District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

	Release Notificati	on and C	orrective A	ction		
		OPERA	TOR	☐ Initi	al Report	☐ Final Repo
Name of Company Enterprise Field		Contact	Alena Miro			*
PO Box 4324, Ho			No. <i>575-628-68</i>			
Facility Name <i>Pipeline ROW, 30</i>	137 Gathering Lateral	Facility Ty	pe: Gas Gather	ing Pipeline		
Surface Owner State of New Mex	rico Mineral Owne	r <i>NA - Pipe</i>	eline	Lease N	No. <i>NA</i>	
		ON OF RE				
	ringe Feet from the Nor 18E 97	th/South Line South	Feet from the 562	East/West Line West	County Eddy	
	Latitude: <u>N 32.6538</u>	6 Longitu	ıde: <u><i>W-104.1285</i></u>	57		
	NATUR	E OF REL		_		
Type of Release Natural Gas, Pipeline L		Volume o	f Release: 1,257 M	ICF, Volume I	Recovered: N/A	
Source of Release Pipeline Leak.			Liquids (updated) Hour of Occurrence	P Date and	Hour of Discove	
			5 @ 10:05 MDT		15 @ 10:05 MD	
Was Immediate Notice Given?		If YES, To				
	s No Not Require		tcher – NMOCD L			
By Whom? Osman De Leon Was a Watercourse Reached?			Hour 04/29/2015 olume Impacting the			
	es 🛭 No	II 1ES, V	orume impacting ti	ne watercourse.		
If a Watercourse was Impacted, Describe F	Fullv.*					
1						
Describe Cause of Problem and Remedial	Action Taken *					
Describe Cause of Froblem and Remedian	Action Taken,					
Pipeline leak was detected by pumper pass	sing by. Pipeline segment w	as clamped an	d blown down, and	l leaking portion v	vas repaired foll	lowing
standard One-Call.						J
Describe Area Affected and Cleanup Actio	n Taken.*					
Liquid spill occurred within pipeline ROW	V. Clean-up activities were c	arried out in a	ccordance with En	terprise's Genera	l release Notific	ation.
Response and Remediation Plan (dated M	larch 9, 2015). Operations p	ersonnel origir	ially estimated app	roximately 2 bbl i	oineline liquids s	spilled to the
ground within pipeline right-of-way. After bbl pipeline liquids. NMOCD Reference 2	r further investigation and e. RP-3191	xcavation, it w	as determined that	the liquid spill vo	lume was appro	ximately 8.5
I hereby certify that the information given	above is true and complete to	the best of my	knowledge and ur	derstand that purs	uant to NMOCT	rules and
regulations all operators are required to rep	ort and/or file certain release	notifications a	nd perform correct	ive actions for rele	eases which may	endanger
public health or the environment. The acce	eptance of a C-141 report by	the NMOCD m	arked as "Final Re	port" does not reli	eve the operator	of liability
should their operations have failed to adequor the environment. In addition, NMOCD	lately investigate and remedi	ate contaminat	ion that pose a thre	at to ground water	, surface water, l	human health
federal, state, or local laws and/or regulation	ns.	does not renev	e the operator of r	esponsibility for co	ompliance with a	my other
// //	25		OIL CONS	SERVATION	DIVISION	
Signature: My 4. Trues	4		,		21,101011	
Signature.	4	Annroyed by	District Superviso	160	711-1	nn
Printed Name: Jon E. Fields		Approved by	District Superviso	". Ashley	Maxwe	ee
Title: Director, Field Environ	mental	Approval Da	te: 4/18/2023	Expiration I		
E-mail Address: jefields@eprod.com		Conditions o	f Approval:			
15 2 10		1	**		Attached	
Date: S-9-/9 Phone: 713-381 Attach Additional Sheets If Necessary	1-6684					
reach Additional offices II Necessary						



CORRECTIVE ACTION REPORT

Property:

30137 Pipeline Releases SW¼ SE ¼, S13 T19S R28E Eddy County, New Mexico ECIRTS: 25049, 25811, 26242, 26497

NMOCD RP#s: 2RP-2846 (30137 #3 Release), 2RP-3191 (30137 #4 Release), 2RP-3193 (30137 #6 Release)

July 2016 Apex Project No. 725010112096

Prepared for:

PO Box 4324 Houston, TX 77252 Attention: Dina Ferguson

Prepared by:

Karolanne Toby Project Manager

Liz Scaggs, P.G. Division Manager

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CORRECTIVE ACTION REPORT

30137 Pipeline Releases

SW¼ SE ¼, S13 T19S R28E Eddy County, New Mexico ECIRTS: 25049, 25811, 26242, 26497 Apex Project No. 725010112096

NMOCD RP#s: 2RP-2846 (30137 #3 Release), 2RP-3191 (30137 #4 Release), 2RP-3044 (30137 #5 Release), 2RP-3100 (30137 #6 Release)

1.0 INTRODUCTION

1.1 Site Description & Background

The 30137 #3, #4, #5 and #6 Pipeline Releases (30137 releases) are located within the Enterprise Field Services, LLC (Enterprise) 30137 natural gas gathering pipeline right-of-way (ROW) in the southwest (SW) ¼ of the southeast (SE) ¼ of Section 13 in Township 19 South and Range 28 East in rural Eddy County, New Mexico (32.65386N, 104.12857W), referred to hereinafter as the "Site". The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities. The subsurface consists of fine sandy loam over mixed alluvium and /or eolian sands.

On February 15, 2015 a leak (30137 #3) was detected on the 30137 natural gas gathering pipeline (30137 pipeline) by a pipeline technician. Subsequent to the initial response activities, a second leak (30137 #4) was detected on the 30137 pipeline on April 30, 2015. Immediate response action was taken based on the Enterprise *General Release Notification, Response and Remediation Plan (dated March 2015)*. On June 8, 2015, a third leak (30137 #5) was detected on the 30137 pipeline. During the completion of remediation activities to address the third leak on the 30137 pipeline, a fourth leak (30137 #6) was detected in the same approximate area as the third release. The four (4) releases on the 30137 pipeline were repaired and remediation efforts were completed subsequent to Enterprise Operations combining the excavation efforts for each individual release. All four (4) of the 30137 pipeline releases listed above occurred within a 200-foot segment along the 30137 pipeline. The RP numbers assigned by the NMOCD to the 30137 #3, #4, #5 and #6 releases are 2RP-2846, 2RP-3191, 2RP-3044 and 2RP-3100, respectively.

Due to the close proximity of each leak on the 30137 pipeline, Enterprise submitted a notification to the New Mexico Oil Conservation Division (NMOCD) of Enterprise's intent to combine the excavation efforts for each release (30137 #3, #4, #5 and #6) into one large excavation in order to effectively complete remediation efforts and to replace the 200-foot segment of pipeline on which all the releases occurred. NMOCD approved Enterprise's plan to address the combined remediation efforts and to combine the releases into a single report subsequent to completion of remediation activities.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the NMOCD *Recommended Remediation Action Levels (RRALs)* using the New Mexico Energy, Minerals and Natural Resources Division (EMNRD) OCD's *Guidelines for Remediation of Leaks*, *Spills and Releases* as guidance.



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2.0 SITE RANKING

In accordance with the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the New Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

Ranking Criteria	Ranking Score		
	<50 ft. 20		
Depth to Groundwater	50 to 99 ft.	10	10
	>100 ft.	0	
Wellhead Protection Area <1,000 ft. from a water source,	Yes	20	0
or; <200 ft. from private domestic water source.	No	0	
	<200 ft.	20	
Distance to Surface Water Body	200 to 1,000 ft.	10	0
	>1,000 ft.	0	
Total Ranking Score	10		

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "10". This ranking is based on the following:

- The approximate depth to the initial groundwater-bearing zone is between 50 and 99 feet (ft.).
- No water source wells (municipal/community wells) were identified within 1,000 ft. of the Site. No private domestic water sources were identified within 200 ft. of the Site.
- The distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of "10", cleanup goals for soils remaining in place at the Site include:

- 10 milligrams per Kilogram (mg/Kg) for benzene;
- 50 mg/Kg for total benzene, toluene, ethylbenzene and xylene (BTEX);
- 1,000 mg/Kg for combined total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO); and
- 500 mg/Kg for chloride.

3.0 SITE CHRONOLOGY

Apex has reviewed the available documentation from previously conducted subsurface investigation and corrective action activities completed at the Site.

The following is a chronology of Site assessment, investigation and corrective action activities previously conducted at the Site. Each release

February 15, 2015

A release was discovered along the Enterprise 30137 pipeline within the pipeline ROW. Enterprise initially estimated the release as approximately three (3) barrels (bbls) of natural gas pipeline liquid. This release is referred to hereinafter as the 30137 #3 release.



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February 24, 2015

An initial C-141 was submitted by Enterprise to the NMOCD due to the gas volume associated with the 30137 #3 release. The initial liquid spill volume was estimated to be approximately three (3) bbls of natural gas pipeline liquid. The RP # 2RP-2846 was assigned by the NMOCD to the 30137 #3 release.

February 25, 2015

Enterprise Operations initiated excavation activities at the 30137 #3 release site and removed impacted soil from below and surrounding the release point on the pipeline. Apex collected five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall, and RP) from each sidewall and floor of the 30137 #3 excavation and two (2) confirmation soil samples [CS-1(2015)] and CS-2(2015)] from an area of hydrocarbon staining identified to the southeast of the excavation. In addition, Apex collected one (1) composite soil sample (SP) from the stockpiled material staged next to the excavation. Based on laboratory analytical results from the initial soil samples, additional excavation was required.

April 29, 2015

A new release was discovered on the 30137 pipeline approximately 170 ft. to the east of the 30137 #3 release. Enterprise initially estimated the release as approximately two (2) bbls of natural gas pipeline liquids. This release is referred to hereinafter as the 30137 #4 release. The RP # 2RP-3191 was assigned by the NMOCD to the 30137 #4 release.

May 18, 2015

An initial C-141 was submitted by Enterprise to the NMOCD due to the gas volume associated with the 30137 #4 release. The initial liquid spill volume was estimated to be approximately two (2) bbls of natural gas pipeline liquid.

June 8, 2015

A new release was discovered on the 30137 pipeline approximately 105 ft. to the east of the 30137 #3 release. Enterprise initially estimated the release as approximately three (3) bbls of natural gas pipeline liquid. This release is referred to hereinafter as the 30137 #5 release.

June 10, 2015

An initial C-141 was submitted by Enterprise to the NMOCD due to the gas volume associated with the 30137 #5 release. The initial liquid spill volume was estimated to be approximately three (3) bbls of natural gas pipeline liquid. The RP # 2RP-3044 was assigned by the NMOCD to the 30137 #5 release.

June 15 to June 16, 2015

Enterprise Operations conducted excavation activities at the 30137 #4 and 30137 #5 release sites. Apex returned to the Site to conduct additional field activities. Apex did not collect additional samples from the 30137 #3 release due to elevated field readings collected from a photoionization detector (PID) and a salinity meter. Apex collected five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall and RP) from the excavation in the vicinity of the 30137 #4 release and five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall and RP) from the excavation in the vicinity of the 30137 #5 release. In addition, Apex collected three (3) composite soil samples (STP-2, STP and STP) from the stockpiled material staged on-Site and two (2) background soil samples (BKG-1 and BKG-2) from areas within the 30137 pipeline ROW, approximately 150 feet (ft.) to the east and west of the excavated areas on-Site. Based on laboratory analytical results, additional excavation was required in the vicinity of the 30137 #5 release.



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July 2, 2015

A new release was discovered on the 30137 pipeline in the same approximate location as the 30137 #5 release. Enterprise initially estimated the release to be approximately three (3) bbls of natural gas pipeline liquid. This release is referred to hereinafter as the 30137 #6 release.

July 7, 2015

An initial C-141 was submitted by Enterprise to the NMOCD due to the gas volume associated with the 30137 #6 release. The initial liquid spill volume was estimated to be approximately three (3) bbls of natural gas pipeline liquid. The RP # 2RP-3100 was assigned by the NMOCD to the 30137 #6 release.

August 2015

Enterprise submits revised C-141 forms with updated liquid spill volumes for the 30137 #3, #4 and #5 releases subsequent to the receipt of field and soil sampling data associated with the initial response actions for each release. The revised liquid spill estimates are ten (10) bbls, eight and a half (8.5) bbls and nine (9) bbls, respectively.

Due to the close proximity of each leak on the 30137 pipeline, Enterprise submitted a notification to the NMOCD of Enterprise's intent to combine the excavation efforts for each release (30137 #3, #4, #5 and #6) into one large excavation in order to effectively complete remediation efforts and to replace the 200-foot segment of pipeline on which all the releases occurred. NMOCD approves Enterprise's plan to address the combined remediation efforts and combining the releases into a single report subsequent to completion of remediation activities.

January 14, 2016

Apex arrived on-Site to collect confirmation soil samples from the combined excavation for the 30137 #3, #4, #5 and #6 releases subsequent to Enterprise Operations completing excavation activities and replacing the 200-foot segment of pipeline. Apex collected 14 confirmation soil samples (CS-1(2016), CS-2(2016) and CS-3 through CS-14) from the sidewalls and floor of the combined excavation for the 30137 pipeline releases. In addition, Apex collected three (3) composite soil samples (SP-1 through SP-3) from the soil stockpiles staged next to the excavation.

March 14, 2016

Based on laboratory analytical results, additional excavation was required. Apex returned to the Site and collected four (4) confirmation soil samples [CS-1(2015) (RE), CS-2(2015) (RE), S-Wall (RE) and R.P.(RE)] from areas within the excavation and from the previously identified area of hydrocarbon staining to the southeast of the former 30137 #3 excavation.

March through April, 2016

Based on laboratory analytical results, no further remediation activities were required. The excavation was backfilled utilizing the final stockpiled soils (SP-1 through SP-6) as fill material and the area was contoured to approximate original surface grade.



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4.0 RESPONSE ACTIONS

4.1 Soil Excavation Activities

On February 25, 2015, Enterprise Operations and Willbros Construction, LLC (Willbros) initiated response actions in the vicinity of the 30137 #3 release. It was at this time that Enterprise estimated the initial spill volume for the 30137 #3 release as three (3) bbls of natural gas pipeline liquid. Enterprise isolated the leaking portion of the 30137 pipeline and the pipeline section was blown down to carry out repair activities. Impacted soil was removed from the vicinity of the release point and collected into a stockpile on-Site. The former 30137 #3 excavation dimensions measured approximately 25 ft. (ft.) long by 15 ft. wide with an approximate depth of ten (10) ft. below ground surface (bgs). The area of hydrocarbon staining identified to the southeast of the 30137 #3 excavation measured approximately 50 ft. long by 15 ft. wide with an approximate depth of two (2) ft. bgs.

On April 29, 2015, Enterprise Operations and Willbros returned to the Site to initiate response actions at in the vicinity of the 30137 #4 release. It was at this time that Enterprise estimated the initial spill volume for the 30137 #4 release as two (2) bbls of natural gas pipeline liquid. The leak was subsequently identified and repaired. Impacted soil was removed from the affected areas surrounding the release point on the 30137 pipeline associated with the 30137 #4 release and collected into a stockpile on-Site. The former 30137 #4 excavation dimensions measured approximately 25 ft. long by 15 ft. wide with an approximate depth of eight (8) ft. bgs.

On June 8, 2016, Enterprise Operations and Willbros returned to the Site to initiate response actions in the vicinity of the 30137 #5 release. It was at this time that Enterprise estimated the initial spill volume for the 30137 #5 release as three (3) bbls of natural gas pipeline liquid. The leak was subsequently identified and repaired. Impacted soil was removed from the affected areas surrounding the release point on the 30137 pipeline associated with the 30137 #5 release and collected into a stockpile on-Site. The former 30137 #5 excavation dimensions measured approximately 35 ft. long by 15 ft. wide with an approximate depth of ten (10) ft. bgs.

On July 2, 2015, Enterprise Operations returned to the Site to initiate response actions in the vicinity of the 30137 #6 release, which occurred in the same approximate location on the 30137 pipeline as the 30137 #5 release. It was at this time that Enterprise estimated the liquid spill volume for the 30137 #6 release as approximately three (3) bbls of natural gas pipeline liquid.

During August, 2015, Enterprise submitted to the NMOCD revised C-141 forms with updated liquid spill volumes for the 30137 #3, #4 and #5 releases. Subsequent to the initial remediation activities conducted at the Site, the 30137 #3, #4 and #5 release volumes were updated and revised to be ten (10) bbls, eight and a half (8.5) bbls and nine (9) bbls, respectively.

Between August, 2015 and January, 2016, Enterprise Operations and NMR Pipeline, LLC (NMR) returned to the Site to complete remediation activities and to replace the 200-foot segment of the 30137 pipeline on which the 30137 #3, #4, #5 and #6 releases occurred. Due to the close proximity of each leak on the 30137 pipeline, the excavation efforts for the 30137 #3, #4, #5 and #6 releases were combined into a single excavation subsequent to Enterprise notification to the NMOCD.

The final excavation dimensions measured approximately 200 ft. long by 15 ft. wide, with an approximate depth ranging from approximately eight (8) ft. to 14 ft. bgs. Figure 3 - Site Map, provided in Appendix A, indicates the previous extent of the former 30137 #3, #4 and #5 excavation limits in relation to the final combined 30137 releases excavation.



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Backfill of the final combined 30137 #3, #4, #5 and #6 excavation was completed during March 2016. The soil stockpiles generated from the individual 30137 #3, #4, #5 and #6 releases were blended into the soils generated during the combined excavation effort.

During the initiation of the combined excavation effort, the initial soil stockpiles from the individual 30137 #3, #4, #5 and #6 releases were moved to different areas around the excavation on-Site to allow heavy equipment safe access around the combined excavation. This allowed the initial affected soil stockpiles from the individual 30137 #3, #4, #5 and #6 releases to aerate during the combined excavation process. It was also during this time that a substantial amount of soil was removed from the excavation and added to the pre-existing stockpiles, which allowed for potential COC concentrations remaining in the previous soil stockpiles to become diluted.

Based on laboratory analytical results, the final stockpiled material (SP-1 through SP-6) generated from combined excavation activities was reused as fill material in the excavation and the area was contoured to approximate original surface grade.

4.2 Soil Sampling Program

On February 25, 2015, Apex collected five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall, and RP) from each sidewall and floor of the 30137 #3 release excavation and two (2) confirmation soil samples [CS-1(2015)] and CS-2(2015)] from the area of hydrocarbon staining identified to the southeast of the 30137 #3 release excavation. In addition, Apex collected one (1) composite soil sample (SP) from the stockpiled material staged next to the 30137 #3 release excavation.

On June 15 and 16, 2015, Apex returned to the Site and collected five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall and RP) from the excavation in the vicinity of the 30137 #4 release and five (5) confirmation soil samples (N-Wall, S-Wall, E-Wall, W-Wall and RP) from the excavation in the vicinity of the 30137 #5 release. In addition, Apex collected three (3) composite soil samples from the stockpiled soils removed from the 30137 #3 excavation (STP-2), from the stockpiled soils removed from the 30137 #5 excavation (STP) and from the stockpiled soils removed from the 30137 #5 excavation (STP). Apex also collected two (2) background soil samples (BKG-1 and BKG-2) from areas within the 30137 pipeline ROW approximately 150 ft. to the east and west of the excavated areas on-Site.

On January 14, 2016, Apex arrived on-Site to collect confirmation soil samples from the combined excavation for the 30137 releases. The confirmation soil samples were collected subsequent to Enterprise Operations completing excavation activities and replacing the 200-foot segment of pipeline. Apex collected 14 confirmation soil samples [CS-1(2016), CS-2(2016) and CS-3 through CS-14] from the sidewalls and floor of the combined excavation. Confirmation soil sample CS-1(2016) was collected in the vicinity of confirmation soil sample W-Wall (30137 #3) subsequent to over-excavation activities. The confirmation soil sample CS-3 was collected to the east of confirmation soil sample E-Wall (30137 #3) along the excavation floor, subsequent to the complete removal of soil that comprised the boundary of the E-Wall sample location. Confirmation soil sample CS-9 was collected from the same location as confirmation soil sample RP (30137 #5) subsequent to over-excavation activities. In addition, Apex collected three (3) composite soil samples (SP-1 through SP-3) from the final soil stockpiles staged next to the final combined excavation.

Based on previous laboratory analytical results, additional excavation was required in the vicinity of the former location of the 30137 #3 release. Apex returned to the Site and collected four (4) confirmation soil samples [CS-1(2015)(RE), CS-2(2015)(RE), S-Wall(RE) and R.P.(RE)] from areas within the former 30137 #3 excavation boundaries and in the vicinity of the previously identified area of hydrocarbon staining. In addition, Apex collected three (3) composite soil samples (SP-4 through SP-6) from the final soil stockpiles staged next to the excavation.



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Soil samples were collected and delivered under chain of custody control to Trace Analysis Laboratory and Xenco Laboratories in Midland, Texas for analysis of BTEX utilizing EPA SW-846 Method #8021B, TPH GRO and DRO utilizing EPA SW-846 Method #8015 and chloride utilizing EPA Method SM 4500-Cl B and/or EPA Method 300.

Executed chain-of-custody forms and laboratory data sheets are provided in Appendix D. All soil samples were analyzed within the specified holding times.

Figure 2 is a Site Vicinity Map that indicates the approximate location of the background soil samples in relation to the Site. Figure 3 is a Site Map that indicates the approximate confirmation soil sample and composite stockpile soil sample locations in relation to the former individual 30137 releases excavation boundaries and the final combined 30137 releases excavation and pertinent land features (Appendix A).

5.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.29 *Remediation Plan.* These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

5.1 Confirmation Soil Samples

Apex compared the benzene, BTEX, TPH GRO/DRO and chloride concentrations associated with the final confirmation soil samples collected from the previous limits of excavation for the individual 30137 #3, #4 and #5 releases and the final combined excavation for the 30137 #3, #4, #5 and #6 releases to the OCD RRALs for sites having a total ranking score of "10".

The laboratory analyses of the final confirmation soil samples CS-1(2015)(RE), CS-2(2015)(RE), CS-1 (2016), CS-2(2016), CS-3, CS-4, N-Wall, S-Wall(RE), R.P.(RE), CS-11, N-Wall, CS-12, CS-13, CS-14, S-Wall, RP, E-Wall and CS-5 through CS-10, collected from both the previous limits of excavation for the individual 30137 #3, #4 and #5 releases and the final combined excavation at the Site, indicate benzene concentrations ranging from below the laboratory reporting limit of 0.000990 mg/Kg to 4.08 mg/Kg, which are below the OCD RRAL limits of 10 mg/Kg for a Site ranking of "10".

The laboratory analyses of the final confirmation soil samples CS-1(2015)(RE), CS-2(2015)(RE), CS-1(2016), CS-2(2016), CS-3, CS-4, N-Wall, S-Wall(RE), R.P.(RE), CS-11, N-Wall, CS-12, CS-13, CS-14, S-Wall, RP, E-Wall and CS-5 through CS-10, collected from both the previous limits of excavation for the individual 30137 #3, #4, and #5 releases and the final combined excavation at the Site, indicate total BTEX concentrations ranging from below the laboratory reporting limit of 0.000990 mg/Kg to 0.507 mg/Kg, which are below the OCD RRAL limits of 50 mg/Kg for a Site ranking of "10".

The laboratory analyses of the final confirmation soil samples CS-1(2015)(RE), CS-2(2015)(RE), CS-1(2016), CS-2(2016), CS-3, CS-4, N-Wall, S-Wall(RE), R.P.(RE), CS-11, N-Wall, CS-12, CS-13, CS-14, S-Wall, RP, E-Wall and CS-5 through CS-10, collected from both the previous limits of excavation for the individual 30137 #3, #4, and #5 releases and the final combined excavation at the Site, indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limit of15.0 mg/Kg to 449 mg/kg, which are below the OCD RRAL limits of 1,000 mg/Kg for a Site ranking of "10".

The laboratory analyses of the final confirmation soil samples CS-1(2015)(RE), CS-2(2015)(RE), CS-1(2016), CS-2(2016), CS-3, CS-4, N-Wall, S-Wall(RE), R.P.(RE), CS-11, N-Wall, CS-12, CS-13, CS-14, S-Wall, RP, E-Wall and CS-5 through CS-10, collected from both the previous limits of excavation for the



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individual 30137 #3, #4, and #5 releases and the final combined excavation at the Site, indicate chloride concentrations ranging from below the laboratory reporting limit of 20.0 mg/Kg to 403 mg/Kg, which are below the OCD RRAL limits of 500 mg/Kg for a Site ranking of "10".

5.2 Stockpile Soil Samples

Apex compared the benzene, BTEX, TPH GRO/DRO and chloride concentrations associated with the final composite soil samples (SP-1 through SP-6) collected from the stockpiled soils generated from excavation activities to the OCD RRALs for sites having a total ranking score of "10".

The laboratory analyses of the final composite soil samples (SP-1 though SP-6) indicate benzene concentrations below the laboratory reporting limits, ranging from 0.000996 mg/Kg to 0.0299 mg/Kg, which are below the OCD RRAL limits of 10 mg/Kg for a Site ranking of "10". The laboratory analyses of the final composite soil samples (SP-1 though SP-6) indicate total BTEX concentrations ranging from below the laboratory reporting limit of 0.000996 mg/Kg to 19.2 mg/Kg, which are below the OCD RRAL limits of 50 mg/Kg for a Site ranking of "10".

The final composite soil samples (SP-1 though SP-6), indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limit of 15.0 mg/Kg to 829 mg/kg, which are below the OCD RRAL limits of 1,000 mg/Kg for a Site ranking of "10".

The final composite soil samples (SP-1 though SP-6), indicate chloride concentrations ranging from 37.0 mg/Kg to 364 mg/Kg, which are below the OCD RRAL limits of 500 mg/Kg for a Site ranking of "10".

Based on the laboratory analytical results, the final soil stockpiles (SP-1 though SP-6) indicated benzene, total BTEX, combined TPH GRO/DRO and chloride concentrations below the applicable regulatory standards, and were suitable to be reused as fill material in the excavation subsequent to the completion of remediation activities.

The laboratory analytical results for the soil samples collected from the Site are provided in Table 1 in Appendix C.

6.0 FINDINGS AND RECOMMENDATIONS

The 30137 releases are located within the Enterprise 30137 natural gas gathering pipeline ROW in the SW ¼ of the southeast SE ¼ of Section 13 in Township 19 South and Range 28 East in rural Eddy County, New Mexico. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities. The subsurface consists of fine sandy loam over mixed alluvium and /or eolian sands.

On February 15, 2015 a leak (30137 #3) was detected on the 30137 natural gas gathering pipeline (30137 pipeline) by a pipeline technician. Subsequent to the initial response activities, a second leak (30137 #4) was detected on the 30137 pipeline on April 30, 2015. Immediate response action was taken based on the Enterprise *General Release Notification, Response and Remediation Plan (dated March 2015)*. On June 8, 2015, a third leak (30137 #5) was detected on the 30137 pipeline. During the completion of remediation activities to address the third leak on the 30137 pipeline, a fourth leak (30137 #6) was detected in the same approximate area as the third release. The four (4) releases on the 30137 pipeline were repaired and remediation efforts were completed subsequent to Enterprise Operations combining the excavation efforts for each individual release. All four (4) of the 30137 pipeline releases listed above occurred within a 200-foot segment along the 30137 pipeline. The RP numbers assigned by the NMOCD to the 30137 #3, #4, #5 and #6 releases are 2RP-2846, 2RP-3191, 2RP-3044 and 2RP-3100, respectively.



July 2016 Page 9

- The primary objective of the corrective actions completed at the Site was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RRALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- On-Site remediation included excavation of the affected areas impacted by the 30137 #3, #4, #5 and #6 releases of natural gas pipeline liquid starting from each release point on the 30137 pipeline. The final combined excavated area for the 30137 releases measured approximately 200 ft. long by 15 ft. wide, with an approximate depth ranging from approximately eight (8) ft. to 14 ft. bgs. Excavated soils were removed and collected into six (6) stockpiles on-Site (SP-1 through SP-6).
- The final confirmation soil samples CS-1(2015)(RE), CS-2(2015)(RE), CS-1 (2016), CS-2(2016), CS-3, CS-4, N-Wall, S-Wall(RE), R.P.(RE), CS-11, N-Wall, CS-12, CS-13, CS-14, S-Wall, RP, E-Wall and CS-5 through CS-10, collected from both the previous limits of excavation for the individual 30137 #3, #4, #5 and #6 releases and the final combined excavation at the Site, indicate benzene, total BTEX, combined TPH GRO/DRO and chloride concentrations below the applicable OCD RRALs for a Site ranking of "10".
- The six (6) final soil stockpiles on-Site (SP-1 through SP-6) indicated laboratory results below the
 applicable OCD RRALs for a Site ranking of "10" and were suitable to be reused as fill material in
 the excavation. The final excavated area was backfilled with the final stockpiled soils and
 subsequently contoured to approximate original surface grade.

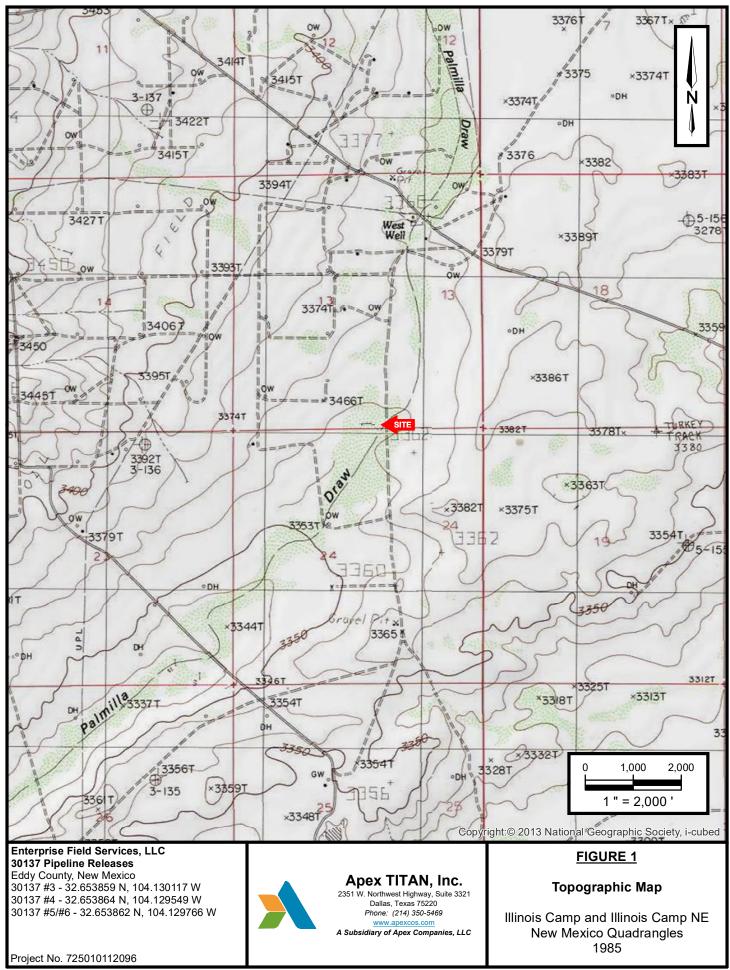
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.





APPENDIX A

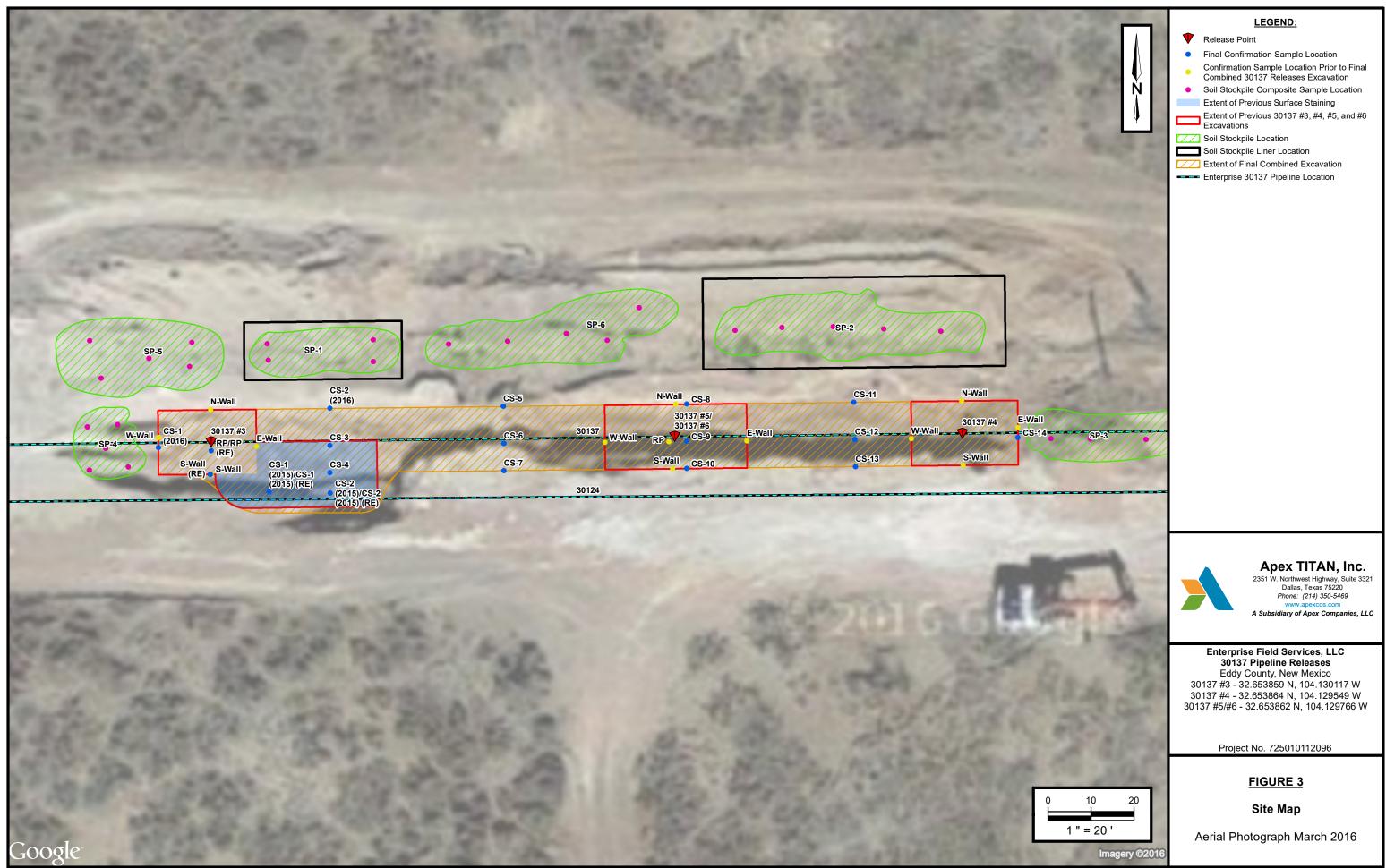
Figures



P:\Drafting\2016\725010112096\Figure 1.mxd 5/6/2016 NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US Projected Coordinate System



Received by OCD: 4/12/2023 10:23:50 AM



P:\Drafting\2016\725010112096\Figure 3B.mxd 5/6/2016 NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US Projected Coordinate System



APPENDIX B

Photographic Documentation



View of combined 30137 releases excavation facing southeast.



View of hydrocarbon stain removal in the vicinity of the former 30137 #3 excavation, facing southwest.



View of stockpiled soils after final excavation activities, facing northeast.



View of excavation sidewall during final remediation activities, facing east.



View of stockpiled soil during final remediation activities, facing west.



View of excavation during final remediation activities, facing east.



APPENDIX C

Analytical Tables

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS 30137 Pipeline Releases

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO/DRO (mg/Kg)	Chloride (mg/Kg)
New Mexico Oil Conse	rvation Division (NM	IOCD) Recommen	ded Remediati	on Action Leve	els (RRALs) (Tot	al Ranking Sco	re: 10)				
	Conservation Division Acti		10	NE	NE	NE	50	NE	NE	1,000	500
			BACKGRO	OUND SOIL SAI	MPLE ANALYTIC	CAL RESULTS					
BKG-1	6/16/2015	6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<54.0	98.0
BKG-2	6/16/2015	6	<0.0200	<0.0200	0.0517 ON SOIL SAMPL	<0.0200	0.0517	<4.00	<50.0	<54.0	<20.0
W-Wall	2/25/2015		0.0665	0.304	0.0500	0.851	1.27	14.5	<50.0	14.5	3.080
CS-1 (2016)	1/14/2016	8	0.0142	0.0637	0.0147	0.142	0.234	24.3	<14.9	24.3	56.5
CS-1 (2015)	2/25/2015	2	4.08	25.3	5.54	47.6 ^{Je}	82.5	2,420	<50.0	2,420	383
CS-1 (2015) (RE)	3/14/2016	10	< 0.00150	<0.00200	<0.00200	<0.0020	< 0.00150	<25.0	34.3	34.3	NS
CS-2 (2015)	2/25/2015	2	112	378 ^{Je}	82.3	346 ^{Je}	918	15,200	320	15,520	3,160
CS-2 (2015) (RE)	3/14/2016	14	<0.00149	<0.00199	<0.00199	<0.00199	<0.00149	<24.9	135	135	343
CS-2 (2016)	1/14/2016	6	<0.000990	<0.00198	<0.000990	<0.000990	<0.000990	<15.0	40.7	40.7	13.7
E-Wall	2/25/2015	8	0.0214	0.163	0.746	3.48	4.41	122	61.1	183	1,530
CS-3	1/14/2016	10	<0.000998	<0.00200	<0.000998	<0.000998	<0.000998	<15.0	<15.0	<15.0	6.74
CS-4	1/14/2016	6	0.00150 0.0270	<0.00198 0.0436	<0.000990	0.505 0.0334	0.507 0.104	149	300	449	9.42 383
N-Wall S-Wall	2/25/2015 2/25/2015	8	0.0270	0.0436	<0.0200 0.352	0.0334	1.23	<4.00	<50.0 62.1	<54.0 182	11,100
S-Wall (RE)	3/14/2016	8	NS	NS	NS NS	NS	NS	NS	NS NS	NS	254
RP	2/25/2015	10	0.0461	<0.0200	0.254	0.511	0.811	90.7	292	383	9,000
R.P. (RE)	3/14/2016	13	NS	NS	NS	NS	NS	NS	NS	NS	403
		30137 #4	EXCAVATION	CONFIRMATION	ON SOIL SAMPL	E ANALYTICAL	RESULTS				
CS-11	1/14/2016	6	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100	<15.0	<15.0	<15.0	<2.00
N-Wall	6/15/2015	6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<54.00	<20.0
W-Wall	6/15/2015	6	<0.0200	0.0221	0.0389	0.0681	0.129	9.34	<50.0	9.34	<20.0
CS-12	1/14/2016	10	<0.00101	<0.00202	<0.00101	<0.00101	<0.00101	<14.9	<14.9	<14.9	7.29
CS-13	1/14/2016	6	<0.00101	<0.00202	<0.00101	<0.00101	<0.00101	<15.0	<15.0	<15.0	2.47
E-Wall	6/15/2015	6	₹0.0200	0.0231	0.0528	0.0585	0.134	8.14	<50.0	8.14	<20.0
CS-14	1/14/2016	6	<0.000992	<0.00198	<0.000992	<0.000992	<0.000992	<15.0	<15.0	<15.0	5.75
S-Wall RP	6/15/2015 6/15/2015	6 8	<0.0200 <0.0200	<0.0200 <0.0200	<0.0200 <0.0200	<0.0200 <0.0200	<0.0200 <0.0200	<4.00 <4.00	<50.0 <50.0	<54.0 <54.0	<20.0 <20.0
KI	0/13/2013				ON SOIL SAMPL			\4.00	<50.0	₹34.0	\20.0
CS-5	1/14/2016	6	<0.00990	<0.00198	<0.000990	<0.000990	<0.000990	<15.0	101	101	<2.00
W-Wall	6/15/2015	6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	₹54.00	<20.0
CS-6	1/14/2016	6	< 0.00101	< 0.00202	<0.00101	< 0.00101	< 0.00101	<14.9	<14.9	<14.9	<2.00
CS-7	1/14/2016	6	<0.00100	<0.00201	<0.00100	<0.00100	<0.00100	<15.0	<15.0	<15.0	2.84
N-Wall	6/15/2015	6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<54.00	193
CS-8	1/14/2016	6	<0.00100	<0.00200	<0.00100	<0.00100	<0.00100	<15.0	<15.0	<15.0	5.66
E-Wall	6/15/2015	6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<54.00	<20.0
RP	6/15/2015	10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<54.00	5,630
CS-9	1/14/2016	10	<0.000996	<0.00199	<0.000996	<0.000996	<0.000996	<15.0	<15.0	<15.0	<2.00
S-Wall	6/15/2015	6	₹000200	₹0.0200	₹0.0200	<0.00200 <0.000994	₹0.0200	≮4.00	≰50.0 -15.0	≼54.00	₹20.0
CS-10	1/14/2016	6	<0.000994	<0.00199	<0.000994		<0.000994	<15.0	<15.0	<15.0	2.63
en.	2/25/2045	NA		63.2	SAMPLE ANALY		224	H THE		ы нич	ע אין ע
SP STD-2	2/25/2015	NA NA	1.88 4.22		30.1	129 34.0 ^{Je}		3,150	571 676	3,721	1,530
STP-2	6/16/2015	INA		20.4	7.34 SAMPLE ANALY			1,190*	575	111199	98.0
STP	6/15/2015	NA	0.0248		1.13		3.15	314	<50.0	314	588
JIF	0/13/2010	INA	•		SAMPLE ANALY			P!#	MANAM	PIH.	1 200
STP	6/15/2015	NA		<0.0200		<0.0200		<4 nn	<50.0	±54 nn	<20.0
5.1	5, 15,2010				IPLE SOIL ANAL				IIIII MAHAMIIIIIIIIIIIIIIIIIIIIIIIIIIIII	TIMITIM	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
	1/14/2016	NA	<0.000996	<0.00199	<0.000996	<0.000996	<0.000996	<15.0	<15.0	<15.0	364
SP-1	1/14/2016										
SP-1 SP-2	1/14/2016	NA	< 0.000996	< 0.00199	< 0.000996	< 0.000996	< 0.000996	<15.0	<15.0	<15.0	141
			<0.000996 <0.00101	<0.00199 <0.00201	<0.000996 <0.00101	<0.000996 <0.00101	<0.000996 <0.00101	<15.0 <15.0	<15.0 <15.0	<15.0 <15.0	141 37.0
SP-2	1/14/2016	NA									
SP-2 SP-3	1/14/2016 1/14/2016	NA NA	<0.00101	<0.00201	<0.00101	<0.00101	<0.00101	<15.0	<15.0	<15.0	37.0

: indicates overexcavated area and/or resample

Note: Concentrations in **bold** and yellow exceed the applicable OCD Remediation Action Level

NE: Not Established

NS: Not Sampled

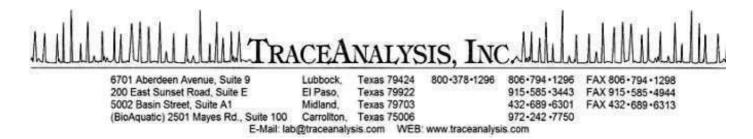
Je: Estimated concentration exceeding calibration range

bgs: below ground surface



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Karolanne Toby APEX/Titan 2351 W. Northwest Hwy. Suite 3321 Dallas, Tx, 75220

Work Order: 15022625

Report Date: March 9, 2015

Work Order: 15022025

Project Name: 30137 #3 Project Number: 7250715022.001

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

			Date	1 ime	Date
Sample	Description	Matrix	Taken	Taken	Received
387688	CS-1	soil	2015-02-25	14:52	2015-02-26
387689	CS-2	soil	2015-02-25	14:54	2015-02-26
387690	N- Wall	soil	2015-02-25	14:58	2015-02-26
387691	E- Wall	soil	2015-02-25	15:02	2015-02-26
387692	W- Wall	soil	2015-02-25	15:04	2015-02-26
387693	S- Wall	soil	2015-02-25	15:06	2015-02-26
387694	RP	soil	2015-02-25	15:08	2015-02-26
387695	SP	soil	2015-02-25	15:15	2015-02-26

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

This report consists of a total of 34 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 387688 (CS-1)	6
Sample 387689 (CS-2)	7
Sample 387690 (N- Wall)	8
Sample 387691 (E- Wall)	10
Sample 387692 (W- Wall)	11
Sample 387693 (S- Wall)	13
Sample 387694 (RP)	14
Sample 387695 (SP)	16
Method Blanks	18
QC Batch 119724 - Method Blank (1)	18
QC Batch 119733 - Method Blank (1)	18
QC Batch 119741 - Method Blank (1)	18
QC Batch 119761 - Method Blank (1)	18
QC Batch 119764 - Method Blank (1)	19
QC Batch 119791 - Method Blank (1)	19
QC Batch 119849 - Method Blank (1)	20
QC Datch 119049 - Method Diank (1)	20
Laboratory Control Spikes	2 1
QC Batch 119724 - LCS (1)	21
QC Batch 119733 - LCS (1)	21
QC Batch 119741 - LCS (1)	21
QC Batch 119761 - LCS (1)	22
QC Batch 119764 - LCS (1)	22
QC Batch 119791 - LCS (1)	23
QC Batch 119849 - LCS (1)	23
Matrix Spikes	25
QC Batch 119724 - MS (1)	25
QC Batch 119733 - MS (1)	25
QC Batch 119741 - MS (1)	25
QC Batch 119761 - MS (1)	26
QC Batch 119764 - MS (1)	26
QC Batch 119791 - MS (1)	27
QC Batch 119849 - MS (1)	27
Calibration Standards	29
QC Batch 119724 - CCV (1)	29
QC Batch 119724 - CCV (2)	$\frac{29}{29}$
QC Batch 119733 - ICV (1)	$\frac{29}{29}$
QC Batch 119733 - CCV (1)	29
QC Batch 119741 - ICV (1)	29
QC Batch 119741 - CCV (1)	$\frac{29}{30}$
W ○ D W V O II I I I I I I I I I I I I I I I I	90

QC Batch 119761 - CCV (1)	30
QC Batch 119761 - CCV (2)	30
QC Batch 119761 - CCV (3)	31
QC Batch 119764 - CCV (1)	31
QC Batch 119764 - CCV (2)	31
QC Batch 119764 - CCV (3)	31
QC Batch 119791 - CCV (1)	31
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Case Narrative

Samples for project 30137 #3 were received by TraceAnalysis, Inc. on 2015-02-26 and assigned to work order 15022625. Samples for work order 15022625 were received intact at a temperature of 4.1 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	101285	2015-03-03 at 14:50	119761	2015-03-04 at 12:14
Chloride (Titration)	$\mathrm{SM}\ 4500\text{-}\mathrm{Cl}\ \mathrm{B}$	101275	2015-03-03 at $12:51$	119733	2015-03-03 at $12:53$
Chloride (Titration)	SM 4500-Cl B	101283	2015-03-03 at $14:35$	119741	2015-03-03 at $14:51$
TPH DRO - NEW	S 8015 D	101249	2015-03-02 at 14:10	119724	2015-03-03 at $11:04$
TPH GRO	S 8015 D	101285	2015-03-03 at $14:50$	119764	2015-03-04 at $12:23$
TPH GRO	S 8015 D	101317	2015-03-04 at $14:57$	119791	2015-03-05 at $10:28$
TPH GRO	S 8015 D	101336	2015-03-05 at 11:54	119849	2015-03-09 at 09:05

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15022625 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: March 9, 2015 Work Order: 15022625 Page Number: 6 of 34

7250715022.001 30137 #3

Analytical Report

Sample: 387688 - CS-1

Laboratory: Midland

Analytical Method: Analysis: BTEX S 8021B Prep Method: S 5035 QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AKPrep Batch: 101285 Sample Preparation: 2015-03-03 Prepared By: AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	4.08	mg/Kg	1	0.0200
Toluene	Je	1	25.3	mg/Kg	1	0.0200
Ethylbenzene		1	5.54	mg/Kg	1	0.0200
Xylene	Je	1	47.6	$\mathrm{mg/Kg}$	1	0.0200

						$_{\mathrm{Spike}}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	1	2.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)			6.72	mg/Kg	1	2.00	336	70 - 130

Sample: 387688 - CS-1

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM Prep Batch: 101275 Sample Preparation: 2015-03-03 Prepared By: EM

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		383	mg/Kg	5	4.00

Sample: 387688 - CS-1

Laboratory: Midland

TPH DRO - NEW Analytical Method: Prep Method: Analysis: S 8015 D N/AQC Batch: Date Analyzed: 2015-03-03 Analyzed By: SC119724 Prep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

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

Report Date: March 9, 2015

7250715022.001

Work Order: 15022625

30137 #3

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			82.7	mg/Kg	1	100	83	70 - 130

Sample: 387688 - CS-1

Laboratory: Midland

Analysis: TPH GRO QC Batch: 119791 Prep Batch: 101317 Analytical Method: S 8015 D Date Analyzed: 2015-03-05 Sample Preparation: 2015-03-04

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

Page Number: 7 of 34

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			86.2	mg/Kg	50	100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			107	mg/Kg	50	100	107	70 - 130

Sample: 387689 - CS-2

Laboratory: Midland

Analysis: BTEX Analytical Method: QC Batch: 119761 Date Analyzed: Prep Batch: 101285 Sample Preparation:

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

RLParameter Flag Cert Result Units Dilution RL20 Benzene 112 mg/Kg 0.0200 Toluene 378 mg/Kg20 0.0200Jе 20 Ethylbenzene 82.3 mg/Kg0.02001 20 346 mg/Kg0.0200Xylene

S 8021B

2015 - 03 - 04

2015-03-03

							$_{ m Spike}$	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				35.1	mg/Kg	20	40.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		67.3	mg/Kg	20	40.0	168	70 - 130

Report Date: March 9, 2015 Work Order: 15022625 Page Number: 8 of 34

7250715022.001 30137 #3

Sample: 387689 - CS-2

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101275 Sample Preparation: 2015-03-03 Prepared By: EM

Sample: 387689 - CS-2

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 2015-03-03 119724 Date Analyzed: Analyzed By: SCPrep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits n-Tricosane 96.7 mg/Kg 1 100 97 70 - 130

Sample: 387689 - CS-2

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 119849 Date Analyzed: 2015-03-09 Analyzed By: AK Prep Batch: 101336 Sample Preparation: 2015-03-05 Prepared By: AK

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 185 mg/Kg 200 92 70 - 130 100 4-Bromofluorobenzene (4-BFB) 248 mg/Kg100 200 124 70 - 130

Report Date: March 9, 2015

Work Order: 15022625

7250715022.001

 $30137 \ #3$

Sample: 387690 - N- Wall

Laboratory:	Midland
A 1 .	DIDDIX

Analytical Method: S 8021BAnalysis: BTEX QC Batch: 119761 Date Analyzed: 2015-03-04 Prep Batch: 101285 Sample Preparation: 2015-03-03 Prep Method: S 5035 Analyzed By: AK Prepared By: AK

N/A

EM

EM

Page Number: 9 of 34

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	0.0270	$\mathrm{mg/Kg}$	1	0.0200
Toluene		1	0.0436	mg/Kg	1	0.0200
Ethylbenzene	U	1	< 0.0200	mg/Kg	1	0.0200
Xylene		1	0.0334	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.23	mg/Kg	1	2.00	112	70 - 130

Sample: 387690 - N- Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: Prep Batch: 101275 Sample Preparation: 2015-03-03 Prepared By:

RLFlag Parameter Cert Result Units Dilution RLChloride 383 4.00 mg/Kg 5 Qs

Sample: 387690 - N- Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SCPrep Batch: 101249 Sample Preparation: 2015 - 03 - 02Prepared By: SC

RLParameter Cert Result Units Dilution RL Flag $\overline{\text{DRO}}$ < 50.0 mg/Kg 50.0 U 1

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			87.0	$\mathrm{mg/Kg}$	1	100	87	70 - 130

S 5035

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Sample: 387690 - N- Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: Prep Batch: 101285 Sample Preparation: 2015-03-03 Prepared By:

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 387691 - E- Wall

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK2015-03-03 Prep Batch: 101285 Sample Preparation: Prepared By: AK

RLFlag Parameter Cert Result Units Dilution RL0.0200 Benzene 0.0214mg/Kg 1 1 Toluene 0.163 mg/Kg1 0.0200 Ethylbenzene 0.746mg/Kg1 0.02001 3.48 mg/Kg1 0.0200Xylene

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		4.44	mg/Kg	1	2.00	222	70 - 130

Sample: 387691 - E- Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101275 Sample Preparation: 2015 - 03 - 03Prepared By: EM

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sample 387691 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		1530	$\mathrm{mg/Kg}$	5	4.00

Sample: 387691 - E- Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SC Prep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO		1	61.1	m mg/Kg	1	50.0

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			94.5	${ m mg/Kg}$	1	100	94	70 - 130

Sample: 387691 - E- Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: AKPrepared By: Prep Batch: 101285 Sample Preparation: 2015-03-03 AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO		1	122	m mg/Kg	1	4.00

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr Qsr		5.27	mg/Kg	1	2.00	264	70 - 130

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Sample: 387692 - W- Wall

Laboratory: Midland

BTEXAnalysis: Analytical Method: S 8021BPrep Method: S 5035QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK Prep Batch: 101285 Sample Preparation: 2015-03-03 Prepared By: AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	0.0665	mg/Kg	1	0.0200
Toluene		1	0.304	mg/Kg	1	0.0200
Ethylbenzene		1	0.0500	mg/Kg	1	0.0200
Xylene		1	0.851	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.64	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			2.23	mg/Kg	1	2.00	112	70 - 130

Sample: 387692 - W- Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 119741 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101283 Sample Preparation: Prepared By: 2015 - 03 - 03EM

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		3080	$\mathrm{mg/Kg}$	5	4.00

Sample: 387692 - W- Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SCPrep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

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

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			94.1	$\mathrm{mg/Kg}$	1	100	94	70 - 130

S 5035

AK

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Prep Method:

Analyzed By:

Prepared By:

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Sample: 387692 - W- Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D QC Batch: 119849 Date Analyzed: 2015-03-09 Prep Batch: 101336 Sample Preparation: 2015-03-05

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 1.72 2.00 70 - 130 mg/Kg 86 1 4-Bromofluorobenzene (4-BFB) 2.01 mg/Kg1 2.00 100 70 - 130

Sample: 387693 - S- Wall

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035 QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK2015-03-03 Prep Batch: 101285 Sample Preparation: Prepared By: AK

RLParameter Flag Cert Result Units Dilution RLBenzene 0.0494 mg/Kg 1 0.0200 1 Toluene 0.277 mg/Kg1 0.0200 Ethylbenzene 0.352mg/Kg1 0.02001 0.5560.0200Xylene mg/Kg 1

Spike Percent Recovery Surrogate Units Limits Flag Cert Result Dilution Amount Recovery Trifluorotoluene (TFT) 1.70 2.00 70 - 130 mg/Kg 1 85 4-Bromofluorobenzene (4-BFB) 2.72 mg/Kg1 2.00 136 70 - 130 $_{\mathrm{Qsr}}$

Sample: 387693 - S- Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101275 Sample Preparation: 2015-03-03 Prepared By: EM

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sample 387693 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			D.I.			
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		11100	m mg/Kg	5	4.00

Sample: 387693 - S- Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SC Prep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO		1	62.1	m mg/Kg	1	50.0

						Spike	$\operatorname{Percent}$	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			91.4	${ m mg/Kg}$	1	100	91	70 - 130

Sample: 387693 - S- Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: AKSample Preparation: Prepared By: Prep Batch: 101285 2015 - 03 - 03AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO		1	120	$\mathrm{mg/Kg}$	1	4.00

							$_{ m Spike}$	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		3.36	mg/Kg	1	2.00	168	70 - 130

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Sample: 387694 - RP

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Laboratory: Midland

Analysis:BTEXAnalytical Method:S 8021BQC Batch:119761Date Analyzed:2015-03-04Prep Batch:101285Sample Preparation:2015-03-03

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

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	0.0461	m mg/Kg	1	0.0200
Toluene	U	1	< 0.0200	m mg/Kg	1	0.0200
Ethylbenzene		1	0.254	mg/Kg	1	0.0200
Xylene		1	0.511	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			2.47	mg/Kg	1	2.00	124	70 - 130

Sample: 387694 - RP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101275 Sample Preparation: Prepared By: 2015 - 03 - 03EM

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		9000	mg/Kg	5	4.00

Sample: 387694 - RP

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SCPrep Batch: 101249 Sample Preparation: 2015-03-02 Prepared By: SC

			Γ L			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO		1	292	m mg/Kg	1	50.0
·	·		·	·	·	

DТ

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			106	${ m mg/Kg}$	1	100	106	70 - 130

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Sample: 387694 - RP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D QC Batch: 119764 Date Analyzed: 2015-03-04 Prep Batch: 101285 Sample Preparation: 2015-03-03 Prep Method: S 5035 Analyzed By: AK Prepared By: AK

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RL Parameter Flag Cert Result

 Parameter
 Flag
 Cert
 Result
 Units
 Dilution
 RL

 GRO
 1
 90.7
 mg/Kg
 1
 4.00

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				1.66	mg/Kg	1	2.00	83	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		3.24	mg/Kg	1	2.00	162	70 - 130

Sample: 387695 - SP

Laboratory: Midland

Analysis: BTEXAnalytical Method: S 8021BPrep Method: S 5035 QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AKPrep Batch: 101285 Prepared By: Sample Preparation: 2015-03-03 AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	1.88	mg/Kg	5	0.0200
Toluene		1	63.2	mg/Kg	5	0.0200
Ethylbenzene		1	30.1	mg/Kg	5	0.0200
Xylene		1	${\bf 129}$	$\mathrm{mg/Kg}$	5	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				7.71	mg/Kg	5	10.0	77	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	$_{\mathrm{Qsr}}$		23.4	mg/Kg	5	10.0	234	70 - 130

Sample: 387695 - SP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EMPrep Batch: 101275 Sample Preparation: 2015 - 03 - 03Prepared By: EM

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sample 387695 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		1530	$\mathrm{mg/Kg}$	5	4.00

Sample: 387695 - SP

Laboratory: Midland

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO		1	571	mg/Kg	1	50.0

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			106	mg/Kg	1	100	106	70 - 130

Sample: 387695 - SP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 119791 Date Analyzed: 2015-03-05 Analyzed By: AKPrep Batch: 101317 Sample Preparation: Prepared By: 2015 - 03 - 04AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO		1	3150	m mg/Kg	50	4.00

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			82.6	mg/Kg	50	100	83	70 - 130
4-Bromofluorobenzene (4-BFB)			115	mg/Kg	50	100	115	70 - 130

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Method Blanks

Method Blank (1) QC Batch: 119724

QC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SC Prep Batch: 101249 QC Preparation: 2015-03-02 Prepared By: SC

Spike Percent Recovery Units Surrogate Flag Cert Result Dilution Amount Recovery Limits 91.3 100 91 70 - 130 n-Tricosane mg/Kg

Method Blank (1) QC Batch: 119733

QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM
Prep Batch: 101275 QC Preparation: 2015-03-03 Prepared By: EM

 MDL

Method Blank (1) QC Batch: 119741

QC Batch: 119741 Date Analyzed: 2015-03-03 Analyzed By: EM
Prep Batch: 101283 QC Preparation: 2015-03-03 Prepared By: EM

 MDL

Parameter Flag Cert Result Units RL Chloride Chloride <3.85 mg/Kg 4

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Method Blank (1) QC	C Batch: 119761							
QC Batch: 119761			nalyzed:	2015-03-0	-		Analyzed	
Prep Batch: 101285		QC Pre	eparation:	2015-03-0	03		Prepared	By: AK
					MDL			
Parameter	Flag		Cert		Result		Units	RL
Benzene			1		< 0.00533	1	mg/Kg	0.02
Toluene			1		< 0.00645	1	mg/Kg	0.02
Ethylbenzene			1		< 0.0116	1	mg/Kg	0.02
Xylene			1		< 0.00874	1	mg/Kg	0.02
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BF	'B)		2.04	mg/Kg	1	2.00	102	70 - 130

Method Blank (1) Q	C Batch: 119764							
QC Batch: 119764 Prep Batch: 101285			analyzed: eparation:	2015-03-04 2015-03-03			Analyzed Prepared	•
					MDL			
Parameter	Flag		Cert		Result		Units	RL
GRO			1		< 2.32		mg/Kg	4
Cumogata	Flor	Cont	Result	Units	Dilution	Spike	Percent	Recovery Limits
Surrogate Trifugate (TET)	Flag	Cert		0 00	DITUTION	Amount 2.00	Recovery 97	70 - 130
Trifluorotoluene (TFT)	ED)		1.94	mg/Kg	1		• •	
4-Bromofluorobenzene (4-B	FB)		1.83	mg/Kg	1	2.00	92	70 - 130

Method Blank (1)	QC Batch: 119791				
QC Batch: 119791 Prep Batch: 101317		Date Analyzed: QC Preparation:	2015-03-05 2015-03-04	Analyzed By Prepared By:	
Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	< 2.32	mg/Kg	4

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Q	T.I.	G .	D 1	TT •	Dil et	Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Method Blank (1) QC Batch: 119849

QC Batch: 119849

Date Analyzed: 2015-03-09

Analyzed By: AK Prepared By: AK

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Prep Batch: 101336

QC Preparation: 2015-03-05

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			MDL		
Parameter	Flag	Cert	Result	Units	RL
GRO		1	< 2.32	m mg/Kg	4

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

SC

SC

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: Prep Batch: 101249 QC Preparation: 2015-03-02 Prepared By:

LCS Spike Matrix Rec. F C Units Dil. Param Result Amount Result Rec. Limit < 7.41DRO 251 mg/Kg 250 100 70 - 130

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

LCSD RPD Spike Matrix Rec. Param Units Dil. Result Limit RPD Result Amount Rec. Limit $\overline{\text{DRO}}$ 260 mg/Kg250 < 7.41104 70 - 130 20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	101	99.2	mg/Kg	1	100	101	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM
Prep Batch: 101275 QC Preparation: 2015-03-03 Prepared By: EM

LCS Spike Matrix Rec. F \mathbf{C} Units Param Result Dil. Amount Result Rec. Limit 85 - 115 Chloride 2680 2500< 19.2107 mg/Kg

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

LCSD Spike Rec. RPD Matrix Param F \mathbf{C} Result Units Dil. Amount Result Rec. Limit RPD Limit 20 Chloride 2580 2500 <19.2 85 - 115 mg/Kg 103

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Laboratory Control Spike (LCS-1)

QC Batch: 119741 Prep Batch: 101283 Date Analyzed: 2015-03-03 QC Preparation: 2015-03-03

Analyzed By: EM

Prepared By: EM

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			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			2500	mg/Kg	5	2500	<19.2	100	85 - 115

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2310	mg/Kg	5	2500	<19.2	92	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 119761 Prep Batch: 101285 Date Analyzed: 2015-03-04 QC Preparation: 2015-03-03 Analyzed By: AK Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	2.09	mg/Kg	1	2.00	< 0.00533	104	70 - 130
Toluene		1	2.02	mg/Kg	1	2.00	< 0.00645	101	70 - 130
Ethylbenzene		1	2.07	mg/Kg	1	2.00	< 0.0116	104	70 - 130
Xylene		1	6.25	mg/Kg	1	6.00	< 0.00874	104	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	2.00	mg/Kg	1	2.00	< 0.00533	100	70 - 130	4	20
Toluene		1	1.96	mg/Kg	1	2.00	< 0.00645	98	70 - 130	3	20
Ethylbenzene		1	1.99	mg/Kg	1	2.00	< 0.0116	100	70 - 130	4	20
Xylene		1	6.03	mg/Kg	1	6.00	< 0.00874	100	70 - 130	4	20

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.76	1.78	mg/Kg	1	2.00	88	89	70 - 130
4-Bromofluorobenzene (4-BFB)	2.05	2.08	mg/Kg	1	2.00	102	104	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 119764 Prep Batch: 101285 Date Analyzed: 2015-03-04 QC Preparation: 2015-03-03 Analyzed By: AK Prepared By: AK

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

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

			LCSD			$_{\rm Spike}$	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	21.9	mg/Kg	1	20.0	< 2.32	110	70 - 130	7	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.95	1.94	mg/Kg	1	2.00	98	97	70 - 130
4-Bromofluorobenzene (4-BFB)	1.89	1.92	mg/Kg	1	2.00	94	96	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 119791 Prep Batch: 101317 Date Analyzed: 2015-03-05 QC Preparation: 2015-03-04 Analyzed By: AK Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	21.3	mg/Kg	1	20.0	< 2.32	106	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	19.4	mg/Kg	1	20.0	< 2.32	97	70 - 130	9	20

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.93	1.90	mg/Kg	1	2.00	96	95	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.90	mg/Kg	1	2.00	96	95	70 - 130

Work Order: 15022625

30137 #3

Laboratory Control Spike (LCS-1)

QC Batch: 119849 Prep Batch: 101336

 $72\overline{50715022.001}$

Date Analyzed: 2015-03-09 QC Preparation: 2015-03-05 Analyzed By: AK Prepared By: AK

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LCS Spike Matrix Rec. Param \mathbf{F} \mathbf{C} Result Dil. Amount Result Limit Units Rec. \overline{GRO} 20.6 20.0 < 2.32 103 70 - 130 mg/Kg

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	21.1	mg/Kg	1	20.0	< 2.32	106	70 - 130	2	20

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.84	1.92	mg/Kg	1	2.00	92	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.87	1.87	mg/Kg	1	2.00	94	94	70 - 130

Report Date: March 9, 2015 Work Order: 15022625 Page Number: 25 of 34

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 387694

QC Batch: 119724 Date Analyzed: 2015-03-03 Analyzed By: SC Prep Batch: 101249 QC Preparation: 2015-03-02 Prepared By: SC

MSSpike Matrix Rec. F Units \mathbf{C} Dil. Param Result Amount Result Rec. Limit DRO 512 mg/Kg 250 292 88 70 - 130

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

MSD RPDSpike Matrix Rec. Dil. \mathbf{C} Units Result Limit RPD Param Result Amount Rec. Limit $\overline{\mathrm{DRO}}$ 527 mg/Kg 250 292 94 70 - 130 3 20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	97.1	101	mg/Kg	1	100	97	101	70 - 130

Matrix Spike (MS-1) Spiked Sample: 387688

QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM
Prep Batch: 101275 QC Preparation: 2015-03-03 Prepared By: EM

MS Spike Matrix Rec. F Units Param Result Dil. AmountResult Rec. Limit Chloride 574 2500383 78.9 - 121 mg/Kg $_{\mathrm{Qs}}$ Qs

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

MSD Rec. RPD Spike Matrix Param F C Result Units Dil. Amount Result Rec. Limit RPD Limit 78.9 - 121 20 Chloride 574 2500 383 mg/Kg 0 Qs

Work Order: 15022625

7250715022.001

30137 #3

Matrix Spike (MS-1) Spiked Sample: 387692

QC Batch: 119741 Prep Batch: 101283 Date Analyzed: 2015-03-03 QC Preparation: 2015-03-03 Analyzed By: EM Prepared By: EM

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MS Spike Matrix Rec. F Param \mathbf{C} Result Units Dil. Amount Result Rec. Limit Chloride 1150 78.9 - 121 mg/Kg 5 2500 < 19.246 Qs

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

				MSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	Qs	Qs		1250	mg/Kg	5	2500	<19.2	-73	78.9 - 121	8	20

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

Matrix Spike (MS-1) Spiked Sample: 387690

 QC Batch:
 119761
 Date Analyzed:
 2015-03-04

 Prep Batch:
 101285
 QC Preparation:
 2015-03-03

Analyzed By: AK Prepared By: AK

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	1.63	mg/Kg	1	2.00	0.027	80	70 - 130
Toluene		1	1.68	mg/Kg	1	2.00	0.0436	82	70 - 130
Ethylbenzene		1	1.81	mg/Kg	1	2.00	< 0.0116	90	70 - 130
Xylene		1	5.48	mg/Kg	1	6.00	0.0334	91	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.48	mg/Kg	1	2.00	0.027	73	70 - 130	10	20
Toluene		1	1.54	mg/Kg	1	2.00	0.0436	75	70 - 130	9	20
Ethylbenzene		1	1.66	mg/Kg	1	2.00	< 0.0116	83	70 - 130	9	20
Xylene		1	5.01	mg/Kg	1	6.00	0.0334	83	70 - 130	9	20

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.77	1.64	mg/Kg	1	2	88	82	70 - 130
4-Bromofluorobenzene (4-BFB)	2.16	2.03	mg/Kg	1	2	108	102	70 - 130

Work Order: 15022625

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30137 #3

Matrix Spike (MS-1) Spiked Sample: 387690

QC Batch: 119764 Prep Batch: 101285 Date Analyzed: 2015-03-04 QC Preparation: 2015-03-03 Analyzed By: AK Prepared By: AK

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			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	14.7	mg/Kg	1	20.0	< 2.32	74	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	15.2	mg/Kg	1	20.0	< 2.32	76	70 - 130	3	20

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

	MS	MSD			$_{ m Spike}$	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.74	1.67	mg/Kg	1	2	87	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.88	mg/Kg	1	2	97	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 387700

QC Batch: 119791 Prep Batch: 101317 Date Analyzed: 2015-03-05 QC Preparation: 2015-03-04 Analyzed By: AK Prepared By: AK

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	15.6	mg/Kg	1	20.0	< 2.32	78	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	16.6	mg/Kg	1	20.0	< 2.32	83	70 - 130	6	20

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.68	1.76	mg/Kg	1	2	84	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.89	1.95	mg/Kg	1	2	94	98	70 - 130

Work Order: 15022625

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Matrix Spike (MS-1) Spiked Sample: 387705

119849 QC Batch: Prep Batch: 101336

Date Analyzed: 2015-03-09

QC Preparation: 2015-03-05

Analyzed By: AK Prepared By: AK

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			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	15.2	mg/Kg	1	20.0	< 2.32	76	70 - 130

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	Qs	Qs	1	13.4	mg/Kg	1	20.0	< 2.32	67	70 - 130	13	20

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.81	1.83	mg/Kg	1	2	90	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.96	mg/Kg	1	2	97	98	70 - 130

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Report Date: March 9, 2015 Work Order: 15022625

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Calibration Standards

Standard (CCV-1)

 $QC\ Batch{:}\quad 119724$ Date Analyzed: 2015-03-03 Analyzed By: SC

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	224	90	80 - 120	2015-03-03

Standard (CCV-2)

Date Analyzed: 2015-03-03 $QC\ Batch{:}\quad 119724$ Analyzed By: SC

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	218	87	80 - 120	2015-03-03

Standard (ICV-1)

QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-03-03

Standard (CCV-1)

QC Batch: 119733 Date Analyzed: 2015-03-03 Analyzed By: EM

				CCVs	CCVs	CCVs	Percent	D. (
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-03-03

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Standard (ICV-1)

QC Batch: 119741 Date Analyzed: 2015-03-03 Analyzed By: EM

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2015-03-03

Standard (CCV-1)

QC Batch: 119741 Date Analyzed: 2015-03-03 Analyzed By: EM

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2015-03-03

Standard (CCV-1)

QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.103	103	80 - 120	2015-03-04
Toluene		1	$\mathrm{mg/kg}$	0.100	0.0995	100	80 - 120	2015-03-04
Ethylbenzene		1	$\mathrm{mg/kg}$	0.100	0.101	101	80 - 120	2015-03-04
Xylene		1	mg/kg	0.300	0.304	101	80 - 120	2015-03-04

Standard (CCV-2)

QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK

				$\begin{array}{c} { m CCVs} \\ { m True} \end{array}$	$\begin{array}{c} {\rm CCVs} \\ {\rm Found} \end{array}$	$\begin{array}{c} { m CCVs} \\ { m Percent} \end{array}$	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0987	99	80 - 120	2015-03-04
Toluene		1	mg/kg	0.100	0.0978	98	80 - 120	2015-03-04
Ethylbenzene		1	mg/kg	0.100	0.0987	99	80 - 120	2015-03-04
Xylene		1	mg/kg	0.300	0.297	99	80 - 120	2015-03-04

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Report Date: March 9, 2015

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Work Order: 15022625

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Standard (CCV-3)

QC Batch: 119761 Date Analyzed: 2015-03-04 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.102	102	80 - 120	2015-03-04
Toluene		1	mg/kg	0.100	0.0984	98	80 - 120	2015-03-04
Ethylbenzene		1	mg/kg	0.100	0.101	101	80 - 120	2015-03-04
Xylene		1	mg/kg	0.300	0.302	101	80 - 120	2015-03-04

Standard (CCV-1)

QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.04	104	80 - 120	2015-03-04

Standard (CCV-2)

QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.09	109	80 - 120	2015-03-04

Standard (CCV-3)

QC Batch: 119764 Date Analyzed: 2015-03-04 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	0.967	97	80 - 120	2015-03-04

Report Date: March 9, 2015 Work Order: 15022625 Page Number: 32 of 34

Standard (CCV-1)

QC Batch: 119791 Date Analyzed: 2015-03-05 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.04	104	80 - 120	2015-03-05

Standard (CCV-2)

QC Batch: 119791 Date Analyzed: 2015-03-05 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.01	101	80 - 120	2015-03-05

Standard (CCV-1)

QC Batch: 119849 Date Analyzed: 2015-03-09 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.05	105	80 - 120	2015-03-09

Standard (CCV-2)

QC Batch: 119849 Date Analyzed: 2015-03-09 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	0.979	98	80 - 120	2015-03-09

Report Date: March 9, 2015 Work Order: 15022625 Page Number: 33 of 34

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Appendix

Report Definitions

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

Laboratory Certifications

	Certifying	Certification	Laboratory
\mathbf{C}	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-14-8	Midland

Standard Flags

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

Attachments

The scanned attachments will follow this page.

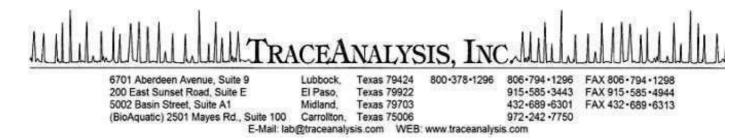
Please note, each attachment may consist of more than one page.

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Apex TITAN, Inc. • 2351 W. Northwest Hwy., Suite 3321 • Dallas, Texas 75220 • Office: 214-350-5469 • Fax 214-350-2914

15061712

Work Order:



Certifications

NCTRCA DBENELAP DoD LELAP Oklahoma ISO 17025 Kansas

Analytical and Quality Control Report

Karolanne Toby APEX/Titan 2351 W. Northwest Hwy. Suite 3321 Dallas, Tx, 75220

Project Name: 30137 #3

Project Number: 7250715022.001

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

			Date	1 ime	Date
Sample	Description	Matrix	Taken	Taken	Received
395922	BKG-1	soil	2015-06-16	10:15	2015-06-17
395923	BKG-2	soil	2015-06-16	10:30	2015-06-17
395924	STP-2	soil	2015-06-16	10:30	2015-06-17

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

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

This report consists of a total of 22 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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QC Batch 122418 - MS (1)	15 15 16 16
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Case Narrative

Samples for project 30137 #3 were received by TraceAnalysis, Inc. on 2015-06-17 and assigned to work order 15061712. Samples for work order 15061712 were received intact at a temperature of 2.1 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	103647	2015-06-22 at 15:12	122539	2015-06-23 at 07:18
Chloride (Titration)	$\mathrm{SM}\ 4500\text{-}\mathrm{Cl}\ \mathrm{B}$	103564	2015-06-18 at $08:35$	122418	2015-06-18 at 09:30
TPH DRO - NEW	S 8015 D	103612	2015-06-19 at 15:26	122545	2015-06-23 at $09:48$
TPH GRO	S 8015 D	103647	2015-06-22 at 15:12	122540	2015-06-23 at $07:21$

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15061712 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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Report Date: June 23, 2015

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Work Order: 15061712

30137 #3

Analytical Report

Sample: 395922 - BKG-1

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 Sample Preparation: 2015-06-22 Prepared By: AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	1	< 0.0200	$\mathrm{mg/Kg}$	1	0.0200
Toluene	U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	< 0.0200	mg/Kg	1	0.0200
Xylene	U	1	< 0.0200	mg/Kg	1	0.0200

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 395922 - BKG-1

Laboratory: Midland

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		98.0	mg/Kg	5	4.00

Sample: 395922 - BKG-1

Laboratory: Midland

Analytical Method: Prep Method: Analysis: TPH DRO - NEW S 8015 D N/AQC Batch: Date Analyzed: 2015-06-23 Analyzed By: SC122545 Prep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO	Qr,Qs,U	1	< 50.0	m mg/Kg	1	50.0

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Prep Method:

Analyzed By:

Prepared By:

S 5035

AK

AK

Report Date: June 23, 2015

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Work Order: 15061712

 $30137 \ \#3$

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	Qsr	Qsr		68.6	mg/Kg	1	50.0	137	70 - 130

Sample: 395922 - BKG-1

Laboratory: Midland

Parameter

 \overline{GRO}

Analysis: TPH GRO QC Batch: 122540 Prep Batch: 103647 Analytical Method: S 8015 D
Date Analyzed: 2015-06-23
Sample Preparation: 2015-06-22

 $\begin{array}{c|cccc} RL & & & & \\ \hline Result & Units & Dilution & RL \\ \hline <4.00 & mg/Kg & 1 & 4.00 \\ \hline \end{array}$

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.54	mg/Kg	1	2.00	127	70 - 130
4-Bromofluorobenzene (4-BFB)			2.18	mg/Kg	1	2.00	109	70 - 130

Cert

Sample: 395923 - BKG-2

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B QC Batch: 122539 Date Analyzed: 2015-06-23 Prep Batch: 103647 Sample Preparation: 2015-06-22

Flag

Qs,U

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

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	1	< 0.0200	m mg/Kg	1	0.0200
Toluene	U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene		1	0.0517	mg/Kg	1	0.0200
Xylene	U	1	< 0.0200	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	1	2.00	102	70 - 130

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Report Date: June 23, 2015 Work Order: 15061712

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Sample: 395923 - BKG-2

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

Sample: 395923 - BKG-2

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

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

Sample: 395923 - BKG-2

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122540 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 Sample Preparation: 2015-06-22 Prepared By: AK

Spike Percent Recovery Dilution Surrogate Flag Cert Result Units Amount Recovery Limits 2.47 Trifluorotoluene (TFT) mg/Kg 2.00 124 70 - 130 1 4-Bromofluorobenzene (4-BFB) 2.14 mg/Kg1 2.00 107 70 - 130

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Work Order: 15061712

30137 #3

Sample: 395924 - STP-2

Laboratory: Midland

Analysis:BTEXAnalytical Method:S 8021BQC Batch:122539Date Analyzed:2015-06-23Prep Batch:103647Sample Preparation:2015-06-22

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

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	4.22	m mg/Kg	1	0.0200
Toluene		1	20.4	mg/Kg	1	0.0200
Ethylbenzene		1	$\bf 7.34$	mg/Kg	1	0.0200
Xylene	Je	1	34.0	mg/Kg	1	0.0200

							$_{ m Spike}$	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				1.72	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	$_{\mathrm{Qsr}}$		6.49	mg/Kg	1	2.00	324	70 - 130

Sample: 395924 - STP-2

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AKPrep Batch: 103564 Sample Preparation: Prepared By: 2015-06-18 AK

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		98.0	mg/Kg	5	4.00

Sample: 395924 - STP-2

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015 - 06 - 19Prepared By: SC

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO	$_{ m Qr,Qs}$	1	575	mg/Kg	1	50.0

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	Qsr	Qsr		81.9	mg/Kg	1	50.0	164	70 - 130

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 $30137\ \#3$

Page Number: 9 of 22

Sample: 395924 - STP-2

Laboratory: Midland Analysis:

Prep Batch: 103647

TPH GRO QC Batch: 122540

Analytical Method: S 8015 D Date Analyzed: 2015-06-23 $Sample\ Preparation:\ \ 2015\text{-}06\text{-}22$

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

RL

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	$_{ m Je,Qs}$	1	1190	mg/Kg	1	4.00

							$_{ m Spike}$	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				11.4	mg/Kg	1	10.0	114	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		25.6	mg/Kg	1	10.0	256	70 - 130

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Analyzed By:

Prepared By:

AK

AK

Report Date: June 23, 2015

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Work Order: 15061712

30137 #3

Method Blanks

Method Blank (1) QC Batch: 122418

 QC Batch:
 122418
 Date Analyzed:
 2015-06-18

 Prep Batch:
 103564
 QC Preparation:
 2015-06-18

Method Blank (1) QC Batch: 122539

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

MDL Parameter Flag Cert Result Units RLBenzene < 0.00533 mg/Kg 0.02 1 Toluene < 0.00645 mg/Kg0.02 Ethylbenzene 0.02 < 0.0116 mg/Kg Xylene < 0.00874mg/Kg0.02

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 1.82 mg/Kg 2.00 91 70 - 130 1 2.00 70 - 130 4-Bromofluorobenzene (4-BFB) 1.88 mg/Kg 1 94

Method Blank (1) QC Batch: 122540

QC Batch: 122540 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

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Surrogate	Flag	Cert	Result	Units	Dilution	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.33	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Method Blank (1) QC Batch: 122545

QC Batch: 122545 Prep Batch: 103612 Date Analyzed: 2015-06-23 QC Preparation: 2015-06-19 Analyzed By: SC Prepared By: SC

RL

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						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			57.1	mg/Kg	1	50.0	114	70 - 130

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Work Order: 15061712

30137 #3

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 122418 Prep Batch: 103564 Date Analyzed: 2015-06-18 QC Preparation: 2015-06-18 Analyzed By: AK Prepared By: AK

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			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			2350	mg/Kg	5	2500	<19.2	94	85 - 115

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2350	mg/Kg	5	2500	<19.2	94	85 - 115	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 122539 Prep Batch: 103647 Date Analyzed: 2015-06-23 QC Preparation: 2015-06-22 Analyzed By: AK Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	1.89	mg/Kg	1	2.00	< 0.00533	94	70 - 130
Toluene		1	1.80	mg/Kg	1	2.00	< 0.00645	90	70 - 130
Ethylbenzene		1	1.73	mg/Kg	1	2.00	< 0.0116	86	70 - 130
Xylene		1	5.64	mg/Kg	1	6.00	< 0.00874	94	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.93	mg/Kg	1	2.00	< 0.00533	96	70 - 130	2	20
Toluene		1	1.81	mg/Kg	1	2.00	< 0.00645	90	70 - 130	1	20
Ethylbenzene		1	1.74	mg/Kg	1	2.00	< 0.0116	87	70 - 130	1	20
Xylene		1	5.70	mg/Kg	1	6.00	< 0.00874	95	70 - 130	1	20

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

continued ...

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30137 #3

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	LCS Rec.	LCSD Rec.	${ m Rec.} \ { m Limit}$
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec.
Trifluorotoluene (TFT)	1.86	1.76	mg/Kg	1	2.00	93	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.83	1.75	${ m mg/Kg}$	1	2.00	92	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122540 Prep Batch: 103647 Date Analyzed: 2015-06-23 QC Preparation: 2015-06-22 Analyzed By: AK Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	15.5	mg/Kg	1	20.0	< 2.32	78	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	15.3	mg/Kg	1	20.0	< 2.32	76	70 - 130	1	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.34	2.35	mg/Kg	1	2.00	117	118	70 - 130
4-Bromofluorobenzene (4-BFB)	2.09	2.12	mg/Kg	1	2.00	104	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122545 Prep Batch: 103612 Date Analyzed: 2015-06-23 QC Preparation: 2015-06-19

Analyzed By: SC Prepared By: SC

			LCS			$_{ m Spike}$	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	239	mg/Kg	1	250	< 7.41	96	70 - 130

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

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control spikes continued											
			LCSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		1	249	mg/Kg	1	250	< 7.41	100	70 - 130	4	20
Percent recovery is based on the	spike	resu	lt. RPD	is based o	n the s	pike and sp	oike duplic	ate resu	ılt.		
	L	CS	LCSI)			Spike	LCS	S LCS	D	Rec.
Surrogate	Res	sult	Resul	lt U	nits	Dil.	Amount	Rec	. Rec		Limit
n-Tricosane	58	3.5	61.9	mg	/Kg	1	50.0	117	124		70 - 130

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 396009

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

MSSpike Matrix Rec. F \mathbf{C} Result Limit Param Result Units Dil. Amount Rec. Chloride 19700 mg/Kg 5 2500 16600 124 78.9 - 121 Qs

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	Qs	Qs		19900	mg/Kg	5	2500	16600	132	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 395922

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	1.78	mg/Kg	1	2.00	< 0.00533	89	70 - 130
Toluene		1	1.72	mg/Kg	1	2.00	< 0.00645	86	70 - 130
Ethylbenzene		1	1.70	mg/Kg	1	2.00	< 0.0116	85	70 - 130
Xylene		1	5.63	mg/Kg	1	6.00	< 0.00874	94	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.66	mg/Kg	1	2.00	< 0.00533	83	70 - 130	7	20
Toluene		1	1.59	mg/Kg	1	2.00	< 0.00645	80	70 - 130	8	20
Ethylbenzene		1	1.59	mg/Kg	1	2.00	< 0.0116	80	70 - 130	7	20
Xylene		1	5.25	mg/Kg	1	6.00	< 0.00874	88	70 - 130	7	20

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

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Report Date: June 23, 2015 7250715022.001	Wo	rk Order: 30137	Pag	er: 16 of 22				
matrix spikes continued								
	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.84	1.89	mg/Kg	1	2	92	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.96	mg/Kg	1	2	96	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 395922

QC Batch: 122540 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	14.8	mg/Kg	1	20.0	< 2.32	74	70 - 130

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	Qs	Qs	1	13.8	mg/Kg	1	20.0	< 2.32	69	70 - 130	7	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.49	2.48	mg/Kg	1	2	124	124	70 - 130
4-Bromofluorobenzene (4-BFB)	2.20	2.21	mg/Kg	1	2	110	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 395908

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	213	mg/Kg	1	250	< 7.41	85	70 - 130

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

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Report Date: June 23, 2015 7250715022.001	Work Order: 15061712 30137 #3						Page Nu	mber:	17 of 22		
matrix spikes continued											
			MSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	Qr,Qs Qr,Qs	1	163	mg/Kg	1	250	< 7.41	65	70 - 130	27	20
Percent recovery is based on the	Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.										
	MS		MSD				Spike	MS	MSI)	Rec.
Surrogate	Result		Result	Units	;	Dil.	Amount	Rec	. Rec		Limit
n-Tricosane	57.2		59.8	mg/K	g	1	50	114	120	,	70 - 130

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Work Order: 15061712

30137 #3

Calibration Standards

Standard (ICV-1)

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK

ICVs ICVsICVsPercent True Found Percent Recovery Date Param Flag Cert Units Conc. Conc. Recovery Limits Analyzed Chloride mg/Kg 100 100 100 85 - 115 2015-06-18

Standard (CCV-1)

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK

CCVsCCVsCCVsPercent True Found Percent Recovery Date Flag Param Cert Units Conc. Conc. Recovery Limits Analyzed Chloride mg/Kg 100 100 100 85 - 115 2015-06-18

Standard (CCV-1)

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK

CCVsCCVsCCVsPercent True Found Percent Recovery Date Flag Cert Param Units Conc. Conc. Recovery Limits Analyzed Benzene mg/kg 0.100 0.0958 96 80 - 120 2015-06-23 1 Toluene mg/kg 0.1000.089189 80 - 120 2015-06-23 Ethylbenzene 80 - 120 2015-06-23 mg/kg 0.1000.084885 Xylene mg/kg 0.3000.27893 80 - 120 2015 - 06 - 23

Standard (CCV-2)

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK

Report Date: June 23, 2015

7250715022.001

Work Order: 15061712

 $30137 \ #3$

				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0950	95	80 - 120	2015-06-23
Toluene		1	$\mathrm{mg/kg}$	0.100	0.0905	90	80 - 120	2015-06-23
Ethylbenzene		1	$\mathrm{mg/kg}$	0.100	0.0861	86	80 - 120	2015-06-23
Xylene		1	mg/kg	0.300	0.283	94	80 - 120	2015-06-23

Standard (CCV-3)

QC Batch: 122539

Date Analyzed: 2015-06-23

Analyzed By: AK

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0924	92	80 - 120	2015-06-23
Toluene		1	mg/kg	0.100	0.0894	89	80 - 120	2015-06-23
Ethylbenzene		1	mg/kg	0.100	0.0856	86	80 - 120	2015-06-23
Xylene		1	mg/kg	0.300	0.279	93	80 - 120	2015-06-23

Standard (CCV-1)

QC Batch: 122540

Date Analyzed: 2015-06-23

Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	0.968	97	80 - 120	2015-06-23

Standard (CCV-2)

QC Batch: 122540

 $Date\ Analyzed:\ \ 2015\text{-}06\text{-}23$

Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	0.964	96	80 - 120	2015-06-23

Report Date: June 23, 2015 Work Order: 15061712 Page Number: 20 of 22

7250715022.001 30137 #3

Standard (CCV-2)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC

 CCVs CCVs CCVs Percent True Found Percent Recovery Date Param Flag Cert Units Conc. Conc. Analyzed Recovery Limits $\overline{\mathrm{DRO}}$ mg/Kg 250 243 97 80 - 120 2015-06-23

Standard (CCV-3)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC

 CCVs CCVs CCVsPercent True Found Percent Recovery Date Conc. Param Flag Cert Units ${\rm Conc.}$ Recovery Limits Analyzed $\overline{\mathrm{DRO}}$ 250 249 100 80 - 120 2015-06-23 1 mg/Kg

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Report Date: June 23, 2015 Work Order: 15061712

 $7250715022.001 \hspace{30137 \# 3}$

Appendix

Report Definitions

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

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-14-8	Midland

Standard Flags

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

Attachments

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Report Date: June 23, 2015 7250715022.001

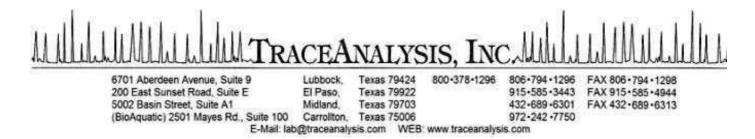
Work Order: 15061712 30137 # 3

The scanned attachments will follow this page.

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

00 #° (506/712	CHAIN OF C
Laboratory: VOLL ANALYSIS REQUESTED	TED Due Date:
Address: Address: Contact:	Temp. of coolers when received (C°): 2.
Phone:	of
GVCACLANCE TOPPO/SO#:	
	1/2 (shed
Proj. No. Project Name	
5	
	345433
X 8769-83	395933
X STO ON WA	395994
Z Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush	
Date: Time: Rece	NOTES:
Time: Received by: (Signature)	
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time:	
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time:	
WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other.	SL - sludge O - Oil

Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Karolanne Toby APEX/Titan 2351 W. Northwest Hwy. Suite 3321 Dallas, Tx, 75220

W 1 0 1 18001

Work Order: 15061711

Report Date: June 23, 2015

Date

Project Name: 30137 #4 Project Number: 7250715053

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

			Date	111110	Date
Sample	Description	Matrix	Taken	Taken	Received
395914	N-Wall	soil	2015-06-15	13:15	2015-06-17
395915	W-Wall	soil	2015-06-15	13:17	2015-06-17
395916	E-Wall	soil	2015-06-15	13:19	2015-06-17
395917	S-Wall	soil	2015-06-15	13:22	2015-06-17
395918	RP	soil	2015-06-15	13:25	2015-06-17
395919	STP	soil	2015-06-15	13:27	2015-06-17

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

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

This report consists of a total of 28 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Report Contents

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Case Narrative

Samples for project 30137 #4 were received by TraceAnalysis, Inc. on 2015-06-17 and assigned to work order 15061711. Samples for work order 15061711 were received intact at a temperature of 2.1 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	103596	2015-06-19 at 08:14	122488	2015-06-20 at 12:17
Chloride (Titration)	SM 4500-Cl B	103564	2015-06-18 at $08:35$	122418	2015-06-18 at 09:30
Chloride (Titration)	SM 4500-Cl B	103564	2015-06-18 at $08:35$	122419	2015-06-18 at $09:55$
Chloride (Titration)	SM 4500-Cl B	103564	2015-06-18 at $08:35$	122475	2015-06-19 at 12:51
TPH DRO - NEW	S 8015 D	103612	2015-06-19 at 15:26	122545	2015-06-23 at 09:48
TPH GRO	S 8015 D	103596	2015-06-19 at 08:14	122489	2015-06-20 at $12:28$

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15061711 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: June 23, 2015 Work Order: 15061711 Page Number: 6 of 28

7250715053 30137 #4

Analytical Report

Sample: 395914 - N-Wall

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK103596 Sample Preparation: Prep Batch: 2015-06-19 Prepared By: AK

RLUnits Dilution Parameter Flag Cert Result RLBenzene < 0.0200 mg/Kg 0.0200 1 U 5 Toluene 1 < 0.0200 mg/Kg 0.0200U 5 1 Ethylbenzene mg/Kg0.0200< 0.0200 Qs, U5 Xylene < 0.0200 mg/Kg 1 0.0200U

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Sample: 395914 - N-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AKPrep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

Sample: 395914 - N-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: SC122545 Date Analyzed: 2015-06-23 Analyzed By: Prep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

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Report Date: June 23, 2015

Work Order: 15061711 30137 # 4

7250715053

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			61.2	mg/Kg	1	50.0	122	70 - 130

Sample: 395914 - N-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

RLParameter Flag Cert Result Units Dilution RL \overline{GRO} < 4.00mg/Kg 4.00 Qs,U

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.31	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 395915 - W-Wall

Laboratory: Midland

Analysis: BTEX Analytical Method: S 5035 S 8021BPrep Method: QC Batch: 122488 Date Analyzed: 2015 - 06 - 20Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

RLParameter Cert Units Dilution RLFlag Result Benzene < 0.0200 mg/Kg 1 0.0200 U 5 Toluene 0.0221mg/Kg1 0.02005 Ethylbenzene 0.0389mg/Kg1 0.0200Qs 5 mg/Kg1 0.0200Xylene 0.0681

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Report Date: June 23, 2015 Work Order: 15061711 Page Number: 8 of 28

7250715053 30137 # 4

Sample: 395915 - W-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

RLParameter Flag Cert Result Units Dilution RLChloride <20.0 5 4.00 mg/Kg

Sample: 395915 - W-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 2015 - 06 - 23122545Date Analyzed: Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

RLCert Result Units Dilution RLParameter Flag $\overline{\mathrm{DRO}}$ Qr,Qs,U < 50.0 mg/Kg 1 50.0 5

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			53.9	${ m mg/Kg}$	1	50.0	108	70 - 130

Sample: 395915 - W-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

RL Cert Dilution Parameter Flag Result Units RLGRO 9.34 mg/Kg 4.00

C	T21	O	D14	TT:4	D:1+:	Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.30	mg/Kg	1	2.00	115	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Report Date: June 23, 2015

Work Order: 15061711 30137 #4

7250715053

Sample: 395916 - E-Wall

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B QC Batch: 122488 Date Analyzed: 2015-06-20 Prep Batch: 103596 Sample Preparation: 2015-06-19 Prep Method: S 5035 Analyzed By: AK Prepared By: AK

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	5	< 0.0200	m mg/Kg	1	0.0200
Toluene		5	0.0231	mg/Kg	1	0.0200
Ethylbenzene	Qs	5	0.0528	mg/Kg	1	0.0200
Xvlene		5	0.0585	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Sample: 395916 - E-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prepared By: Prep Batch: 103564 Sample Preparation: 2015-06-18 AK

Sample: 395916 - E-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015 - 06 - 19Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			64.6	mg/Kg	1	50.0	129	70 - 130

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Sample: 395916 - E-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.33	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Sample: 395917 - S-Wall

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035QC Batch: 122488 Date Analyzed: 2015 - 06 - 20Analyzed By: AK2015-06-19 Prep Batch: 103596 Sample Preparation: Prepared By: AK

RLFlag Parameter Cert Result Units Dilution RL0.0200 Benzene < 0.0200 mg/Kg 1 U 5 Toluene < 0.0200 mg/Kg1 0.0200 U 5 Ethylbenzene < 0.0200 mg/Kg1 0.0200Qs, U5 < 0.0200 mg/Kg1 0.0200Xylene U

Cumagata	Flag	Cont	Dogult	IInita	Dilution	Spike	Percent	Recovery
Surrogate	riag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.01	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Sample: 395917 - S-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

 $\overline{continued}$. . .

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sample 395917 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	U		< 20.0	mg/Kg	5	4.00

Sample: 395917 - S-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015 - 06 - 19Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			56.2	mg/Kg	1	50.0	112	70 - 130

Sample: 395917 - S-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.47	mg/Kg	1	2.00	124	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Report Date: June 23, 2015

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30137 #4

Sample: 395918 - RP

7250715053

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B QC Batch: 122488 Date Analyzed: 2015-06-20 Prep Batch: 103596 Sample Preparation: 2015-06-19 Prep Method: S 5035 Analyzed By: AK Prepared By: AK

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	5	< 0.0200	m mg/Kg	1	0.0200
Toluene	U	5	< 0.0200	m mg/Kg	1	0.0200
Ethylbenzene	$_{\mathrm{Qs,U}}$	5	< 0.0200	mg/Kg	1	0.0200
Xylene	U	5	< 0.0200	mg/Kg	1	0.0200

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Sample: 395918 - RP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B QC Batch: 122475 Date Analyzed: 2015-06-19 Prep Batch: 103564 Sample Preparation: 2015-06-18 Prep Method: N/A Analyzed By: AK Prepared By: AK

Sample: 395918 - RP

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015 - 06 - 19Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			58.0	$\mathrm{mg/Kg}$	1	50.0	116	70 - 130

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Sample: 395918 - RP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.42	mg/Kg	1	2.00	121	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 395919 - STP

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK2015-06-19 Prep Batch: 103596 Sample Preparation: Prepared By: AK

RLFlag Result Parameter Cert Units Dilution RL0.02480.0200 Benzene mg/Kg 1 5 Toluene 0.777mg/Kg1 0.0200 5 Ethylbenzene 1.13 mg/Kg1 0.0200Qs 5 1.22 mg/Kg1 0.0200Xylene

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				1.71	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		3.35	mg/Kg	1	2.00	168	70 - 130

Sample: 395919 - STP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

 $\overline{continued}$. . .

Report Date: June 23, 2015 Work Order: 15061711 Page Number: 14 of 28 7250715053 30137 #4

sample 395919 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		588	m mg/Kg	5	4.00

Sample: 395919 - STP

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

						Spike	$\operatorname{Percent}$	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			60.6	${ m mg/Kg}$	1	50.0	121	70 - 130

Sample: 395919 - STP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

							$_{ m Spike}$	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)	$_{\mathrm{Qsr}}$	$_{\mathrm{Qsr}}$		7.56	mg/Kg	1	2.00	378	70 - 130

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Method Blanks

Method Blank (1) QC Batch: 122418

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

Method Blank (1) QC Batch: 122419

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

Method Blank (1) QC Batch: 122475

QC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

Method Blank (1) QC Batch: 122488

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK
Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

Report Date: June 23, 2015 Work Order: 15061711 Page Number: 16 of 28

7250715053 30137 #4

			MDL			
Parameter	Flag	Cert	Result		Units	RL
Benzene		5	< 0.00533	n	ng/Kg	0.02
Toluene		5	< 0.00645	n	ng/Kg	0.02
Ethylbenzene		5	< 0.0116	n	ng/Kg	0.02
Xylene		5	< 0.00874	n	ng/Kg	0.02
				Spike	Percent	Recovery

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Method Blank (1) QC Batch: 122489

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate	riag	Cert	nesun	Omus	Dilution	Amount	necovery	Lillius
Trifluorotoluene (TFT)			2.41	mg/Kg	1	2.00	120	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

Method Blank (1) QC Batch: 122545

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			57.1	mg/Kg	1	50.0	114	70 - 130

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

LCS Spike Matrix Rec. F \mathbf{C} Dil. Param Result Units Amount Result Limit Rec. Chloride 2350 mg/Kg 5 2500 <19.2 94 85 - 115

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2350	mg/Kg	5	2500	<19.2	94	85 - 115	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

LCS Spike Matrix Rec. F \mathbf{C} Param Result Units Dil. Amount Result Rec. Limit Chloride 2520 2500 <19.2 101 mg/Kg 5 85 - 115

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

LCSD RPD Spike Matrix Rec. Param F \mathbf{C} Result Units Dil. Amount Result Rec. Limit RPD Limit Chloride 2430 2500 <19.2 85 - 115 20 mg/Kg 97

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

Laboratory Control Spike (LCS-1)

QC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

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			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			2560	mg/Kg	5	2500	<19.2	102	85 - 115

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

			LCSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2370	mg/Kg	5	2500	<19.2	95	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		5	1.99	mg/Kg	1	2.00	< 0.00533	100	70 - 130
Toluene		5	1.88	mg/Kg	1	2.00	< 0.00645	94	70 - 130
Ethylbenzene		5	1.76	mg/Kg	1	2.00	< 0.0116	88	70 - 130
Xylene		5	5.80	mg/Kg	1	6.00	< 0.00874	97	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.97	mg/Kg	1	2.00	< 0.00533	98	70 - 130	1	20
Toluene		5	1.91	mg/Kg	1	2.00	< 0.00645	96	70 - 130	2	20
Ethylbenzene		5	1.78	mg/Kg	1	2.00	< 0.0116	89	70 - 130	1	20
Xylene		5	5.83	mg/Kg	1	6.00	< 0.00874	97	70 - 130	0	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.90	1.84	mg/Kg	1	2.00	95	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.93	1.87	mg/Kg	1	2.00	96	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

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LCS Spike Matrix Rec. Rec. Param Result Units Dil. Amount Result Limit GRO 14.6 20.0 < 2.3273 70 - 130 mg/Kg

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

			LCSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		5	15.7	mg/Kg	1	20.0	< 2.32	78	70 - 130	7	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.43	2.40	mg/Kg	1	2.00	122	120	70 - 130
4-Bromofluorobenzene (4-BFB)	2.16	2.13	mg/Kg	1	2.00	108	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

LCS Spike Matrix Rec. F С Param Result Units Dil. Amount Result Rec. Limit $\overline{\text{DRO}}$ 239 250 < 7.4170 - 130 mg/Kg 1 96

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		5	249	mg/Kg	1	250	< 7.41	100	70 - 130	4	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	58.5	61.9	mg/Kg	1	50.0	117	124	70 - 130

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 396009

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

MS Spike Matrix Rec. F \mathbf{C} Limit Param Result Units Dil. Amount Result Rec. Chloride 19700 mg/Kg 5 2500 16600 124 78.9 - 121 Qs

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

				MSD			Spike	Matrix		Rec.		RPD
Param		F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	Qs	Qs		19900	mg/Kg	5	2500	16600	132	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 396011

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

MSSpike Matrix Rec. Param \mathbf{C} Result Units Dil. Amount Result Rec. Limit Chloride 14800 2500 12233 103 mg/Kg 5 78.9 - 121

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

			MSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			15000	mg/Kg	5	2500	12233	112	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 395918

QC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

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			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			2370	mg/Kg	5	2500	<19.2	95	78.9 - 121

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2370	mg/Kg	5	2500	<19.2	95	78.9 - 121	0	20

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

Matrix Spike (xMS-1) Spiked Sample: 395908

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

				MS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene			5	1.51	mg/Kg	1	2.00	< 0.00533	76	70 - 130
Toluene			5	1.53	mg/Kg	1	2.00	0.0628	73	70 - 130
Ethylbenzene	$_{\mathrm{Qs}}$	$_{\mathrm{Qs}}$	5	1.42	mg/Kg	1	2.00	0.0413	69	70 - 130
Xylene			5	4.64	mg/Kg	1	6.00	0.0429	77	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.74	mg/Kg	1	2.00	< 0.00533	87	70 - 130	14	20
Toluene		5	1.67	mg/Kg	1	2.00	0.0628	80	70 - 130	9	20
Ethylbenzene		5	1.63	mg/Kg	1	2.00	0.0413	79	70 - 130	14	20
Xylene		5	5.35	mg/Kg	1	6.00	0.0429	88	70 - 130	14	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.81	1.92	mg/Kg	1	2	90	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.97	mg/Kg	1	2	96	98	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 395908

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

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				MS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	Qs	Qs	5	11.8	mg/Kg	1	20.0	11.6	1	70 - 130

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	Qs	Qs	5	13.2	mg/Kg	1	20.0	11.6	8	70 - 130	11	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.26	2.45	mg/Kg	1	2	113	122	70 - 130
4-Bromofluorobenzene (4-BFB)	2.03	2.15	mg/Kg	1	2	102	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 395908

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		5	213	mg/Kg	1	250	< 7.41	85	70 - 130

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	Or.Os	Or.Os	5	163	mg/Kg	1	250	< 7.41	65	70 - 130	27	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	57.2	59.8	mg/Kg	1	50	114	120	70 - 130

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Calibration Standards

Standard (ICV-1)

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (CCV-1)

QC Batch: 122418 Date Analyzed: 2015-06-18 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (ICV-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (CCV-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

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Standard (ICV-1)

QC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-19

Standard (CCV-1)

QC Batch: 122475 Date Analyzed: 2015-06-19 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-19

Standard (CCV-2)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0986	99	80 - 120	2015-06-20
Toluene		5	$\mathrm{mg/kg}$	0.100	0.0920	92	80 - 120	2015-06-20
Ethylbenzene		5	mg/kg	0.100	0.0857	86	80 - 120	2015-06-20
Xylene		5	mg/kg	0.300	0.282	94	80 - 120	2015-06-20

Standard (CCV-3)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs True	$\begin{array}{c} {\rm CCVs} \\ {\rm Found} \end{array}$	$\begin{array}{c} { m CCVs} \\ { m Percent} \end{array}$	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0978	98	80 - 120	2015-06-20
Toluene		5	mg/kg	0.100	0.0933	93	80 - 120	2015-06-20
Ethylbenzene		5	mg/kg	0.100	0.0887	89	80 - 120	2015-06-20
Xylene		5	mg/kg	0.300	0.289	96	80 - 120	2015-06-20

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Standard (CCV-2)

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.940	94	80 - 120	2015-06-20

Standard (CCV-3)

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.900	90	80 - 120	2015-06-20

Standard (CCV-1)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		5	mg/Kg	250	275	110	80 - 120	2015-06-23

Standard (CCV-2)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		5	mg/Kg	250	243	97	80 - 120	2015-06-23

Standard (CCV-3)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		5	mg/Kg	250	249	100	80 - 120	2015-06-23

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Appendix

Report Definitions

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

Laboratory Certifications

	Certifying	Certification	Laboratory
\mathbf{C}	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

Standard Flags

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

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F Description

Qsr Surrogate recovery outside of laboratory limits.

U The analyte is not detected above the SDL

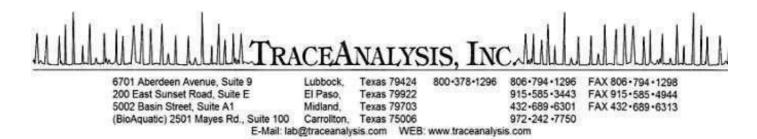
Attachments

The scanned attachments will follow this page.

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

CHAIN OF CUSTODY RECORD	Due Date:	1 2 3 4 5.	Pageof				Lab Sample ID (Lab Use Only)	395914	395915	395916	394917	395918	393919									io-o
	Analysis Requested	100	210	To to	18. S.	MAN	ST TO THE TOTAL STATE OF THE TOT	イイイ	estator socio-						5)		Timo: NOTES:	ク.ゼ . ・	Time:	Time.	Time:	C - Charcoal tube SL - sludge C P/O - Plastic or other
	Hral(48.3)					No/Type of Containers	9/A	7	and a second	ON-water committee			>	-	4/10		oto O	(dfi)/4	e) Daté:	e) Date:	e) Date:	L - Liquid A - Air Bag C - Charc 250 ml - Glass wide mouth P/O - Pla
	Laboratory: Address:	act:	:e:	.#0	Sampler's Signature	No	Imple(s) Start Start End End AOV	3		7	7	8	ż			1	lush 100% Rush Received by: (Signature)		Received by (Signature)	Received by: (Signature)	Received by: (Signature)	
11219051	7	Contact:		e5/	\	Project Name	G Identifying Marks of Sample(s)	1 N-Wall	1 N - Worl	(1)	5. Wa	CA	AF				- 1	[a/17/15 946]	Date: Time:	Date: Time:	Date: Time:	W - Water S - Soil SD - Solid A/G - Amber / Or Glass 1 Liter
MOO 件。	APEX	Office Location (VV./V.(CL	1 1	Project Manager & Ot v.C. V. C. V. V	Sampler's Name)	Matrix Date Time	S WAS 13.6	17/2	(3.94	(322)	525	子 か の な よ く く く				Turn around time Normal	(All	Refinquished by (Signature)	Relinquished by (Signature)	Relinquished by (Signature)	Matrix WW - Wastewater Container VOA - 40 ml vial

Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Karolanne Toby APEX/Titan 2351 W. Northwest Hwy. Suite 3321 Dallas, Tx, 75220

Work Order: 15061709

Report Date: June 23, 2015

Project Name: 30137 #5 Project Number: 7250715061

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
395908	N-Wall	soil	2015-06-15	13:30	2015-06-17
395909	E-Wall	soil	2015-06-15	13:33	2015-06-17
395910	S-Wall	soil	2015-06-15	13:36	2015-06-17
395911	W-Wall	soil	2015-06-15	13:40	2015-06-17
395912	RP	soil	2015-06-15	13:45	2015-06-17
395913	STP	soil	2015-06-15	13:50	2015-06-17

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

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

This report consists of a total of 32 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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Case Narrative

Samples for project 30137 #5 were received by TraceAnalysis, Inc. on 2015-06-17 and assigned to work order 15061709. Samples for work order 15061709 were received intact at a temperature of 2.1 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	103596	2015-06-19 at 08:14	122488	2015-06-20 at 12:17
BTEX	S 8021 B	103647	2015-06-22 at $15:12$	122539	2015-06-23 at 07:18
Chloride (Titration)	SM 4500-Cl B	103564	2015-06-18 at $08:35$	122419	2015-06-18 at $09:55$
Chloride (Titration)	SM 4500 -Cl B	103564	2015-06-18 at $08:35$	122430	2015-06-18 at 11:20
TPH DRO - NEW	S 8015 D	103612	2015-06-19 at 15:26	122545	2015-06-23 at 09:48
TPH GRO	S 8015 D	103596	2015-06-19 at 08:14	122489	2015-06-20 at $12:28$
TPH GRO	S 8015 D	103647	2015-06-22 at 15:12	122540	2015-06-23 at 07:21

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15061709 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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7250715061 30137 #5

Analytical Report

Sample: 395908 - N-Wall

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK103647 Sample Preparation: 2015-06-22 Prep Batch: Prepared By: AK

RLUnits Dilution RLParameter Flag Cert Result Benzene < 0.0200 mg/Kg 0.0200 1 U 5 Toluene 1 < 0.0200 mg/Kg 0.0200U 5 1 Ethylbenzene mg/Kg0.0200< 0.0200 U Xylene < 0.0200 mg/Kg 1 0.0200U

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 395908 - N-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AKPrep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

Sample: 395908 - N-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: SC122545 Date Analyzed: 2015-06-23 Analyzed By: Prep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

Report Date: June 23, 2015

Work Order: 15061709

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 $30137 \ #5$

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	Qsr	Qsr		69.3	mg/Kg	1	50.0	139	70 - 130

Sample: 395908 - N-Wall

Laboratory: Midland

Analysis: TPH GRO QC Batch: 122540 Prep Batch: 103647 Analytical Method: S 8015 D
Date Analyzed: 2015-06-23
Sample Preparation: 2015-06-22

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

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	$_{\mathrm{Qs,U}}$	5	< 4.00	mg/Kg	1	4.00

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.42	mg/Kg	1	2.00	121	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 395909 - E-Wall

Laboratory: Midland

Analysis: BTEX QC Batch: 122488 Prep Batch: 103596 Analytical Method: S 8021B Date Analyzed: 2015-06-20 Sample Preparation: 2015-06-19

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

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	5	< 0.0200	m mg/Kg	1	0.0200
Toluene	U	5	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	$_{\mathrm{Qs,U}}$	5	< 0.0200	mg/Kg	1	0.0200
Xylene	U	5	< 0.0200	mg/Kg	1	0.0200

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.14	mg/Kg	1	2.00	107	70 - 130

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Sample: 395909 - E-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

Sample: 395909 - E-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 2015 - 06 - 23122545Date Analyzed: Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			61.1	$\mathrm{mg/Kg}$	1	50.0	122	70 - 130

Sample: 395909 - E-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.46	mg/Kg	1	2.00	123	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Report Date: June 23, 2015

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30137 #5

Sample: 395910 - S-Wall

Laboratory: Midland

7250715061

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

RL

Dilution

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			RL		
Parameter	Flag	Cert	Result	Units	
Benzene	U	5	< 0.0200	mg/Kg	
m ı			40.0000	/17	

0.0200 1 0.0200Toluene mg/Kg < 0.0200U Ethylbenzene mg/Kg1 0.0200 < 0.0200 Qs,U5 1 Xylene U 5 < 0.0200 mg/Kg0.0200

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.09	mg/Kg	1	2.00	104	70 - 130

Sample: 395910 - S-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

Sample: 395910 - S-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015 - 06 - 19Prepared By: SC

							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	1_{Qsr}	Qsr		135	mg/Kg	1	100	135	70 - 130

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Sample: 395910 - S-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.42	mg/Kg	1	2.00	121	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

Sample: 395911 - W-Wall

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035 QC Batch: 122488 Date Analyzed: 2015 - 06 - 20Analyzed By: AK2015-06-19 Prep Batch: 103596 Sample Preparation: Prepared By: AK

RLFlag Parameter Cert Result Units Dilution RL0.0200 Benzene < 0.0200 mg/Kg 1 U 5 Toluene < 0.0200 mg/Kg1 0.0200 U 5 Ethylbenzene < 0.0200 mg/Kg1 0.0200Qs, U5 < 0.0200 mg/Kg1 0.0200Xylene U

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	70 - 130

Sample: 395911 - W-Wall

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

 $\overline{continued}$. . .

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sample 395911 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	U		< 20.0	mg/Kg	5	4.00

Sample: 395911 - W-Wall

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			63.8	mg/Kg	1	50.0	128	70 - 130

Sample: 395911 - W-Wall

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.23	mg/Kg	1	2.00	112	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

S 5035

AK

AK

Prep Method:

Analyzed By:

Prepared By:

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Sample: 395912 - RP

Laboratory: Midland

Parameter

Benzene

Toluene

Xylene

Analysis: **BTEX** Analytical Method: S 8021B QC Batch: 122488 Date Analyzed: 2015-06-20 Prep Batch: 103596 Sample Preparation: 2015-06-19

RLCert Units Dilution Flag Result RL< 0.0200mg/Kg 0.0200 U 5 < 0.0200 mg/Kg1 0.0200U 5 Ethylbenzene mg/Kg1 0.0200 < 0.0200 Qs,U mg/Kg1 U 5 < 0.0200 0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

Sample: 395912 - RP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

RLParameter Flag Cert Result Units Dilution RLChloride 5630 mg/Kg 5 4.00

Sample: 395912 - RP

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

RLParameter Cert Result Dilution RL Flag Units $\overline{\text{DRO}}$ < 50.050.0 mg/Kg $_{
m Qr,Qs,U}$ 5

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			50.3	mg/Kg	1	50.0	101	70 - 130

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Sample: 395912 - RP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.36	mg/Kg	1	2.00	118	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Sample: 395913 - STP

Laboratory: Midland

Analysis: **BTEX** Analytical Method: S_{8021B} Prep Method: S 5035QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK2015-06-19 Prep Batch: 103596 Sample Preparation: Prepared By: AK

RLFlag Parameter Cert Result Units Dilution RL0.0200 Benzene < 0.0200 mg/Kg 1 U 5 Toluene < 0.0200 mg/Kg1 0.0200 U 5 Ethylbenzene < 0.0200 mg/Kg1 0.0200Qs, U5 < 0.0200 mg/Kg1 0.0200Xylene U

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Sample: 395913 - STP

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/AQC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 Sample Preparation: 2015-06-18 Prepared By: AK

 $\overline{continued}$. . .

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7250715061 30137 #5

sample 395913 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			DI			
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	U		< 20.0	mg/Kg	5	4.00

Sample: 395913 - STP

Laboratory: Midland

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 122545Date Analyzed: 2015-06-23 Analyzed By: SCPrep Batch: 103612 Sample Preparation: 2015-06-19 Prepared By: SC

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			62.3	mg/Kg	1	50.0	125	70 - 130

Sample: 395913 - STP

Laboratory: Midland

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AKPrep Batch: 103596 Sample Preparation: 2015-06-19 Prepared By: AK

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.32	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	70 - 130

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Method Blanks

Method Blank (1) QC Batch: 122419

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

Method Blank (1) QC Batch: 122430

QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

Method Blank (1) QC Batch: 122488

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

MDL Parameter Cert Units RLFlag Result Benzene < 0.00533 mg/Kg 0.02 Toluene < 0.00645 mg/Kg0.02 5 Ethylbenzene < 0.0116mg/Kg0.025 mg/KgXylene < 0.008740.025

Spike Percent Recovery Flag Dilution Amount Result Units Surrogate Cert Recovery Limits Trifluorotoluene (TFT) 2.00 100 2.00 mg/Kg 1 70 - 1304-Bromofluorobenzene (4-BFB) 2.08mg/Kg 1 2.00104 70 - 130

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Method Blank (1) QC Batch: 122489

122489 QC Batch: Date Analyzed: 2015-06-20 Analyzed By: AK Prepared By: AK

Prep Batch: 103596 QC Preparation: 2015-06-19

MDLParameter Flag Cert Result Units RLGRO < 2.32mg/Kg 4

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			2.41	mg/Kg	1	2.00	120	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

Method Blank (1) QC Batch: 122539

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

MDLParameter Flag Cert Result Units RLBenzene < 0.00533 mg/Kg 0.02 mg/KgToluene 0.02 < 0.006455 Ethylbenzene mg/Kg0.02 < 0.0116 5 Xylene < 0.00874mg/Kg 0.025

						$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Method Blank (1) QC Batch: 122540

QC Batch: 122540 Date Analyzed: 2015 - 06 - 23Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015 - 06 - 22Prepared By: AK

MDL Flag Cert Units RL Parameter Result GRO < 2.32 mg/Kg 5

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Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 2.33 mg/Kg 2.00 116 70 - 130 1 1.99 2.00 70 - 130 4-Bromofluorobenzene (4-BFB) mg/Kg1 100

Method Blank (1) QC Batch: 122545

 QC Batch:
 122545
 Date Analyzed:
 2015-06-23

 Prep Batch:
 103612
 QC Preparation:
 2015-06-19

Analyzed By: SC Prepared By: SC

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Percent Spike Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits n-Tricosane 57.1 mg/Kg 50.0 114 70 - 130 1

Report Date: June 23, 2015 Work Order: 15061709 Page Number: 18 of 32

7250715061 30137 #5

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

LCS Spike Matrix Rec. F \mathbf{C} Dil. Param Result Units Amount Result Rec. Limit Chloride 2520 mg/Kg 5 2500 <19.2 101 85 - 115

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2430	mg/Kg	5	2500	<19.2	97	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

LCS Spike Matrix Rec. \mathbf{C} Param Result Units Dil. Amount Result Rec. Limit Chloride 2320 2500 <19.2 93 mg/Kg 5 85 - 115

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2420	mg/Kg	5	2500	<19.2	97	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK
Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

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Param	F	С	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	1.99	mg/Kg	1	2.00	< 0.00533	100	70 - 130
Toluene		5	1.88	mg/Kg	1	2.00	< 0.00645	94	70 - 130
Ethylbenzene		5	1.76	mg/Kg	1	2.00	< 0.0116	88	70 - 130
Xylene		5	5.80	m mg/Kg	1	6.00	< 0.00874	97	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.97	mg/Kg	1	2.00	< 0.00533	98	70 - 130	1	20
Toluene		5	1.91	mg/Kg	1	2.00	< 0.00645	96	70 - 130	2	20
Ethylbenzene		5	1.78	mg/Kg	1	2.00	< 0.0116	89	70 - 130	1	20
Xylene		5	5.83	mg/Kg	1	6.00	< 0.00874	97	70 - 130	0	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.90	1.84	mg/Kg	1	2.00	95	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.93	1.87	mg/Kg	1	2.00	96	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		5	14.6	mg/Kg	1	20.0	< 2.32	73	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		5	15.7	mg/Kg	1	20.0	< 2.32	78	70 - 130	7	20

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

	LCS	LCSD			$_{\mathrm{Spike}}$	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.43	2.40	mg/Kg	1	2.00	122	120	70 - 130
4-Bromofluorobenzene (4-BFB)	2.16	2.13	mg/Kg	1	2.00	108	106	70 - 130

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Laboratory Control Spike (LCS-1)

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By:

LCS Spike Matrix Rec. F Param C Result Units Dil. Amount Result Rec. Limit Benzene 1.89 mg/Kg 1 2.00 < 0.00533 94 70 - 130Toluene 2.00 70 - 130 1.80 mg/Kg 1 < 0.00645 90 5 Ethylbenzene 2.00 70 - 130 1.73 mg/Kg 1 86 < 0.0116 70 - 130 94 Xylene 5.64 mg/Kg 1 6.00 < 0.00874

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.93	mg/Kg	1	2.00	< 0.00533	96	70 - 130	2	20
Toluene		5	1.81	mg/Kg	1	2.00	< 0.00645	90	70 - 130	1	20
Ethylbenzene		5	1.74	mg/Kg	1	2.00	< 0.0116	87	70 - 130	1	20
Xylene		5	5.70	mg/Kg	1	6.00	< 0.00874	95	70 - 130	1	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.86	1.76	mg/Kg	1	2.00	93	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.83	1.75	mg/Kg	1	2.00	92	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122540 Date Analyzed: 2015-06-23 Analyzed By: AK QC Preparation: Prep Batch: 103647 Prepared By: 2015-06-22 AK

LCS Spike Rec. Matrix F Param \mathbf{C} Result Units Dil. Amount Result Rec. Limit GRO 15.5 mg/Kg 20.0 < 2.3278 70 - 130

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

LCSD RPD Spike Matrix Rec. Param \mathbf{F} \mathbf{C} Result Units Dil. Amount Result Limit RPD Limit Rec. GRO 15.3 mg/Kg 20.0 < 2.3276 70 - 130 20 1

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

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control spikes continued								
•	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	LCS	LCSD			$_{ m Spike}$	LCS	LCSD	$\mathrm{Rec}.$
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.34	2.35	mg/Kg	1	2.00	117	118	70 - 130
4-Bromofluorobenzene (4-BFB)	2.09	2.12	mg/Kg	1	2.00	104	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		5	239	mg/Kg	1	250	< 7.41	96	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		5	249	mg/Kg	1	250	< 7.41	100	70 - 130	4	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	58.5	61.9	mg/Kg	1	50.0	117	124	70 - 130

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 396011

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK
Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

MS Spike Matrix Rec. F \mathbf{C} Dil. Limit Param Result Units Amount Result Rec. Chloride 14800 mg/Kg 5 2500 12233 103 78.9 - 121

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

MSD RPD Spike Matrix Rec. Dil. F \mathbf{C} Result Limit RPD Param Result Units Amount Rec. Limit 112 Chloride 15000 mg/Kg 5 2500 12233 78.9 - 121 20

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

Matrix Spike (MS-1) Spiked Sample: 395750

QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AK Prep Batch: 103564 QC Preparation: 2015-06-18 Prepared By: AK

MSSpike Matrix Rec. C Param Result Units Dil. Amount Result Rec. Limit 10100 2500 7440 Chloride mg/Kg 106 78.9 - 121

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

RPD MSD Spike Matrix Rec. Param F С Result Units Dil. Amount Result Rec. Limit RPD Limit Chloride 9760 2500 7440 78.9 - 12120 mg/Kg

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

Matrix Spike (xMS-1) Spiked Sample: 395908

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK
Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

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Param		F	С	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene			5	1.51	mg/Kg	1	2.00	< 0.00533	76	70 - 130
Toluene			5	1.53	mg/Kg	1	2.00	0.0628	73	70 - 130
Ethylbenzene	Qs	Qs	5	1.42	mg/Kg	1	2.00	0.0413	69	70 - 130
Xylene			5	4.64	$\mathrm{mg/Kg}$	1	6.00	0.0429	77	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.74	mg/Kg	1	2.00	< 0.00533	87	70 - 130	14	20
Toluene		5	1.67	mg/Kg	1	2.00	0.0628	80	70 - 130	9	20
Ethylbenzene		5	1.63	mg/Kg	1	2.00	0.0413	79	70 - 130	14	20
Xylene		5	5.35	mg/Kg	1	6.00	0.0429	88	70 - 130	14	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.81	1.92	mg/Kg	1	2	90	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.97	mg/Kg	1	2	96	98	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 395908

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK Prep Batch: 103596 QC Preparation: 2015-06-19 Prepared By: AK

				MS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	Qs	Qs	5	11.8	mg/Kg	1	20.0	11.6	1	70 - 130

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

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	Qs	Qs	5	13.2	mg/Kg	1	20.0	11.6	8	70 - 130	11	20

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

	MS	MSD			$_{\mathrm{Spike}}$	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.26	2.45	mg/Kg	1	2	113	122	70 - 130
4-Bromofluorobenzene (4-BFB)	2.03	2.15	mg/Kg	1	2	102	108	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 395922

QC Batch: 122539 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		5	1.78	mg/Kg	1	2.00	< 0.00533	89	70 - 130
Toluene		5	1.72	mg/Kg	1	2.00	< 0.00645	86	70 - 130
Ethylbenzene		5	1.70	mg/Kg	1	2.00	< 0.0116	85	70 - 130
Xylene		5	5.63	mg/Kg	1	6.00	< 0.00874	94	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		5	1.66	mg/Kg	1	2.00	< 0.00533	83	70 - 130	7	20
Toluene		5	1.59	mg/Kg	1	2.00	< 0.00645	80	70 - 130	8	20
Ethylbenzene		5	1.59	mg/Kg	1	2.00	< 0.0116	80	70 - 130	7	20
Xylene		5	5.25	mg/Kg	1	6.00	< 0.00874	88	70 - 130	7	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.84	1.89	mg/Kg	1	2	92	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.96	mg/Kg	1	2	96	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 395922

QC Batch: 122540 Date Analyzed: 2015-06-23 Analyzed By: AK Prep Batch: 103647 QC Preparation: 2015-06-22 Prepared By: AK

MS Spike Matrix Rec. F С Result Dil. Param Units Amount Result Rec. Limit GRO 14.8 mg/Kg 20.0 < 2.327470 - 130

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

MSD RPDSpike Matrix Rec. Param С Result Units Dil. Amount Result Limit RPD Limit Rec. GRO 13.8 mg/Kg 20.0 < 2.3269 70 - 130 20 7 Qs Qs

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

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matrix spikes continued								
•	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	3.50	3.60D			~ .,	3.50	3.500	_
	MS	MSD			$_{ m Spike}$	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.49	2.48	mg/Kg	1	2	124	124	70 - 130
4-Bromofluorobenzene (4-BFB)	2.20	2.21	mg/Kg	1	2	110	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 395908

QC Batch: 122545 Date Analyzed: 2015-06-23 Analyzed By: SC Prep Batch: 103612 QC Preparation: 2015-06-19 Prepared By: SC

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		5	213	mg/Kg	1	250	< 7.41	85	70 - 130

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

				MSD			$_{\rm Spike}$	Matrix		Rec.		RPD
Param		\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	Qr,Qs	$_{ m Qr,Qs}$	5	163	mg/Kg	1	250	< 7.41	65	70 - 130	27	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	57.2	59.8	mg/Kg	1	50	114	120	70 - 130

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Calibration Standards

Standard (ICV-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (CCV-1)

QC Batch: 122419 Date Analyzed: 2015-06-18 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (ICV-1)

QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AK

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

Standard (CCV-1)

QC Batch: 122430 Date Analyzed: 2015-06-18 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2015-06-18

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Standard (CCV-1)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0984	98	80 - 120	2015-06-20
Toluene		5	mg/kg	0.100	0.0928	93	80 - 120	2015-06-20
Ethylbenzene		5	mg/kg	0.100	0.0874	87	80 - 120	2015-06-20
Xylene		5	mg/kg	0.300	0.287	96	80 - 120	2015-06-20

Standard (CCV-2)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0986	99	80 - 120	2015-06-20
Toluene		5	$\mathrm{mg/kg}$	0.100	0.0920	92	80 - 120	2015-06-20
Ethylbenzene		5	mg/kg	0.100	0.0857	86	80 - 120	2015-06-20
Xylene		5	mg/kg	0.300	0.282	94	80 - 120	2015-06-20

Standard (CCV-3)

QC Batch: 122488 Date Analyzed: 2015-06-20 Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0978	98	80 - 120	2015-06-20
Toluene		5	mg/kg	0.100	0.0933	93	80 - 120	2015-06-20
Ethylbenzene		5	mg/kg	0.100	0.0887	89	80 - 120	2015-06-20
Xylene		5	mg/kg	0.300	0.289	96	80 - 120	2015-06-20

Standard (CCV-1)

QC Batch: 122489 Date Analyzed: 2015-06-20 Analyzed By: AK

Report Date: June 23, 2015

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.881	88	80 - 120	2015-06-20

Standard (CCV-2)

QC Batch: 122489

Date Analyzed: 2015-06-20

Analyzed By: AK

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.940	94	80 - 120	2015-06-20

Standard (CCV-3)

QC Batch: 122489

Date Analyzed: 2015-06-20

Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.900	90	80 - 120	2015-06-20

Standard (CCV-1)

QC Batch: 122539

Date Analyzed: 2015-06-23

Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	mg/kg	0.100	0.0958	96	80 - 120	2015-06-23
Toluene		5	mg/kg	0.100	0.0891	89	80 - 120	2015-06-23
Ethylbenzene		5	mg/kg	0.100	0.0848	85	80 - 120	2015-06-23
Xylene		5	mg/kg	0.300	0.278	93	80 - 120	2015-06-23

Standard (CCV-2)

QC Batch: 122539

Date Analyzed: 2015-06-23

Analyzed By: AK

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				CCVs	CCVs	CCVs	Percent	Data
D		~ .	TT	True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		5	$\mathrm{mg/kg}$	0.100	0.0950	95	80 - 120	2015-06-23
Toluene		5	mg/kg	0.100	0.0905	90	80 - 120	2015-06-23
Ethylbenzene		5	mg/kg	0.100	0.0861	86	80 - 120	2015-06-23
Xylene		5	mg/kg	0.300	0.283	94	80 - 120	2015-06-23

Standard (CCV-1)

QC Batch: 122540

Date Analyzed: 2015-06-23

Analyzed By: AK

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.968	97	80 - 120	2015-06-23

Standard (CCV-2)

QC Batch: 122540

Date Analyzed: 2015-06-23

Analyzed By: AK

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		5	mg/Kg	1.00	0.964	96	80 - 120	2015-06-23

Standard (CCV-1)

QC Batch: 122545

Date Analyzed: 2015-06-23

Analyzed By: SC

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		5	mg/Kg	250	275	110	80 - 120	2015-06-23

Standard (CCV-2)

QC Batch: 122545

Date Analyzed: 2015-06-23

Analyzed By: SC

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				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		5	mg/Kg	250	243	97	80 - 120	2015-06-23

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Appendix

Report Definitions

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

Laboratory Certifications

	Certifying	Certification	Laboratory	
\mathbf{C}	Authority	Number	Location	
-	NCTRCA	WFWB384444Y0909	TraceAnalysis	
-	DBE	VN 20657	TraceAnalysis	
-	HUB	1752439743100-86536	TraceAnalysis	
-	WBE	237019	TraceAnalysis	
1	L-A-B	L2418	Lubbock	
2	Kansas	Kansas E- 10317	Lubbock	
3	LELAP	LELAP-02003	Lubbock	
4	NELAP	T104704219-15-11	Lubbock	
5	NELAP	T104704392-14-8	Midland	
6		2014-018	Lubbock	

Standard Flags

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

Report Date: June 23, 2015 Work Order: 15061709 Page Number: 32 of 32 7250715061 30137 #5

F Description

Qsr Surrogate recovery outside of laboratory limits.

U The analyte is not detected above the SDL

Result Comments

1 Analyst double spiked surrogate.

Attachments

The scanned attachments will follow this page.

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

MO # 15061709	CHAIN OF CUSTODY RECORD
Laboratory: AMALYSIS REQUESTED	Lab use only Due Date:
Address:	Temp. of coolers
Office Location / Wrd (Mand () Contact:	when received (C°): 7
B	Pageof
Project Manager Caroltaine TOD PO/SO#:	
15.78 - 1-15.75 - 15.7	
Proj. No. Project Name XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
ine O E c	Lab Sample ID (Lab Use Only)
1 2 2 2 2 X	395908
	395909
(2)(0)	395910
(240 W - WON)	396911
22 X SE	367013
1300 K STP NA JUVU	395913
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Rush	
Relinquished by (Signature) Out Notes: Received by: (Signature) Date: Time: Notes: Notes:	
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time:	
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time:	
WWV - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other	0-0

Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016

Analytical Report 522956

for APEX/Titan

Project Manager: Karolanne Toby 30137 Pipeline Release 725010112096 28-JAN-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-Lakeland: Florida (E84098)





28-JAN-16

Project Manager: Karolanne Toby

APEX/Titan

505 N. Big Spring Ste. 301 A

Midland, TX 79701

Reference: XENCO Report No(s): 522956

30137 Pipeline Release Project Address: NM

Karolanne Toby:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 522956. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 522956 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks

Knus Koah

Project Manager

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Sample Cross Reference 522956



APEX/Titan, Midland, TX

30137 Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1	S	01-14-16 11:06	- 6 ft	522956-001
CS-2	S	01-14-16 11:12	- 6 ft	522956-002
CS-3	S	01-14-16 11:18	- 10 ft	522956-003
CS-4	S	01-14-16 11:24	- 6 ft	522956-004
CS-5	S	01-14-16 11:30	- 6 ft	522956-005
CS-6	S	01-14-16 11:36	- 6 ft	522956-006
CS-7	S	01-14-16 11:42	- 6 ft	522956-007
CS-8	S	01-14-16 11:48	- 6 ft	522956-008
CS-9	S	01-14-16 11:59	- 10 ft	522956-009
CS-10	S	01-14-16 12:00	- 6 ft	522956-010
CS-11	S	01-14-16 12:03	- 6 ft	522956-011
CS-12	S	01-14-16 12:06	- 10 ft	522956-012
CS-13	S	01-14-16 12:12	- 6 ft	522956-013
CS-14	S	01-14-16 12:18	- 6 ft	522956-014
SP-1	S	01-14-16 12:40		522956-015
SP-2	S	01-14-16 12:50		522956-016
SP-3	S	01-14-16 12:59		522956-017



CASE NARRATIVE



Client Name: APEX/Titan
Project Name: 30137 Pipeline Release

 Project ID:
 725010112096
 Report Date:
 28-JAN-16

 Work Order Number(s):
 522956
 Date Received:
 01/15/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



APEX/Titan, Midland, TX

Project Name: 30137 Pipeline Release

TNI TOTAL

Project Id: 725010112096 Contact: Karolanne Toby

Project Location: NM

Date Received in Lab: Fri Jan-15-16 08:40 am

Report Date: 28-JAN-16

Project Manager: Kelsey Brooks

			204		00					722 0.7.4.0	٥		00.5
	Lab Id:	522956-0)01	522956-0	02	522956-0		522956-0	004	522956-0	05	522956-	006
Analysis Requested	Field Id:	CS-1		CS-2		CS-3		CS-4		CS-5		CS-6	
Thulysis Requesicu	Depth:	6 ft		6 ft		10 ft		6 ft		6 ft		6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-14-16	11:06	Jan-14-16 1	1:12	Jan-14-16	11:18	Jan-14-16	11:24	Jan-14-16 1	1:30	Jan-14-16	11:36
BTEX by EPA 8021B	Extracted:	Jan-18-16 (09:00	Jan-18-16 0	9:00	Jan-18-16	09:00	Jan-18-16 (9:00	Jan-18-16 0	9:00	Jan-18-16	09:00
	Analyzed:	Jan-18-16	18:57	Jan-18-16 1	2:58	Jan-18-16	11:50	Jan-18-16	19:12	Jan-18-16 1	2:07	Jan-18-16	13:14
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.0142	0.00101	ND	0.000990	ND	0.000998	0.00150	0.000990	ND	0.000990	ND	0.00101
Toluene		0.0637	0.00202	ND	0.00198	ND	0.00200	ND	0.00198	ND	0.00198	ND	0.00202
Ethylbenzene		0.0147	0.00101	ND	0.000990	ND	0.000998	ND	0.000990	ND	0.000990	ND	0.00101
m,p-Xylenes		0.122	0.00202	ND	0.00198	ND	0.00200	0.312	0.00198	ND	0.00198	ND	0.00202
o-Xylene		0.0198	0.00101	ND	0.000990	ND	0.000998	0.193	0.000990	ND	0.000990	ND	0.00101
Total Xylenes		0.142	0.00101	ND	0.000990	ND	0.000998	0.505	0.000990	ND	0.000990	ND	0.00101
Total BTEX		0.234	0.00101	ND	0.000990	ND	0.000998	0.507	0.000990	ND	0.000990	ND	0.00101
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-22-16	10:00	Jan-22-16 1	0:00	Jan-22-16	10:00	Jan-22-16	10:00	Jan-22-16 1	0:00	Jan-22-16	10:00
	Analyzed:	Jan-26-16	20:02	Jan-26-16 2	0:28	Jan-27-16	15:41	Jan-26-16 2	20:53	Jan-26-16 2	1:06	Jan-26-16	21:19
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		56.5	2.00	13.7	2.00	6.74	2.00	9.42	2.00	ND	2.00	ND	2.00
TPH by SW 8015B	Extracted:	Jan-19-16	11:30	Jan-19-16 1	1:30	Jan-19-16	11:30	Jan-19-16	11:30	Jan-19-16 1	1:30	Jan-19-16	11:30
	Analyzed:	Jan-20-16 (02:53	Jan-20-16 0	3:27	Jan-20-16)3:59	Jan-21-16	14:12	Jan-20-16 0	5:02	Jan-20-16	05:35
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		24.3	14.9	ND	15.0	ND	15.0	149	15.0	ND	15.0	ND	14.9
C10-C28 Diesel Range Organics		ND	14.9	40.7	15.0	ND	15.0	300	15.0	101	15.0	ND	14.9
Total TPH		24.3	14.9	40.7	15.0	ND	15.0	449	15.0	101	15.0	ND	14.9

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

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Kelsey Brooks
Project Manager



APEX/Titan, Midland, TX

Project Name: 30137 Pipeline Release

Page 147

Project Id: 725010112096 Contact: Karolanne Toby

Project Location: NM

Date Received in Lab: Fri Jan-15-16 08:40 am

Report Date: 28-JAN-16 **Project Manager:** Kelsey Brooks

	Lab Id:	522956-0	007	522956-0	08	522956-0	009	522956-0	010	522956-0)11	522956-	012
Analysis Requested	Field Id:	CS-7		CS-8	CS-8		CS-9			CS-11		CS-12	2
Anaiysis Requesieu	Depth:	6 ft		6 ft	6 ft 10 ft		6 ft		6 ft		10 ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-14-16 1	11:42	Jan-14-16 1	1:48	Jan-14-16	11:59	Jan-14-16	12:00	Jan-14-16	12:03	Jan-14-16	12:06
BTEX by EPA 8021B	Extracted:	Jan-18-16 (09:00	Jan-18-16 0	9:00	Jan-18-16 (9:00	Jan-18-16 (9:00	Jan-18-16 (9:00	Jan-18-16	09:00
	Analyzed:	Jan-18-16 1	15:24	Jan-18-16 1	5:41	Jan-18-16 1	5:57	Jan-18-16 1	6:14	Jan-18-16	16:30	Jan-18-16	16:47
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00100	ND	0.00100	ND	0.000996	ND	0.000994	ND	0.00100	ND	0.00101
Toluene		ND	0.00201	ND	0.00200	ND	0.00199	ND	0.00199	ND	0.00200	ND	0.00202
Ethylbenzene		ND	0.00100	ND	0.00100	ND	0.000996	ND	0.000994	ND	0.00100	ND	0.00101
m,p-Xylenes		ND	0.00201	ND	0.00200	ND	0.00199	ND	0.00199	ND	0.00200	ND	0.00202
o-Xylene		ND	0.00100	ND	0.00100	ND	0.000996	ND	0.000994	ND	0.00100	ND	0.00101
Total Xylenes		ND	0.00100	ND	0.00100	ND	0.000996	ND	0.000994	ND	0.00100	ND	0.00101
Total BTEX		ND	0.00100	ND	0.00100	ND	0.000996	ND	0.000994	ND	0.00100	ND	0.00101
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-22-16 1	10:00	Jan-22-16 1	0:00	Jan-22-16 1	0:00	Jan-22-16 1	0:00	Jan-22-16	10:00	Jan-22-16	10:00
	Analyzed:	Jan-27-16 1	16:18	Jan-26-16 2	2:10	Jan-26-16 1	6:23	Jan-26-16 2	22:22	Jan-26-16	17:55	Jan-26-16	18:59
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2.84	2.00	5.66	2.00	ND	2.00	2.63	2.00	ND	2.00	7.29	2.00
TPH by SW 8015B	Extracted:	Jan-19-16 1	11:30	Jan-20-16 0	9:00	Jan-20-16 (9:00	Jan-20-16 (9:00	Jan-20-16 (9:00	Jan-20-16	09:00
	Analyzed:	Jan-20-16 (06:09	Jan-21-16 0	1:27	Jan-21-16 (01:51	Jan-21-16 ()2:16	Jan-21-16 ()2:41	Jan-21-16	03:08
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	14.9 14.9
C10-C28 Diesel Range Organics		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	5.0 ND	
Total TPH		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	14.9

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Kelsey Brooks Project Manager

Knis Roah



APEX/Titan, Midland, TX

Project Name: 30137 Pipeline Release

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Project Id: 725010112096 Contact: Karolanne Toby

Project Location: NM

Date Received in Lab: Fri Jan-15-16 08:40 am

Project Manager: Kelsey Brooks

Report Date: 28-JAN-16

	Lab Id:	522956-0	013	522956-0	14	522956-0	15	522956-0	16	522956-	017	
Analysis Paguested	Field Id:	CS-13		CS-14		SP-1		SP-2		SP-3		
Analysis Requested	Depth:	6 ft		6 ft								
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	.	
	Sampled:	Jan-14-16	12:12	Jan-14-16 1	2:18	Jan-14-16 1	2:40	Jan-14-16 1	2:50	Jan-14-16	12:59	
BTEX by EPA 8021B	Extracted:	Jan-18-16 (9:00	Jan-18-16 0	9:00	Jan-18-16 0	9:00	Jan-18-16 0	9:00	Jan-18-16	09:00	
	Analyzed:	Jan-19-16 (9:47	Jan-18-16 1	7:20	Jan-18-16 1	7:35	Jan-18-16 1	7:51	Jan-18-16	18:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		ND	0.00101	ND	0.000992	ND (0.000996	ND (0.000996	ND	0.00101	
Toluene		ND	0.00202	ND	0.00198	ND	0.00199	ND	0.00199	ND	0.00201	
Ethylbenzene		ND	0.00101	ND	0.000992	ND (0.000996	ND (0.000996	ND	0.00101	
m,p-Xylenes		ND	0.00202	ND	0.00198	ND	0.00199	ND	0.00199	ND	0.00201	
o-Xylene		ND	0.00101	ND	0.000992	ND (0.000996	ND (0.000996	ND	0.00101	
Total Xylenes		ND	0.00101	ND	0.000992	ND (0.000996	ND (0.000996	ND	0.00101	
Total BTEX		ND	0.00101	ND	0.000992	ND (0.000996	ND (0.000996	ND	0.00101	
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-22-16	10:00	Jan-22-16 1	0:00	Jan-22-16 1	0:00	Jan-22-16 1	0:00	Jan-22-16	10:00	
	Analyzed:	Jan-26-16	18:20	Jan-26-16 1	8:33	Jan-26-16 1	8:46	Jan-26-16 1	9:37	Jan-27-16	21:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		2.47	2.00	5.75	2.00	364	100	141	40.0	37.0	10.0	
TPH by SW 8015B	Extracted:	Jan-20-16 (9:00	Jan-20-16 0	9:00	Jan-20-16 0	9:00	Jan-20-16 0	9:00	Jan-20-16	09:00	
	Analyzed:	Jan-21-16 ()3:37	Jan-21-16 0	3:34	Jan-21-16 1	3:42	Jan-21-16 0	4:47	Jan-21-16	05:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	
C10-C28 Diesel Range Organics		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	
Total TPH		ND	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0	_

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Kelsey Brooks Project Manager

Knis Roah





Flagging Criteria



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

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 985838

Sample: 522956-003 / SMP

Matrix: Soil Batch: 1

Units:	mg/kg	Date Analyzed: 01/18/16 11:50	SU	RROGATE RE	ECOVERY S	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1,4-Difluoro	benzene		0.0321	0.0300	107	80-120	
4-Bromofluo	orobenzene		0.0296	0.0300	99	80-120	

Lab Batch #: 985838 Sample: 522956-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 12:07 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0323 0.0300 108 80-120 4-Bromofluorobenzene 0.0299 0.0300 100 80-120

Lab Batch #: 985838 Sample: 522956-002 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 12:58 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0352	0.0300	117	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 985838 Sample: 522956-006 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 13:14	SU	RROGATE R	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene		0.0345	0.0300	115	80-120	
4-Bromoflu	uorobenzene		0.0294	0.0300	98	80-120	

Lab Batch #: 985838 Sample: 522956-007 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 15:24	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene	Time y tes	0.0340	0.0300	113	80-120	
4-Bromofluo	orobenzene		0.0298	0.0300	99	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 985838

Sample: 522956-008 / SMP

Matrix: Soil Batch:

Units:	mits: mg/kg Date Analyzed: 01/18/16 15:41 SURROGATE RECOVERY STUDY								
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluoro	benzene		0.0340	0.0300	113	80-120			
4-Bromofluo	orobenzene		0.0295	0.0300	98	80-120			

Lab Batch #: 985838 Sample: 522956-009 / SMP Batch: 1 Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/18/16 15:57 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0345 0.0300 115 80-120 4-Bromofluorobenzene 0.0299 0.0300 100 80-120

Lab Batch #: 985838 Sample: 522956-010 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 16:14 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 985838 Sample: 522956-011 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 16:30	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene		0.0355	0.0300	118	80-120	
4-Bromoflu	uorobenzene		0.0303	0.0300	101	80-120	

Lab Batch #: 985838 Sample: 522956-012 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 16:47	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorol	benzene	Marytes	0.0336	0.0300	112	80-120			
4-Bromofluo	robenzene		0.0291	0.0300	97	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Sample: 522956-014 / SMP

Project ID: 725010112096

Lab Batch #: 985838

Matrix: Soil Batch:

Units:	mg/kg	Date Analyzed: 01/18/16 17:20	SURROGATE RECOVERY STUDY				
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0359	0.0300	120	80-120	
4-Bromofluorobenzene			0.0305	0.0300	102	80-120	

Lab Batch #: 985838 Sample: 522956-015 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 17:35 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0283 0.0300 94 80-120 4-Bromofluorobenzene 0.0241 0.0300 80 80-120

Lab Batch #: 985838 Sample: 522956-016 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 17:51 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 985838 Sample: 522956-017 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 18:41	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	robenzene		0.0276	0.0300	92	80-120			
4-Bromoflu	uorobenzene		0.0241	0.0300	80	80-120			

Lab Batch #: 985838 Sample: 522956-001 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/18/16 18:57	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorober	nzene		0.0268	0.0300	89	80-120		
4-Bromofluorol	benzene		0.0240	0.0300	80	80-120		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 985838

1-Chlorooctane

o-Terphenyl

Sample: 522956-004 / SMP

Matrix: Soil Batch:

Units:	mg/kg	Date Analyzed: 01/18/16 19:12	SURROGATE RECOVERY STUDY				
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoroben	zene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene			0.0351	0.0300	117	80-120	

Lab Batch #: 985838 Sample: 522956-013 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/19/16 09:47 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0340 0.0300 113 80-120 4-Bromofluorobenzene 0.0300 104 0.0311 80-120

Lab Batch #: 986082 Sample: 522956-001 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/20/16 02:53

TPH by SW 8015B

Analytes

SURROGATE RECOVERY STUDY Amount True Control Limits Found Amount Recovery Flags %R [A] [B] %R [D] 87.5 99.6 88 70-135

94

70-135

49.8

Lab Batch #: 986082 Sample: 522956-002 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/20/16 03:27	SURROGATE RECOVERY STUDY						
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	tane		103	99.9	103	70-135			
o-Terpheny	1		54.5	50.0	109	70-135			

46.6

Lab Batch #: 986082 Sample: 522956-003 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/20/16 03:59	SURROGATE RECOVERY STUDY					
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane		106	99.7	106	70-135		
o-Terpheny	1		57.1	49.9	114	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 986082

Sample: 522956-005 / SMP

Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/20/16 05:02	SURROGATE RECOVERY STUDY					
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chloroocta	ane		88.8	99.8	89	70-135		
o-Terphenyl			47.1	49.9	94	70-135		

Lab Batch #: 986082

Sample: 522956-006 / SMP

Batch: 1

Matrix: Soil

Units:

mg/kg

Date Analyzed: 01/20/16 05:35

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	99.6	92	70-135	
o-Terphenyl	48.7	49.8	98	70-135	

Lab Batch #: 986082

Sample: 522956-007 / SMP

Batch:

Matrix: Soil

Units:

mg/kg

Date Analyzed: 01/20/16 06:09

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	99.8	93	70-135	
o-Terphenyl	49.9	49.9	100	70-135	

Lab Batch #: 986086

Sample: 522956-008 / SMP

Batch: 1

Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 01:27	SURROGATE RECOVERY STUDY					
TPH by SW 8015B Analytes			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooc	tane		115	99.9	115	70-135		
o-Terpheny	1		47.7	50.0	95	70-135		

Lab Batch #: 986086

Sample: 522956-009 / SMP

Batch: 1

Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 01:51	SURROGATE RECOVERY STUDY						
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	tane		115	100	115	70-135			
o-Terpheny	1		47.2	50.0	94	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Sample: 522956-010 / SMP

Project ID: 725010112096

Lab Batch #: 986086

Date Analyzed: 01/21/16 02:16

Matrix: Soil Batch: 1

Units:	mg/kg	Date Analyzed: 01/21/16 02:16	SURROGATE RECOVERY STUDY					
	TPI	I by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane		106	99.8	106	70-135		
o-Terpheny	·l		44.0	49.9	88	70-135		

Lab Batch #: 986086 Sample: 522956-011 / SMP Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 02:41	SURROGATE RECOVERY STUDY							
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	tane	•	102	100	102	70-135				
o-Terpheny	·1		42.7	50.0	85	70-135				

Sample: 522956-012 / SMP Lab Batch #: 986086 Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/21/16 03:08 SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.6	104	70-135	
o-Terphenyl	44.1	49.8	89	70-135	

Lab Batch #: 986086 Sample: 522956-014 / SMP Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 03:34	SURROGATE RECOVERY STUDY							
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	ctane		106	100	106	70-135				
o-Terpheny	yl		55.7	50.0	111	70-135				

Batch: Lab Batch #: 986086 Sample: 522956-013 / SMP Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 03:37	SURROGATE RECOVERY STUDY						
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	ane		105	99.9	105	70-135			
o-Terphenyl			44.0	50.0	88	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 986086

Sample: 522956-016 / SMP

Matrix: Soil Batch:

Units:	mg/kg	Date Analyzed: 01/21/16 04:47	SURROGATE RECOVERY STUDY							
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	e		84.4	99.9	84	70-135				
o-Terphenyl			44.6	50.0	89	70-135				

Lab Batch #: 986086 Sample: 522956-017 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/21/16 05:21 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW 8015B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 85.2 100 85 70-135 o-Terphenyl 44.4 50.0 89 70-135

Lab Batch #: 986086 Sample: 522956-015 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/21/16 13:42 SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	99.9	94	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

Lab Batch #: 986082 Sample: 522956-004 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 14:12	SURROGATE RECOVERY STUDY							
	TP	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	stana	Analytes	125	100		70.125				
			125	100	125	70-135				
o-Terpheny	/1		63.6	50.0	127	70-135				

Lab Batch #: 985838 **Sample:** 703579-1-BLK / BLK Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/18/16 09:05	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	obenzene	-	0.0337	0.0300	112	80-120			
4-Bromoflu	orobenzene		0.0329	0.0300	110	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 986082

Sample: 703714-1-BLK / BLK

Matrix: Solid Batch: 1

Units:	mg/kg	Date Analyzed: 01/19/16 13:06	SURROGATE RECOVERY STUDY						
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	tane		91.7	100	92	70-135			
o-Terpheny	1		48.2	50.0	96	70-135			

Lab Batch #: 986086 **Sample:** 703716-1-BLK / BLK Batch: 1 Matrix: Solid

Units:	Jnits: mg/kg Date Analyzed: 01/20/16 09:11 SURROGATE RECOVERY STUDY								
	TPI	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorood	ctane		110	100	110	70-135			
o-Terpheny	yl		45.9	50.0	92	70-135			

Sample: 703579-1-BKS / BKS Lab Batch #: 985838 Batch: 1 Matrix: Solid

Date Analyzed: 01/18/16 08:15 **Units:** mg/kg SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 986082 **Sample:** 703714-1-BKS / BKS Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/19/16 13:37	SURROGATE RECOVERY STUDY								
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorood	ctane	v	97.5	100	98	70-135					
o-Terpheny	yl		48.3	50.0	97	70-135					

Batch: Lab Batch #: 986086 **Sample:** 703716-1-BKS / BKS Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/20/16 09:38	SURROGATE RECOVERY STUDY							
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	ane		127	100	127	70-135				
o-Terphenyl			49.6	50.0	99	70-135				

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Sample: 703579-1-BSD / BSD

Project ID: 725010112096

Lab Batch #: 985838

Date Analyzed: 01/18/16 08:32

Matrix: Solid Batch: 1

Units: mg/kg Date Analyzed: 01/18/16 08:32	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
·								
1,4-Difluorobenzene	0.0338	0.0300	113	80-120				
4-Bromofluorobenzene	0.0326	0.0300	109	80-120				

Lab Batch #: 986082 **Sample:** 703714-1-BSD / BSD Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/19/16 14:04	SU	RROGATE RI	ECOVERY S	STUDY	
	TP	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	etane		93.6	100	94	70-135	
o-Terpheny	/1		46.4	50.0	93	70-135	

Sample: 703716-1-BSD / BSD Lab Batch #: 986086 Batch: 1 Matrix: Solid

Date Analyzed: 01/20/16 10:06 **Units:** mg/kg SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	135	100	135	70-135	
o-Terphenyl	57.3	50.0	115	70-135	

Lab Batch #: 985838 **Sample:** 522956-002 S / MS Batch: 1 Matrix: Soil

Units:	Units: mg/kg Date Analyzed: 01/18/16 13:30			SURROGATE RECOVERY STUDY							
	вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
		Analytes			[2]						
1,4-Difluor	robenzene		0.0335	0.0300	112	80-120					
4-Bromoflu	uorobenzene		0.0338	0.0300	113	80-120					

Batch: **Lab Batch #:** 986082 Sample: 522956-007 S / MS Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/20/16 06:41	SURROGATE RECOVERY STUDY							
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooct	ane		98.1	99.7	98	70-135				
o-Terpheny	1		48.7	49.9	98	70-135				

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 Pipeline Release

Work Orders: 522956,

Project ID: 725010112096

Lab Batch #: 986086

Sample: 522956-010 S / MS

Matrix: Soil Batch:

Units:	mg/kg	Date Analyzed: 01/21/16 05:57	SURROGATE RECOVERY STUDY							
TPH by SW 8015B Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1.011		Analytes								
1-Chlorooct	ane		103	99.6	103	70-135				
o-Terphenyl	1		49.9	49.8	100	70-135				

Lab Batch #: 985838 **Sample:** 522956-002 SD / MSD Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/18/16 13:45 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0351 0.0300 117 80-120 4-Bromofluorobenzene 0.0349 0.0300 116 80-120

Lab Batch #: 986082 Sample: 522956-007 SD / MSD Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/20/16 07:13 SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	51.4	50.0	103	70-135	

Lab Batch #: 986086 **Sample:** 522956-010 SD / MSD Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/21/16 08:14	SURROGATE RECOVERY STUDY							
	TP	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooc	etane		103	99.7	103	70-135				
o-Terpheny	/l		50.8	49.9	102	70-135				

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: 30137 Pipeline Release

Work Order #: 522956 Project ID: 725010112096

Analyst: SYG Date Prepared: 01/18/2016 Date Analyzed: 01/18/2016

Lab Batch ID: 985838Sample: 703579-1-BKSBatch #: 1Matrix: Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	< 0.00100	0.100	0.0805	81	0.100	0.0820	82	2	70-130	35	
Toluene	< 0.00200	0.100	0.0810	81	0.100	0.0812	81	0	70-130	35	
Ethylbenzene	< 0.00100	0.100	0.0842	84	0.100	0.0839	84	0	71-129	35	
m,p-Xylenes	< 0.00200	0.200	0.172	86	0.200	0.171	86	1	70-135	35	
o-Xylene	< 0.00100	0.100	0.0852	85	0.100	0.0849	85	0	71-133	35	

Analyst: MNR **Date Prepared:** 01/22/2016 **Date Analyzed:** 01/26/2016

Lab Batch ID: 986585 Sample: 703750-1-BKS Batch #: 1 Matrix: Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	49.1	98	50.0	48.0	96	2	90-110	20	

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



BS / BSD Recoveries



Project Name: 30137 Pipeline Release

Work Order #: 522956 **Project ID:** 725010112096

Date Prepared: 01/19/2016 **Date Analyzed:** 01/19/2016 **Analyst:** PJB

Lab Batch ID: 986082 **Sample:** 703714-1-BKS **Batch #:** 1 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	SPIKE / 1	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUL	Υ	
TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	802	80	1000	840	84	5	70-135	35	
C10-C28 Diesel Range Organics	<15.0	1000	982	98	1000	973	97	1	70-135	35	

Analyst: PJB **Date Prepared:** 01/20/2016 **Date Analyzed:** 01/20/2016

Lab Batch ID: 986086 Sample: 703716-1-BKS **Batch #:** 1 Matrix: Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	801	80	1000	879	88	9	70-135	35	
C10-C28 Diesel Range Organics	<15.0	1000	1040	104	1000	1140	114	9	70-135	35	

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



Form 3 - MS / MSD Recoveries



Page 162 of 189

Project Name: 30137 Pipeline Release

Work Order #: 522956

QC- Sample ID: 522956-002 S

Batch #:

Matrix: Soil

Project ID: 725010112096

Lab Batch ID: Date Analyzed:

01/18/2016

Date Prepared: 01/18/2016

Analyst: SYG

Reporting Units:

mg/kg

985838

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000992	0.0992	0.0836	84	0.0992	0.0837	84	0	70-130	35	
Toluene	<0.00198	0.0992	0.0796	80	0.0992	0.0803	81	1	70-130	35	
Ethylbenzene	< 0.000992	0.0992	0.0802	81	0.0992	0.0817	82	2	71-129	35	
m,p-Xylenes	< 0.00198	0.198	0.163	82	0.198	0.166	84	2	70-135	35	
o-Xylene	< 0.000992	0.0992	0.0795	80	0.0992	0.0800	81	1	71-133	35	

Lab Batch ID:

986082

QC- Sample ID: 522956-007 S

Batch #:

Matrix: Soil

Date Analyzed:

01/20/2016

Date Prepared: 01/19/2016

Analyst: PJB

Reporting Units:

mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	997	782	78	1000	724	72	8	70-135	35	
C10-C28 Diesel Range Organics	<15.0	997	918	92	1000	962	96	5	70-135	35	

Lab Batch ID:

986086

QC- Sample ID: 522956-010 S

Batch #:

Matrix: Soil

Date Analyzed:

01/21/2016

Date Prepared: 01/20/2016

Analyst: PJB

Reporting Units:

mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

1

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<14.9	996	845	85	997	794	80	6	70-135	35	
C10-C28 Diesel Range Organics	<14.9	996	942	95	997	968	97	3	70-135	35	

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

Page 21 of 24

Final 1.000

	SL-sludge O-Oil	C - Charcoal tube P/O - Plastic or other		L - Liquid A - Air Bag 250 ml - Glass wide mouth		W - Water S - Soil SD - Solid A/G - Amber / Or Glass 1 Liter	W - Wate A/G - Amt	VOA - 40 ml vial	Container VC	Cont
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Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016

	0 - 0!	SL - sludge	C - Charcoal tube P/O - Plastic or other	ı	L - Liquid A - Air Bag 250 ml - Glass wide mouth		ii SD-Soli s1Liter	W - Water S - Soil SD - Solid A/G - Amber / Or Glass 1 Liter	W - Wate A/G - Am	WW - Wastewater VOA - 40 ml vial	VOA - 4	Matrix Container
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Lab Sample ID (Lab Use Only)		CA B TP	1	250 ml Glass Jar P/O	VOA A/G 1 Lt.	Start Depth End Depth	of Sample(s)	Identifying Marks of Sample(s)	b ldenti	D∃0C	Date	Matrix
100000	_	(C)4/	161		17	Pipeline Release	The		30137) ta		
		* C	70	ontainers	No/Type of Containers	0			Project Name	Proj	,	Proj. No.
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Page of the page o		210		9,	725010112096	725016	#	`	nne Tou	Project Manager Karolanne Toby	≭ Manage	Projec
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Lab use only		SIS	ANALYSIS								>	_



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: APEX/Titan

Work Order #: 522956

AT LX/ III.ali

Date/ Time Received: 01/15/2016 08:40:00 AM

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

Temperature Measuring device used: r8

Sar	nple Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/	cooler? N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Cu	stody? Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished	received? Yes	
#11 Chain of Custody agrees with sample label(s)? Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain	of Custody? Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)? Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	No	
#20 VOC samples have zero headspace (less th	an 1/4 inch bubble)? N/A	
#21 <2 for all samples preserved with HNO3,HC samples for the analysis of HEM or HEM-SGT whanalysts.		
#22 >10 for all samples preserved with NaAsO2	+NaOH, ZnAc+NaOH? N/A	

* Must be	completed for after-hours de	livery of samples prior to pla	acing in the refrigerator
Analyst:	ompleted for after flours de	PH Device/Lot#:	ionig in the remigerator
	Checklist completed by:	Carley Owens	Date: 01/15/2016
	Checklist reviewed by:	Hurry Hoah Kelsey Brooks	Date: <u>01/15/2016</u>

Analytical Report 526802

for APEX/Titan

Project Manager: Karolanne Toby 30137 #3, #4, #5 725010112096 16-MAR-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-Lakeland: Florida (E84098)





16-MAR-16

Project Manager: Karolanne Toby

APEX/Titan

505 N. Big Spring Ste. 301 A

Midland, TX 79701

Reference: XENCO Report No(s): 526802

30137 #3, **#4**, **#5** Project Address: NM

Karolanne Toby:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 526802. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 526802 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Mus Hoah

Kelsey Brooks

Project Manager

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



Sample Cross Reference 526802



APEX/Titan, Midland, TX

30137 #3, #4, #5

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1 (2015) (RE)	S	03-14-16 10:49	- 10 ft	526802-001
S-Wall (RE)	S	03-14-16 11:35	- 8 ft	526802-002
CS-2 (2015) (RE)	S	03-14-16 11:52	- 14 ft	526802-003
R.P. (RE)	S	03-14-16 12:04	- 13 ft	526802-004
SP-4	S	03-14-16 14:00		526802-005
SP-5	S	03-14-16 12:40		526802-006
SP-6	S	03-14-16 12:45		526802-007



CASE NARRATIVE



Client Name: APEX/Titan
Project Name: 30137 #3, #4, #5

 Project ID:
 725010112096
 Report Date:
 16-MAR-16

 Work Order Number(s):
 526802
 Date Received:
 03/15/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



APEX/Titan, Midland, TX

Project Name: 30137 #3, #4, #5



Project Id: 725010112096 Contact: Karolanne Toby

Contact: Karol
Project Location: NM

Date Received in Lab: Tue Mar-15-16 08:40 am

Report Date: 16-MAR-16 **Project Manager:** Kelsey Brooks

	Lab Id:	526802-0	001	526802-0	02	526802-0	003	526802-00)4	526802-0	005	526802-0	006
4 1 2 8 4 1	Field Id:	CS-1 (2015)	(RE)	S-Wall (R	.E)	CS-2 (2015)	(RE)	R.P. (RE)	SP-4		SP-5	
Analysis Requested	Depth:	10 ft		8 ft		14 ft		13 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-14-16	10:49	Mar-14-16 1	1:35	Mar-14-16	11:52	Mar-14-16 1	2:04	Mar-14-16	14:00	Mar-14-16	12:40
BTEX by EPA 8021B	Extracted:	Mar-15-16	14:00			Mar-15-16	14:00			Mar-15-16	14:00	Mar-15-16	14:00
	Analyzed:	Mar-15-16	18:42			Mar-15-16	18:58			Mar-16-16	15:08	Mar-16-16	11:08
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene		ND	0.00150			ND	0.00149			ND	0.0299	ND	0.00150
Toluene		ND	0.00200			ND	0.00199			1.95	0.0399	0.0137	0.00200
Ethylbenzene		ND	0.00200			ND	0.00199			2.77	0.0399	0.0174	0.00200
m,p-Xylenes		ND				ND	0.00199			11.2	0.0399	0.126	0.00200
o-Xylene		ND				ND	0.00298			3.30	0.0599	ND	0.00299
Total Xylenes		ND	0.00200			ND	0.00199			14.5	0.0399	0.126	0.00200
Total BTEX		ND	0.00150			ND	0.00149			19.2	0.0299	0.157	0.00150
Inorganic Anions by EPA 300/300.1	Extracted:			Mar-15-16 14:00		Mar-15-16 14:00		Mar-15-16 14:00		Mar-15-16 14:00		Mar-15-16 14:00	
	Analyzed:			Mar-15-16 1	4:43	Mar-15-16 14:24		Mar-15-16 1	4:44	Mar-15-16 15:04		Mar-15-16 15:	
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride	'			254	20.0	343	100	403	100	107	100	344	100
TPH by SW 8015B	Extracted:	Mar-15-16	09:00			Mar-15-16	09:00			Mar-15-16 (09:00	Mar-15-16	09:00
	Analyzed:	Mar-15-16	18:02			Mar-15-16	18:29			Mar-15-16	19:21	Mar-15-16	19:49
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	25.0			ND	24.9			583	24.9	215	25.0
C10-C28 Diesel Range Hydrocarbons		34.3	25.0			135	24.9			122	24.9	561	25.0
Total TPH		34.3	25.0			135	24.9			705	24.9	829	25.0

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

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

Kelsey Brooks Project Manager

Knis Roah



725010112096

Karolanne Toby

NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 526802

APEX/Titan, Midland, TX

Project Name: 30137 #3, #4, #5



Date Received in Lab: Tue Mar-15-16 08:40 am

Report Date: 16-MAR-16 Project Manager: Kelsey Brooks

	l I		T	1	1	1	I
	Lab Id:	526802-007					
Analysis Requested	Field Id:	SP-6					
Anaiysis Kequesieu	Depth:						
	Matrix:	SOIL					
	Sampled:	Mar-14-16 12:45					
BTEX by EPA 8021B	Extracted:	Mar-15-16 14:00					
	Analyzed:	Mar-16-16 14:52					
	Units/RL:	mg/kg RL					
Benzene		ND 0.00150					
Toluene		0.0140 0.00200					
Ethylbenzene		0.0193 0.00200					
m,p-Xylenes		0.211 0.00200					
o-Xylene		0.0221 0.00300					
Total Xylenes		0.233 0.00200					
Total BTEX		0.266 0.00150					
Inorganic Anions by EPA 300/300.1	Extracted:	Mar-15-16 14:00					
	Analyzed:	Mar-15-16 15:45					
	Units/RL:	mg/kg RL					
Chloride		207 100					
TPH by SW 8015B	Extracted:	Mar-15-16 09:00					
	Analyzed:	Mar-15-16 20:14					
	Units/RL:	mg/kg RL					
C6-C10 Gasoline Range Hydrocarbons		198 24.9					
C10-C28 Diesel Range Hydrocarbons		229 24.9					
Total TPH		455 24.9					

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

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

Kelsey Brooks Project Manager

Knis Roah



Flagging Criteria



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

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102 Tempe A7 85282	(602) 437 0330	



Project Name: 30137 #3, #4, #5

Work Orders: 526802,

Sample: 526802-001 / SMP

Project ID: 725010112096

Lab Batch #: 990381

Date Analyzed: 03/15/16 18:02

Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 18:02	SURROGATE RECOVERY STUDY					
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane	11mily ves	115	100	115	70-130		
o-Terpheny	1		56.7	50.0	113	70-130		

Lab Batch #: 990381 **Sample:** 526802-003 / SMP Batch: 1

Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 18:29	SURROGATE RECOVERY STUDY					
	TPI	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
		Analytes			[D]			
1-Chlorooct	tane		116	99.7	116	70-130		
o-Terpheny	1		57.3	49.9	115	70-130		

Lab Batch #: 990323

Sample: 526802-001 / SMP

Batch: 1

Matrix: Soil

Units:

mg/kg

Date Analyzed: 03/15/16 18:42

SURROGATE RECOVERY STUDY Control

BTEX by EPA 8021B	Found [A]	Amount [B]	Recovery %R	Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 990323

Sample: 526802-003 / SMP

Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 18:58	SU	RROGATE RE	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene	Tinary tes	0.0285	0.0300	95	80-120	
4-Bromofli	uorobenzene		0.0306	0.0300	102	80-120	

Lab Batch #: 990381

Sample: 526802-005 / SMP

Batch: 1

Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 19:21	SU	RROGATE RE	ECOVERY S	STUDY	
	TP	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	tane		123	99.7	123	70-130	
o-Ternheny	1		57.1	10.0	11/	70 130	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 #3, #4, #5

Work Orders: 526802,

Project ID: 725010112096

Lab Batch #: 990381

Sample: 526802-006 / SMP

Matrix: Soil Batch: 1

Units:	mg/kg	Date Analyzed: 03/15/16 19:49	SURROGATE RECOVERY STUDY					
	TP	H by SW 8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
		Analytes			[2]			
1-Chlorooct	ane		116	99.8	116	70-130		
o-Terphenyl			56.4	49.9	113	70-130		

Lab Batch #: 990381

Sample: 526802-007 / SMP

Batch: 1

Matrix: Soil

Units:

mg/kg

Date Analyzed: 03/15/16 20:14

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.7	114	70-130	
o-Terphenyl	54.7	49.9	110	70-130	

Lab Batch #: 990323

Sample: 526802-006 / SMP

Batch:

Matrix: Soil

Units:

mg/kg

Date Analyzed: 03/16/16 11:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 990323

Sample: 526802-007 / SMP

Batch:

Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/16/16 14:52	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluor	robenzene		0.0278	0.0300	93	80-120		
4-Bromofli	uorobenzene		0.0325	0.0300	108	80-120		

Lab Batch #: 990323

Sample: 526802-005 / SMP

Batch:

Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/16/16 15:08	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0242	0.0300	81	80-120	
4-Bromofluo	orobenzene		0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 #3, #4, #5

Work Orders: 526802,

Sample: 706407-1-BLK / BLK

Project ID: 725010112096

Lab Batch #: 990381

Sample: /0040/-1-blk/blk

Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 03/15/16 08:42	SURROGATE RECOVERY STUDY							
TPH by SW 8015B			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
		Analytes			[D]					
1-Chlorooct	tane		92.7	100	93	70-130				
o-Terpheny	1		45.7	50.0	91	70-130				

Lab Batch #: 990323 Sample: 706394-1-BLK/BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/15/16 14:26 SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
		Analytes			[D]		
1,4-Difluor	robenzene		0.0274	0.0300	91	80-120	
4-Bromoflu	4-Bromofluorobenzene		0.0287	0.0300	96	80-120	

Lab Batch #: 990381 Sample: 706407-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 03/15/16 09:14 SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-130	
o-Terphenyl	50.0	50.0	100	70-130	

Lab Batch #: 990323 Sample: 706394-1-BKS / BKS Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 03/15/16 13:05	SURROGATE RECOVERY STUDY								
	вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
		Analytes			[D]						
1,4-Difluor	robenzene		0.0274	0.0300	91	80-120					
4-Bromoflu	uorobenzene		0.0313	0.0300	104	80-120					

Lab Batch #: 990381 Sample: 706407-1-BSD / BSD Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 03/15/16 09:48	SURROGATE RECOVERY STUDY								
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chloroocta	ane		118	100	118	70-130					
o-Terphenyl			50.9	50.0	102	70-130					

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: 30137 #3, #4, #5

Work Orders: 526802,

Sample: 706394-1-BSD / BSD

Project ID: 725010112096

Lab Batch #: 990323

Matrix: Solid Batch: 1

Units:	mg/kg	Date Analyzed: 03/15/16 13:21	SU	SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
		Analytes			[D]						
1,4-Difluoro	benzene		0.0267	0.0300	89	80-120					
4-Bromofluo	orobenzene		0.0300	0.0300	100	80-120					

Sample: 526801-001 S / MS **Lab Batch #:** 990323 Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 03/15/16 13:38 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0262 0.0300 87 80-120 4-Bromofluorobenzene 0.0297 0.0300 99 80-120

Lab Batch #: 990381 Sample: 526801-001 S / MS Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 03/15/16 13:58 SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.8	128	70-130	
o-Terphenyl	57.5	49.9	115	70-130	

Lab Batch #: 990323 **Sample:** 526801-001 SD / MSD Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 13:53	SU	RROGATE RE	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene		0.0275	0.0300	92	80-120	
4-Bromoflu	uorobenzene		0.0336	0.0300	112	80-120	

Lab Batch #: 990381 Sample: 526801-001 SD / MSD Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 03/15/16 14:25	SU	SURROGATE RECOVERY STUDY								
	TPI	H by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooct	ane		129	100	129	70-130						
o-Terpheny	1		55.7	50.0	111	70-130						

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



mg/kg

Units:

BS / BSD Recoveries

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY



Project Name: 30137 #3, #4, #5

Work Order #: 526802 Project ID: 725010112096

Analyst: PJB Date Prepared: 03/15/2016 Date Analyzed: 03/15/2016

 Lab Batch ID:
 990323
 Sample:
 706394-1-BKS
 Batch #:
 1
 Matrix:
 Solid

		DLIM	(IX/DL/IIIIX)			TIKE DOLL	EICHIE	RECOVI			
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	< 0.00150	0.100	0.0840	84	0.100	0.0827	83	2	70-130	35	
Toluene	< 0.00200	0.100	0.0831	83	0.100	0.0829	83	0	70-130	35	
Ethylbenzene	< 0.00200	0.100	0.0877	88	0.100	0.0850	85	3	71-129	35	
m,p-Xylenes	< 0.00200	0.200	0.184	92	0.200	0.178	89	3	70-135	35	
o-Xylene	< 0.00300	0.100	0.0854	85	0.100	0.0831	83	3	71-133	35	

Analyst: MNR Date Prepared: 03/15/2016 Date Analyzed: 03/15/2016

Lab Batch ID: 990333 Sample: 706395-1-BKS Batch #: 1 Matrix: Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	48.1	96	50.0	48.0	96	0	90-110	20	

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



C10-C28 Diesel Range Hydrocarbons

Units:

BS / BSD Recoveries

85

1000

920

92

8



35

75-125

Project Name: 30137 #3, #4, #5

Project ID: 725010112096 Work Order #: 526802

Analyst: ARM **Date Prepared:** 03/15/2016 **Date Analyzed:** 03/15/2016

Lab Batch ID: 990381 Sample: 706407-1-BKS **Batch #:** 1 Matrix: Solid

1000

<25.0

mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY **TPH by SW 8015B** Blank Spike Blank Blank Blank Blk. Spk Control Control Spike Sample Result Added Spike Spike Added Spike Dup. RPD Limits Limits Flag %Ř %RPD %R **Duplicate** %R [A] Result % [B] [C] [D] Result [F] [G] $[\mathbf{E}]$ **Analytes** C6-C10 Gasoline Range Hydrocarbons <25.0 1000 818 82 1000 875 88 7 75-125 35

851

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



Form 3 - MS Recoveries

Project Name: 30137 #3, #4, #5



Work Order #: 526802 Lab Batch #: 990333

Project ID: 725010112096

Date Analyzed: 03/15/2016

Date Prepared: 03/15/2016

Analyst: MNR

QC- Sample ID: 526801-005 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg

MATRIX	/ MATRIX SPIKE	RECOVERY STUDY

	WATRIX / WATRIX STIRE RECOVERT STODI							
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Chloride	65.5	500	547	96	80-120			

Lab Batch #: 990333

Date Analyzed: 03/15/2016 **QC- Sample ID:** 526802-002 S **Date Prepared:** 03/15/2016

Analyst: MNR

Batch #:

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY										
Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag					

Inorganic Anions by EPA 300 [A] [B] **Analytes** Chloride 254 500 747 80-120

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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Page 180 of 189

Project Name: 30137 #3, #4, #5

Work Order #: 526802 **Project ID:** 725010112096

Lab Batch ID:

990323

QC- Sample ID: 526801-001 S

Batch #:

Matrix: Soil

Date Analyzed:

03/15/2016

Date Prepared: 03/15/2016

Analyst: PJB

Reporting Units: mg/kg MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00144	0.0962	0.0939	98	0.0962	0.0616	64	42	70-130	35	XF
Toluene	0.00209	0.0962	0.0978	99	0.0962	0.0651	65	40	70-130	35	XF
Ethylbenzene	< 0.00192	0.0962	0.108	112	0.0962	0.0719	75	40	71-129	35	F
m,p-Xylenes	0.00228	0.192	0.227	117	0.192	0.153	79	39	70-135	35	F
o-Xylene	< 0.00288	0.0962	0.108	112	0.0962	0.0717	75	40	71-133	35	F

Lab Batch ID:

990381

QC- Sample ID: 526801-001 S

Batch #:

Matrix: Soil

Date Analyzed:

03/15/2016

Date Prepared: 03/15/2016

Analyst: ARM

Reporting Units:

mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<25.0	998	921	92	1000	926	93	1	75-125	35	
C10-C28 Diesel Range Hydrocarbons	<25.0	998	1070	107	1000	1040	104	3	75-125	35	

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

ludge O - Oil	C - Charcoal tube SL - sludge P/O - Plastic or other		il SD - Solid L - Liquid A - Air Bag s 1 Liter 250 ml - Glass wide mouth	W - Water S - Soil SD - A/G - Amber / Or Glass 1 Liter	Matrix WW - Wastewater \ Container VOA - 40 ml vial \
	Time:	Date:	Received by: (Signature)	Date: Time:	Relinquished by (Signature)
* NM samples &	Time:	Date:	Received by: (Signature)	Date: Time:	
* 24 hour 10sh		Date:		Date: Time:	Relinguished by (Signature)
ES:	3:40 NOTES:	Pate:	leton lite	3/19/ 0 840	
	4		Rush @700% Rush	h	mal
			5	8	
		1	3/8/		
				11	
	XXX	×	1	SP-6	5 7/4/16 1245 X
	XXX		1	SP-5	1 1240 X
	× × ×		1	50-4	X cap,
	×		3'	R.P. LRE	1204 X
	× × ×		s) (RE) 14"	(s-2 (2015)	1152
	×		(RE) 8:	s-Wall	1/35
	× >	×) CRE) 10'	CS-1 (ROS	5 3/14/16 1049 X
	Ca Ca	Glass Jar P/O	Start Depth End Depth VOA A/G 1 Lt. 250	Identifying Marks of Sample(s)	Matrix Date Time of F
	78. P. S.		8 00	1 43 x4	2002 360211010521
608080a	X Xe	tainers	No/Type of Containers	me A	Proj. No. Project Name
	80 200		Sampler's Signature		Sampler's Name
	13/1	01	PO/SO#: 725010112096	PC	Project Manager Karalanne
Page of	30		Phone:	P	
			Contact:	00	
Temp. of coolers when received (C°): 'Z, Sy			midland TX	R	Office Location Mollan
Due Date.	REQUESTED		Laboratory: KENCO	A. La	APEX
	ANALYSIS				
CHAIN OF CUSTODY RECORD					•

Apex TITAN, Inc. • 505 N. Big Springs Drive, Suite 301A • Midland, Texas 79701 • Office: 432-695-6016



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: APEX/Titan

Work Order #: 526802

Date/ Time Received: 03/15/2016 08:40:00 AM

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

Temperature Measuring device used: r8

Sample Receipt Chec	klist	Comments
#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Custody?	Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	No	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.		
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH	? N/A	

Must be completed for after-hours delivery of samples prior to placing in the refrigerator										
Analyst: PH Device/Lot#:										
	Checklist completed by:	Carley Owens	Date: 03/15/2016							
	Checklist reviewed by:	Mms Hoah Kelsey Brooks	Date: <u>03/15/2016</u>							



APPENDIX E

Initial C-141 Documentation

NM OIL CONSERVATION

ARTESIA DISTRICT FEB 2 4 2015

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in **RECEIVED** ance with 19.15.29 NMAC.

+AB/43284 1543 Release Notification and Corrective Action									
NAB1506228797	OPERATOR								
Name of Company Enterprise Field Services LLC	Contact Dina Babinski								
PO Box 4324, Houston, TX 77210	Telephone No. 210-528-3824								
Facility Name Pipeline ROW, 30137 Gathering Lateral	Facility Type: Gas Gathering Pipeline								
Surface Owner State of New Mexico Mineral Owner	NA - Pipeline Lease No. NA								
	N OF RELEASE								
Unit Letter Section Township Range Feet from the North	V/South Line Feet from the East/West Line County South South West Eddy								
Latitude: <i>N 32.6540</i>	Longitude: W-104.1286								
	OF RELEASE								
Type of Release Natural Gas, Pipeline Liquids	Volume of Release: 1581 MCF, Volume Recovered: N/A								
	3 BBL Liquids								
Source of Release Pipeline Leak.	Date and Hour of Occurrence Date and Hour of Discovery								
Was Immediate Notice Given?	02/15/2015@09:10 MST 02/15/2015@09:10 MST If YES, To Whom?								
✓ Yes ☐ No ☐ Not Required									
By Whom? Dina Babinski	Date and Hour 02/15/2015 @ 12:43 MST								
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.								
☐ Yes ⊠ No									
If a Watercourse was Impacted, Describe Fully.*									
Describe Cause of Problem and Remedial Action Taken.*									
Pipeline leak was detected by pipeline technician. Pipeline segment wa	s clamped and blown down, and leaking portion was repaired.								
Describe Area Affected and Cleanup Action Taken.*									
	ently being performed and additional sampling has been requested to confirm								
cleanup is satisfactory. Thereby 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								
	ne NMOCD marked as "Final Report" does not relieve the operator of liability								
	te contamination that pose a threat to ground water, surface water, human health does not relieve the operator of responsibility for compliance with any other								
federal, state, or local laws and/or regulations.	noes not remove the operator of responsibility for compniance with any other								
	OIL CONSERVATION DIVISION								
Signature									
Signature	Approved by District Supervisor Like Desagner								
Printed Name: Ivan W. Zirbes	Approved by District Supervisor.								
Title: Sr. Director, Field Environmental	Approval Date: 3315 Expiration Date: NA								
E-mail Address: snolan@eprod.com	Conditions of Approval:								
	diation per O.C.D. Rules & Guidelines								
Attach Additional Sheets If Necessary	AIT REMEDIATION PROPOSAL NO								
LATE	RTHAN: 4/3/15 2RP-2846								
	•								

Received 8/7/15 NMOCD Dist 2

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

fAB143284	AB1432841543 Release Notification and Corrective Action											
nMLB1521	930490					OPERA'	TOR	ſ	⊠ Initi	al Report	-⊠ - Fimat Repor	
Name of Co	mpany E	nterprise Fi	eld Servi	ces LLC		Contact	Dina Ferg				2	
		O Box 4324,					No. <i>210-528-38</i>			-		
Facility Nar	ne <i>Pip</i>	eline ROW,	30137	Sathering Later	al	Facility Typ	e: Gas Gather	ring Pipe	line			
Surface Ow	ner <i>St</i>	ate of New 1	Мехісо	Mineral (Owner	NA - Pipe	line		Lease N	No. <i>NA</i>		
					OITA	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	1	est Line	County		
<u> </u>	13	195	28E	97		South	562	W	est	Eddy		
]	Latitude: <u>N 32</u>	65386	Longitu	de: <u><i>W-104.12</i>8.</u>	<u>57</u>				
					URE	OF RELI						
Type of Relea	ase <i>Natura</i>	ıl Gas, Pipelii	ne Liquids	5		Volume of 2 BBL Liqu	Release: 1,257 M	ICF,	Volume F	Recovered:	N/A	
Source of Release Pipeline Leak.							lour of Occurrence	e I	Date and	Hour of Dis	coverv	
Was Immediate Notice Given?							@ 10:05 MDT			5 @ 10:05		
Was Immedia	ite Notice G	_	Yes	No Not Re	saninad	If YES, To	Whom?	01.41.42				
D W/h0	O D		168		equirea		cher – NMOCD L					
By Whom? Was a Watero	Osman De						lour 04/29/2015					
77 45 47 77 41501	ourse recipe			11 165, 40	nume impacing t	ne watert	course.					
If a Watercon	☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.*											
11 4 () 41111011	100 1100 1111	, 1505011	oc r uny.									
D11 - C	CD 11	- 15										
Describe Caus	se of Proble	m and Kemed	lial Action	i Taken,*								
Pipeline leak	was detecte	ed by pumper	passing b	y. Pipeline segm	ent was	clamped and	blown down, and	d leaking	portion w	as repaired	l following	
standard One	-Call.						,,,,,				, j	
Describe Area	Affected a	nd Cleanup A	ction Tak	an *								
Liquid spill of	ccurred wit	hin pipeline k	ROW. Clea	on. I n-up activities w	ill be c	arried out in a	accordance with 1	Enternrise	e's Gener	ni release N	Votification	
Response and	Remediati	on Plan accoi	rding to h	ousekeeping stan	dards.	Enterprise wil	ll maintain record	ds of sam	pling resi	ults and dis	posal	
<u>documentatio</u>	n, and will	<u>ma</u> ke availab	le to NM(OCD upon reques	st.							
regulations all	operators a	uormanon giv ire required to	en agove report an	is true and compl d/or file certain re	ete to t elease n	ne best of my l otifications an	knowledge and und perform correct	nderstand	that purs	uant to NM(OCD rules and	
public health	or the enviro	onment. The	acceptance	e of a C-141 repo	rt by th	e NMOCD ma	rked as "Final Re	eport" doe	s not relie	eve the oner	ator of liability	
should their of	perations ha	ive failed to a	dequately	investigate and re	emediat	e contaminatio	on that pose a thre	at to grou	ind water.	surface wa	ter, human health	
or the environ	ment. In ad	ldition, NMO	CD accept	ance of a C-141 i	eport d	oes not relieve	the operator of r	esponsibi	lity for co	mpliance w	ith any other	
rederal, state,	or local law	s and/or regul	auons.		Т		OII CONS	TED X/A	TION	DIVIGIO	AT.	
		16	1//				OIL CONS	BERVA	TION.	DIVISIO	<u>IN</u>	
Signature:	V 92	1 KM	(cls									
Printed Name:	Jon E. 1	Fields				Approved by I	District Superviso	r:Accep	ted as	Initial Re	port only	
112110011101113	0011 231 2	PURE	<u> </u>		_						,	
Title:	Directo	r, Field Envi	ronmenta	<u> </u>		Approval Date	8/7/15	Ex	piration I	Date:		
E-mail Addres	s: <i>iefields</i>	@eprod.com				Conditions of	Approval: Reme	ediation	ner			
									P	Attached		
Date: 3 - 15 - 7015 Phone: 713-381-6684						OCD Rules and Guidelines						

* Attach Additional Sheets If Necessary

Received by OCD: 4/12/2023 10:23:50 AMEVISED

Rec'd 8/12/2015

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico NMOCD Dist 2
Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

fAB143284	11543		Rel	ease Notifi	catio	n and Co	orrective A	ction				
nMLB152	1930490					OPERA'	ГOR		✓ Initi	ial Report		Final Repo
Name of Co	ompany E	nterprise Fi	eld Servi	ces LLC		Contact	Dina Ferg	uson		<u></u>		
		O Box 4324,	Houston	ı, TX 77210		Telephone 1	No. 210-528-38					
Facility Na	me <i>Pip</i>	peline ROW	, 30137 (athering Later	ral	Facility Typ	e: Gas Gather	ring Pip	eline			
Surface Ow	ner St	ate of New I	Мехісо	Mineral (Owner	NA - Pipe	line	· ·	Lease 1	No. NA		
				LOC	ATIO	N OF REI	LEASE					
Unit Letter O	Section 13	Township 19S	Range 28E	Feet from the	North	/South Line	Feet from the 562	i .	est Line	County		- :
		173		Latitude: <u>N 32</u>			de: <u>W-104.128</u>	-1	Vest	Eddy_		
				_		OF RELI						
Type of Rele	ase Natura	ıl Gas. Pipeli	ne Liquids		Old		Release: 1,257 M	ACE	Volume I	Recovered:	N/A	
L							iquids (updated)	101,	v Oldific 1	cocovered.	11//1	
Source of Release Pipeline Leak.							our of Occurrence	e	Date and	Hour of Di	scovery	
Was Immediate Notice Given?							@ 10:05 MDT			15 @ 10:05		
was Immedia	ate Notice G		37	N N - D		If YES, To						
			res	No Not Re	equirea	Mike Brate	cher – NMOCD I	District 2				
By Whom?	Osman De		our <i>04/29/2015</i>									
Was a Watercourse Reached? ☐ Yes ☒ No						If YES, Vo	lume Impacting t	he Water	course.			
70 777	If a Watercourse was Impacted, Describe Fully.*											
II a Watercou	rse was Imp	pacted, Descri	be Fully.*									
												-
Describe Cau	se of Proble	m and Remed	lial Action	Taken.*								
Pipeline leak	was detecte	d by pumper	passing by	y. Pipeline segm	ent was	clamped and	blown down, and	d leaking	portion v	vas repaire	d follon	ving
standard One	:-Call,									_		Ü
Describe Area	Affected a	nd Cleanup A	ction Take	en.*								
Liquid spill o	ccurred with	hin pipeline I	ROW. Clea	in-up activities w	vill be co	arried out in a	ccordance with	Enteroris	se's Gener	ral release i	Votifica	tion.
Kesponse and	i Kemediatu	on Pian (date	d March !	9, 2015). Operati	ons pers	sonnel origina	illy estimated ani	proximat	elv 2 hhl r	nineline liau	iide enii	lled to the
ground within pipeline liqui	n pipetine ri	ght-of-way. A	l <i>fter furth</i>	er investigation (and exc	avation, it was	s determined tha	t the liqu	id spill vo	lume is app	roxima	itely 8.5 bbl
I hereby certif	v that the in	formation of	ven ahove	is true and compl	lete to th	na hagt of my l	mourlades and us	n d amatan d	l that many		OCD	1 1
regulations all	operators a	re required to	report and	d/or file certain re	elease no	otifications an	diowicuge and in	tive actio	i uiai purs ns for rele	uant to MM	DCD ru	iles and
public nearth	or the enviro	onment. The	acceptance	e of a C-141 repo	rt by the	e NMOCD ma	rked as "Final Re	eport" do	es not reli	eve the one	rator of	liahility
should their of	perations ha	ve failed to a	dequately.	investigate and re	emediate	e contaminatio	on that pose a thre	eat to oro	und water	surface wa	ter hur	man health
or the environ	ment. In ad	dition, NMU	CD accept	ance of a C-141 i	report de	oes not relieve	the operator of r	esponsib	ility for co	mpliance w	/ith any	other
federal, state,	or local law	s and/or regul	ations.		 r-							
		مسر ا	No				OIL CONS	<u>SERV</u>	<u>MOITA</u>	<u>DIVISIC</u>	<u>)N</u>	
Signature:	Non	I Feel	Ls .									
-				-		Annroved by I	District Superviso					
Printed Name:	Jon E. F	Fields				approved by I	Zisurct Superviso	л.				
Title:	Directo	r, Field Envi	ronmenta	<u> </u>	1	Approval Date	:8/21/15	Ех	piration [Date:		
E-mail Addres	e lofiald-	(a) annod a a					Approval: Rem					
L-man Addres	is. jejtetasi	weprou.com							n per	Attached		İ
Date: 8-12	-205	Phone: 713-	<u> 381-6684</u>		1	NMOCD Rules & Guidelines						
Attach Additi	onal Sheets	s If Necessa	гу						<u> </u>	DD 21	01	
									Z .	RP-31	フレ	

NM OIL CONSERVATION

ARTESIA DISTRICT

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II
1301 W. Grand Avenue, Artesia, NM 88210 District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

JUN 1.0 2015

Form C-141 Revised August 8, 2011

Submit Eight appropriate District Office in accordance with 19.15.29 NMAC.

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 27505

Salita Fe, NW 67505											
FAB143284154.3 Release Notification	FAB1432841543 Release Notification and Corrective Action										
NAB1516226673	OPERATOR `	Initial Report Final Report									
Name of Company Enterprise Field Services LLC	Contact Dina Ferguson										
PO Box 4324, Houston, TX 77210	Telephone No. 210-528-3824										
Facility Name Pipeline ROW, 30137 Gathering Lateral	Facility Type: Gas Gathering I	Pipeline									
Surface Owner State of New Mexico Mineral Owner	NA - Pipeline	Lease No. NA									
LOCATIO	ON OF RELEASE										
Unit Letter Section Township Range Feet from the Nort O 13 19S 28E 70	h/South Line Feet from the Eas South 388	t/West Line County West Eddy									
Latitude: <u>N 32.653899</u>	Longitude: <u>W-104.129186</u>										
NATURE OF RELEASE											
Type of Release Natural Gas, Pipeline Liquids	Volume of Release: 1,574 MCF, 3 BBL Liquids	Volume Recovered: N/A									
Source of Release Pipeline Leak.	Date and Hour of Occurrence 06/08/2015 @ 8:50 MDT	Date and Hour of Discovery 06/08/2015 @ 9:38 MDT									
Was Immediate Notice Given?	If YES, To Whom? Mike Bratcher - NMOCD District	ct 2									
By Whom? Osman De Leon	Date and Hour 06/08/2015@ 0	Date and Hour 06/08/2015 @ 9:38 MDT									
Was a Watercourse Reached?	If YES, Volume Impacting the W										
☐ Yes ⊠ No	in 130, Volume impacting ato W	acroourse.									
If a Watercourse was Impacted, Describe Fully.*	,										
Describe Cause of Problem and Remedial Action Taken.*	,										
Pipeline leak was detected by an Enterprise Inspector. Pipeline segme	nt was clamped and blown down, an	d leaking portion will be repaired following									
standard One-Call.		6 Francisco (17 - 17 - 17 - 17 - 17 - 17 - 17 - 17									
Describe Area Affected and Cleanup Action Taken.*		***									
Liquid spill occurred within pipeline ROW. Clean-up activities will be Response and Remediation Plan according as defined in the housekee,											
documentation, and will make available to NMOCD upon request.											
I hereby certify that the information given above is true and complete to	the best of my knowledge and unders	stand that pursuant to NMOCD rules and									
regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by t											
should their operations have failed to adequately investigate and remedia											
or the environment. In addition, NMOCD acceptance of a C-141 report											
federal, state, or local laws and/or regulations.	органия од горо										
i i i	OIL CONSER	VATION DIVISION									
Signature: Signature:	Signed By	My Breaking									
Printed Name: Jon E. Fields	Signed By Approved by District Supervisor:										
Title: Director, Field Environmental	Approval Date: U 1115	Expiration Date: NIA									
E-mail Address: jeftelds@eprod.com	Conditions of Approval: Attached										
Date: 6-8-2015 Phone: 713-381-6684	FINA	tL									

* Attach Additional Sheets If Necessary

2RP-3044

NM OIL CONSERVATION

ARTESIA DISTRICT

<u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</u>
1301 W. Grand Avenue, Artesia, NM 88210
<u>District III</u>
1000 Rio Brazos Road, Aztec, NM 87410
<u>District IV</u>
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources JUL 0 7 2015

Form C-141 Revised August 8, 2011

Submit C Copyrhy appropriate District Office in accordance with 19.15.29 NMAC.

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505

FAB1432841543 Release Notification and Corrective Action				
NAB1519449044	OPERATOR	☐ Initial Report ☐ Final Report		
Name of Company Enterprise Field Services LLC	Contact Dina Ferguson			
PO Box 4324, Houston, TX 77210	Telephone No. 210-528-3824			
Facility Name Pipeline ROW, 30137 Gathering Lateral Facility Type: Gas Gathering Pipeline				
Surface Owner State of New Mexico Mineral Owner	NA - Pipeline	Lease No. NA		
LOCATION OF RELEASE				
Unit Letter Section Township Range Feet from the North		West Line County West Eddy		
Latitude: <u>N 32.653899</u> Longitude: <u>W-104.129186</u>				
	OF RELEASE	. •		
Type of Release Natural Gas, Pipeline Liquids	Volume of Release: 1,532 MCF, 3 BBL Liquids	Volume Recovered: N/A		
Source of Release Pipeline Leak.	Date and Hour of Occurrence 07/02/2015 @ 8:50 MDT	Date and Hour of Discovery 07/02/2015 @ 8:50 MDT		
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD District	2 (00, 0, 0, 1)		
By Whom? Osman De Lean		CI, U, U IIIIII / /		
Was a Watercourse Reached?	Date and Hour 07/02/2015 @ 13. If YES, Volume Impacting the Wat	tercourse.		
☐ Yes ⊠ No	in 120, voiding impassing are void			
If a Watercourse was Impacted, Describe Fully.*		.:		
		•		
Describe Cause of Problem and Remedial Action Taken.*				
Pipeline leak was detected by an Enterprise Inspector. Pipeline segments standard One-Call.	rt was clamped and blown down, and i	leaking portion was repaired following		
Describe Area Affected and Cleanup Action Taken.*	ageniad and in appendence with Entern	sinale Communications Notification		
Liquid spill occurred within pipeline ROW. Clean-up activities will be carried out in accordance with Enterprise's General release Notification, Response and Remediation Plan (dated March 9, 2015) as defined in the housekeeping standards. Enterprise will maintain records of sampling results				
and disposal documentation, and will make available to NMOCD upon request.				
I hereby certify that the information given above is true and complete to				
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 federal, state, or local laws and/or regulations.	does not relieve the operator of respons	sibility for compliance with any other		
A second of the	OIL CONSERV	ATION DIVISION		
Signature: Fulls		1 21		
Signature.	Approved by District Supervisor:			
Printed Name: Von E. Flelds	Tipple ved by Bisalet Bape. visor.			
Title: Director, Field Environmental	Approval Date: 1115 5	Expiration Date: N		
E-mail Address: jeflelds@eprod.com	Conditions of Approval:	A Wood out		
Date: 7/7/2015 Phone: 713-381-6684	- FINAL	Attached		
Attach Additional Sheets If Necessary				

2RP.3100

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 206767

CONDITIONS

Operator:	OGRID:
ENTERPRISE PRODUCTS OPERATING, LLC	374092
P.O. BOX 4324	Action Number:
HOUSTON, TX 77210	206767
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwel	None	4/18/2023