

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

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 Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: XTO Energy, Inc.	Contact: James McDaniel	
Address: 500 W Illinois St, Suite 900, Midland Texas, 79701	Telephone No.: (505) 333-3701	
Facility Name: EMSU B Satellite #13	Facility Type: Satellite	
Surface Owner: Federal	Mineral Owner: Federal	API No. NA

LOCATION OF RELEASE

Unit Letter	Section 14	Township 20S	Range 36E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
-------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude: N 32.5800 Longitude: W -103.3247

NATURE OF RELEASE

Type of Release: Produced Oil and Water	Volume of Release: 0.62 bbls oil, 30.58 bbls water bbls	Volume Recovered: 0.60 bbls oil, 29.40 bbls water
Source of Release: Test Separator	Date and Hour of Occurrence: 1/4/17 @ 8:00 AM	Date and Hour of Discovery: 1/4/17 @ 8:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Kristen Lynch, NMOCD	
By Whom? John Robinson	Date and Hour: 1/4/17 @ 10:30 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

On January 4, 2017, a valve was left open on a test separator going to a drain tank. The drain tank overran, and produced oil and water was spilled onto the ground. The site was ranked a 20 according to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases due to an estimated depth to groundwater of less than 50 feet (~45 feet BGS). This set the closure standards to 10 ppm benzene, 50 ppm total BTEX and 100 ppm total petroleum hydrocarbons.

Describe Area Affected and Cleanup Action Taken.*

On November 9, 2017, XTO personnel were on-site to perform soil borings for delineation of the release area. Four (4) soil borings were conducted at the location using a hand auger. Based on visual conditions on-site at the time the sampling was conducted, soil borings were analyzed for TPH, benzene and BTEX from 0-6" BGS, and for chlorides from 0-6", 6"-1', and 2" BGS. A spreadsheet detailing the sample results are enclosed for reference. Based on chloride results less than 600 ppm in all samples collected, and benzene and BTEX values below standards in all samples analyzed, XTO does not believe the release poses a threat to human health and the environment. TPH values were slightly elevated in SB-1 and SB-4 (123.1 and 157.1 ppm respectively), but the values were made up entirely of diesel range organics (DRO) and motor-oil range organics (MRO), which is a non-mobile form of TPH. Based on the results collected during this sampling event, XTO proposes closure of the site 1R-4545.

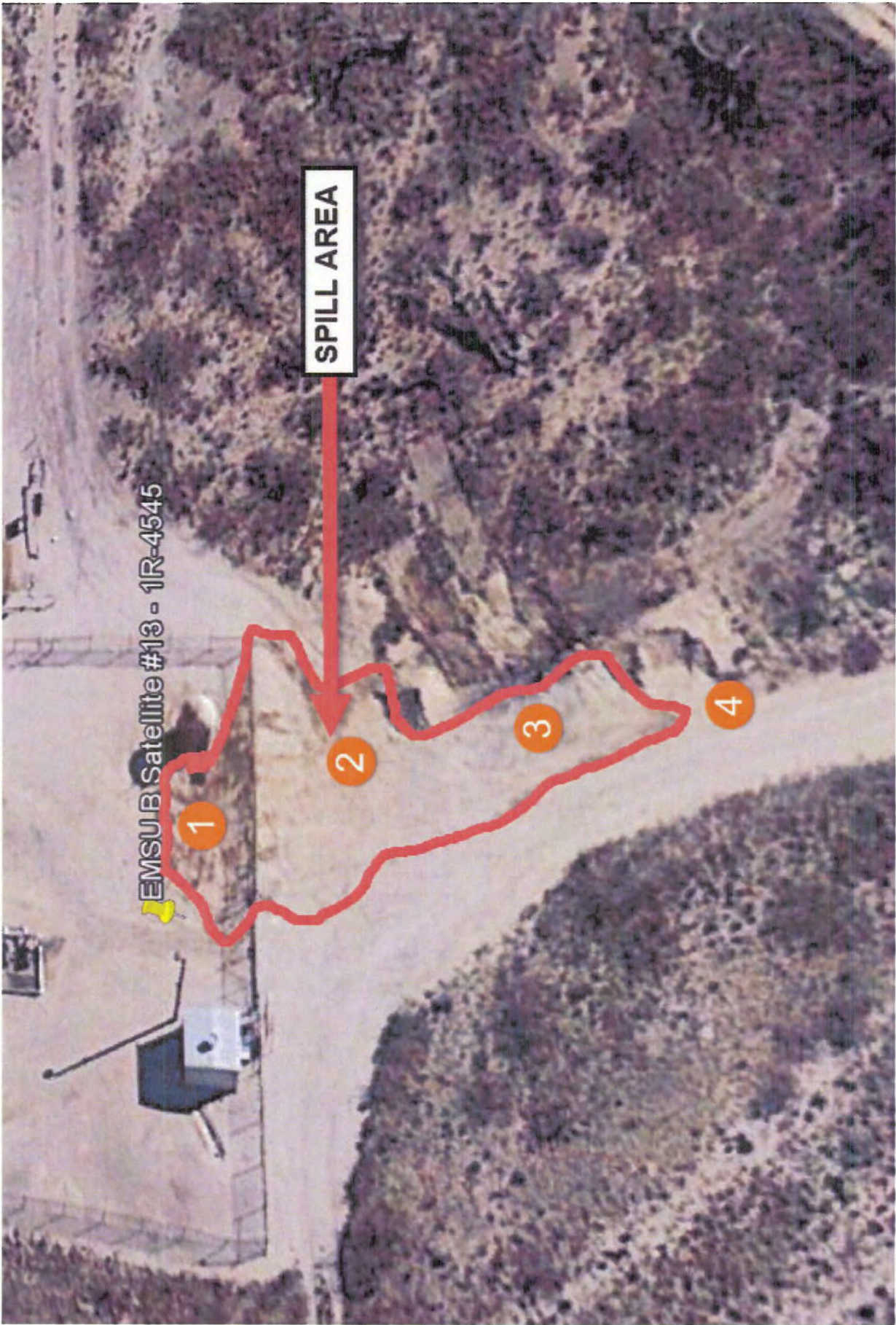
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger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

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist:		
Printed Name: James McDaniel			
Title: EH&S Supervisor	Approval Date:	Expiration Date:	
E-mail Address: James_McDaniel@xtoenergy.com	Conditions of Approval:		Attached ☐
Date: 12/11/2017	Phone: 505-333-3701		

* Attach Additional Sheets If Necessary

PRELIMINARY RESULTS





XTO Energy On-Site Form

Well Name EMSU Satellite B #13 API # NA

Section 14 Township 20S Range 36E County Lea

Contractors On-Site None Time On-Site 11:45 Time Off-Site 13:55

Spill Amount 32 bbls Spilled (Oil / Produced W / Other) RCVRD 30

Land Use (Range / Residential / Tribe) Excavation — x — x — deep

Site Diagram

SB-1 location hard Refusal @ 1'

Comments SB-2,3,4 were easy augering

*Spill area had been scraped prior to arrival

Legend:
☒ Gravel
☒ Silty loam

Number of Photos Taken

Time	Sample #	Sample Description	Characteristics	OVM (ppm)	Analysis Requested
	NA	100 Standard	NA		NA
1150	SB-1606	Caliche w/ Gravel	Dry, Pinkish Red	NA	8015, 8021, Chloride
1200	SB-1601	Caliche w/ Gravel	Dry, Pinkish Red	NA	Chlorides
1205	SB-260-6"	Caliche w/ Gravel	Dry, Pinkish Red	NA	8015, 8021, Chloride
1215	SB-266-1'	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides
1220	SB-262-1'	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides
1225	SB-360-6"	Caliche w/ Gravel	Dry, Pinkish Red	NA	8015, Chlorides
1230	SB-366-1'	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides
1240	SB-362-1'	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides

Name (Print) James McDaniel Date 11/9/17

Name (Signature) [Signature] Company XTO



XTO Energy On-Site Form

Well Name EMSU Satellite B #13 API # NA
Section 14 Township 20S Range 36E County Lea
Contractors On-Site None Time On-Site 11:45 Time Off-Site 13:55
Spill Amount 32 bbls Spilled (Oil / Produced W / Other) RCVRD 30
Land Use (Range / Residential / Tribe) Excavation — x — x — deep



See Page
1

Sample Location

Site Diagram

Sample Location

Comments

Number of Photos Taken

Samples

Time	Sample #	Sample Description	Characteristics	OVM (ppm)	Analysis Requested
—	NA	100 Standard	NA		NA
1307	SB-460-6	Caliche w/ gravel	Dry, Pinkish red	NA	EO15, PO21, Chlorides
1310	SB-460-1	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides
1315	SB-462	Silty loam, organic	Dry, Brown, Powdery	NA	Chlorides

Name (Print) James McDaniel

Date 11/9/17

Name (Signature) [Signature]

Company XTO

XTO Energy - San Juan Division

Sample Delivery Group: L950160
Samples Received: 11/10/2017
Project Number: ESMU B SAT #13
Description:

Report To: James McDaniel
382 County Road 3100
Aztec, NM 87410

Entire Report Reviewed By:



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.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SB #1 0-6" L950160-01 Solid

			Collected by	Collected date/time	Received date/time
				11/09/17 11:50	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042702	1	11/14/17 18:31	11/14/17 18:33	JD
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 17:09	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1042506	1	11/14/17 08:23	11/14/17 12:55	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1043708	1	11/18/17 12:33	11/19/17 01:23	ACM

SB #1 6"-1' L950160-02 Solid

			Collected by	Collected date/time	Received date/time
				11/09/17 12:00	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042702	1	11/14/17 18:31	11/14/17 18:33	JD
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 17:26	DR

SB #2 0-6" L950160-03 Solid

			Collected by	Collected date/time	Received date/time
				11/09/17 12:05	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042702	1	11/14/17 18:31	11/14/17 18:33	JD
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:08	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1042506	1	11/14/17 08:23	11/14/17 13:17	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1043708	1	11/18/17 12:33	11/18/17 22:46	ACM

SB #2 6"-1' L950160-04 Solid

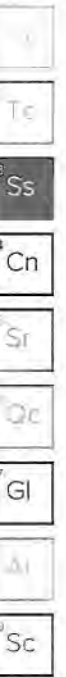
			Collected by	Collected date/time	Received date/time
				11/09/17 12:15	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:17	DR

SB #2 2' L950160-05 Solid

			Collected by	Collected date/time	Received date/time
				11/09/17 12:20	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:26	DR

SB #3 0-6" L950160-06 Solid

			Collected by	Collected date/time	Received date/time
				11/09/17 12:25	11/10/17 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:34	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1042506	1	11/14/17 08:23	11/14/17 13:39	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1043708	1	11/18/17 12:33	11/18/17 22:29	ACM



SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SB #3 6"-1' L950160-07 Solid

Collected by: 11/09/17 12:30 Received date/time: 11/10/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:43	DR

SB #3 2' L950160-08 Solid

Collected by: 11/09/17 12:40 Received date/time: 11/10/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 18:51	DR

SB #4 0-6" L950160-09 Solid

Collected by: 11/09/17 13:07 Received date/time: 11/10/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 19:00	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1042506	1	11/14/17 08:23	11/14/17 14:01	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1043708	1	11/18/17 12:33	11/19/17 01:40	ACM

SB #4 6"-1' L950160-10 Solid

Collected by: 11/09/17 13:10 Received date/time: 11/10/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042587	1	11/14/17 14:05	11/14/17 19:08	DR

SB #4 2' L950160-11 Solid

Collected by: 11/09/17 13:15 Received date/time: 11/10/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1042706	1	11/14/17 18:19	11/14/17 18:19	KDW
Wet Chemistry by Method 9056A	WG1042839	1	11/15/17 15:32	11/16/17 00:20	MAJ



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. 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.



Daphne Richards
Technical Service Representative



SB #1 0-6"

Collected date/time: 11/09/17 11:50

SAMPLE RESULTS - 01

L950160

ONE LAB. NATIONWIDE



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.9		1	11/14/2017 18:33	WG1042702

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	48.0	P1	11.6	1	11/14/2017 17:09	WG1042567

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	ND		0.000582	1	11/14/2017 12:55	WG1042506
Toluene	ND		0.00582	1	11/14/2017 12:55	WG1042506
Ethylbenzene	ND		0.000582	1	11/14/2017 12:55	WG1042506
Total Xylene	ND		0.00175	1	11/14/2017 12:55	WG1042506
TPH (GC/FID) Low Fraction	ND		0.116	1	11/14/2017 12:55	WG1042506
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	92.9		77.0-120		11/14/2017 12:55	WG1042506
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	99.3		75.0-128		11/14/2017 12:55	WG1042506

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	70.2		4.66	1	11/19/2017 01:23	WG1043708
C28-C40 Oil Range	52.9		4.66	1	11/19/2017 01:23	WG1043708
(S) <i>o</i> -Terphenyl	55.1		78.0-148		11/19/2017 01:23	WG1043708



SB #1 6"-1'

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.



Collected date/time: 11/09/17 12:00

L950160

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.3		1	11/14/2017 18:33	WG1042703

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	mg/kg		mg/kg			
Chloride	527		11.6	1	11/14/2017 17:26	WG1042567



SB #2 0-6"

Collected date/time: 11/09/17 12:05

SAMPLE RESULTS - 03

L950160

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.7		1	11/14/2017 18:33	WG1042702

Wet Chemistry by Method 9056A

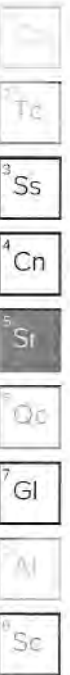
Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	39.7		11.1	1	11/14/2017 18:08	WG1042587

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	ND		0.000557	1	11/14/2017 13:17	WG1042506
Toluene	ND		0.00557	1	11/14/2017 13:17	WG1042506
Ethylbenzene	ND		0.000557	1	11/14/2017 13:17	WG1042506
Total Xylene	ND		0.00167	1	11/14/2017 13:17	WG1042506
TPH (GC/FID) Low Fraction	ND		0.111	1	11/14/2017 13:17	WG1042506
(S) o,a,a-Trifluorotoluene(FID)	94.0		77.0-120		11/14/2017 13:17	WG1042506
(S) o,a,a-Trifluorotoluene(PID)	101		75.0-128		11/14/2017 13:17	WG1042506

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.46	1	11/18/2017 22:46	WG1043708
C28-C40 Oil Range	ND		4.46	1	11/18/2017 22:46	WG1043708
(S) o-Terphenyl	76.2		18.0-148		11/18/2017 22:46	WG1043708



SB #2 6"-1'

Collected date/time: 11/09/17 12:15

SAMPLE RESULTS - 04

L950160

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.6		1	11/14/2017 18:19	WG10427035

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	42.2		11.5	1	11/14/2017 18:17	WG1042587



SB #2 2'

Collected date/time: 11/09/17 12:20

SAMPLE RESULTS - 05

L950160

ONE LAB. NATIONWIDE.

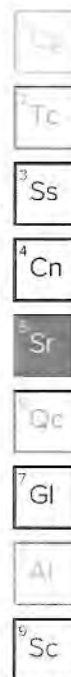


Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.8		1	11/14/2017 18:19	WG1042706

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	41.4		11.7	1	11/14/2017 18:26	WG1042587



SB #3 0-6"

SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE



Collected date/time: 11/09/17 12:25

L950160

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.4		1	11/14/2017 18:19	WG1042706

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	mg/kg		mg/kg			
Chloride	37.0		11.2	1	11/14/2017 18:34	WG1042587

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Benizene	mg/kg		mg/kg			
Benizene	0.000789	B	0.000560	1	11/14/2017 13:39	WG1042506
Toluene	ND		0.00560	1	11/14/2017 13:39	WG1042506
Ethylbenzene	ND		0.000560	1	11/14/2017 13:39	WG1042506
Total Xylene	ND		0.00168	1	11/14/2017 13:39	WG1042506
TPH (GC/FID) Low Fraction	ND		0.112	1	11/14/2017 13:39	WG1042506
(S) <i>o,o,a</i> -Trifluorotoluene(FID)	93.9		77.0-120		11/14/2017 13:39	WG1042506
(S) <i>o,o,a</i> -Trifluorotoluene(PID)	100		75.0-128		11/14/2017 13:39	WG1042506

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	mg/kg		mg/kg			
C10-C28 Diesel Range	ND		4.48	1	11/18/2017 22:29	WG1043708
C28-C40 Oil Range	ND		4.48	1	11/18/2017 22:29	WG1043708
(S) <i>o</i> -Terphenyl	64.8		18.0-148		11/18/2017 22:29	WG1043708



SB #3 6"-1'

Collected date/time: 11/09/17 12:30

SAMPLE RESULTS - 07

L950160

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.9		1	11/14/2017 18:19	WG1042/06

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	41.3		11.6	1	11/14/2017 18:43	WG1042587



SB #3 2'

Collected date/time: 11/09/17 12:40

SAMPLE RESULTS - 08

L950160

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.8		1	11/14/2017 18:19	WG1042705

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	59.2		11.4	1	11/14/2017 18:51	WG1042587



SB #4 0-6"

Collected date/time: 11/09/17 13:07

SAMPLE RESULTS - 09

L950160

ONE LAB, NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.1		1	11/14/2017 18:19	WG1042706

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	36.2		10.7	1	11/14/2017 19:00	WG1042587

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000537	1	11/14/2017 14:01	WG1042506
Toluene	ND		0.00537	1	11/14/2017 14:01	WG1042506
Ethylbenzene	ND		0.000537	1	11/14/2017 14:01	WG1042506
Total Xylene	ND		0.00161	1	11/14/2017 14:01	WG1042506
TPH (GC/FID) Low Fraction	ND		0.107	1	11/14/2017 14:01	WG1042506
(S) o,a,a-Trifluorotoluene(FID)	93.3		77.0-120		11/14/2017 14:01	WG1042506
(S) o,a,a-Trifluorotoluene(PID)	99.7		75.0-128		11/14/2017 14:01	WG1042506

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	117		4.30	1	11/19/2017 01:40	WG1043708
C28-C40 Oil Range	40.1		4.30	1	11/19/2017 01:40	WG1043708
(S) o-Terphenyl	51.9		18.0-148		11/19/2017 01:40	WG1043708



SB #4 6"-1'

Collected date/time: 11/09/17 13:10

SAMPLE RESULTS - 10

L950160

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Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.9		1	11/14/2017 18:19	WG1042706

Wet Chemistry by Method 9056A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	54.0		11.1	1	11/14/2017 19:08	WG1042587



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SB #4 2'

Collected date/time: 11/09/17 13:15

SAMPLE RESULTS - 11

L950160

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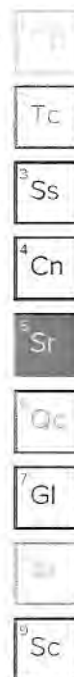


Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.2		1	11/14/2017 18:19	<u>WG1042706</u>

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	mg/kg		mg/kg			
Chloride	138		11.5	1	11/16/2017 00:20	<u>WG1042839</u>





Method Blank (MB)

(MB) R3265638-1 11/14/17 18:33

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0			

L950149-01 Original Sample (OS) • Duplicate (DUP)

(OS) L950149-01 11/14/17 18:33 • (DUP) R3265638-3 11/14/17 18:33

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.7	85.0	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3265638-2 11/14/17 18:33

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

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Method Blank (MB)

(MB) R3265732-1 11/14/17 18:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Total Solids	%	%	%	%
	0			

L950160-04 Original Sample (OS) • Duplicate (DUP)

(OS) L950160-04 11/14/17 18:19 • (DUP) R3265732-3 11/14/17 18:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Total Solids	%	%		%	%	%
	86.6	87.1	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3265732-2 11/14/17 18:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Total Solids	%	%	%	%	
	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3265580-1 11/14/17 16:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U	0.795	10.0	

L950160-01 Original Sample (OS) • Duplicate (DUP)

(OS) L950160-01 11/14/17 17:09 • (DUP) R3265580-4 11/14/17 17:17

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	48.0	57.9	1	19	P1	15

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

(LCS) R3265580-2 11/14/17 16:09 • (LCSD) R3265580-3 11/14/17 16:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	211	212	106	106	80-120			0	15

L950160-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L950160-02 11/14/17 17:26 • (MS) R3265580-5 11/14/17 17:34 • (MSD) R3265580-6 11/14/17 17:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	580	527	1170	1140	110	106	1	80-120	E		2	15

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Method Blank (MB)

(MB) R3266263-1 11/15/17 22:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	8.48	J	0.795	10.0

L950160-11 Original Sample (OS) • Duplicate (DUP)

(OS) L950160-11 11/16/17 00:20 • (DUP) R3266263-4 11/16/17 00:40

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	138	125	1	10		15

L950849-05 Original Sample (OS) • Duplicate (DUP)

(OS) L950849-05 11/16/17 06:28 • (DUP) R3266263-7 11/16/17 07:29

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	148	157	1	6		15

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

(LCS) R3266263-2 11/15/17 22:58 • (LCSD) R3266263-3 11/15/17 23:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	Rec. Limits %	LCSD Rec. %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	222	212	111	80-120	106			5	15

L950700-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L950700-01 11/16/17 02:02 • (MS) R3266263-5 11/16/17 02:22 • (MSD) R3266263-6 11/16/17 03:24

Analyte	Spike Amount (dry) mg/kg	Original Result mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	602	93.7	693	673	100	96	1	80-120			3	15

Method Blank (MB)

(MB) R3265935-5 11/14/17 12:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000396	J	0.000120	0.000500
Toluene	0.000447	J	0.000150	0.00500
Ethylbenzene	0.000280	J	0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0253	J	0.0217	0.100
(S) a,a,α-Trifluorotoluene(FID)	96.1			77.0-120
(S) a,a,α-Trifluorotoluene(PID)	103			75.0-128

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

(LCS) R3265935-1 11/14/17 10:21 • (LCSD) R3265935-2 11/14/17 10:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0441	0.0451	88.3	90.3	71.0-121			2.27	20
Toluene	0.0500	0.0474	0.0472	94.8	94.4	72.0-120			0.416	20
Ethylbenzene	0.0500	0.0499	0.0502	99.9	100	76.0-121			0.481	20
Total Xylene	0.150	0.149	0.149	99.5	99.5	75.0-124			0.0670	20
(S) a,a,α-Trifluorotoluene(FID)				95.8	96.0	77.0-120				
(S) a,a,α-Trifluorotoluene(PID)				102	102	75.0-128				

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

(LCS) R3265935-3 11/14/17 11:05 • (LCSD) R3265935-4 11/14/17 11:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.49	4.56	81.6	83.0	70.0-136			1.64	20
(S) a,a,α-Trifluorotoluene(FID)				105	106	77.0-120				
(S) a,a,α-Trifluorotoluene(PID)				112	116	75.0-128				

L950181-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L950181-01 11/14/17 14:23 • (MS) R3265935-6 11/14/17 19:32 • (MSD) R3265935-7 11/14/17 19:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0577	11.7	223	249	73.3	82.4	5000	10.0-146			11.0	29
Toluene	0.0577	85.9	297	329	73.1	84.3	5000	10.0-143			10.4	30
Ethylbenzene	0.0577	97.6	323	358	78.0	90.3	5000	10.0-147			10.4	31
Total Xylene	0.173	170	848	943	78.4	89.3	5000	10.0-149			10.6	30
(S) <i>o,o</i> -Trifluorotoluene(FID)					97.0	96.2		77.0-120				
(S) <i>o,o</i> -Trifluorotoluene(PID)					102	102		75.0-128				

L950181-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L950181-01 11/14/17 14:23 • (MS) R3265935-8 11/14/17 20:16 • (MSD) R3265935-9 11/14/17 20:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID), Low Fraction	6.35	4240	26500	28000	70.2	75.0	5000	10.0-147			5.57	30
(S) <i>o,o</i> -Trifluorotoluene(FID)					101	102		77.0-120				
(S) <i>o,o</i> -Trifluorotoluene(PID)					108	109		75.0-128				

Method Blank (MB)

(MB) R3266871-5 11/18/17 21:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U	1.61	4.00	4.00
C28-C40 Oil Range	U	0.274	4.00	4.00
(S) o-Terphenyl	80.7		18.0-148	

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

(LCS) R3266871-1 11/18/17 19:01 • (LCSD) R3266871-2 11/18/17 19:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	Rec. Limits %	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	51.5	52.0	85.8	50.0-150	86.7	1.02	20
(S) o-Terphenyl				90.7	18.0-148	83.1		

L951070-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L951070-04 11/18/17 20:09 • (MS) R3266871-3 11/18/17 20:27 • (MSD) R3266871-4 11/18/17 20:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	ND	45.6	49.9	76.0	83.2	1	50.0-150		9.13		20
(S) o-Terphenyl					53.0	60.1		18.0-148				



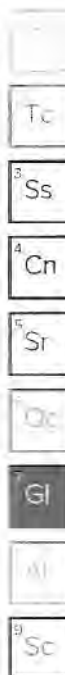
Guide to Reading and Understanding Your Laboratory Report

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.

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.
(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.
U	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.
Dilution	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.
Limits	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	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.
Case Narrative (Cn)	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)	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
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
PI	RPD value not applicable for sample concentrations less than 5 times the reporting limit.



ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



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.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	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
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ^{1,4}	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	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		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC	100789
A2LA – ISO 17025 ¹	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	TN00003		

¹ 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.**



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Comments

ESC LAB SCIENCES Cooler Receipt Form

Client: <i>XTORNN</i>	SDG#	<i>1950160</i>
Cooler Received/Opened On: <i>11/10/17</i>	Temperature:	<i>5.1</i>
Received by : Kelsey Stephenson		
Signature: <i>Kelsey Stephenson</i>		
	NP	Yes No
Receipt Check List		
COC Seal Present / Intact?	<i>/</i>	<i>/</i>
COC Signed / Accurate?		<i>/</i>
Bottles arrive intact?		<i>/</i>
Correct bottles used?		
Sufficient volume sent?		
If Applicable		
VOA Zero headspace?		
Preservation Correct / Checked?		