# 3R-1044

# XTO NV Navajo 35-1 Water Manifold

**Initial C-141** 

Date 2/24/17

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

#### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised August 8, 2011
Submit 1 Copy to appropriate District Office in

Form C-141

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

**Release Notification and Corrective Action** 

2.0.0.0.0 1 (0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	OPERATOR   ☑ Initial Report ☐ Final Report								
Name of Company: XTO Energy, Inc.	Contact: Logan Hixon								
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3683								
Facility Name: NV Navajo 35-1 Wtr Manifold	Facility Type: Gas/Water Manifold								
Surface Owner: Navajo Nation Mineral Owner	: Tribal API No. Non Production Facility								
	ON OF RELEASE								
Unit Letter   Section   Township   Range   Feet from the   Nort	h/South Line Feet from the East/West Line County San Juan								
<u> </u>	074 Longitude: W-108.2708031312639								
	E OF RELEASE								
Type of Release: Produced Water	Volume of Release: Volume Recovered: 0 bbl. Recovered								
Source of Release: Water Manifold (Gas Eliminator)	Approximately 10 bbl.  Date and Hour of Occurrence: Date and Hour of Discovery: February 1,								
Source of Refease: Water Manifold (Gas Eliminator)	February 1, 2017 at Unknown 2017 at 1145.								
	Time								
Was Immediate Notice Given?	If YES, To Whom?								
☐ Yes ☐ No ☒ Not Required	UIL GUNS, DIV DIST.								
By Whom?	Date and Hour:								
Was a Watercourse Reached?  ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. FEB 16 2017								
If a Watercourse was Impacted, Describe Fully.*	1.0017								
	1, 2017, a water leak was discovered in the produced water transport line near the ed from the pipeline. The waterline was evacuated, and the leak occurred at the								
	ast approximately 500 feet where it stopped. The site was ranked a 20 pursuant to								
	eases. The distance to a waterway is estimated to be less than 200 feet from the en								
the release. This set the regulatory limits to 100 ppm TPH, 10 ppm benz									
	17, a composite sample was collected at the source of the release, a composite								
	ner composite sample was collected at the end of the release. The samples were Method 8021, and for chlorides. The sample returned results below all regulatory								
	remediation activities to be performed to address chloride levels. With the								
approval of the NMOCD, cleanup activities will occur, and a final C-14	1 will be submitted at completion of remediation activities. The sample results are								
attached for your reference.									
	the best of my knowledge and understand that pursuant to NMOCD rules and notifications and perform corrective actions for releases which may endanger								
	the NMOCD marked as "Final Report" does not relieve the operator of liability								
	ate 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.	OH COMBERNATION DIVIGION								
Signature: Louis	OIL CONSERVATION DIVISION								
Printed Name: Logan Hixon	Approved by Environmental Specialist:								
Title: EHS Coordinator	Approval Date: 3   Expiration Date:								
E-mail Address: Logan_Hixon@xtoenergy.com	Conditions of Approval:								
Date: Z - 14 - 17 Phone: 505-333-3683	NIFI TULT 341658 Attached								
Attach Additional Sheets If Necessary	Apola guram amication								

Operator/Responsible Party,

The OCD has received the form C-141 you provided on Allololl regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number NETOCOM has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District office in on or before if the characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- •Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.
- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, If any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.
- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us



## ANALYTICAL REPORT

February 09, 2017



#### XTO Energy - San Juan Division

Sample Delivery Group:

L887468

Samples Received:

02/02/2017

Project Number:

Description:

NV Navajo 35-1

Report To:

James McDaniel

382 County Road 3100

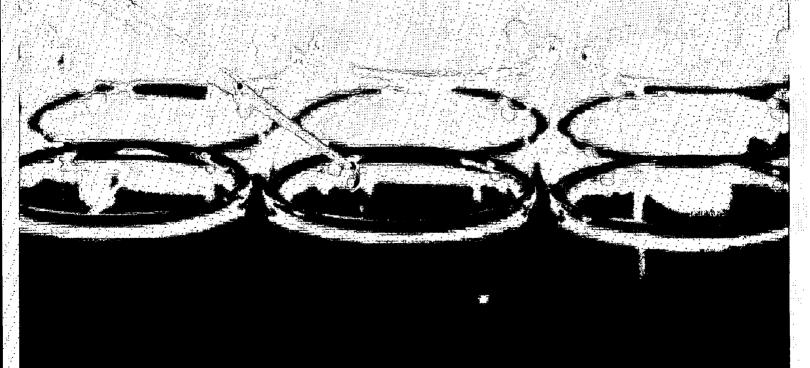
Aztec, NM 87410

Entire Report Reviewed By: Hume & 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.



Cp: Cover Page					霍马基氏	过度期 建	
<sup>2</sup> Tc: Table of Contents							
<sup>3</sup> Ss: Sample Summary							
<sup>4</sup> Cn: Case Narrative							
<sup>5</sup> Sr. Sample Results							
POINT OF RELEASE	L887468-01						
BEFORE SANDSTONE	L887468-02						
END OF RELEASE L8	87468-03						
<sup>6</sup> Qc: Quality Control Summ	nary						
Total Solids by Method	1 2540 G-2011						
Wet Chemistry by Met	hod 9056A						
Volatile Organic Comp	ounds (GC) by	Method	8015/8	021			1
Semi-Volatile Organic	Compounds (C	C) by N	ethod 8	XO15			1
<sup>7</sup> Gl: Glossary of Terms							1
<sup>8</sup> Al: Accreditations & Loca	tions						1
<sup>9</sup> Sc. Chain of Custody							1

#### SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

KMC

KCF

02/08/17 14:06

02/07/17 06:32

02/03/17 09:39

02/06/17 12:30

5.

POINT OF RELEASE L887468-01 Solid			Collected by Logan Hixon	Collected date/time 02/01/17 13:25	Received date/time 02/02/17 09:00
Method	Batch	Difution	Preparation date/time	Analysis date/time	Analyst
SemI-Volatile Organic Compounds (GC) by Method 8015	WG949458	1	02/06/17 23:01	02/07/17 13:14	KLM
Total Solids by Method 2540 G-2011	WG949506	1	02/04/17 13:20	02/04/17 13:32	KDW
Volatile Organic Compounds (GC) by Method 8015/8021	WG949639	11	02/03/17 09:39	02/06/17 18:30	JHH
Wet Chemistry by Method 9056A	WG949592	20	02/06/17 12:30	.02/07/17 05:59	KCF
BEFORE SANDSTONE L887468-02 Solid			Collected by Logan Hixon	Collected date/time 02/01/17 13:30	Received date/time 02/02/17 09:00
Method.	Batch	Dilution	Preparation	Analysis	Analyst
	a California de Caración de America de Caración de la Caración de		date/time	date/time	and the second of the second s
Semi-Volatile Organic Compounds (GC) by Method 8015	WG949458	.1	02/06/17 23:01	02/07/17-13:25	KLM
Total Solids by Method 2540 G-2011	WG949506	1:	02/04/1713.20	02/04/17 13:32	KDW
Volatile Organic Compounds (GC) by Method 8015/8021	WG949639	1	02/03/17 09:39	02/06/17 18:54	JHH
Wet Chemistry by Method 9056A	WG949592	10	02/06/17 12:30	02/07/17 06:16	KCF
END OF RELEASE L887468-03 Solid			Collected by Logan Hixon	Collected date/time 02/01/17 13:35	Received date/time 02/02/17.09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds. (GC) by Method 8015	WG949458	1	.02/06/17 23:01	02/07/17 13:37	KLM
Total Solids by Method 2540 G-2011	WG949506		02/04/17 13:20	02/04/17 13:32	KDW

WG949639

WG949592

Volatile Organic Compounds (GC) by Method 8015/8021

Wet Chemistry by Method 9056A

1 Cr 2 Tc 2 Tc 3 Ss 4 Cr 5 Sr 6 Qr 7 Gl 8 Al

#### 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. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. 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.

Dapline R Richards

Daphne Richards
Technical Service Representative

Cr Tc Ss

FOC GI BAI

PAGE:

#### POINT OF RELEASE

Collected date/time: 02/01/17 13:25

#### SAMPLE RESULTS - 01

#### ONE LAB NATIONWIDE

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

::		·	 					0.4.0			***						100		 	
		<i>.</i>		1.1	: Tree	Result		Qualific	er	Dilutio	n Anal	ysis	# X	Batch		- 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1				
i	Analyte			·;	:	%		ίd,,,			date	/time					1.			
			 	، بت		07 F				4				WG949				 	 	
	Total Solid	5			J.,	87:5	.::		7 4 1 5		UZ/L	14/201/ 13:32		WG949	<u> </u>					

#### Wet Chemistry by Method 9056A

	Result (dry)	Qualifier RDL (dry)	Dilution Analysis	<u>Batch</u>	
Analyte	mg/kg	mg/kg	date / time		
Chloride	6910	229	20 02/07/2017 05:5		

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

	<ul> <li>PERSONAL CONTROL OF CHEEN TO RELEASE</li> </ul>	10 1 11111 or 1				15
	Result (dry) Qualifier	RDL (dry) Dilution	Analysis	<u>Batch</u>		
Analyte	mg/kg	mg/kg	date / time			
Benzene	0.000777	0.000571 1	02/06/2017 18:30	WG949639		
Toluene	ND TO THE REPORT OF THE PARTY O	0.00571 1	02/06/2017 18:30	WG949639		
Ethylbenzene	ND	0.000571 1	02/06/2017 18:30	WG949639		
Total Xylene	0,00173	0.00171 1	02/06/2017 18:30	WG949639		
TPH (GC/FID) Low Fraction	0.138	0,114	. 02/06/2017 18:30	WG949639		
(S) a,a,a-Trifluorotoluene(FID)	103	77.0-120	02/06/2017 18:30	WG949639		
(S) a,a,a-Trifluorotoluene(PID)	107	75.0-128	02/06/2017 18:30	WG949639	<b>斯</b> 尔克雷拉斯	
				and the state of t		

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

ACCOUNT:

		Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch		
Analyte		mg/kg		mg/kg		date / time			
	content, with their consequently and property.								
TPH (GC/	FID) High Fraction	31.3		4.57	. 1	02/07/2017 13:14	WG949458		



#### **BEFORE SANDSTONE**

#### SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.

Collected date/time: 02/01/17 13:30

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

	. :
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Replantation of the second of	e <del>r</del> ii.
4.	

#### Wet Chemistry by Method 9056A

	· :		Re	esult (dr	y).	Qualifier	 RDL (dry	)	Diluti	on	Analysis	. [	Batch :				
Analyte			m	g/kg			mg/kg				date / time						
Chloride			11	80			122		10		02/07/2017 06:16		NG9495	92			

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

	Result (dry)	Qualifier RDL (dry)	Dilution	Analysis	<u>Batch</u>	THE VIEW	
Analyte	mg/kg	mg/kg		date / time			
Benzene	0.00152	0.000612	1	02/06/2017 18:54	WG949639		
Toluene	:ND	0.00612	1	02/06/2017 18:54	WG949639		
Ethylbenzene	ND	0.000612		02/06/2017 18:54	WG949639		
Total Xylene	ND .	0.00183	1	02/06/2017 18:54	WG949639		期法的证
TPH (GC/FID) Low Fraction	0.303	0.122	1.	02/06/2017 18:54	WG949639		
(S) a,a,a-Trifluorotoluene(FID)	104	77.0-120		02/06/2017 18:54	WG949639		
(S) a,a,a-Trifluorotoluene(PID)	107	75.0-128		02/06/2017 18:54	WG949639		
5469900万吨,五国铁旗自动平台	医乳类病 电图片分别	開 進 ひこうじょ 進した					1、通过49年展刊

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

		 Result	(dry)	<u>Qualifier</u>	RDI	. (dry)	Dilution	Analysis	<u>Batch</u>	医细胞增殖性		٠.
Analyte		mg/kg			mg/	kg .		date / time				
	O) High Fraction	ND.			4.89	9	g, <b>1</b>	02/07/2017 13:25	WG949458		 	
 (S) o-Ter	phenyl	70.1			18 (	)-148		02/07/2017 13:25	WG949458		4.173	3

ACCOUNT: DATE/TIME: PAGE:

END OF RELEASE

Collected date/time: 02/01/17 13:35

SAMPLE RESULTS - 03

Total Solids by Method 2540 G-2011

	TOTOL SC	JII CO LJ	y weine	u 2545 5 20							<u> </u>	<u>e eniji lid</u>
,				Result	Qualifier	Dilution	Analysis	Bat	<u>ch</u>			
	Analyte			%			date / time					
. 1	Total Solids			83.0			02/04/2017 13:32	<u>WG</u>	949506			

ONE LAB. NATIONWIDE.

٠.									 	 
			Result	Qualifier	Dilution	Analysis	E	3atch .		
٠.	Analyte		%			date / time				
	Total Sol	ds	83.0	and and an end of the second of	1	02/04/2017 13:32	<u>v</u>	NG949506		
Ċ										grafficht.



Wet Chemistry by Method 9056A

	Result (dry) Quali	fier RDL (dry) Dilution	Analysis Batch	
Analyte	mg/kg	mg/kg	date / time	
Chloride	994	60.2 5	02/07/2017 06:32 <u>WG949592</u>	

Volatile Organic Compounds (GC) by Method 8015/8021

	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch			·······································
.Analyte	mg/kg		mg/kg		date / time				inamente :
Benzene	0.00117		0.000602	1	02/08/2017 14:06	WG949639			l
Toluene	ND		0.00602	1	02/08/2017 14:06	WG949639			
Ethylbenzene	ND		0.000602	1	02/08/2017 14:06	WG949639			
Total Xylene	ND		0.00181	1	02/08/2017 14:06	WG949639			1
TPH (GC/FID) Low Fraction	ND		0,120	1	02/08/2017 14:06	WG949639			
(S) a,a,a-Trifluorotoluene(FID)	105		77.0-120		02/08/2017 14:06	WG949639			ŀ
(S) a,a,a-Trifluorotoluene(PID)	108		75.0-128		02/08/2017 14:06	WG949639			
그를 지도한 사람들이 되었다.								4. 芦苇草	

Semi-Volatile Organic Compounds (GC) by Method 8015

						Ti.	Res	ult (dr	y)	Qua	lifier		RDL (dry)	Dilutio	n i	Analysis	Bat	<u>ch</u>				
. A	naly	te					mg/	kg					mg/kg			date / time						
्रा	PH (	GC/FI	D) Hig	h Fract	ion		ND						4.82	 1	(	02/07/2017 13:37	WG	949458			; <del>-</del>	
	(S)	ó-Ter	pheny	1		i i je Grav	45.	2.				; ; ;	18.0-148			02/07/2017 13:37	<u>WG</u>	949458				

#### QUALITY CONTROL SUMMARY 1887468-01,02,03

ONE LAB. NATIONWIDE:

⁵Sr

'GI

Total Solids by Method 2540 G-2011

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 44.404		45 4 6	- 10 A 14	40 00
(MB)	K31945	) 15-1 C	2/04/17	T3:32
		5 Trees, 100		

 	. 1. 1 1.7		
			Docult

MB Qualifier MB MDL

MB RDL

Analyte 0.00100 **Total Solids** 

## L887502-04 Original Sample (OS) • Duplicate (DUP)

(OS) L887502-04: 02/04/17 13:32 (DUP) R3194915-3: 02/04/17 13:32

Original Result DUP Result Dilution DUP RPD

%: %

68.2

50.0

DUP Qualifier **DUP RPD Limits** 

### Laboratory Control Sample (LCS)

(LCS) R3194915-2 Q2/04/17 13:32

Analyte

Analyte

**Total Solids** 

**Total Solids** 

50.0

68.4

Spike Amount LCS Result

LCS Rec.

%

100.

Rec. Limits

0.314

LCS Qualifier

85.0-115



Wet Chemistry by Method 9056A

#### QUALITY CONTROL SUMMARY

L887468-01,02,03

#### Method Blank (MB)

(MB) R3195179-1 02/06/17.21:56

			MB Re	sult	MB Qualifier	MB MDL	MB RDL
Analyte .		digerid Zavi	mg/kġ			mg/kg	mg/kg
hloride	1,1,1,1		2.18	1.12	1	0.795	10.0

#### L887220-17 Original Sample (OS) • Duplicate (DUP)

(OS) L887220-17 02/07/17 00 09 (DDP) R3195179-4 02/07/17 00 26

			,,,,	20.	,		O.	ΨJ-	וטטו	/ NO!	22122		ربربير	/ I/ C				1.1		· · · · :	100 pt 1		. 1.1			· .	1.111111111				
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14			tage,	11.14		S	100	٠.	resui	' DU	P Resi	ılt (d	ry) Dil	ution:	D	UP RF	י סי		DUP.	Qualific	≘r`	DUP.	RPD I	imits -			1884.	·····	s., 116		5
			161-41				(ar	y)												. : :	_		11 ×			1 , 11	1.76	1.00			٠
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	· · · ·	nloride	٠.	1.10	1111111111	1711111	טווו י			J.Z	100		1,5		· U				.15. 14.			10,									111

#### L887220-19 Original Sample (OS) • Duplicate (DUP)

(OS) 1.887220-19-02/07/17 01:32: (DUP) P3195179-5-02/07/17 01:49

. (00) 2007220	15 02/0//12 01/02/2 (0/01	7 13 13 3 17 3 - 3 10 ZI 0 77 17 0 1					
	Original Resu	le .					itter jii ttarrjii tarrjii teagilees jii tarrii tarrii
Mandalli Maria (1777).	and the first of the first section of the	DUP Result (dry) Dilution	DUP RPD: DUP Qualific	er DUP RPD Limits		result (Managirine de La Company) (18	
	(ary)						法 医克尔特氏溶液 医多角性溶液 医多角皮皮 建聚烷
Analyte	mg/kg	mg/kg	%	%			
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#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

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#### L887220-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L887220-27 02/07/17 04:36 • (MS) R3195179-6 02/07/17 04:52 • (MSD) R3195179-7 02/07/17 05:09

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ONE LAB. NATIONWIDE

# QUALITY CONTROL SUMMARY

Volatile Organic Compounds (GC) by Method 8015/8021.

#### Method Blank (MB)

	(MB) R3195344-5 02/06/17	7.13:19						
		MB Result	MB Qualifier	MB MDL	MB RDL			
•	Analyte	mg/kg		mg/kg	mg/kg			
	Benzene	U		0.000120	0.000500			
⋰.	Toluene	0.000380	<u>.</u>	0.000150	0.00500			
	Ethylbenzene	· N		0.000110	0.000500			
-::	Total Xylene	U		0.000460	0.00150	e alia tana Car		
	TPH (GC/FID) Low Fraction	U		0.0217	0:100			
	(S) a.a.a-Trifluorotoluene(FID,	105			77.0-120		••	
	(S) a,a,a-Trifluorotoluene(PID)	) 110			75.0-128.			

#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195344-1 02/06/17 11:19 · (LCSD) R3195344-2	02/06/17 11:43					
Spike Amount LCS Result.	LCSD Result LCS Rec	LCSD Rec. Rec. Li	mits <u>LCS Qualifier</u> I	LCSD Qualifier RPD	RPD Limits	
Analyte mg/kg mg/kg	mg/kg %	% %		.%	%	ر والمراجعة المنافق في المنافقية المنافقة المنافقة المنافقة المنافقة المنافقة المنافقة المنافقة المنافقة المنافقة
Benzene 0.0500 0.0506	0.0515 101	103 71.0-12		1.79	20.	uni fitana fitana fitala fitala fitala. Baringan
Toluene 0.0500 0.0500	0,0503 100	72 0-12	ó	0.550	20	
Ethylbenzene 0.0500 0.0525	0.0530 105	106 76.0-12		1.07	20	
Total Xylene 0.150 0.157	0.160	75.0-12	4	1.83	20	
(S) a,a,a-Trifluorotoluene(FID)	105	105 77.0-12	0			
(S) a,a,a-Trifluorotoluene(PID)	108	108 75.0-12	8			

#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3195344-3 02/06/17 12:07 • (LCSD) R3195	344-4 02/06/17 12:31		10. will make		tauli da ijreg	7 196		nesi yake ani yake	Addition 1895 Standard Standard
Spike Amount LCS Res	ult: LCSD Result	LCS Rec. LCSD R	lec. Rec. Limits	LCS Qualifier	LCSD Qualifier RI	D '	RPD Limits		
Analyte mg/kg mg/kg	mg/kg	% %	%		%		.%		
TPH (GC/FID) Low Fraction 5.50 5.07	5.02	92.1 91.2	70.0-136		0	970	20 :		
(S) a,a,a-Trifluorotoluene(FID)		106 105	77.0-120						
(S) a,a,a-Trifluorotoluene(PID)			75.0-128	· ·			The state of the s		

#### L887539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L887539-01 02/06/17	15:42 • (MS) F	3195344-6 02	/06/17 16:06 •	(MSD) R3195344	-7 02/06/17	16:30						
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%		%	. %	
Benzene	0.0500	ND	0.428	0.445	90.0	93.7	9.5	10.0-146		3.99	29	
Toluene	0.0500	ND .	0.419	0.433	87.7	90.8	9.5	10:0-143		3.48	30	a interes de la companya de la comp La companya de la co
Ethylbenzene	0.0500	ND	0.444	0.463	93.5	97.6	9.5	10.0-147		4.27	31	
Total Xylene	0.150	ND	1.35	1.41	95.0	99.0	9.5	10:0-149		4.12	30	
(S) a,a,a-Trifluorotoluene(FID)					105	105		77.0-120				
		into a line all'			a dayan biye			salii irraa ili ta			sa, ilika bilan i	

#### QUALITY CONTROL SUMMARY

L887468-01,02,03

Volatile Organic Compounds (GC) by Method 8015/8021.

#### L887539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L887539-01 02/06/17:15:42 - (MS) R3195344-6 02/06/17:16:06 - (MSD) R3195344-7 02/06/17 16:30

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		Call	Amazina Oda	timal Daniels BAC	Decule MC	Donald M	S Rec.	MSD Rec.	Dilution Rec. L	innien RAC	Qualifier	MSD Qualifier	RPD	RPD Limits	20 A D G T F S 12 T T	
	attal, sitta ja 1. tita	ווטכ	ke Amount Orio	lingi kesult. Mə	Result MS	D KESUIL IVI	Skec. F	MISD KEL	Dilution Rec. L	mints mis	Qualifier .	M2D Gramin	KFU	KI D LIMITS	1.14	
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	Analyte	·····ma/	ka ma/	kg' mg	/ka ma/	KO 7o		76	76				70	70	***** 1 ****** 1	25.41.1 ( 27
				· · · · · · · · · · · · · · · · · · ·	n#				والأرائب والمراج فأراب والرابات	للأرواء المحادية	للحارج وبالأراب الروارة	ومراجعا والمقاصيص المطالب	ويورين والمراكزة والمستحدث والمراكزة	and the manager	وخطموه والموطية إنهجام	سياسه والأراهان بالمار ساور
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· .	: (S) a.a.a-Trifluoro	talriana/DIN): .	1.400.0	oracina de activada de la compansión de la	elektroni (1919) in 1919	. 10	10 1	100		20				35 to 2 to 25 to 2		1 11.1.

#### L887539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

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ONE LAB, NATIONWIDE.

## QUALITY CONTROL SUMMARY

ONE LAB, NATIONWIDE.

Semi-Volatile Organic Compounds (GC) by Method 8015

#### Method Blank (MB)

(MB) R3195281-1 02/07/17 08:57	19.22.6 (2.2.36)							
MB Resul	lt <u>MB Qualifier</u>	MB MDL .	MB RDL		Section Section			
Analyte mg/kg		mg/kg	mg/kg					
TPH (GC/FID) High Fraction U.		0.769	4.00			(1977) [1747] [1747]	App. Therein, Therein	fraggither, March
	and the same of th	0, 00		The state of the s			and the street of the state of	of and the Late of the
(S) o-Terphenyl 77.0			18.0-148					

#### Laboratory Control Sample (LCS) . Laboratory Control Sample Duplicate (LCSD)

LCS) R3195281-2 02/07/17 09:08 • (LCSD) R3195281-3 02/07/	7/17 09:19	본토 하는 사람들이 살뛰다는 주민들이		
Spike Amount LCS Result LCSD	Result LCS Rec. LCSD Rec. Rec	Limits: LCS Qualifier LCSD Qualifier	RPD Limits	
Analyte mg/kg mg/kg mg/kg	g % % %		% %	
PH (GC/FID) High Fraction 60.0 45.4 44.6	75.6 74.3 50.0	-150	1.68 20	
(S) o-Terphenyl	85.5 84.9 18.0	148		

#### L887539-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L887539-04 02/07/17 14:	34 • (MS) R3195281-4 . 02.	/07/17 14:46 • (MSD) R3195	281-5 02/07/17 14:58				
Spi	ke Amount Original Result	MS Result MSD Resul	t MS Rec. MSD Rec.	Dilution Rec. Limits	MS Qualifier MSD Qua	<u>alifier</u> RPD I	RPD Limits
Analyte mg	/kg mg/kg	mg/kg mg/kg	% %	<b>%</b> :		%	
TPH (GC/FID) High Fraction 60	O ND	50.5 48.1	84.2 80.1	1 50,0-150	The state of the s	4.96	20
(S) o-Terphenyl			88.0 83.7	18.0-148			

ACCOUNT: DATE/TIME: PROJECT: PAGE:

### GLOSSARY OF LERMS

#### **Abbreviations and Definitions**

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL-where applicable):
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. (this will only be present on a dry report basis for soils).
Original Sample	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.
(S)	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.
Rec.	Recovery

#### Qualifier Description

The identification of the analyte is acceptable, the reported value is an estimate.





<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cr

<sup>5</sup> Sr

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 most like conductive 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.

#### State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizoná	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina	DW21704
Florida	E87487	North Carolina <sup>z</sup>	.41
Georgia	NELAP	North Dakota	R-140
Georgia 1	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	·C-TN-01	Pennsylvania	68-02979
lowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee 14	2006
Louisiana	Al30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas. <sup>5</sup>	LAB0152
Maryland	324	Ulah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska.	NE-OS-15-05		
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#### Third Party & Federal Accreditations

A2LA - ISO 17025	1461.01	机压速温温		AIHA	, Pilitina i	100789	
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Canada	1461.01			USDA		S-67674	
FPA-Crypto	TN0000	}				arany (ilian	

Drinking Water 2 Underground Storage Tanks 3 Aquatic Toxicity 4 Chemical/Microbiological 5 Mold 6 Accreditation not applicable

#### **Our Locations**

ESC Lab Sciences has sixty-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.



ACCOUNT DATE/TIME PROJECT

Quo			ite Number		Page 1 of				Analysis/Container					ier	Lab Information			
ENERGY Western Division		'- ·	XTO Contact			XTO Contact Phone #											1,887	1468
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<sup>\*</sup> Sample ID will be the office and sampler-date-military time FARIM-MMDDYY 1200

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Cod	oler Receipt For	m		
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