



21-Jan-2020

Natalie Steiner
XTO Energy
21459 CR5
Rifle, CO 81650

Re: **YCF 2-35-1**

Work Order: **20010911**

Dear Natalie,

ALS Environmental received 6 samples on 15-Jan-2020 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 35.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
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Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Alex J. Cszaszar

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: XTO Energy
Project: YCF 2-35-1
Work Order: 20010911

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
20010911-01	Inside Secondary Containment #1	Soil		1/13/2020 10:30	1/15/2020 09:30	<input type="checkbox"/>
20010911-02	Inside Secondary Containment #2	Soil		1/13/2020 10:40	1/15/2020 09:30	<input type="checkbox"/>
20010911-03	Inside Secondary Containment #3	Soil		1/13/2020 10:40	1/15/2020 09:30	<input type="checkbox"/>
20010911-04	Inside Secondary Containment #4	Soil		1/13/2020 11:00	1/15/2020 09:30	<input type="checkbox"/>
20010911-05	Inside Secondary Containment #5	Soil		1/13/2020 11:00	1/15/2020 09:30	<input type="checkbox"/>
20010911-06	Inside Secondary Containment #6	Soil		1/13/2020 11:00	1/15/2020 09:30	<input type="checkbox"/>

Client: XTO Energy
Project: YCF 2-35-1
Work Order: 20010911

Case Narrative

Samples for the above noted Work Order were received on 01/15/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:

Batch 150479, Method VOC_8260_S, Sample 20010911-02A MSD: The MSD recoveries were outside of the control limits for m,p-Xylene and Xylenes, Total. However, the MS recoveries and the RPDs between the MS and MSD were in control. No qualification is required for these analytes.

Extractable Organics:

Batch 150480, Method GRO_8015_S, Sample 20010911-02A MSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: GRO (C6-C10)

Batch 150480, Method GRO_8015_S, Sample 20010911-03A: One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Batch 150480, Method GRO_8015_S, Sample 20010911-04A: Surrogate high due to matrix interference.

Batch 150535, Method PNLVI_8270_S, Sample 20010911-01A: The reporting limits are elevated due to internal standard failure in the undiluted run for these analytes:

Batch 150535, Method PNLVI_8270_S, Sample 20010911-01A MS: The MS recoveries were

Client: XTO Energy
Project: YCF 2-35-1
Work Order: 20010911

Case Narrative

outside of the control limits for Naphthalene and Pyrene. However, the MSD recoveries and the RPDs between the MS and MSD were in control. No qualification is required for these analytes.

Batch 150535, Method PNLVI_8270_S, Samples 20010911-01A MS and MSD: Reporting limits are elevated due to an internal standard fialure in the undiluted run of the parent sample.

Metals:

Batch 150549, Method ICP_6020_S, Sample 20010911-06A MS: The MS recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample were greater than 4x the spike amount. No qualification is required for these analytes.

Batch 150549, Method ICP_6020_S, Samples 20010911-06A MS and MSD: The MS andf MSD recoveries were below the lower control limits for Silver. The reported result in the parent sample may be biased low for this analyte.

Batch 150549, Method ICP_6020_S, Sample 20010911-06AMS: The MS recoveries were outside of the control limits for Copper and Nickel. However, the MSD recoveries and the RPDs between the MS and MSD were in control. No qualification is required for these analytes.

Batch 150549, Method ICP_6020_S, Sample 20010911-06A MSD: The MSD recovery was outside of the control limits for Barium; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte.

Wet Chemistry:

Batch 150620, Method CR6_7196_S, Samples 20010911-01A MS and MSD: The MS and MSD recoveries were below the lower control limits for Cr6. The reported result in the parent sample may be biased low for this analyte.

Client: XTO Energy
Project: YCF 2-35-1
WorkOrder: 20010911

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
°C	Degrees Celcius
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius

none	
s.u.	Standard Units

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #1
Collection Date: 1/13/2020 10:30 AM

Work Order: 20010911
Lab ID: 20010911-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	220		3.2	5.6	mg/Kg-dry	1	1/16/2020 16:50
Surr: 4-Terphenyl-d14	45.6			33-111	%REC	1	1/16/2020 16:50
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	600		2.6	6.2	mg/Kg	1	1/16/2020 18:16
Surr: Toluene-d8	113			71-123	%REC	1	1/16/2020 18:16
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.022	J	0.0023	0.023	mg/Kg-dry	1	1/17/2020 11:21
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	4.7		0.052	0.43	mg/Kg-dry	1	1/16/2020 22:21
Barium	190		4.0	4.3	mg/Kg-dry	10	1/17/2020 14:40
Boron	5.5		1.6	1.7	mg/Kg-dry	1	1/16/2020 22:21
Cadmium	0.058	J	0.026	0.17	mg/Kg-dry	1	1/16/2020 22:21
Chromium	13		0.19	0.43	mg/Kg-dry	1	1/16/2020 22:21
Copper	8.6		0.43	0.43	mg/Kg-dry	1	1/16/2020 22:21
Lead	8.0		0.21	0.43	mg/Kg-dry	1	1/16/2020 22:21
Nickel	15		0.22	0.43	mg/Kg-dry	1	1/16/2020 22:21
Selenium	0.55		0.40	0.43	mg/Kg-dry	1	1/16/2020 22:21
Silver	U		0.057	0.43	mg/Kg-dry	1	1/16/2020 22:21
Zinc	36		8.4	8.6	mg/Kg-dry	10	1/17/2020 14:40
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	52		2.5	5.0	mg/L	10	1/17/2020 15:07
Magnesium	16		0.50	2.0	mg/L	10	1/17/2020 15:07
Sodium	110		0.45	2.0	mg/L	10	1/17/2020 15:07
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	3.3		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		18	93	µg/Kg-dry	20	1/20/2020 18:21
Anthracene	U		32	93	µg/Kg-dry	20	1/20/2020 18:21
Benzo(a)anthracene	U		38	93	µg/Kg-dry	20	1/20/2020 18:21
Benzo(a)pyrene	U		25	93	µg/Kg-dry	20	1/20/2020 18:21
Benzo(b)fluoranthene	U		22	93	µg/Kg-dry	20	1/20/2020 18:21
Benzo(k)fluoranthene	U		28	93	µg/Kg-dry	20	1/20/2020 18:21
Chrysene	U		19	93	µg/Kg-dry	20	1/20/2020 18:21
Dibenzo(a,h)anthracene	U		22	93	µg/Kg-dry	20	1/20/2020 18:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #1
Collection Date: 1/13/2020 10:30 AM

Work Order: 20010911
Lab ID: 20010911-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		17	93	µg/Kg-dry	20	1/20/2020 18:21
Fluorene	260		31	93	µg/Kg-dry	20	1/20/2020 18:21
Indeno(1,2,3-cd)pyrene	U		34	93	µg/Kg-dry	20	1/20/2020 18:21
Naphthalene	1,600		41	93	µg/Kg-dry	20	1/20/2020 18:21
Pyrene	U		15	93	µg/Kg-dry	20	1/20/2020 18:21
Surr: 2-Fluorobiphenyl	102			20-140	%REC	20	1/20/2020 18:21
Surr: 4-Terphenyl-d14	106			22-172	%REC	20	1/20/2020 18:21
Surr: Nitrobenzene-d5	80.5			28-140	%REC	20	1/20/2020 18:21
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0063	0.037	mg/Kg	1	1/16/2020 12:34
Ethylbenzene	0.47		0.0078	0.037	mg/Kg	1	1/16/2020 12:34
m,p-Xylene	9.6		0.049	0.074	mg/Kg	1	1/16/2020 12:34
o-Xylene	1.8		0.014	0.037	mg/Kg	1	1/16/2020 12:34
Toluene	0.78		0.010	0.037	mg/Kg	1	1/16/2020 12:34
Xylenes, Total	11		0.049	0.11	mg/Kg	1	1/16/2020 12:34
Surr: 1,2-Dichloroethane-d4	91.6			70-130	%REC	1	1/16/2020 12:34
Surr: 4-Bromofluorobenzene	109			70-130	%REC	1	1/16/2020 12:34
Surr: Dibromofluoromethane	94.6			70-130	%REC	1	1/16/2020 12:34
Surr: Toluene-d8	100			70-130	%REC	1	1/16/2020 12:34
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	24		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	13		0.35	1.1	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		0.97	1.1	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	12		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.88		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.2		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #2
Collection Date: 1/13/2020 10:40 AM

Work Order: 20010911
Lab ID: 20010911-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	100		3.5	6.2	mg/Kg-dry	1	1/16/2020 17:18
Surr: 4-Terphenyl-d14	49.3			33-111	%REC	1	1/16/2020 17:18
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	90		3.4	8.0	mg/Kg	1	1/16/2020 18:41
Surr: Toluene-d8	99.8			71-123	%REC	1	1/16/2020 18:41
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.015	J	0.0022	0.022	mg/Kg-dry	1	1/17/2020 11:23
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	5.0		0.055	0.46	mg/Kg-dry	1	1/16/2020 22:23
Barium	250		4.2	4.6	mg/Kg-dry	10	1/17/2020 14:42
Boron	13		1.7	1.8	mg/Kg-dry	1	1/16/2020 22:23
Cadmium	0.16	J	0.028	0.18	mg/Kg-dry	1	1/16/2020 22:23
Chromium	21		0.20	0.46	mg/Kg-dry	1	1/16/2020 22:23
Copper	10		0.46	0.46	mg/Kg-dry	1	1/16/2020 22:23
Lead	11		0.22	0.46	mg/Kg-dry	1	1/16/2020 22:23
Nickel	14		0.24	0.46	mg/Kg-dry	1	1/16/2020 22:23
Selenium	0.91		0.42	0.46	mg/Kg-dry	1	1/16/2020 22:23
Silver	U		0.061	0.46	mg/Kg-dry	1	1/16/2020 22:23
Zinc	47		9.0	9.2	mg/Kg-dry	10	1/17/2020 14:42
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	27		2.5	5.0	mg/L	10	1/17/2020 15:08
Magnesium	4.6		0.50	2.0	mg/L	10	1/17/2020 15:08
Sodium	180		0.45	2.0	mg/L	10	1/17/2020 15:08
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	8.3		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		1.0	5.2	µg/Kg-dry	1	1/17/2020 22:22
Anthracene	U		1.8	5.2	µg/Kg-dry	1	1/17/2020 22:22
Benzo(a)anthracene	U		2.1	5.2	µg/Kg-dry	1	1/17/2020 22:22
Benzo(a)pyrene	U		1.4	5.2	µg/Kg-dry	1	1/17/2020 22:22
Benzo(b)fluoranthene	U		1.2	5.2	µg/Kg-dry	1	1/17/2020 22:22
Benzo(k)fluoranthene	U		1.5	5.2	µg/Kg-dry	1	1/17/2020 22:22
Chrysene	U		1.1	5.2	µg/Kg-dry	1	1/17/2020 22:22
Dibenzo(a,h)anthracene	U		1.2	5.2	µg/Kg-dry	1	1/17/2020 22:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #2
Collection Date: 1/13/2020 10:40 AM

Work Order: 20010911
Lab ID: 20010911-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.96	5.2	µg/Kg-dry	1	1/17/2020 22:22
Fluorene	25		1.7	5.2	µg/Kg-dry	1	1/17/2020 22:22
Indeno(1,2,3-cd)pyrene	U		1.9	5.2	µg/Kg-dry	1	1/17/2020 22:22
Naphthalene	230		2.3	5.2	µg/Kg-dry	1	1/17/2020 22:22
Pyrene	U		0.86	5.2	µg/Kg-dry	1	1/17/2020 22:22
Surr: 2-Fluorobiphenyl	85.8			20-140	%REC	1	1/17/2020 22:22
Surr: 4-Terphenyl-d14	67.4			22-172	%REC	1	1/17/2020 22:22
Surr: Nitrobenzene-d5	90.2			28-140	%REC	1	1/17/2020 22:22
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0082	0.048	mg/Kg	1	1/16/2020 12:51
Ethylbenzene	0.062		0.010	0.048	mg/Kg	1	1/16/2020 12:51
m,p-Xylene	2.1		0.064	0.096	mg/Kg	1	1/16/2020 12:51
o-Xylene	0.51		0.019	0.048	mg/Kg	1	1/16/2020 12:51
Toluene	0.18		0.013	0.048	mg/Kg	1	1/16/2020 12:51
Xylenes, Total	2.6		0.064	0.14	mg/Kg	1	1/16/2020 12:51
Surr: 1,2-Dichloroethane-d4	89.1			70-130	%REC	1	1/16/2020 12:51
Surr: 4-Bromofluorobenzene	101			70-130	%REC	1	1/16/2020 12:51
Surr: Dibromofluoromethane	90.5			70-130	%REC	1	1/16/2020 12:51
Surr: Toluene-d8	97.4			70-130	%REC	1	1/16/2020 12:51
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	24		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	21		0.40	1.3	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		1.1	1.3	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	22		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.70		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.1		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #3
Collection Date: 1/13/2020 10:40 AM

Work Order: 20010911
Lab ID: 20010911-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	36		3.2	5.7	mg/Kg-dry	1	1/16/2020 17:45
Surr: 4-Terphenyl-d14	47.3			33-111	%REC	1	1/16/2020 17:45
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	U		2.9	6.8	mg/Kg	1	1/16/2020 19:07
Surr: Toluene-d8	170	S		71-123	%REC	1	1/16/2020 19:07
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.014	J	0.0019	0.019	mg/Kg-dry	1	1/17/2020 11:25
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	8.0		0.048	0.40	mg/Kg-dry	1	1/16/2020 22:25
Barium	280		3.7	4.0	mg/Kg-dry	10	1/17/2020 14:44
Boron	6.1		1.5	1.6	mg/Kg-dry	1	1/16/2020 22:25
Cadmium	0.18		0.024	0.16	mg/Kg-dry	1	1/16/2020 22:25
Chromium	18		0.18	0.40	mg/Kg-dry	1	1/16/2020 22:25
Copper	11		0.40	0.40	mg/Kg-dry	1	1/16/2020 22:25
Lead	9.5		0.19	0.40	mg/Kg-dry	1	1/16/2020 22:25
Nickel	21		2.1	4.0	mg/Kg-dry	10	1/17/2020 14:44
Selenium	0.61		0.37	0.40	mg/Kg-dry	1	1/16/2020 22:25
Silver	U		0.053	0.40	mg/Kg-dry	1	1/16/2020 22:25
Zinc	38		7.8	8.0	mg/Kg-dry	10	1/17/2020 14:44
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	18		2.5	5.0	mg/L	10	1/17/2020 15:10
Magnesium	4.2		0.50	2.0	mg/L	10	1/17/2020 15:10
Sodium	120		0.45	2.0	mg/L	10	1/17/2020 15:10
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	6.6		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		0.93	4.8	µg/Kg-dry	1	1/17/2020 22:38
Anthracene	U		1.6	4.8	µg/Kg-dry	1	1/17/2020 22:38
Benzo(a)anthracene	U		2.0	4.8	µg/Kg-dry	1	1/17/2020 22:38
Benzo(a)pyrene	U		1.3	4.8	µg/Kg-dry	1	1/17/2020 22:38
Benzo(b)fluoranthene	U		1.2	4.8	µg/Kg-dry	1	1/17/2020 22:38
Benzo(k)fluoranthene	U		1.4	4.8	µg/Kg-dry	1	1/17/2020 22:38
Chrysene	U		0.99	4.8	µg/Kg-dry	1	1/17/2020 22:38
Dibenzo(a,h)anthracene	U		1.1	4.8	µg/Kg-dry	1	1/17/2020 22:38

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #3
Collection Date: 1/13/2020 10:40 AM

Work Order: 20010911
Lab ID: 20010911-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.89	4.8	µg/Kg-dry	1	1/17/2020 22:38
Fluorene	U		1.6	4.8	µg/Kg-dry	1	1/17/2020 22:38
Indeno(1,2,3-cd)pyrene	U		1.7	4.8	µg/Kg-dry	1	1/17/2020 22:38
Naphthalene	4.9		2.1	4.8	µg/Kg-dry	1	1/17/2020 22:38
Pyrene	U		0.79	4.8	µg/Kg-dry	1	1/17/2020 22:38
Surr: 2-Fluorobiphenyl	89.7			20-140	%REC	1	1/17/2020 22:38
Surr: 4-Terphenyl-d14	70.5			22-172	%REC	1	1/17/2020 22:38
Surr: Nitrobenzene-d5	95.4			28-140	%REC	1	1/17/2020 22:38
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0070	0.041	mg/Kg	1	1/16/2020 01:08
Ethylbenzene	U		0.0087	0.041	mg/Kg	1	1/16/2020 01:08
m,p-Xylene	U		0.055	0.082	mg/Kg	1	1/16/2020 01:08
o-Xylene	U		0.016	0.041	mg/Kg	1	1/16/2020 01:08
Toluene	U		0.011	0.041	mg/Kg	1	1/16/2020 01:08
Xylenes, Total	U		0.055	0.12	mg/Kg	1	1/16/2020 01:08
Surr: 1,2-Dichloroethane-d4	90.9			70-130	%REC	1	1/16/2020 01:08
Surr: 4-Bromofluorobenzene	97.0			70-130	%REC	1	1/16/2020 01:08
Surr: Dibromofluoromethane	90.2			70-130	%REC	1	1/16/2020 01:08
Surr: Toluene-d8	97.0			70-130	%REC	1	1/16/2020 01:08
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	19		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	18		0.36	1.2	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		0.98	1.2	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	13		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.82		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.1		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #4
Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911
Lab ID: 20010911-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	380		3.2	5.6	mg/Kg-dry	1	1/16/2020 18:14
Surr: 4-Terphenyl-d14	56.5			33-111	%REC	1	1/16/2020 18:14
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	840		2.8	6.7	mg/Kg	1	1/16/2020 19:32
Surr: Toluene-d8	124	S		71-123	%REC	1	1/16/2020 19:32
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.016	J	0.0020	0.020	mg/Kg-dry	1	1/17/2020 11:27
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	3.2		0.046	0.39	mg/Kg-dry	1	1/16/2020 22:27
Barium	120		0.36	0.39	mg/Kg-dry	1	1/16/2020 22:27
Boron	3.9		1.5	1.5	mg/Kg-dry	1	1/16/2020 22:27
Cadmium	0.12	J	0.023	0.15	mg/Kg-dry	1	1/16/2020 22:27
Chromium	9.1		0.17	0.39	mg/Kg-dry	1	1/16/2020 22:27
Copper	5.5		0.39	0.39	mg/Kg-dry	1	1/16/2020 22:27
Lead	5.7		0.19	0.39	mg/Kg-dry	1	1/16/2020 22:27
Nickel	12		0.20	0.39	mg/Kg-dry	1	1/16/2020 22:27
Selenium	0.38	J	0.36	0.39	mg/Kg-dry	1	1/16/2020 22:27
Silver	U		0.051	0.39	mg/Kg-dry	1	1/16/2020 22:27
Zinc	30		7.6	7.7	mg/Kg-dry	10	1/17/2020 14:46
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	24		2.5	5.0	mg/L	10	1/17/2020 15:11
Magnesium	3.4		0.50	2.0	mg/L	10	1/17/2020 15:11
Sodium	160		0.45	2.0	mg/L	10	1/17/2020 15:11
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	7.9		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		0.89	4.6	µg/Kg-dry	1	1/17/2020 22:53
Anthracene	U		1.5	4.6	µg/Kg-dry	1	1/17/2020 22:53
Benzo(a)anthracene	U		1.9	4.6	µg/Kg-dry	1	1/17/2020 22:53
Benzo(a)pyrene	U		1.2	4.6	µg/Kg-dry	1	1/17/2020 22:53
Benzo(b)fluoranthene	U		1.1	4.6	µg/Kg-dry	1	1/17/2020 22:53
Benzo(k)fluoranthene	U		1.3	4.6	µg/Kg-dry	1	1/17/2020 22:53
Chrysene	U		0.94	4.6	µg/Kg-dry	1	1/17/2020 22:53
Dibenzo(a,h)anthracene	U		1.1	4.6	µg/Kg-dry	1	1/17/2020 22:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #4
Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911
Lab ID: 20010911-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.84	4.6	µg/Kg-dry	1	1/17/2020 22:53
Fluorene	210		1.5	4.6	µg/Kg-dry	1	1/17/2020 22:53
Indeno(1,2,3-cd)pyrene	U		1.6	4.6	µg/Kg-dry	1	1/17/2020 22:53
Naphthalene	1,000		40	91	µg/Kg-dry	20	1/20/2020 18:36
Pyrene	5.7		0.76	4.6	µg/Kg-dry	1	1/17/2020 22:53
Surr: 2-Fluorobiphenyl	87.3			20-140	%REC	1	1/17/2020 22:53
Surr: 4-Terphenyl-d14	66.5			22-172	%REC	1	1/17/2020 22:53
Surr: Nitrobenzene-d5	80.4			28-140	%REC	20	1/20/2020 18:36
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0068	0.040	mg/Kg	1	1/16/2020 01:25
Ethylbenzene	0.30		0.0084	0.040	mg/Kg	1	1/16/2020 01:25
m,p-Xylene	27		0.21	0.32	mg/Kg	4	1/16/2020 20:08
o-Xylene	3.7		0.015	0.040	mg/Kg	1	1/16/2020 01:25
Toluene	0.64		0.011	0.040	mg/Kg	1	1/16/2020 01:25
Xylenes, Total	34		0.21	0.48	mg/Kg	4	1/16/2020 20:08
Surr: 1,2-Dichloroethane-d4	90.4			70-130	%REC	1	1/16/2020 01:25
Surr: 1,2-Dichloroethane-d4	99.1			70-130	%REC	4	1/16/2020 20:08
Surr: 4-Bromofluorobenzene	102			70-130	%REC	1	1/16/2020 01:25
Surr: 4-Bromofluorobenzene	104			70-130	%REC	4	1/16/2020 20:08
Surr: Dibromofluoromethane	91.1			70-130	%REC	1	1/16/2020 01:25
Surr: Dibromofluoromethane	93.7			70-130	%REC	4	1/16/2020 20:08
Surr: Toluene-d8	105			70-130	%REC	1	1/16/2020 01:25
Surr: Toluene-d8	102			70-130	%REC	4	1/16/2020 20:08
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	22		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	9.1		0.35	1.1	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		0.97	1.1	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	12		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.76		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.1		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #5
Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911
Lab ID: 20010911-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	74		3.2	5.7	mg/Kg-dry	1	1/16/2020 18:41
Surr: 4-Terphenyl-d14	51.7			33-111	%REC	1	1/16/2020 18:41
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	64		3.0	7.3	mg/Kg	1	1/16/2020 19:57
Surr: Toluene-d8	89.9			71-123	%REC	1	1/16/2020 19:57
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.012	J	0.0019	0.019	mg/Kg-dry	1	1/17/2020 11:34
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	5.4		0.054	0.45	mg/Kg-dry	1	1/16/2020 22:29
Barium	220		4.1	4.5	mg/Kg-dry	10	1/17/2020 14:47
Boron	8.1		1.7	1.8	mg/Kg-dry	1	1/16/2020 22:29
Cadmium	0.12	J	0.027	0.18	mg/Kg-dry	1	1/16/2020 22:29
Chromium	20		0.20	0.45	mg/Kg-dry	1	1/16/2020 22:29
Copper	8.7		0.45	0.45	mg/Kg-dry	1	1/16/2020 22:29
Lead	10		0.22	0.45	mg/Kg-dry	1	1/16/2020 22:29
Nickel	14		0.23	0.45	mg/Kg-dry	1	1/16/2020 22:29
Selenium	0.60		0.41	0.45	mg/Kg-dry	1	1/16/2020 22:29
Silver	U		0.059	0.45	mg/Kg-dry	1	1/16/2020 22:29
Zinc	41		8.8	9.0	mg/Kg-dry	10	1/17/2020 14:47
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	22		2.5	5.0	mg/L	10	1/17/2020 15:16
Magnesium	3.6		0.50	2.0	mg/L	10	1/17/2020 15:16
Sodium	130		0.45	2.0	mg/L	10	1/17/2020 15:16
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	6.6		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		0.94	4.8	µg/Kg-dry	1	1/17/2020 23:08
Anthracene	U		1.6	4.8	µg/Kg-dry	1	1/17/2020 23:08
Benzo(a)anthracene	U		2.0	4.8	µg/Kg-dry	1	1/17/2020 23:08
Benzo(a)pyrene	U		1.3	4.8	µg/Kg-dry	1	1/17/2020 23:08
Benzo(b)fluoranthene	U		1.2	4.8	µg/Kg-dry	1	1/17/2020 23:08
Benzo(k)fluoranthene	U		1.4	4.8	µg/Kg-dry	1	1/17/2020 23:08
Chrysene	U		0.99	4.8	µg/Kg-dry	1	1/17/2020 23:08
Dibenzo(a,h)anthracene	U		1.1	4.8	µg/Kg-dry	1	1/17/2020 23:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy

Project: YCF 2-35-1

Sample ID: Inside Secondary Containment #5

Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911

Lab ID: 20010911-05

Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.89	4.8	µg/Kg-dry	1	1/17/2020 23:08
Fluorene	29		1.6	4.8	µg/Kg-dry	1	1/17/2020 23:08
Indeno(1,2,3-cd)pyrene	U		1.7	4.8	µg/Kg-dry	1	1/17/2020 23:08
Naphthalene	150		2.1	4.8	µg/Kg-dry	1	1/17/2020 23:08
Pyrene	U		0.80	4.8	µg/Kg-dry	1	1/17/2020 23:08
Surr: 2-Fluorobiphenyl	84.9			20-140	%REC	1	1/17/2020 23:08
Surr: 4-Terphenyl-d14	68.0			22-172	%REC	1	1/17/2020 23:08
Surr: Nitrobenzene-d5	80.5			28-140	%REC	1	1/17/2020 23:08
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0075	0.044	mg/Kg	1	1/16/2020 01:42
Ethylbenzene	U		0.0092	0.044	mg/Kg	1	1/16/2020 01:42
m,p-Xylene	1.1		0.058	0.087	mg/Kg	1	1/16/2020 01:42
o-Xylene	0.28		0.017	0.044	mg/Kg	1	1/16/2020 01:42
Toluene	U		0.012	0.044	mg/Kg	1	1/16/2020 01:42
Xylenes, Total	1.4		0.058	0.13	mg/Kg	1	1/16/2020 01:42
Surr: 1,2-Dichloroethane-d4	90.2			70-130	%REC	1	1/16/2020 01:42
Surr: 4-Bromofluorobenzene	101			70-130	%REC	1	1/16/2020 01:42
Surr: Dibromofluoromethane	92.8			70-130	%REC	1	1/16/2020 01:42
Surr: Toluene-d8	93.2			70-130	%REC	1	1/16/2020 01:42
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	20		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	20		0.37	1.2	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		1.0	1.2	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	16		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.73		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.1		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #6
Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911
Lab ID: 20010911-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3550 / 1/16/20		Analyst: BCM
DRO (C10-C28)	90		3.4	5.9	mg/Kg-dry	1	1/16/2020 19:09
Surr: 4-Terphenyl-d14	48.5			33-111	%REC	1	1/16/2020 19:09
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 1/15/20		Analyst: BCM
GRO (C6-C10)	41		3.3	8.0	mg/Kg	1	1/16/2020 20:23
Surr: Toluene-d8	88.1			71-123	%REC	1	1/16/2020 20:23
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 1/17/20		Analyst: RSH
Mercury	0.013	J	0.0021	0.021	mg/Kg-dry	1	1/17/2020 11:36
METALS BY ICP-MS							
			Method: SW6020A		Prep: SW3050B / 1/16/20		Analyst: STP
Arsenic	4.8		0.051	0.42	mg/Kg-dry	1	1/16/2020 22:36
Barium	190		3.9	4.2	mg/Kg-dry	10	1/17/2020 14:49
Boron	6.7		1.6	1.7	mg/Kg-dry	1	1/16/2020 22:36
Cadmium	0.12	J	0.025	0.17	mg/Kg-dry	1	1/16/2020 22:36
Chromium	14		0.19	0.42	mg/Kg-dry	1	1/16/2020 22:36
Copper	8.1		0.42	0.42	mg/Kg-dry	1	1/16/2020 22:36
Lead	8.3		0.20	0.42	mg/Kg-dry	1	1/16/2020 22:36
Nickel	14		0.22	0.42	mg/Kg-dry	1	1/16/2020 22:36
Selenium	0.51		0.39	0.42	mg/Kg-dry	1	1/16/2020 22:36
Silver	U		0.056	0.42	mg/Kg-dry	1	1/16/2020 22:36
Zinc	37		8.3	8.4	mg/Kg-dry	10	1/17/2020 14:49
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Calcium	40		2.5	5.0	mg/L	10	1/17/2020 15:18
Magnesium	8.6		0.50	2.0	mg/L	10	1/17/2020 15:18
Sodium	140		0.45	2.0	mg/L	10	1/17/2020 15:18
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: STP
Sodium Adsorption Ratio	5.2		0.010	0.010	none	1	1/17/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW846 8270D		Prep: SW3546 / 1/16/20		Analyst: EEW
Acenaphthene	U		0.95	4.9	µg/Kg-dry	1	1/17/2020 23:24
Anthracene	U		1.7	4.9	µg/Kg-dry	1	1/17/2020 23:24
Benzo(a)anthracene	U		2.0	4.9	µg/Kg-dry	1	1/17/2020 23:24
Benzo(a)pyrene	U		1.3	4.9	µg/Kg-dry	1	1/17/2020 23:24
Benzo(b)fluoranthene	U		1.2	4.9	µg/Kg-dry	1	1/17/2020 23:24
Benzo(k)fluoranthene	U		1.4	4.9	µg/Kg-dry	1	1/17/2020 23:24
Chrysene	U		1.0	4.9	µg/Kg-dry	1	1/17/2020 23:24
Dibenzo(a,h)anthracene	U		1.2	4.9	µg/Kg-dry	1	1/17/2020 23:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 21-Jan-20

Client: XTO Energy
Project: YCF 2-35-1
Sample ID: Inside Secondary Containment #6
Collection Date: 1/13/2020 11:00 AM

Work Order: 20010911
Lab ID: 20010911-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.91	4.9	µg/Kg-dry	1	1/17/2020 23:24
Fluorene	33		1.6	4.9	µg/Kg-dry	1	1/17/2020 23:24
Indeno(1,2,3-cd)pyrene	U		1.8	4.9	µg/Kg-dry	1	1/17/2020 23:24
Naphthalene	160		2.1	4.9	µg/Kg-dry	1	1/17/2020 23:24
Pyrene	U		0.81	4.9	µg/Kg-dry	1	1/17/2020 23:24
Surr: 2-Fluorobiphenyl	86.9			20-140	%REC	1	1/17/2020 23:24
Surr: 4-Terphenyl-d14	73.8			22-172	%REC	1	1/17/2020 23:24
Surr: Nitrobenzene-d5	89.2			28-140	%REC	1	1/17/2020 23:24
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 1/15/20		Analyst: MF
Benzene	U		0.0082	0.048	mg/Kg	1	1/16/2020 01:59
Ethylbenzene	0.037	J	0.010	0.048	mg/Kg	1	1/16/2020 01:59
m,p-Xylene	1.1		0.064	0.096	mg/Kg	1	1/16/2020 01:59
o-Xylene	0.29		0.018	0.048	mg/Kg	1	1/16/2020 01:59
Toluene	0.031	J	0.013	0.048	mg/Kg	1	1/16/2020 01:59
Xylenes, Total	1.4		0.064	0.14	mg/Kg	1	1/16/2020 01:59
Surr: 1,2-Dichloroethane-d4	89.6			70-130	%REC	1	1/16/2020 01:59
Surr: 4-Bromofluorobenzene	102			70-130	%REC	1	1/16/2020 01:59
Surr: Dibromofluoromethane	92.6			70-130	%REC	1	1/16/2020 01:59
Surr: Toluene-d8	93.8			70-130	%REC	1	1/16/2020 01:59
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 1/17/20		Analyst: QTN
Electrical Conductivity @ Saturation	24		0.011	0.10	mmhos/cm @25°	20	1/17/2020 09:06
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JZB
Chromium, Trivalent	14		0.39	1.3	mg/Kg-dry	1	1/17/2020 15:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 1/17/20		Analyst: RZM
Chromium, Hexavalent	U		1.1	1.3	mg/Kg-dry	1	1/17/2020 14:15
MOISTURE			Method: SW3550C				Analyst: KTP
Moisture	20		0.10	0.10	% of sample	1	1/16/2020 11:14
PH			Method: SW9045D		Prep: EXTRACT / 1/15/20		Analyst: DNW
pH	8.74		0.10	0.100	s.u.	1	1/15/2020 15:03
Temperature	22.1		0.10	0.100	°C	1	1/15/2020 15:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150457** Instrument ID **GC8** Method: **SW8015D**

MBLK Sample ID: DBLKS1-150457-150457					Units: mg/Kg		Analysis Date: 1/15/2020 02:50 PM				
Client ID:		Run ID: GC8_200115A			SeqNo: 6192676		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	2.8	5.0								
Surr: 4-Terphenyl-d14	1.725	0	0	3.33	0	51.8	33-111	0			

LCS Sample ID: dlcss1-150457-150457					Units: mg/Kg		Analysis Date: 1/15/2020 03:19 PM				
Client ID:		Run ID: GC8_200115A			SeqNo: 6192678		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	338.2	2.8	5.0	333	0	102	80-121	0			
Surr: 4-Terphenyl-d14	2.583	0	0	3.33	0	77.6	33-111	0			

MS Sample ID: 20010854-01A MS					Units: mg/Kg		Analysis Date: 1/15/2020 03:48 PM				
Client ID:		Run ID: GC8_200115A			SeqNo: 6192679		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	328	2.8	4.9	326.5	15.11	95.8	80-121	0			
Surr: 4-Terphenyl-d14	2.565	0	0	3.265	0	78.6	33-111	0			

MSD Sample ID: 20010854-01A MSD					Units: mg/Kg		Analysis Date: 1/15/2020 04:17 PM				
Client ID:		Run ID: GC8_200115A			SeqNo: 6192680		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	350	2.8	5.0	332.1	15.11	101	80-121	328	6.49	30	
Surr: 4-Terphenyl-d14	2.47	0	0	3.321	0	74.4	33-111	2.565	3.76	30	

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150480** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-150480-150480				Units: µg/Kg-dry			Analysis Date: 1/16/2020 05:50 PM			
Client ID:		Run ID: GC9_200116A				SeqNo: 6194475			Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	U	2100	5,000									
<i>Surr: Toluene-d8</i>	4286	0	0	5000	0	85.7	71-123	0				

LCS		Sample ID: LCS-150480-150480				Units: µg/Kg-dry			Analysis Date: 1/16/2020 04:33 PM			
Client ID:		Run ID: GC9_200116A				SeqNo: 6194474			Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	431300	2100	5,000	5E+05	0	86.3	71-123	0				
<i>Surr: Toluene-d8</i>	4976	0	0	5000	0	99.5	71-123	0				

MS		Sample ID: 20010911-02A MS				Units: µg/Kg-dry			Analysis Date: 1/16/2020 09:14 PM			
Client ID: Inside Secondary Containment #2		Run ID: GC9_200116A				SeqNo: 6194483			Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	1012000	3300	7,800	8E+05	90080	118	71-123	0				
<i>Surr: Toluene-d8</i>	8896	0	0	7821	0	114	71-123	0				

MSD		Sample ID: 20010911-02A MSD				Units: µg/Kg-dry			Analysis Date: 1/16/2020 09:39 PM			
Client ID: Inside Secondary Containment #2		Run ID: GC9_200116A				SeqNo: 6194484			Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
GRO (C6-C10)	960400	2800	6,800	7E+05	90080	128	71-123	1012000	5.25	30	S	
<i>Surr: Toluene-d8</i>	7776	0	0	6806	0	114	71-123	8896	13.4	30		

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150578** Instrument ID **HG4** Method: **SW7471B**

MBLK		Sample ID: MBLK-150578-150578				Units: mg/Kg		Analysis Date: 1/17/2020 11:16 AM			
Client ID:		Run ID: HG4_200117A				SeqNo: 6195580		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.002	0.020								

LCS		Sample ID: LCS-150578-150578				Units: mg/Kg		Analysis Date: 1/17/2020 11:19 AM			
Client ID:		Run ID: HG4_200117A				SeqNo: 6195581		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1854	0.002	0.020	0.167	0	111	80-120	0			

MS		Sample ID: 20010911-04AMS				Units: mg/Kg		Analysis Date: 1/17/2020 11:29 AM			
Client ID: Inside Secondary Containment #4		Run ID: HG4_200117A				SeqNo: 6195586		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1671	0.0017	0.017	0.146	0.01428	105	75-125	0			

MSD		Sample ID: 20010911-04AMSD				Units: mg/Kg		Analysis Date: 1/17/2020 11:32 AM			
Client ID: Inside Secondary Containment #4		Run ID: HG4_200117A				SeqNo: 6195587		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1738	0.0018	0.018	0.148	0.01428	108	75-125	0.1671	3.95	35	

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150549** Instrument ID **ICPMS3** Method: **SW6020A**

MBLK		Sample ID: MBLK-150549-150549				Units: mg/Kg		Analysis Date: 1/16/2020 10:07 PM			
Client ID:		Run ID: ICPMS3_200116B				SeqNo: 6195020		Prep Date: 1/16/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.03	0.25								
Barium	U	0.23	0.25								
Boron	U	0.94	1.0								
Cadmium	U	0.015	0.10								
Chromium	U	0.11	0.25								
Copper	U	0.25	0.25								
Lead	U	0.12	0.25								
Nickel	U	0.13	0.25								
Selenium	0.2443	0.23	0.25								J
Silver	U	0.033	0.25								
Zinc	U	0.49	0.50								

LCS		Sample ID: LCS-150549-150549				Units: mg/Kg		Analysis Date: 1/16/2020 10:08 PM			
Client ID:		Run ID: ICPMS3_200116B				SeqNo: 6195021		Prep Date: 1/16/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.104	0.03	0.25	5	0	102	80-120	0			
Barium	5.244	0.23	0.25	5	0	105	80-120	0			
Boron	24.56	0.94	1.0	25	0	98.3	80-120	0			
Cadmium	5.041	0.015	0.10	5	0	101	80-120	0			
Chromium	5.153	0.11	0.25	5	0	103	80-120	0			
Copper	4.92	0.25	0.25	5	0	98.4	80-120	0			
Lead	5.236	0.12	0.25	5	0	105	80-120	0			
Nickel	4.959	0.13	0.25	5	0	99.2	80-120	0			
Selenium	5.097	0.23	0.25	5	0	102	80-120	0			
Silver	4.955	0.033	0.25	5	0	99.1	80-120	0			
Zinc	5.087	0.49	0.50	5	0	102	80-120	0			

MS		Sample ID: 20010911-06AMS				Units: mg/Kg		Analysis Date: 1/16/2020 10:38 PM			
Client ID: Inside Secondary Containment #6		Run ID: ICPMS3_200116B				SeqNo: 6195037		Prep Date: 1/16/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.894	0.038	0.32	6.313	3.843	80	75-125	0			
Boron	36.15	1.2	1.3	31.57	5.341	97.6	75-125	0			
Cadmium	5.015	0.019	0.13	6.313	0.09421	77.9	75-125	0			
Chromium	17.24	0.14	0.32	6.313	11.15	96.6	75-125	0			
Copper	10.22	0.32	0.32	6.313	6.47	59.3	75-125	0			S
Lead	12.71	0.15	0.32	6.313	6.618	96.5	75-125	0			
Nickel	14.62	0.16	0.32	6.313	11.02	56.9	75-125	0			S
Selenium	5.728	0.29	0.32	6.313	0.4088	84.3	75-125	0			
Silver	4.746	0.042	0.32	6.313	0.02335	74.8	75-125	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: 150549 Instrument ID ICPMS3 Method: SW6020A

MS					Sample ID: 20010911-06AMS			Units: mg/Kg		Analysis Date: 1/17/2020 02:51 PM		
Client ID: Inside Secondary Containment #6					Run ID: ICPMS3_200117B			SeqNo: 6196399		Prep Date: 1/16/2020		DF: 10
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Barium	140.2	2.9	3.2	6.313	148.8	-136	75-125	0			SO	
Zinc	33.51	6.2	6.3	6.313	29.82	58.5	75-125	0			SO	

MSD					Sample ID: 20010911-06AMSD			Units: mg/Kg		Analysis Date: 1/16/2020 10:40 PM		
Client ID: Inside Secondary Containment #6				Run ID: ICPMS3_200116B			SeqNo: 6195038		Prep Date: 1/16/2020		DF: 1	
					SPK Ref	Control		RPD Ref	RPD			
Analyte	Result	MDL	PQL	SPK Val	Value	%REC	Limit	Value	%RPD	Limit	Qual	
Arsenic	9.119	0.04	0.33	6.596	3.843	80	75-125	8.894	2.5	20		
Boron	37.64	1.2	1.3	32.98	5.341	97.9	75-125	36.15	4.05	20		
Cadmium	5.153	0.02	0.13	6.596	0.09421	76.7	75-125	5.015	2.71	20		
Chromium	19.2	0.15	0.33	6.596	11.15	122	75-125	17.24	10.7	20		
Copper	11.53	0.33	0.33	6.596	6.47	76.7	75-125	10.22	12.1	20		
Lead	12.81	0.16	0.33	6.596	6.618	93.9	75-125	12.71	0.799	20		
Nickel	16.34	0.17	0.33	6.596	11.02	80.5	75-125	14.62	11.1	20		
Selenium	5.799	0.3	0.33	6.596	0.4088	81.7	75-125	5.728	1.23	20		
Silver	4.904	0.044	0.33	6.596	0.02335	74	75-125	4.746	3.26	20	S	

MSD					Sample ID: 20010911-06AMSD				Units: mg/Kg			Analysis Date: 1/17/2020 02:56 PM				
Client ID: Inside Secondary Containment #6					Run ID: ICPMS3_200117B				SeqNo: 6196402			Prep Date: 1/16/2020		DF: 10		
												SPK Ref Value	Control Limit	RPD Ref Value	RPD Limit	
Analyte	Result	MDL	PQL	SPK Val												
Barium	151.4	3	3.3	6.596			148.8	38.5	75-125		140.2	7.62	20	SO		
Zinc	37.02	6.5	6.6	6.596			29.82	109	75-125		33.51	9.96	20	O		

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: 150570 Instrument ID ICPMS3 Method: SW6020A

DUP					Sample ID: 20010911-06ADUP			Units: mg/L		Analysis Date: 1/17/2020 03:20 PM		
Client ID: Inside Secondary Containment #6			Run ID: ICPMS3_200117A			SeqNo: 6196503		Prep Date: 1/17/2020		DF: 10		
					SPK Ref	Control		RPD Ref	RPD			
Analyte	Result	MDL	PQL	SPK Val	Value	%REC	Limit	Value	%RPD	Limit	Qual	
Calcium	37.73	2.5	5.0	0	0	0	0-0	40.36	6.73			
Magnesium	8.175	0.5	2.0	0	0	0	0-0	8.618	5.27			
Sodium	148.1	0.45	2.0	0	0	0	0-0	139	6.39			

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Batch ID: 150570 Instrument ID SAR Method: USDA H60 Metho

DUP					Sample ID: 20010911-06ADUP			Units: none		Analysis Date: 1/17/2020		
Client ID: Inside Secondary Containment #6				Run ID: SAR_200117A			SeqNo: 6196529		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Sodium Adsorption Ratio	5.7	0.01	0.010	0	0	0		5.18	9.56	50		

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150535** Instrument ID **SVMS6** Method: **SW846 8270D**

MBLK				Sample ID: SBLKS1-150535-150535				Units: µg/Kg			Analysis Date: 1/17/2020 08:33 PM		
Client ID:			Run ID: SVMS6_200117A				SeqNo: 6198249		Prep Date: 1/16/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Acenaphthene	U	0.81	4.2										
Anthracene	U	1.4	4.2										
Benzo(a)anthracene	U	1.7	4.2										
Benzo(a)pyrene	U	1.1	4.2										
Benzo(b)fluoranthene	U	1	4.2										
Benzo(k)fluoranthene	U	1.2	4.2										
Chrysene	U	0.86	4.2										
Dibenzo(a,h)anthracene	U	0.98	4.2										
Fluoranthene	U	0.77	4.2										
Fluorene	U	1.4	4.2										
Indeno(1,2,3-cd)pyrene	U	1.5	4.2										
Naphthalene	U	1.8	4.2										
Pyrene	U	0.69	4.2										
<i>Surr: 2-Fluorobiphenyl</i>	2874	0	0	3333	0	86.2	20-140	0					
<i>Surr: 4-Terphenyl-d14</i>	2120	0	0	3333	0	63.6	22-172	0					
<i>Surr: Nitrobenzene-d5</i>	2963	0	0	3333	0	88.9	28-140	0					

LCS		Sample ID: SLCSS1-150535-150535				Units: µg/Kg		Analysis Date: 1/17/2020 08:49 PM			
Client ID:		Run ID: SVMS6_200117A				SeqNo: 6198250		Prep Date: 1/16/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1096	0.81	4.2	1333	0	82.2	40-140	0			
Anthracene	1208	1.4	4.2	1333	0	90.6	40-140	0			
Benzo(a)anthracene	1234	1.7	4.2	1333	0	92.6	40-140	0			
Benzo(a)pyrene	1130	1.1	4.2	1333	0	84.8	40-140	0			
Benzo(b)fluoranthene	1159	1	4.2	1333	0	87	40-140	0			
Benzo(k)fluoranthene	1106	1.2	4.2	1333	0	83	40-140	0			
Chrysene	1059	0.86	4.2	1333	0	79.4	40-140	0			
Dibenzo(a,h)anthracene	1110	0.98	4.2	1333	0	83.3	40-140	0			
Fluoranthene	1185	0.77	4.2	1333	0	88.9	40-140	0			
Fluorene	1215	1.4	4.2	1333	0	91.1	40-140	0			
Indeno(1,2,3-cd)pyrene	1217	1.5	4.2	1333	0	91.3	40-140	0			
Naphthalene	1196	1.8	4.2	1333	0	89.8	40-140	0			
Pyrene	1087	0.69	4.2	1333	0	81.5	40-140	0			
Surr: 2-Fluorobiphenyl	3030	0	0	3333	0	90.9	20-140	0			
Surr: 4-Terphenyl-d14	2212	0	0	3333	0	66.4	22-172	0			
Surr: Nitrobenzene-d5	2928	0	0	3333	0	87.8	28-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: 150535 Instrument ID SVMS6 Method: SW846 8270D

MS					Sample ID: 20010911-01A MS			Units: µg/Kg		Analysis Date: 1/20/2020 05:50 PM		
Client ID: Inside Secondary Containment #1				Run ID: SVMS6_200120A			SeqNo: 6200286		Prep Date: 1/16/2020		DF: 20	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1393	16	82	1317	0	106	40-140	0				
Anthracene	1433	28	82	1317	0	109	40-140	0				
Benzo(a)anthracene	1463	34	82	1317	0	111	40-140	0				
Benzo(a)pyrene	1148	23	82	1317	0	87.1	40-140	0				
Benzo(b)fluoranthene	1123	20	82	1317	0	85.2	40-140	0				
Benzo(k)fluoranthene	1193	24	82	1317	0	90.6	40-140	0				
Chrysene	1319	17	82	1317	0	100	40-140	0				
Dibenzo(a,h)anthracene	1362	19	82	1317	0	103	40-140	0				
Fluoranthene	1365	15	82	1317	0	104	40-140	0				
Fluorene	1712	27	82	1317	229.9	113	40-140	0				
Indeno(1,2,3-cd)pyrene	1254	30	82	1317	0	95.2	40-140	0				
Naphthalene	3574	36	82	1317	1391	166	40-140	0			S	
Pyrene	1858	14	82	1317	0	141	40-140	0			S	
Surr: 2-Fluorobiphenyl	3629	0	0	3294	0	110	20-140	0				
Surr: 4-Terphenyl-d14	3793	0	0	3294	0	115	22-172	0				
Surr: Nitrobenzene-d5	3020	0	0	3294	0	91.7	28-140	0				

MSD					Sample ID: 20010911-01A MSD			Units: µg/Kg		Analysis Date: 1/20/2020 06:05 PM		
Client ID: Inside Secondary Containment #1			Run ID: SVMS6_200120A			SeqNo: 6200287		Prep Date: 1/16/2020		DF: 20		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1302	16	82	1317	0	98.8	40-140	1393	6.75	30		
Anthracene	1324	28	82	1317	0	101	40-140	1433	7.87	30		
Benzo(a)anthracene	1328	34	82	1317	0	101	40-140	1463	9.64	30		
Benzo(a)pyrene	1053	23	82	1317	0	79.9	40-140	1148	8.6	30		
Benzo(b)fluoranthene	1139	20	82	1317	0	86.4	40-140	1123	1.39	30		
Benzo(k)fluoranthene	1305	24	82	1317	0	99	40-140	1193	8.93	30		
Chrysene	1243	17	82	1317	0	94.3	40-140	1319	5.97	30		
Dibenzo(a,h)anthracene	1197	19	82	1317	0	90.9	40-140	1362	12.9	30		
Fluoranthene	1225	15	82	1317	0	93	40-140	1365	10.8	30		
Fluorene	1562	27	82	1317	229.9	101	40-140	1712	9.16	30		
Indeno(1,2,3-cd)pyrene	1105	30	82	1317	0	83.9	40-140	1254	12.6	30		
Naphthalene	2932	36	82	1317	1391	117	40-140	3574	19.8	30		
Pyrene	1662	14	82	1317	0	126	40-140	1858	11.2	30		
Surr: 2-Fluorobiphenyl	3451	0	0	3294	0	105	20-140	3629	5.03	0		
Surr: 4-Terphenyl-d14	3512	0	0	3294	0	107	22-172	3793	7.69	0		
Surr: Nitrobenzene-d5	3027	0	0	3294	0	91.9	28-140	3020	0.233	0		

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: 150479 Instrument ID VMS10 Method: SW8260C

MBLK Sample ID: MBLK-150479-150479					Units: µg/Kg-dry			Analysis Date: 1/15/2020 09:10 PM			
Client ID:		Run ID: VMS10_200115B			SeqNo: 6192979		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	5.1	30								
Ethylbenzene	U	6.3	30								
m,p-Xylene	U	40	60								
o-Xylene	U	12	30								
Toluene	U	8.2	30								
Xylenes, Total	U	40	90								
Surr: 1,2-Dichloroethane-d4	922.5	0	0	1000	0	92.2	70-130	0			
Surr: 4-Bromofluorobenzene	931.5	0	0	1000	0	93.2	70-130	0			
Surr: Dibromofluoromethane	954.5	0	0	1000	0	95.4	70-130	0			
Surr: Toluene-d8	941	0	0	1000	0	94.1	70-130	0			

LCS Sample ID: LCS-150479-150479					Units: µg/Kg-dry			Analysis Date: 1/15/2020 08:19 PM			
Client ID:		Run ID: VMS10_200115B			SeqNo: 6192978		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	969.5	5.1	30	1000	0	97	75-125	0			
Ethylbenzene	937	6.3	30	1000	0	93.7	75-125	0			
m,p-Xylene	1880	40	60	2000	0	94	80-125	0			
o-Xylene	971	12	30	1000	0	97.1	75-125	0			
Toluene	948.5	8.2	30	1000	0	94.8	70-125	0			
Xylenes, Total	2850	40	90	3000	0	95	75-125	0			
Surr: 1,2-Dichloroethane-d4	914.5	0	0	1000	0	91.4	70-130	0			
Surr: 4-Bromofluorobenzene	987	0	0	1000	0	98.7	70-130	0			
Surr: Dibromofluoromethane	974	0	0	1000	0	97.4	70-130	0			
Surr: Toluene-d8	972	0	0	1000	0	97.2	70-130	0			

MS Sample ID: 20010911-02A MS					Units: µg/Kg-dry			Analysis Date: 1/16/2020 03:40 AM			
Client ID: Inside Secondary Containment #2		Run ID: VMS10_200115B			SeqNo: 6192986		Prep Date: 1/15/2020		DF: 1		
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1438	8	47	1564	0	92	75-125	0			
Ethylbenzene	1459	9.9	47	1564	61.74	89.3	75-125	0			
m,p-Xylene	4864	63	94	3128	2131	87.4	80-125	0			
o-Xylene	1892	18	47	1564	506	88.6	75-125	0			
Toluene	1602	13	47	1564	175.6	91.2	70-125	0			
Xylenes, Total	6756	63	140	4692	2610	88.4	75-125	0			
Surr: 1,2-Dichloroethane-d4	1332	0	0	1564	0	85.2	70-130	0			
Surr: 4-Bromofluorobenzene	1598	0	0	1564	0	102	70-130	0			
Surr: Dibromofluoromethane	1483	0	0	1564	0	94.8	70-130	0			
Surr: Toluene-d8	1510	0	0	1564	0	96.6	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: 150479 Instrument ID VMS10 Method: SW8260C

MSD		Sample ID: 20010911-02A MSD				Units: µg/Kg-dry		Analysis Date: 1/16/2020 03:57 AM			
Client ID: Inside Secondary Containment #2		Run ID: VMS10_200115B				SeqNo: 6192987		Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1356	7	41	1361	0	99.6	75-125	1438	5.85	30	
Ethylbenzene	1414	8.6	41	1361	61.74	99.3	75-125	1459	3.13	30	
m,p-Xylene	5725	54	82	2722	2131	132	80-125	4864	16.2	30	S
o-Xylene	2048	16	41	1361	506	113	75-125	1892	7.93	30	
Toluene	1542	11	41	1361	175.6	100	70-125	1602	3.83	30	
Xylenes, Total	7773	54	120	4084	2610	126	75-125	6756	14	30	S
Surr: 1,2-Dichloroethane-d4	1179	0	0	1361	0	86.6	70-130	1332	12.2	30	
Surr: 4-Bromofluorobenzene	1403	0	0	1361	0	103	70-130	1598	12.9	30	
Surr: Dibromofluoromethane	1277	0	0	1361	0	93.8	70-130	1483	14.9	30	
Surr: Toluene-d8	1322	0	0	1361	0	97.1	70-130	1510	13.3	30	

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
Work Order: 20010911
Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150487** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-150487-150487				Units: s.u.		Analysis Date: 1/15/2020 03:03 PM			
Client ID:		Run ID: WETCHEM_200115N				SeqNo: 6191309		Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.01	0.1	0.10	4	0	100	90-110	0			

DUP		Sample ID: 20010911-01A DUP				Units: s.u.		Analysis Date: 1/15/2020 03:03 PM			
Client ID: Inside Secondary Containment #1		Run ID: WETCHEM_200115N				SeqNo: 6191311		Prep Date: 1/15/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.83	0.1	0.10	0	0	0	0-0	8.88	0.565	20	
Temperature	22.2	0.1	0.10	0	0	0		22.2	0		

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
Work Order: 20010911
Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150570** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 20010911-06A DUP				Units: mmhos/cm @25°		Analysis Date: 1/17/2020 09:06 AM			
Client ID: Inside Secondary Containment #6			Run ID: WETCHEM_200117C			SeqNo: 6194742		Prep Date: 1/17/2020		DF: 20	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Satu	24.24	0.011	0.10	0	0	0		23.9	1.41	50	

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **150620** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-150620-150620				Units: mg/Kg		Analysis Date: 1/17/2020 02:15 PM			
Client ID:		Run ID: WETCHEM_200117J				SeqNo: 6196128		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	0.85	1.0								

LCS		Sample ID: LCS-150620-150620				Units: mg/Kg		Analysis Date: 1/17/2020 02:15 PM			
Client ID:		Run ID: WETCHEM_200117J				SeqNo: 6196129		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.88	0.85	1.0	5	0	97.6	80-120	0			

MS		Sample ID: 20010911-01A MS				Units: mg/Kg		Analysis Date: 1/17/2020 02:15 PM			
Client ID: Inside Secondary Containment #1		Run ID: WETCHEM_200117J				SeqNo: 6196135		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	3.07	0.85	1.0	5	0.49	51.6	75-125	0			S

MS		Sample ID: 20010911-01A MSI				Units: mg/Kg		Analysis Date: 1/17/2020 02:15 PM			
Client ID: Inside Secondary Containment #1		Run ID: WETCHEM_200117J				SeqNo: 6196137		Prep Date: 1/17/2020		DF: 100	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2695	85	100	2784	0.49	96.8	75-125	0			

MSD		Sample ID: 20010911-01A MSD				Units: mg/Kg		Analysis Date: 1/17/2020 02:15 PM			
Client ID: Inside Secondary Containment #1		Run ID: WETCHEM_200117J				SeqNo: 6196136		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.81	0.85	1.0	5	0.49	46.4	75-125	3.07	8.84	20	S

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: XTO Energy
 Work Order: 20010911
 Project: YCF 2-35-1

QC BATCH REPORT

Batch ID: **R280789** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R280789				Units: % of sample			Analysis Date: 1/16/2020 11:14 AM		
Client ID:		Run ID: MOIST_200116B				SeqNo: 6195181			Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS		Sample ID: LCS-R280789				Units: % of sample			Analysis Date: 1/16/2020 11:14 AM		
Client ID:		Run ID: MOIST_200116B				SeqNo: 6195180			Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.1	0.10	100	0	100	98-102	0			

DUP		Sample ID: 20010953-01B DUP				Units: % of sample			Analysis Date: 1/16/2020 11:14 AM		
Client ID:		Run ID: MOIST_200116B				SeqNo: 6195176			Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	3.99	0.1	0.10	0	0	0	0-0	3.94	1.26	10	

DUP		Sample ID: 20010953-03B DUP				Units: % of sample			Analysis Date: 1/16/2020 11:14 AM		
Client ID:		Run ID: MOIST_200116B				SeqNo: 6195179			Prep Date:		DF: 1
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.77	0.1	0.10	0	0	0	0-0	4.92	3.1	10	

The following samples were analyzed in this batch:

20010911-01A	20010911-02A	20010911-03A
20010911-04A	20010911-05A	20010911-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Failure to complete all section of this form may delay analysis.

COC number (for client tracking)

2001091

Page 1 of 1

[illegible]

Note: (a) DW (Drinking water), SW (Surface water), GW (Ground water), WW (Waste water), S (Soil), SL (Sludge), SE (Sediment), OS (Other solid material)

ALS Technichem (HK) Pty Ltd Address: 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong Tel: +852 2610 1044 Fax: +852 2610 2021 Email: HongKong@alsglobal.com

SP2 3.4'c

Sample Receipt Checklist

Client Name: **XTO - CO**

Date/Time Received: **15-Jan-20 09:30**

Work Order: **20010911**

Received by: **DS**

Checklist completed by Diane Shaw 15-Jan-20
eSignature Date

Reviewed by: Chad Whelton 16-Jan-20
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.4/3.4 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>1/15/2020 1:11:42 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: