District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico Energy Minerals and Natural Resources

Revised August 8, 2011

Copy to appropriate District Office in

Form C-141

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.

			Kel	ease Mound	catio	OPERA	rrective A	Cuoi	_	al Report	$\boxtimes$	Final Repor
Name of Co	mnany. X	TO Energy,	Inc			Contact: Ku			IIIIti	аткероп		Tillal Repol
		00, Aztec, N		ico 87410			No.: (505) 333-3	100				
		ain Ute Gas				Δ	e: Gas Well (Pa		1			
						7 71						
Surface Ow Allotment	ner: Tribal	Trust or Inc	dian	Mineral (	Owner				API No	o.: 30-045-2	29865	
						N OF RE						
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/\	West Line	County		
A	10	32N	14W	655	I	FNL	520	F	FEL	San Juan		
				Latitude 36.9			ude -108.28873					
				NAT	<b>TURE</b>	OF REL						
Type of Rele							Release: 5 BBL's			Recovered: 4		
Source of Re	lease: Pit Ta	ank				Date and F	lour of Occurrenc	e:		Hour of Dis	covery:	
Was Immedia	ate Notice (	Given?				If YES, To			2-20-201	8 9:30 am.		
Was minean	ite Protiec C		Yes 🗵	No Not R	equired	11 125, 10	WHOIII.					
By Whom? N	I/A					Date and H	lour.					
Was a Water		ched?					olume Impacting t	he Wate	ercourse.			at Inggrouperstation
			Yes 🗵	No			1 0			N	MOCD	
If a Watercou	rse was Im	pacted, Descri	ibe Fully.	k						MAD	20	2010
										MAR	26	2010
Describe Cau	se of Proble	em and Remed	dial Actio	n Taken.* On 2-2	26-201	8 at 9:30 am	an XTO produc	tion fo	oreman for	und waterni	nside th	he pit tank
							ched & recovere					
							ne site was then					
							ie to an estimate					
					ce to ar	arroyo at 20	00 feet to 1000 f	feet. Th	nis set the	closure star	ndard t	o 1000
ppm 1PH, 1	o ppm ber	nzene, and 50	) ppm to	al BIEX.								
Describe Are	Affected a	and Cleanup A	Action Tak	en *A release ha	as been	confirmed bas	ed on an integrity	failure	of the nit t	ank On 3-2-	2018 a	composite
							s for this site. A r					
cellar, no furt	her action i	s required.										
							knowledge and u					
							nd perform correct arked as "Initial R					
should their o	perations h	ave failed to a	dequately	investigate and r	emediat	e contaminati	on that pose a three	eat to gi	round water	r. surface wa	iter, hur	nan health
or the environ	ment. In a	ddition, NMO	CD accep				e the operator of					
federal, state,	or local lav	vs and/or regu	lations.									
		0 0					OIL CONS	SERV	ATION	DIVISIO	<u>N</u>	1
	but Hoe	11							//	1		
Signature:	inch Noe	serie				Approved by	Environmental S	pacialic	. //		1/	
						Approved by	Liiviroiiiientai 5	pecialis		46	1	1
Printed Name	: Kurt Hoel	kstra										X
Title: EHS Co	oordinator					Approval Dat	e: 3/30/19	8	Expiration	Date:		
E-mail Addre	ss: Kurt H	oekstra@xtoe	nergy.com	1		Conditions of	Approval:					
								-		Attached		
Date: 3-20-20 Attach Addit			none: 505-		,							
Auacii Audii	ional Silee	as II Necessi	ai y	TIME	180	189 40	0558					



# ANALYTICAL REPORT



## **XTO Energy - San Juan Division**

Sample Delivery Group:

L974596

Samples Received:

03/03/2018

Project Number:

30-045-29865

Description:

Mountain Ute GC N#1

Site:

MOUNTAIN UTE GC N#1

Report To:

Kurt Hoekstra

382 County Road 3100

Aztec, NM 87410

Entire Report Reviewed By: Washer R Richards

Daphne Richards

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



#### TABLE OF CONTENTS ONE LAB. NATIONWIDE. Cp: Cover Page 1 Tc: Table of Contents 2 Ss: Sample Summary 3 Cn: Case Narrative Sr: Sample Results 5 MTN UTE GC N#1 L974596-01 5 **Qc: Quality Control Summary** 6 Total Solids by Method 2540 G-2011 6 Sr Wet Chemistry by Method 9056A 7 Qc Volatile Organic Compounds (GC) by Method 8015D/GRO 8 Volatile Organic Compounds (GC) by Method 8021B 9 GI Semi-Volatile Organic Compounds (GC) by Method 8015 10 **GI: Glossary of Terms** 11 Al: Accreditations & Locations 12

Sc: Sample Chain of Custody

13

## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MTN UTE GC N#1 L974596-01 Solid			Collected by Kurt Hoekstra	Collected date/time 03/02/18 12:15	Received date/time 03/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Total Solids by Method 2540 G-2011	WG1082552	1	03/09/18 14:30	03/09/18 14:42	DL
Wet Chemistry by Method 9056A	WG1080320	1	03/05/18 14:47	03/05/18 19:17	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1080524	25	03/03/18 16:46	03/05/18 18:06	ВМВ
Volatile Organic Compounds (GC) by Method 8021B	WG1080816	1	03/03/18 16:46	03/06/18 17:42	ВМВ
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1082350	5	03/08/18 11:41	03/09/18 17:06	DMW





















#### CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Тс

Ss

Sr

Qc

GΙ

Johne R Richards Daphne Richards **Technical Service Representative** 

#### MTN UTE GC N#1

## **SAMPLE RESULTS - 01**

ONE LAB. NATIONWIDE.



Collected date/time: 03/02/18 12:15

L974596

#### Total Solids by Method 2540 G-2011

· · · · · · · · · · · · · · · · · · ·	Result	Qualifier	Dilution	Analysis	<u>Batch</u>
Analyte	%			date / time	
Total Solids	83.7		1	03/09/2018 14:42	WG1082552



#### Wet Chemistry by Method 9056A

	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg		date / time	
Chloride	83.9		11.9	1 .	03/05/2018 19:17	WG1080320



Cn

#### Volatile Organic Compounds (GC) by Method 8015D/8021B/GRO

	Result (dry)	Qualifier	RDL (dry)	Dilution	Anatysis	Batch	
Analyte	mg/kg		mg/kg		date / time		
Benzene	0.00424		0.000597	1	03/06/2018 17:42	WG1080816	
TPH (GC/FID) Low Fraction	11.6		2.99	25	03/05/2018 18:06	WG1080524	
Toluene	0.00836		0.00597	1	03/06/2018 17:42	WG1080816	
Ethylbenzene	0.00224	<u>B</u>	0.000597	11	03/06/2018 17:42	WG1080816	
Total Xylene	0.0292	- <del>-</del>	0.00179	1	03/06/2018 17:42	WG1080816	
(S) a,a,a-Trifluorotoluene(FID)	98.7		77.0-120		03/05/2018 18:06	WG1080524	
(S) a,a,o-Trifluorotoluene(PID)	98.4		75.0-128		03/06/2018 17:42	WG1080816	



GI

## Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	603	<u>J3 V</u>	23.9	5	03/09/2018 17:06	WG1082350
C28-C40 Oil Range	ND		23.9	5	03/09/2018 17:06	WG1082350
(S) o-Terphenyl	99.0		18.0-148		03/09/2018 17:06	WG1082350

WG10825 Total Solids by M		11		QI	JALITY CONTROL SUMMARY L974596-01	ONE LAB. NATIONWIDE.	*
Method Blank	(MB)						-
(MB) R3292138-1 03							Ср
	MB Result	MB Qualifier	MB MDL	MB RDL			2_
Analyte	%		%	%			<sup>2</sup> Tc
Total Solids	0.00100						<u></u>
							³Ss
1074E72 0E 0	rininal Cassala	(OC) D	-l:+- /ſ	200			Ц.
L974572-05 O							<sup>1</sup> Cn
(OS) L974572-05 03	3/09/18 14:42 • (DUP)	R3292138-3	03/09/18 1	4:42			
	Original Result	DUP Result	Dilution	DUP RPD <u>DI</u>	P Qualifier		5
Analyte	%	%		%	%		Sr
Total Solids	90.6	91.2	1	0.623	5		6
							"Oc
Laboratory Cor	ntrol Sample (L	CS)					ľgi i
(LCS) R3292138-2 O	3/09/18 14:42						
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier		[C]
		%	%	%			Al
Analyte	%	70	~				
Analyte Total Solids	% 50.0	50.0	100	85.0-115			
. <del></del>				85.0-115			Sc

ACCOUNT: XTO Energy - San Juan Division PROJECT: 30-045-29865 SDG: L974596 DATE/TIME: 03/12/18 12:12 PAGE: 6 of 14

Method Blank (																	
Metriod Diank (	MB)																_ 🖺
MB) R3290768-1 03								_			_					•	- Ľ
Inalyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg		M8 RDL mg/kg												2
Thloride	1,57		0.795		10.0	<del></del>		·									- L
		-															3
.974655-02 O	riginal Sample	(OS) • Dur	olicate (1	DUPI	١												Ĺ
OS) L974655-02 03	<u> </u>	· · · · · ·										<del></del>					- ['c
	Original Result (dry)	DUP Result (dry)	Dilution	DUP F	RPD	DUP Qualifter	DUP RPD Limits										 [5
Analyte	mg/kg	mg/kg		%			%										٤
Chloride	1270	1070	1	16.5		<u>J3</u>	15										. 5
																	_
.974687-01 Ori	ginal Sample (	OS) • Dupi	icate (D	(PUP													7.
	<u> </u>			<u> </u>													- [
	<u> </u>	R3290768-8		00:35		DUP Qualifier	DUP RPD Limits							· .	· · · ·	\ "	- ∟ 
OS) L974687-01 03/	06/18 00:26 • (DUP)	R3290768-8	03/06/18	00:35		DUP Qualifier				•			·-··				- <sup>2</sup> C
OS) L974687-01 03/ Inalyte Chloride	O6/18 00:26 - (DUP) Original Result mg/kg 1540	R3290768-8 DUP Result mg/kg 1600	03/06/18 Dibrition	00:35 DUP R % 3.80	RPD		Limits % 15										
os) L974687-01 03/ Inalyte Chloride Laboratory Con LCS) R3290768-2 0	O6/18 00:26 - (DUP) Original Result mg/kg 1540  atrol Sample (LC 3/05/18 18:43 - (LCS Spike Amount	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result	03/06/18 Dibution 5 ratory C -3 03/05/1	00:35 DUP R % 3.80 Contro	rol Sam	npte Duplic	Limits % 15 cate (LCSD)	LCS Qual	her LCSD (	Quadifier	RPD	RPD LI	nits				- ∟ 
nalyte hloride aboratory Concs) R3290768-2 0	OG/18 OO:26 - (DUP) Original Result mg/kg 1540  htrol Sample (LC) 3/05/18 18:43 - (LCS Spike Amount mg/kg	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg	O3/06/18 Dibution 5 ratory C -3 O3/05/1 LCSD Res	00:35 DUP R % 3.80 Contro	rol Sam 1 LCS Rec. %	npte Duplic LCSD Re %	Limits % 15 cate (LCSD) c. Rec. Limits %	LCS Qual	her LCSD (	Qualifier	%	%	nits				
nalyte hloride aboratory Concs) R3290768-2 0	O6/18 00:26 - (DUP) Original Result mg/kg 1540  atrol Sample (LC 3/05/18 18:43 - (LCS Spike Amount	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result	03/06/18 Dibution 5 ratory C -3 03/05/1	00:35 DUP R % 3.80 Contro	rol Sam	npte Duplic	Limits % 15 cate (LCSD)	LCS Qual	ler LCSD 0	· · · · · · · · · · · · · · · · · · ·			nits				
nalyte hloride aboratory Con .CS) R3290768-2 0 nalyte	O6/18 00:26 - (DUP) Original Result mg/kg 1540  atrol Sample (LCS Spike Amount mg/kg 200	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg 198	O3/06/18 Dibrition  5 ratory C -3 O3/05/1 LCSD Res mg/kg	00:35 DUP R % 3.80 Contro	ol Sam 1 ics Rec. % 98.8	nple Duplic LCSD Re % 98.6	Limits % 15 cate (LCSD) c. Rec. Limits % 80.0-120		ler LCSD c	· · · · · · · · · · · · · · · · · · ·	%	%	nits				
nalyte hloride .aboratory Con	O6/18 00:26 - (DUP) Original Result my/kg 1540  atrol Sample (LC 3/05/18 18:43 - (LCS Spike Amount my/kg 200	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg 198 (OS) • Mat	O3/O6/18 Dibution  5 rratory C -3 O3/O5/1 LCSD Res mg/kg 197 rix Spik	00:35 DUP R % 3.80 Contr 18 18:51 suft	rol Sam 1 LCS Rec. % 98.8	nple Duplic LCSD Re- % 98.6 atrix Spike	Limits % 15  cate (LCSD)  c. Rec. Limits % 80.0-120  Duplicate (MS		Her LCSD 0	Qualifier	%	%	nits				
nalyte hloride .aboratory Con .CS) R3290768-2 0 nalyte hloride	OG/18 00:26 - (DUP) Original Result mg/kg 1540  htrol Sample (LC) 3/05/18 18:43 - (LCS Spike Amount mg/kg 200  riginal Sample 6/05/18 20:51 - (MS) 6 Spike Amount	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg 198 (OS) • Mat R3290768-5 Original Result	03/06/18 Dibution 5 ratory C 3 03/05/1 LCSD Res mg/kg 197 rix Spik	00:35 DUP R 3.80 Contri- 8 18:51	ol Sam 1 LCS Rec. % 98.8 S) • Ma (MSD) R:	nple Duplic LCSD Re- % 98.6 atrix Spike 3290768-6 0	Limits % 15  cate (LCSD)  c. Rec. Limits % 80.0-120  Duplicate (MS	D)			0.158	% 15					
OS) L974687-01 03/ Inalyte Chloride  Bboratory Con LCS) R3290768-2 0 Inalyte Chloride  _974668-06 01 OS) L974668-06 03	OG/18 00:26 - (DUP) Original Result mg/kg 1540  atrol Sample (LC 3/05/18 18:43 - (LCS Spike Amount mg/kg 200  riginal Sample V05/18 20:51 - (MS) 6 Spike Amount (dry)	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg 198 (OS) • Mat R3290768-5 Original Resul (dry)	03/06/18 Dibution 5 rratory C -3 03/05/1 LCSD Res mg/kg 197 rrix Spik. 03/05/18 2	00:35 DUP R % 3.80 COntribe B 18:51	ol Sam i LCS Rec. % 98.8 S) • Ma (MSD) R3	LCSD Rev % 98.6 atrix Spike 3290768-6 00 with MS Rec.	Limits % 15 cate (LCSD) c. Rec. Limits % 80.0-120  Duplicate (MS 3/05/18 21:08 MSD Rec.		Rec. Limits		%	%	RPD	RPOLI	mits		
L974687-01 Ori OS) L974687-01 O3/ Analyte Chloride  Laboratory Con LCS) R3290768-2 O  Analyte Chloride  L974668-06 O3  Analyte Chloride  Chloride	OG/18 00:26 - (DUP) Original Result mg/kg 1540  htrol Sample (LC) 3/05/18 18:43 - (LCS Spike Amount mg/kg 200  riginal Sample 6/05/18 20:51 - (MS) 6 Spike Amount	R3290768-8 DUP Result mg/kg 1600 CS) • Labo D) R3290768 LCS Result mg/kg 198 (OS) • Mat R3290768-5 Original Result	03/06/18 Dibution 5 ratory C 3 03/05/1 LCSD Res mg/kg 197 rix Spik	00:35 DUP R % 3.80 COntribe B 18:51	ol Sam 1 LCS Rec. % 98.8 S) • Ma (MSD) R:	nple Duplic LCSD Re- % 98.6 atrix Spike 3290768-6 0	Limits % 15  cate (LCSD)  c. Rec. Limits % 80.0-120  Duplicate (MS	D)			0.158	% 15		RPO LI % 15	mits		

Method Blank (MB)   MB R291303-5 03/05/18 12:52   MB Result   MB MDL   MB MDL   Mg/kg   mg/k	WG1080524 Volatile Organic Com		by Method I	3015D/GRO	Q	UALITY	L974596		WIVIAR Y			ONE LAB. NATIONWIDE.	-
MB Result   MB Qualifier   MB MDL   MB RDL	Method Blank (MB	<b>)</b> )											C
Analyte mg/kg mg/kg mg/kg  TPH (GCFID) Low Fraction U 0.0217 0.100  (S) 77.0-120  Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)  (LCS) R3291303-3 03/05/18 11:43 • (LCSD) R3291303-4 03/05/18 12:06  Spike Amount LCS Result LCS Result LCS Rec. LCSD Rec. Rec. Limits LCS Qualifier RPD RPD Limits  Analyte mg/kg mg/kg mg/kg % % % %  SPH (GCFID) Low Fraction 5.50 4.84 4.97 87.9 90.3 70.0-136 2.56 20	(MB) R3291303-5 03/05/				•							· · · · · · · · · · · · · · · · · · ·	
TPH (GCFID) Low Fraction   U   0.0217   0.100	444.		MB Qualifier										²Tc
(S) 0,0,0-Trifluorotoluene(FiD) 100 77.0-120  Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)  LCS) R3291303-3 03/05/18 11:43 • (LCSD) R3291303-4 03/05/18 12:06  Spike Amount LCS Result LCSD Result LCS Rec. LCSD Rec. Rec. Limits LCS Qualifier RPO RPD Limits  Analyte mg/kg mg/kg mg/kg % % % % % % % % % % PDH (GC/FiD) Low Fraction 5.50 4.84 4.97 87.9 90.3 70.0-136 2.66 20	<del></del>			<del> </del>		·····		······································					Ľ
CSD   R3291303-3   03/05/18   11:43 - (LCSD)   R3291303-4   03/05/18   12:06   Spike Amount   LCS Result   LCSD Result   LCSD Rec.   LCSD Rec.   LCSD Rec.   LCSD Dualifier   LCSD Qualifier   RPD   RPD Limits	(S)			V.VI.									³Ss
Spike Amount LCS Result LCS Result LCS Rec. LCSD Rec. Rec. Limits LCS Qualifier LCSQ Qualifier RPD RPD Limits													
Analyte mg/kg mg/kg mg/kg % % % % % %  IPH (GC/FID) Low Fraction 5.50 4.84 4.97 87.9 90.3 70.0-136 2.66 20  (5)	<del></del>		<u> </u>	<u></u>	<u> </u>	ole Duplicat	e (LCSD)						느
(5)	<del></del>	V18 11:43 • (LCSC	D) R3291303-	03/05/18 12:0	6			LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		*Cr
(S) 99.7 100 77.0-120  .c.o-Triffluorototuene(FID)	LCS) R3291303-3 03/05	/18 11:43 • (LCSE Spike Amount	) R3291303- LCS Result	03/05/18 12:0 LCSD Result	6 LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier				<sup>5</sup> Sr
	(LCS) R3291303-3 03/05 Analyte	V18 11:43 • (LCSC Spike Amount mg/kg	0) R3291303- LCS Result mg/kg	1 03/05/18 12:0 LCSD Result mg/kg	6 LCS Rec. %	LCSD Rec.	Rec. Limits %	LCS Qualifier	LCSD Qualifier	%	%		<u> </u>
	LCS) R3291303-3 03/05 Analyte IPH (GC/FID) Low Fraction (S)	V18 11:43 • (LCSC Spike Amount mg/kg	0) R3291303- LCS Result mg/kg	1 03/05/18 12:0 LCSD Result mg/kg	6 LCS Rec. % 87.9	LCSD Rec. % 90.3	Rec. Limits % 70.0-136	LCS Qualifier	LCSD Qualifier	%	%		<sup>5</sup> Sr
	LCS) R3291303-3 03/05 <b>Inalyte</b> PH (GC/FID) Low Fraction (S)	V18 11:43 • (LCSC Spike Amount mg/kg	0) R3291303- LCS Result mg/kg	1 03/05/18 12:0 LCSD Result mg/kg	6 LCS Rec. % 87.9	LCSD Rec. % 90.3	Rec. Limits % 70.0-136	LCS Qualifier	LCSD Qualifier	%	%		<sup>5</sup> Sr
	LCS) R3291303-3 03/05 <b>Inalyte</b> PH (GC/FID) Low Fraction (S)	V18 11:43 • (LCSC Spike Amount mg/kg	0) R3291303- LCS Result mg/kg	1 03/05/18 12:0 LCSD Result mg/kg	6 LCS Rec. % 87.9	LCSD Rec. % 90.3	Rec. Limits % 70.0-136	LCS Qualifier	LCSD Qualifier	%	%		SSr O
	LCS) R3291303-3 03/05.  Analyte  IPH (GC/FID) Low Fraction  (S)	V18 11:43 • (LCSC Spike Amount mg/kg	0) R3291303- LCS Result mg/kg	1 03/05/18 12:0 LCSD Result mg/kg	6 LCS Rec. % 87.9	LCSD Rec. % 90.3	Rec. Limits % 70.0-136	LCS Qualifier	LCSD Qualifier	%	%		<sup>5</sup> Sr

ACCOUNT: XTO Energy - San Juan Division PROJECT: 30-045-29865 SDG: L974596 DATE/TIME: 03/12/18 12:12

PAGE: 8 of 14

ONE LAB. NATIONWIDE. QUALITY CONTROL SUMMARY WG1080816 L974596-01 Volatile Organic Compounds (GC) by Method 80218 Method Blank (MB) (MB) R3291264-5 03/06/18 11:46 MB RDL MB Result MB Qualifier MB MOL Tc Analyte mg/kg mg/kg 0.000178 0.000120 0.000500 Benzene 0.00500 Toluene 0.000389 0.000150 Ss 0.000212 0.000110 0.000500 ī 0.000460 0.00150 Total Xylene (S) a,a,a-Trifluoralaluene(PID) 75.0-128 105 Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD) (LCS) R3291264-1 03/06/18 09:54 • (LCSD) R3291264-2 03/06/18 10:17 Spike Amount LCS Result LCS Rec. LCSD Rec. LCS Qualifier LCSD Qualifier RPD RPD Limits Rec. Limits mg/kg mg/kg mg/kg 0.0500 0.0522 0.0523 104 105 71.0-121 0.148 20 Toluene 0.0500 0.0515 0.0508 103 102 72.0-120 1.37 20 0.0500 0.706 0.0507 0.0510 101 102 76.0-121 20 Ethylbenzene Total Xylene 0.150 0.150 0.152 100 101 75.0-124 1.06 20 (S) a,a,a-Trifluorotoluene(PiD) 102 103 75.0-128

L974613-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974613-01 03/06/1	8 18:04 • (MS) R3	3291264-6 03/	06/18 19:33 •	(MSD) R329126	4-7 03/06/18	3 19:55						
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifler	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Benzene	0.0500	0.000661	0.0108	0.0180	20.2	34.7	1	10.0-146		<u>13</u>	50.3	29
Toluene ,	0.0500	ND	0.0282	0.0343	56.5	68.6	1	10.0-143			19.4	30
Ethylbenzene	0.0500	0.00726	0.0106	0.0126	6.60	10.8	1	10.0-147	<u> 16</u>		17.9	31
Total Xylene	0.150	0.0857	0.236	0.265	100	119	1	10.0-149	<u> 15 16</u>	J5 J6	11.5	30
(S) a.a.a.Tathuorotohuene(PID)					96.0	96.4		75.0-128				

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WG108235( Semi-Volatile Organ	-	(GC) by Met	thod 8015	QI	UALITY	CONTR L974596		JMMA	RY			ONE LAB. NATION	NWIDE.
Method Blank (M	IB)												F. C.
(MB) R3292066-1 03/0	9/18 16:20	•											— [ct
	MB Result	MB Qualifier	MB MDL	MB RDL									2
Analyte	mg/kg	·	mg/kg	mg/kg									
C10-C28 Diesel Range	U		1.61	4.00									<u> </u>
C28-C40 Oil Range	U		0.274	4.00								•	³ss
(S) o-Terphenyl	97.5			18.0-148									
													4
													*Cr
		~~`											
Laboratory Contr	ol Sample (Lo	CS) • Labo	ratory Cont	rol Sampl	le Duplicate	(LCSD)							
Laboratory Contr (LCS) R3292066-2 03/	<del></del>				le Duplicate	e (LCSD)							<sup>5</sup> Sr
	<del></del>	D) R3292066			LCSD Rec.	Rec. Limits	LCS Quali	Ner LCSD O	ualifier RPD	RPD Lim	its		s Sr
LCS) R3292066-2 03/	09/18 16:36 • (LCS	D) R3292066	-3 03/09/18 16:	:52		· · ·	LCS Quali	Ner LCSD O	ualifler RPD %	RPD Limi	its		
LCS) R3292066-2 03/	'09/18 16:36 • (LCS Spike Amount	D) R3292066 LCS Result	-3 03/09/18 16: LCSD Result	52 LCS Rec.	LCSD Rec.	Rec. Limits	LCS Quali	Ner LCSD O			its		ssr oc
LCS) R3292066-2 03/	/09/18 16:36 • (LCS Spike Amount mg/kg	D) R3292066 LCS Result mg/kg	-3 03/09/18 16: LCSD Result mg/kg	52 LCS Rec.	LCSD Rec.	Rec. Limits	LCS Quali	Ner LCSD Q	%	%	its		
(LCS) R3292066-2 03/ Analyte C10-C28 Diesel Range	/09/18 16:36 • (LCS Spike Amount mg/kg	D) R3292066 LCS Result mg/kg	-3 03/09/18 16: LCSD Result mg/kg	52 LCS Rec. % 84.8	LCSD Rec. % 82.6	Rec. Limits % 50.0-150	LCS Quali	fler LCSD Q	%	%	its		
LCS) R3292066-2 03/ Analyte C10-C28 Diesel Range	/09/18 16:36 • (LCS Spike Amount mg/kg	D) R3292066 LCS Result mg/kg	-3 03/09/18 16: LCSD Result mg/kg	52 LCS Rec. % 84.8	LCSD Rec. % 82.6	Rec. Limits % 50.0-150	LCS Quali	ner LCSD O	%	%	its		<sup>*</sup> Oc
LCS) R3292066-2 03/ Analyte C10-C28 Diesel Range (S) o-Terphenyl	09/18 16:36 - (LCS Spike Amount mg/kg 50.0	D) R3292066 LCS Result mg/kg 42.4	-3 03/09/18 16: LCSD Result mg/kg 41.3	52 LCS Rec. % 84.8 96.9	LCSD Rec. % 82.6 95.5	Rec. Limits % 50.0-150 18.0-148		Ner LCSD Q	%	%	its		°Od
LCS) R3292066-2 03/ Analyte	709/18 16:36 - (LCS Spike Amount mg/kg 50.0	D) R3292066 LCS Result mg/kg 42.4	-3 03/09/18 16: LCSD Result mg/kg 41.3	52 LCS Rec. % 84.8 96.9 S) - Matrix	LCSD Rec. % 82.6 95.5	Rec. Limits % 50.0-150 18.0-148		ner LCSD Q	%	%	its		<sup>*</sup> Oc
(LCS) R3292066-2 03/ Analyte C10-C28 Diesel Range	709/18 16:36 - (LCS Spike Amount mg/kg 50.0	D) R3292066 LCS Result mg/kg 42.4 OS) • Matri 3292066-4 0	3 03/09/18 16: LCSD Result mg/kg 41.3 ix Spike (M: 3/09/18 17:21 • (	52 LCS Rec. % 84.8 96.9 S) • Matrix MSD) R32920	LCSD Rec. % 82.6 95.5	Rec. Limits % 50.0-150 18.0-148	D)	Ner LCSD Q	%	%	RPD	RPO Limits	*GI
LCS) R3292066-2 03/ Analyte 10-C28 Diesel Range (S) o-Terphenyl .974596-01 Origi OS) L974596-01 03/09	709/18 16:36 - (LCS Spike Amount mg/kg 50.0 in al Sample ( 9/18 17:06 - (MS) R Spike Amount	D) R3292066 LCS Result mg/kg 42.4 OS) • Matri 3292066-4 0 Original Result	3 03/09/18 16: LCSD Result mg/kg 41.3 ix Spike (M: 3/09/18 17:21 - (	52 LCS Rec. % 84.8 96.9 S) - Matrix MSD) R32920 MSD Result	82.6 95.5 8 Spike Dup	Rec. Limits % 50.0-150 18.0-148 Dicate (MSE 3 17:35	D)		% 2.59	% 20		RPD Limits %	°Od
LCS) R3292066-2 03/ Analyte	709/18 16:36 - (LCS Spike Amount mg/kg 50.0 inal Sample ( 27/8 17:06 - (MS) R: Spike Amount (dry)	D) R3292066 LCS Result mg/kg 42.4 OS) • Matri 3292066-4 O Original Result (dry)	3 03/09/18 16: LCSD Result mg/kg 41.3 41.3 X Spike (M: 3/09/18 17:21 • (m) MS Result (dry)	52 LCS Rec. % 84.8 96.9 S) - Matrix MSD) R32920 MSD Result (dry)	82.6 95.5 8 Spike Dup 066-5 03/09/18	Rec. Limits % 50.0-150 18.0-148 Dilicate (MSE 3 17:35 MSD Rec.	D)	Rec. Limits	% 2.59	% 20	RPD		~°O₀ ²GI <sup>©</sup> AI

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#### Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## [2

Ss

Cn

#### Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].	_
MDL	Method Detection Limit.	
ND	Not detected at the Reporting Limit (or MDL where applicable).	
RDL	Reported Detection Limit.	
RDL (dry)	Reported Detection Limit.	
Rec.	Recovery.	
RPD	Relative Percent Difference.	
SDG	Sample Delivery Group.	
	Surrogato (Surrogato Standard). Applica added to ayou, blank comple. Laboratory Control Sample/Dynlicate and	



SDG Sample Delivery Gro
Surrogate (Surrogate
(S) Matrix Spike/Duplica



Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.

Not detected at the Reporting Limit (or MDL where applicable).



Analyte The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.



If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.



These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.

Original Sample

u

Dilution

Limits

The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.

Qualifier

This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.

Result

The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.

or report for this analyte.

A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.

Quality Control Summary (Qc)

Case Narrative (Cn)

This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.

Sample Chain of Custody (Sc) This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.

Sample Results (Sr)

This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.

Sample Summary (Ss)

This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
В	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

### **ACCREDITATIONS & LOCATIONS**

ONE LAB. NATIONWIDE.

Ср

Tc

Ss

Cn

Sr

Qc

GI

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

#### State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Artzona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico 1	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina 1	DW21704
Georgia	NELAP	North Carolina 3	41
Georgia 1	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Minois	200008	Okłahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky 16	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	Al30792	Tennessee 14	2006
Louisiana <sup>†</sup>	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas <sup>6</sup>	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

#### Third Party Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA - ISO 17025 5	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>&</sup>lt;sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

#### Our Locations

ESC Lab Sciences has shty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



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ENERGY Western Division Well Star Location					Page of XTO Contact Phone & 505_4%6-9543 I Results for:			<u> </u>	ruai Àz	3/Contai	ier	, "- Information		
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ESC LAB SCIENCES			
Cooler Receipt Form			
Client: XTUR UM	SDG#	L974	1596
Cooler Received/Opened On: 3/3 /18	Temperature:	20	
Received By: Branford Shaw		ing the second s	
Signature:		in grant	
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Receipt Check List	NP	Yes	No
COC Seal Present / Intact?			
COC Signed / Accurate?			
Bottles arrive intact?			
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Bottles arrive intact?	· · · · · · · · · · · · · · · · · · ·		
Bottles arrive intact? Correct bottles used? Sufficient volume sent?			
Bottles arrive intact? Correct bottles used?			