzed: 08/02/13

C6-C12	3060	140	mg/kg dry		2590			16.5	20	
>C12-C28	9230	140	"		10100			8.80	20	
>C28-C35	911	140	"		1030			12.1	20	
Surrogate: 1-Chlorooctane	126		"	112		112	70-130			
Surrogate: o-Terphenyl	57.8		"	56.2		103	70-130			

**Batch P3H0506 - TX 1005**

**Blank (P3H0506-BLK1)**

Prepared & Analyzed: 08/02/13

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	101		"	100		101	70-130			
Surrogate: o-Terphenyl	53.0		"	50.0		106	70-130			

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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 P3H0506 - TX 1005**

**LCS (P3H0506-BS1)**

Prepared & Analyzed: 08/02/13

C6-C12	947	25.0	mg/kg wet	1000		94.7	75-125			
>C12-C28	1100	25.0	"	1000		110	75-125			
Surrogate: 1-Chlorooctane	118		"	100		118	70-130			
Surrogate: o-Terphenyl	51.9		"	50.0		104	70-130			

**LCS Dup (P3H0506-BSD1)**

Prepared & Analyzed: 08/02/13

C6-C12	918	25.0	mg/kg wet	1000		91.8	75-125	3.20	20	
>C12-C28	1010	25.0	"	1000		101	75-125	8.58	20	
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	50.2		"	50.0		100	70-130			

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Parks 4/Targa  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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:

8/6/2013

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.

Permian Basin Environmental Lab, L.P.

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Page 32 of 34

Data Reported to:

DATE: 7/31/13 PAGE 1 OF 2  
PO #: \_\_\_\_\_ LAB WORK ORDER #: \_\_\_\_\_  
PROJECT LOCATION OR NAME: Park 4 / Targa  
LAB PROJECT #: 13-D116-01 COLLECTOR: ML/SR

**CHAIN-OF-CUSTODY**

TRRP report  
 Yes  No

S=SOIL  
W=WATER  
A=AIR

P=PAINT  
SL=SLUDGE  
OT=OTHER

3631004

TIME ZONE:  
Time zone/State:  
MTN/AM

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	ANALYSES	
SUN-6	-01	7/31/13	9:50		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-10	-02	7/31/13	9:45		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-2	-03	7/31/13	9:55		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-10	-04	7/31/13	10:00		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-6	-05	7/31/13	10:15		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-6	-06	7/31/13	10:05		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-2	-07	7/31/13	10:10		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-10	-08	7/31/13	10:15		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-6	-09	7/31/13	10:35		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-10	-10	7/31/13	10:30		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-6	-11	7/31/13	10:25		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-10	-12	7/31/13	11:10		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-2	-13	7/31/13	10:20		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-2	-14	7/31/13	10:40		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUN-6	-15	7/31/13	10:45		1						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOTAL												

- BTEX  MTBE   
 TPH 418.1  TPH 1005  TPH 1006   
 GASOLINE MOD 8015   
 DIESEL MOD 8015   
 VOC 8260   
 SVOC 8270   
 8081 PESTICIDES  PAH 8270  HOLDPAH   
 8082 PCBS   
 TCLP - METALS  8151 HERBICIDES   
 TCLP - PEST  HERB  Semi-VOC   
 TOTAL METALS (RCRA)  OTHER LIST   
 LEAD - TOTAL  D.W. 200.8  TCLP   
 RCI  TOX  FLASHPOINT   
 TDS  TSS  % MOISTURE  CYANIDE   
 pH  HEXAVALENT CHROMIUM   
 EXPLOSIVES  PECTHLORATE   
 CHLORIDE  ANIONS  ALKALINITY   
**5300**

FIELD NOTES

RELINQUISHED BY: (Signature) [Signature] DATE/TIME: 7/31/13 12:55pm RECEIVED BY: (Signature) [Signature]  
 RELINQUISHED BY: (Signature) [Signature] DATE/TIME: 7/31/13 RECEIVED BY: (Signature) [Signature]  
 RELINQUISHED BY: (Signature) [Signature] DATE/TIME: 7/31/13 RECEIVED BY: (Signature) [Signature]

TURN AROUND TIME  
 NORMAL   
 1 DAY   
 2 DAY   
 OTHER

LABORATORY USE ONLY:  
 RECEIVING TEMP: 22 THERM #: \_\_\_\_\_  
 CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL # \_\_\_\_\_  
 HAND DELIVERED

3031004

DATE: 7/31/13 LAB WORK ORDER #: 2 OF 2  
PO #: \_\_\_\_\_ PROJECT LOCATION OR NAME: Parks 4/Targa  
LAI PROJECT #: 13-0116-01 COLLECTOR: ML/SF

Data Reported to:

TRRP report?  Yes  No  
S=SOIL W=WATER P=PAINT  
A=AIR SL=SLUDGE OT=OTHER

TIME ZONE:  
Time zone/State:  
MTN/NM

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	ANALYSES		FIELD NOTES
ESE-17	-16	7/31/13	16:50		1							<input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/>		
BSP-17	-17	7/31/13	10:52		1							<input type="checkbox"/> TRPH 418.1 <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/>		
BSP-18	-18	7/31/13	11:05		1							<input type="checkbox"/> GASOLINE MOD 8015 <input type="checkbox"/>		
SWS-15	-19	7/31/13	11:00		1							<input type="checkbox"/> DIESEL - MOD 8015 <input type="checkbox"/>		
SWE-15	-20	7/31/13	10:57		1							<input type="checkbox"/> VOC 8260 <input type="checkbox"/>		
BSP-15-S	-21	7/31/13	11:15		1							<input type="checkbox"/> SVOC 8270 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLDPAH <input type="checkbox"/>		
TOTAL														

RELINQUISHED BY: (Signature) [Signature] DATE/TIME 7/31/13 12:55 PM  
RECEIVED BY: (Signature) [Signature] DATE/TIME 7/31/13 3:45  
RELINQUISHED BY: (Signature) [Signature] DATE/TIME 7/31/13 3:45  
RECEIVED BY: (Signature) [Signature] DATE/TIME 7/31/13 3:45

TURN AROUND TIME  
NORMAL   
1 DAY   
2 DAY   
OTHER

LABORATORY USE ONLY:  
RECEIVING TEMP: 22 THERM #: \_\_\_\_\_  
CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL # \_\_\_\_\_  
 HAND DELIVERED

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
10014 SCR 1213  
Midland, TX 79706**

**PBELAB**

## Analytical Report

**Prepared for:**

Coty Woolf  
Larson & Associates, Inc.  
P.O. Box 50685  
Midland, TX 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Location: New Mexico  
Lab Order Number: 3I05005



NELAP/TCEQ # T104704156-12-1

Report Date: 09/11/13

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH1 0-1	3105005-01	Soil	09/04/13 13:00	09-05-2013 16:45
BH1 5-6	3105005-02	Soil	09/04/13 13:07	09-05-2013 16:45
BH1 10-11	3105005-03	Soil	09/04/13 13:11	09-05-2013 16:45
BH1 15-16	3105005-04	Soil	09/04/13 13:17	09-05-2013 16:45
BH1 20-21	3105005-05	Soil	09/04/13 13:29	09-05-2013 16:45
BH1 25-26	3105005-06	Soil	09/04/13 13:37	09-05-2013 16:45
BH1 30-31	3105005-07	Soil	09/04/13 13:42	09-05-2013 16:45
BH1 40-41	3105005-08	Soil	09/04/13 13:53	09-05-2013 16:45
BH1 50-51	3105005-09	Soil	09/04/13 14:15	09-05-2013 16:45
BH2 0-1	3105005-10	Soil	09/04/13 14:38	09-05-2013 16:45
BH2 5-6	3105005-11	Soil	09/04/13 14:42	09-05-2013 16:45
BH2 10-11	3105005-12	Soil	09/04/13 14:48	09-05-2013 16:45
BH2 15-16	3105005-13	Soil	09/04/13 14:54	09-05-2013 16:45
BH2 20-21	3105005-14	Soil	09/04/13 14:56	09-05-2013 16:45
BH2 25-26	3105005-15	Soil	09/04/13 15:03	09-05-2013 16:45
BH2 30-31	3105005-16	Soil	09/04/13 15:10	09-05-2013 16:45
BH2 40-41	3105005-17	Soil	09/04/13 15:21	09-05-2013 16:45
BH2 50-51	3105005-18	Soil	09/04/13 15:40	09-05-2013 16:45

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 0-1**  
**3I05005-01 (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	22.7	1.04	mg/kg dry	1	P3I0604	09/06/13	09/06/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
 Project Number: 13-0116-01  
 Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 5-6**  
**3105005-02 (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	23.1	1.22	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	18.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	ND	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	ND	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		67.4 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	S-GC
Surrogate: o-Terphenyl		71.4 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	91.5	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 10-11**  
**3I05005-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

<b>Benzene</b>	<b>0.00274</b>	0.00106	mg/kg dry	1	P3I1004	09/09/13	09/09/13	EPA 8021B	
<b>Toluene</b>	<b>0.00646</b>	0.00213	mg/kg dry	1	P3I1004	09/09/13	09/09/13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P3I1004	09/09/13	09/09/13	EPA 8021B	
<b>Xylene (p/m)</b>	<b>0.0471</b>	0.00213	mg/kg dry	1	P3I1004	09/09/13	09/09/13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P3I1004	09/09/13	09/09/13	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		78.2 %	75-125		<i>P3I1004</i>	<i>09 09 13</i>	<i>09 09 13</i>	<i>EPA 8021B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.7 %	75-125		<i>P3I1004</i>	<i>09 09 13</i>	<i>09 09 13</i>	<i>EPA 8021B</i>	

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>60.8</b>	1.06	mg/kg dry	1	P3I0604	09/06/13	09/06/13	EPA 300.0	
<b>% Moisture</b>	<b>6.0</b>	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>284</b>	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
<b>&gt;C12-C28</b>	<b>4000</b>	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
<b>&gt;C28-C35</b>	<b>469</b>	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
<i>Surrogate: 1-Chlorooctane</i>		75.2 %	70-130		<i>P3I1002</i>	<i>09 09 13</i>	<i>09 09 13</i>	<i>TPH 8015M</i>	
<i>Surrogate: o-Terphenyl</i>		73.7 %	70-130		<i>P3I1002</i>	<i>09 09 13</i>	<i>09 09 13</i>	<i>TPH 8015M</i>	
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>4750</b>	79.8	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 15-16**  
**3105005-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

<b>Benzene</b>	<b>0.00170</b>	0.00110	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<b>Toluene</b>	<b>0.00810</b>	0.00220	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<b>Xylene (p/m)</b>	<b>0.0227</b>	0.00220	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<b>Xylene (o)</b>	<b>0.0291</b>	0.00110	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		90.5 %	75-125		P311004	09/09/13	09/09/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		94.4 %	75-125		P311004	09/09/13	09/09/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>32.0</b>	1.10	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
<b>% Moisture</b>	<b>9.0</b>	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>553</b>	27.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
<b>&gt;C12-C28</b>	<b>4680</b>	27.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
<b>&gt;C28-C35</b>	<b>583</b>	27.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		78.8 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: o-Terphenyl		73.6 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>5820</b>	82.4	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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P.O. Box 50685  
Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 20-21**  
**3I05005-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00122	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
Toluene	ND	0.00244	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
Ethylbenzene	ND	0.00122	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<b>Xylene (p/m)</b>	<b>0.00777</b>	0.00244	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<b>Xylene (o)</b>	<b>0.00485</b>	0.00122	mg/kg dry	1	P311004	09/09/13	09/09/13	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		97.9 %	75-125		P311004	09/09/13	09/09/13	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		82.4 %	75-125		P311004	09/09/13	09/09/13	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	38.5	1.22	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	18.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	276	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	5520	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	695	30.5	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
<i>Surrogate: 1-Chlorooctane</i>		89.9 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
<i>Surrogate: o-Terphenyl</i>		86.5 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>6490</b>	91.5	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Larson & Associates, Inc.  
 P.O. Box 50685  
 Midland TX, 79710

Project: Targa Parks 4  
 Project Number: 13-0116-01  
 Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 25-26**  
**3105005-06 (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	47.0	1.19	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	16.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	37.0	29.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	124	29.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	79.0	29.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		68.4 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	S-GC
Surrogate: o-Terphenyl		71.2 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	240	89.3	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH1 30-31**  
**3I05005-07 (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	62.6	1.04	mg/kg dry	1	P3I0604	09/06/13	09/06/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

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**BH1 40-41**  
**3105005-08 (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**

Chloride	24.2	1.10	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	9.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

Permian Basin Environmental Lab, L.P.

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Project Manager: Coty Woolf

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**BH1 50-51**  
**3105005-09 (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	35.0	1.09	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	8.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

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**BH2 0-1**  
**3I05005-10 (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	17.6	1.05	mg/kg dry	1	P3I0604	09/06/13	09/06/13	EPA 300.0	
% Moisture	5.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

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Project Number: 13-0116-01  
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**BH2 5-6**  
**3105005-11 (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**

Chloride	160	1.02	mg/kg dry	1	P310604	09/06/13	09/06/13	EPA 300.0	
% Moisture	2.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

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**BH2 10-11**  
**3I05005-12 (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**

Chloride	75.7	1.06	mg/kg dry	1	P3I0604	09/06/13	09/06/13	EPA 300.0	
% Moisture	6.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P3I1002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		69.1 %		70-130	P3I1002	09/09/13	09/09/13	TPH 8015M	S-GC
Surrogate: o-Terphenyl		72.6 %		70-130	P3I1002	09/09/13	09/09/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	79.8	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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**BH2 15-16**  
**3105005-13 (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**

Chloride	15.1	1.03	mg/kg dry	1	P311006	09/10/13	09/10/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	25.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		128 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: o-Terphenyl		130 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	77.3	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH2 20-21**  
**3105005-14 (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**

Chloride	25.9	1.08	mg/kg dry	1	P311006	09/10/13	09/10/13	EPA 300.0	
% Moisture	7.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.9	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P311002	09/09/13	09/09/13	TPH 8015M	
Surrogate: 1-Chlorooctane		69.2 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	S-GC
Surrogate: o-Terphenyl		70.1 %	70-130		P311002	09/09/13	09/09/13	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	80.6	mg/kg dry	1	[CALC]	09/09/13	09/09/13	calc	

Permian Basin Environmental Lab, L.P.

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10014 SCR 1213 Midland, TX 79706 432-686-7235

Larson & Associates, Inc.  
P.O. Box 50685  
Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH2 25-26**  
**3105005-15 (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**

Chloride	205	1.25	mg/kg dry	1	P3I1006	09/10/13	09/10/13	EPA 300.0	
% Moisture	20.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
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Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH2 30-31**  
**3105005-16 (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	54.8	1.03	mg/kg dry	1	P311006	09/10/13	09/10/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	P310901	09/09/13	09/09/13	% calculation	

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
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Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH2 40-41**  
**3I05005-17 (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**

Chloride	72.6	1.08	mg/kg dry	1	P3I1006	09/10/13	09/10/13	EPA 300.0	
% Moisture	7.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

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Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

Fax: (432) 687-0456

**BH2 50-51**  
**3I05005-18 (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**

Chloride	33.8	1.09	mg/kg dry	1	P3I1006	09/10/13	09/10/13	EPA 300.0	
% Moisture	8.0	0.1	%	1	P3I0901	09/09/13	09/09/13	% calculation	

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Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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**Organics by GC - 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 P3I1004 - General Preparation (GC)**

**Blank (P3I1004-BLK1)**

Prepared & Analyzed: 09/09/13

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	47.9		ug/kg	60.0		79.9	75-125			
Surrogate: 1,4-Difluorobenzene	51.8		"	60.0		86.4	75-125			

**LCS (P3I1004-BS1)**

Prepared & Analyzed: 09/09/13

Benzene	0.118	0.00100	mg/kg wet	0.100		118	80-120			
Toluene	0.0973	0.00200	"	0.100		97.3	80-120			
Ethylbenzene	0.0933	0.00100	"	0.100		93.3	80-120			
Xylene (p/m)	0.191	0.00200	"	0.200		95.6	80-120			
Xylene (o)	0.0854	0.00100	"	0.100		85.4	80-120			
Surrogate: 1,4-Difluorobenzene	56.2		ug/kg	60.0		93.7	75-125			
Surrogate: 4-Bromofluorobenzene	52.1		"	60.0		86.8	75-125			

**LCS Dup (P3I1004-BSD1)**

Prepared & Analyzed: 09/09/13

Benzene	0.119	0.00100	mg/kg wet	0.100		119	80-120	0.253	20	
Toluene	0.0935	0.00200	"	0.100		93.5	80-120	3.95	20	
Ethylbenzene	0.0873	0.00100	"	0.100		87.3	80-120	6.65	20	
Xylene (p/m)	0.188	0.00200	"	0.200		94.1	80-120	1.52	20	
Xylene (o)	0.0823	0.00100	"	0.100		82.3	80-120	3.76	20	
Surrogate: 4-Bromofluorobenzene	50.1		ug/kg	60.0		83.5	75-125			
Surrogate: 1,4-Difluorobenzene	60.8		"	60.0		101	75-125			

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Project Number: 13-0116-01  
Project Manager: Coty Woolf

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 P3I0604 - *** DEFAULT PREP ***</b>										
<b>Blank (P3I0604-BLK1)</b> Prepared & Analyzed: 09/06/13										
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P3I0604-BS1)</b> Prepared & Analyzed: 09/06/13										
Chloride	10.5		mg/kg Wet	10.0		105	80-120			
<b>LCS Dup (P3I0604-BSD1)</b> Prepared & Analyzed: 09/06/13										
Chloride	10.6		mg/kg Wet	10.0		106	80-120	1.34	20	
<b>Duplicate (P3I0604-DUP1)</b> Source: 3I05001-01 Prepared & Analyzed: 09/06/13										
Chloride	238	1.16	mg/kg dry		243			1.68	20	
<b>Batch P3I0901 - General Preparation (Prep)</b>										
<b>Blank (P3I0901-BLK1)</b> Prepared & Analyzed: 09/09/13										
% Moisture	ND	0.1	%							
<b>Duplicate (P3I0901-DUP1)</b> Source: 3I06001-01 Prepared & Analyzed: 09/09/13										
% Moisture	ND	0.1	%		0.0				20	
<b>Batch P3I1006 - *** DEFAULT PREP ***</b>										
<b>Blank (P3I1006-BLK1)</b> Prepared & Analyzed: 09/10/13										
Chloride	ND	1.00	mg/kg wet							
<b>LCS (P3I1006-BS1)</b> Prepared & Analyzed: 09/10/13										
Chloride	10.9		mg/kg Wet	10.0		109	80-120			

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Midland TX, 79710

Project: Targa Parks 4  
Project Number: 13-0116-01  
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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 P3I1006 - *** DEFAULT PREP ***</b>										
<b>LCS Dup (P3I1006-BSD1)</b>					Prepared & Analyzed: 09/10/13					
Chloride	11.0		mg/kg Wet	10.0		110	80-120	1.37	20	
<b>Duplicate (P3I1006-DUP1)</b>					Source: 3I09002-01 Prepared & Analyzed: 09/10/13					
Chloride	476	1.09	mg/kg dry		455			4.60	20	

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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
<b>Batch P3I1002 - TX 1005</b>										
<b>Blank (P3I1002-BLK1)</b>										
Prepared & Analyzed: 09/09/13										
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	143		"	200		71.5	70-130			
Surrogate: o-Terphenyl	72.8		"	100		72.8	70-130			
<b>LCS (P3I1002-BS1)</b>										
Prepared & Analyzed: 09/09/13										
C6-C12	962	25.0	mg/kg wet	1000		96.2	75-125			
>C12-C28	1110	25.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	123		"	100		123	70-130			
Surrogate: o-Terphenyl	62.1		"	50.0		124	70-130			
<b>LCS Dup (P3I1002-BSD1)</b>										
Prepared & Analyzed: 09/09/13										
C6-C12	967	25.0	mg/kg wet	1000		96.7	75-125	0.512	20	
>C12-C28	1110	25.0	"	1000		111	75-125	0.0398	20	
Surrogate: 1-Chlorooctane	129		"	100		129	70-130			
Surrogate: o-Terphenyl	62.4		"	50.0		125	70-130			
<b>Matrix Spike (P3I1002-MS1)</b>										
Source: 3I09003-01 Prepared: 09/09/13 Analyzed: 09/10/13										
C6-C12	1060	27.2	mg/kg dry	1090	76.0	90.5	75-125			
>C12-C28	4030	27.2	"	1090	3140	82.0	75-125			
Surrogate: 1-Chlorooctane	242		"	217		111	70-130			
Surrogate: o-Terphenyl	111		"	109		102	70-130			
<b>Matrix Spike Dup (P3I1002-MSD1)</b>										
Source: 3I09003-01 Prepared: 09/09/13 Analyzed: 09/10/13										
C6-C12	1160	27.2	mg/kg dry	1090	76.0	99.8	75-125	9.76	20	
>C12-C28	4020	27.2	"	1090	3140	80.7	75-125	1.60	20	
Surrogate: 1-Chlorooctane	279		"	217		128	70-130			
Surrogate: o-Terphenyl	124		"	109		114	70-130			

Permian Basin Environmental Lab, L.P.

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Project: Targa Parks 4  
Project Number: 13-0116-01  
Project Manager: Coty Woolf

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: 9/11/2013

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.



Data Reported to:

DATE: 9/11/13 PAGE 2 OF 2  
 PO #: \_\_\_\_\_ LAB WORK ORDER #: 3105005  
 PROJECT LOCATION OR NAME: 13-0110-01 Targa Parts 4  
 LAI PROJECT #: 13-0110-01 COLLECTOR: LM1

CHAIN-OF-CUSTODY

TRRP report?  Yes  No  
 TIME ZONE: Nm - MST  
 Time zone/State:

S=SOIL P=PAINT  
 W=WATER SL=SLUDGE  
 A=AIR OT=OTHER  
3105005

Field Sample I.D. \_\_\_\_\_  
 Lab # \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Matrix \_\_\_\_\_  
 # of Containers \_\_\_\_\_  
 HCl \_\_\_\_\_ HNO<sub>3</sub> \_\_\_\_\_  
 H<sub>2</sub>SO<sub>4</sub>  NaOH   
 ICE \_\_\_\_\_ UNPRESERVED \_\_\_\_\_

**ANALYSES**  
 BTEX  MTBE   
 TRPH 418.1  TPH 1005  TPH 1006   
 GASOLINE MOD 8015  DIESEL - MOD 8015   
 VOC 8260  SVOC 8270  PAH 8270  HOLD PAH   
 8081 PESTICIDES  8151 HERBICIDES   
 TCLP - METALS (RCRA)  TCLP VOC   
 TOTAL METALS (RCRA)  OTHER LIST   
 LEAD - TOTAL  D.W. 200.8  TCLP   
 RCI  TOX  FLASHPOINT   
 TDS  TSS  % MOISTURE  CYANIDE   
 PH  HEXAVALENT CHROMIUM   
 EXPLOSIVES  PECTHLORATE   
 CHLORIDE  ANIONS  ALKALINITY

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	ANALYSES	FIELD NOTES
BH2 30-31	16	9/11/13	15:10	Soil	1							<input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE	
BH2 40-41	17	9/11/13	15:21	Soil	1							<input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE	
BH2 50-57	18	9/11/13	15:40	Soil	1							<input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE	
TOTAL													

RELINQUISHED BY: (Signature) \_\_\_\_\_  
 DATE/TIME \_\_\_\_\_  
 RECEIVED BY: (Signature) \_\_\_\_\_  
 DATE/TIME \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_  
 DATE/TIME \_\_\_\_\_  
 RECEIVED BY: (Signature) \_\_\_\_\_  
 DATE/TIME \_\_\_\_\_

TURN AROUND TIME  
 NORMAL   
 1 DAY   
 2 DAY   
 OTHER

LABORATORY USE ONLY:  
 RECEIVING TEMP: 52 THERM #: \_\_\_\_\_  
 CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL # \_\_\_\_\_  
 HAND DELIVERED

Signature: [Handwritten Signature]

DATE/TIME: 9/11/13 14:30

### Well Completion Record

Geolog. Unit	Depth (Feet)	Lithologic Description	Unified Soil Classification	Graphic Log	PID Reading	Well Completion Detail
	0	Sand: Strong Brown (7.5YR 4/6), subrounded, quartz sand, little fines, well sorted, moist to dry	SP			
	5	loose, dry, sand, mostly quartz, some trace rounded caliche and clay				
	8.0	Caliche: Pink (7.5YR 7/4), unconsolidated, caliche, quartz sand, some coarse grained but mostly fines	Calche			
	10					
	15	Caliche: Very Pale Brown (10YR 7/4), coarse grained caliche, very fine grained sand to pebble sized caliche, dry	Calche			
	20					
	25	Silty Sand: Light Brown to Reddish Yellow (7.5YR 6/4 to 6/6), dry sand, quartz and caliche, coarse grained sand, some pebble sized, subrounded	SM			
	25	Gravel: Pink (9.5YR 7/3), dry caliche, sand to pebbles, rounded to subrounded, very fine grained silt sized caliche, some quartz grains - mostly caliche	GM			
	30					
	30	Silty Sand: Pink (8YR 8/3), dry sand, silt, sand, very fine grained, poorly sorted, subrounded, quartz sand	SM			
	35					
	38.0	Silty Sand: Yellowish Red (5YR 5/6), fine grained sand, poorly sorted, quartz sand, rounded, sand, silt	SM			
	40					
	45					
	48.0	Clay: Reddish Yellow to Yellowish Red (5YR 6/6 to 4/6), redbed, dry, coarse grained sand to pebble size, clay, consolidated but friable, subangular	CL			
	50					
	51.0	Total Depth: 51'				
	55					
	60					
	65					

**Legend**

- Water Table (Time of Boring)

Date Drilled - 9/4/2013  
 Drilling Method - Air Rotary  
 Drilled By - S.D.I.  
 Logged By - S. Rehman  
 Checked By - M. Larson

**Targa Midstream Services, L.P.**  
**Parks 4" Pipeline Release**  
 Lea County, New Mexico  
 Sec. 23, T-22-S, R-37-E

N 32° 22' 46.56"  
 W 103° 08' 23.65"



### Well Completion Record

Geolog. Unit	Depth (Feet)	Lithologic Description	Unified Soil Classification	Graphic Log	PID Reading	Well Completion Detail
	0	Sand: Strong Brown (7.5YR 4/6), well sorted, quartz sand	SP			0
	5	Sand: Brown (5YR 5/8), friable, unconsolidated, silt, quartz, round to subrounded, dry very fine grained sand	SP			5
	8.0	Caliche: Pink (5YR 8/4), angular, fine to coarse grained, sand sized, poorly sorted, some quartz sand	Caliche			10
	10					
	15	Caliche: Pinkish White (7.5YR 8/2), sand sized, caliche sand to pebbles, poorly sorted, quartz, subrounded to rounded	Caliche			15
	20					20
	25	Caliche: Pink (7.5YR 8/3), pebbles to sand sized, quartz, poorly sorted, silt sized, angular	Caliche			25
	30	Caliche: Pink (5YR 7/4), subangular to subrounded, silt, sand, pebbles, caliche, poorly sorted	Caliche			30
	35					35
	40	caliche, sand quartz mix, poorly sorted, mostly fine grained to very fine grained caliche, some caliche pebbles, subangular				40
	45					45
	47.0	Clay: Reddish Yellow to Yellowish Red (5YR 6/6 to 4/6), redbed, course grained to pebble sized clay, consolidated but blocky, friable, subangular	CL			50
	51.0					
	55	Total Depth: 51'				55
	60					60
	65					65

**Legend**

- Water Table (Time of Boring)

Date Drilled - 9/4/2013  
 Drilling Method - Air Rotary  
 Drilled By - S.D.R.  
 Logged By - S. Rehman  
 Checked By - M. Larson

**Targa Midstream Services, L.P.**  
**Parks 4" Pipeline Release**

Lea County, New Mexico  
 Sec. 23, T-22-S, R-37-E

N 32° 22' 46.56"  
 W 103° 08' 23.65"

**Larson & Associates, Inc.**  
 Environmental Consultants

PHOTOGRAPHS



Excavation Viewing East, July 11, 2013



Excavation Viewing West, July 11, 2013

PHOTOGRAPHS



Excavation Viewing North, July 11, 2013



West End of Excavation Viewing Southwest, July 11, 2013