FORM 27 Rev 6/99

#7471

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

FOR OGCC USE ONLY

RECEIVED 10/19/2012

OGCC Employee
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☑ Other (describe): Partially Buried Tank Pit Closure

OGCC Operator Number: 100264
Name of Operator: XTO Energy Inc.
Address: PO Box 6501
City: Englewood State: CO Zip: 80155

Contact Name and Telephone:
Jessica Dooling
No: 970-675-4122
Fax: 970-675-4150

API Number: 05-103-10976
County: Rio Blanco
Facility Name:
Facility Number: Location ID # 288891
Well Name: Federal
Well Number: 2S-95-15-42BP
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SENE, 15, 2S, 95W, 6th PM Latitude: 39.877760 Longitude: -108.03485

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water and Condensate

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☑ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): non-cropland rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Rhone Laom

Potential receptors (water wells within 1/4 mi, surface waters, etc.): There are no potential receptors within 1/4 mile of the subject locaiton

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
☑ Soils	Arsenic, pH	laboratory analysis
☐ Vegetation		
☐ Groundwater		
☐ Surface Water		

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

An out of service partially buried tank was removed from the Federal 2S-95-15-42BP location. A sample was collected from the low point of the tank pit and analyzed for full Table 910-1. Results were below Table 910-1 standards with the exception of pH (9.37) and Arsenic (5.9 mg/kg).

Describe how source is to be removed:

NA

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Remaining elevated pH will be covered with 3 feet of clean fill per COGCC guidance. The Arsenic value of 5.9 mg/kg is within allowable background concentrations, please see associated Form 4 requesting consideration of background Arsenic concentrations.

OK

Submit Page 2 with Page 1

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State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax (303)894-2109

Page 2

REMEDIATION WORKPLAN (Cont.)

Tracking Number: _____
Name of Operator: XTO
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: location ID # 288891

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Available information indicates that the uppermost groundwater bearing zone is greater than 200 feet below the ground surface. Soil samples were collected for laboratory analysis below the pit to confirm no groundwater impact potential exists (see Table 1).

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

The pit will be backfilled with onsite clean fill material.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☑ N If yes, describe:

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

NA

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 9/4/2012	Date Site Investigation Completed: 10/17/2012	Date Remediation Plan Submitted: 10/19/2012
Remediation Start Date: pending approval	Anticipated Completion Date: pending approval	Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete

Print Name: Jessica Dooling Signed: _____

Title: Environmental Coordinator Date: 10/19/2012

OGCC Approved: _____ Title: FOR Chris Canfield EPS NW Region Date: 12/20/2012

Table 1
Location: Federal 2S-95-15-42BP
Lab Summary

Last update 10/16/2012

Analytical Parameter		Background Arsenic (10/3/12)								COGCC	
(with units)	*Partially Buried Tank Pit 9/4/12*	*BG-1*	*BG-2*	*BG-3*	*BG-4*	*BG-5*	*BG-6*	*BG-7*	*BG-8*	*Table 910-1 Concentration Levels*	*Maximum based on Background*
Accutest Job #	D38362	D39510								-	-
Sample type (Composite/Discrete)	D	D	D	D	D	D	D	D	D	-	-
TPH (GRO) (mg/Kg)	ND	-	-	-	-	-	-	-	-	-	-
TPH (DRO) (mg/Kg)	ND	-	-	-	-	-	-	-	-	-	-
TPH (GRO + DRO) (mg/Kg)	ND	-	-	-	-	-	-	-	-	500	-
Benzene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.170	-
Toluene (mg/Kg)	ND	-	-	-	-	-	-	-	-	85	-
Ethylbenzene (mg/Kg)	ND	-	-	-	-	-	-	-	-	100	-
Xylenes (total) (mg/Kg)	ND	-	-	-	-	-	-	-	-	175	-
Acenaphthene (mg/Kg)	ND	-	-	-	-	-	-	-	-	1000	-
Anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	-	1000	-
Benzo(A)anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.22	-
Benzo(A)pyrene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.22	-
Benzo(B)fluoranthene (mg/Kg)	ND	-	-	-	-	-	-	-	-	2.2	-
Benzo(K)fluoranthene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.022	-
Chrysene (mg/Kg)	ND	-	-	-	-	-	-	-	-	22	-
Dibenzo(A,H)anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.022	-
Fluoranthene (mg/Kg)	ND	-	-	-	-	-	-	-	-	1000	-
Fluorene (mg/Kg)	ND	-	-	-	-	-	-	-	-	1000	-
Indeno(1,2,3,C,D)pyrene (mg/Kg)	ND	-	-	-	-	-	-	-	-	0.22	-
Naphthalene (mg/Kg)	ND	-	-	-	-	-	-	-	-	23	-
Pyrene (mg/Kg)	ND	-	-	-	-	-	-	-	-	1000	-
Electrical Conductivity (mmhos/cm)	0.194	-	-	-	-	-	-	-	-	4	-
Sodium Adsorption Ratio (SAR)	0.611	-	-	-	-	-	-	-	-	12	-
pH	9.37	-	-	-	-	-	-	-	-	6-9	-
Arsenic (mg/kg)	5.9	5.8	6.0	4.0	3.4	2.7	4.1	3.8	5.0	0.39	6.6
Barium (mg/kg)	361	-	-	-	-	-	-	-	-	15000	-
Cadmium (mg/kg)	<1.1	-	-	-	-	-	-	-	-	70	-
Chromium (III) (mg/Kg)	26.8	-	-	-	-	-	-	-	-	120000	-
Chromium (VI) (mg/Kg)	<1.0	-	-	-	-	-	-	-	-	23	-
Copper (mg/kg)	10.2	-	-	-	-	-	-	-	-	3100	-
Lead (inorganic) (mg/kg)	7.8	-	-	-	-	-	-	-	-	400	-
Mercury (mg/kg)	<0.11	-	-	-	-	-	-	-	-	23	-
Nickel (mg/kg)	18.6	-	-	-	-	-	-	-	-	1600	-
Selenium (mg/kg)	<5.3	-	-	-	-	-	-	-	-	390	-
Silver (mg/kg)	<3.2	-	-	-	-	-	-	-	-	390	-
Zinc (mg/kg)	37.3	-	-	-	-	-	-	-	-	23000	-
% Solids	94.0	94.6	91.8	94.4	93.7	91.7	93.9	95.9	95.8	-	-

Notes:

1) ND = not detectible to the laboratory detection limit.

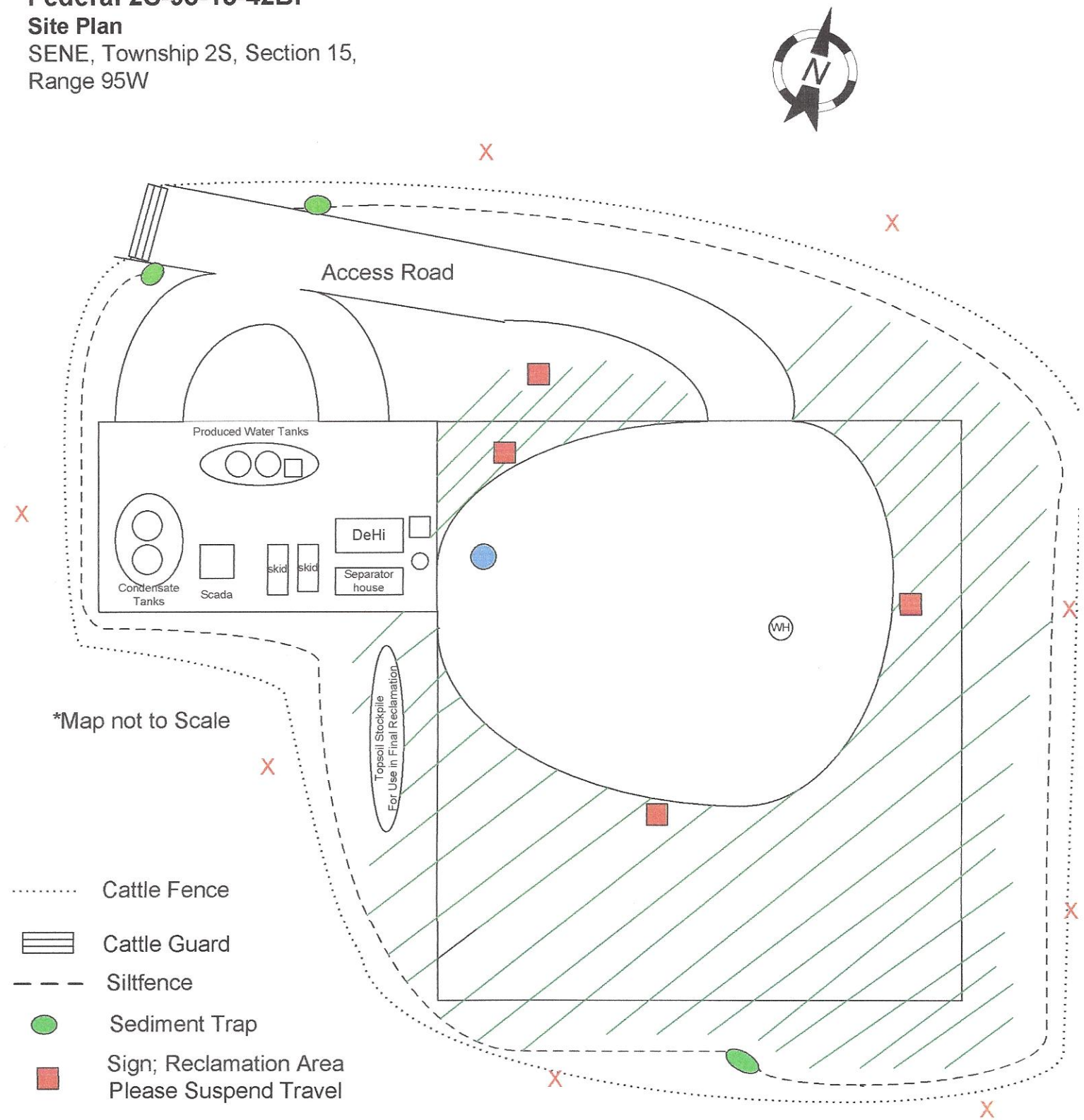
2) Results highlighted in yellow exceed Table 910-1 concentration levels. Results highlighted in Gray exceed Table 910-1, but are below background levels.

3) "-" indicates no analysis.

Federal 2S-95-15-42BP

Site Plan

SENE, Township 2S, Section 15,
Range 95W



Mountain States ACCUTEST LABORATORIES

09/13/12

Technical Report for

XTO Energy, Inc.

Federal 2S-95-15-42

Accutest Job Number: D38362

Sampling Date: 09/04/12

Report to:

XTO Energy, Inc.
21459 County Road 5
Rifle, CO 81650
jessica_dooling@xtoenergy.com; dknudson@krwconsulting.com;
jhess@krwconsulting.com; crachak@krwconsulting.com;
ATTN: Jes Dooling

Total number of pages in report: **68**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

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Table of Contents

Accutest Laboratories

Sample Summary

XTO Energy, Inc.

Federal 2S-95-15-42

Job No: D38362

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D38362-1	09/04/12	10:00	BS	09/05/12	SO	Soil	PARTIALLY BURIED TANK PIT
D38362-1A	09/04/12	10:00	BS	09/05/12	SO	Soil	PARTIALLY BURIED TANK PIT

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy, Inc.	**Job No**	D38362
Site:	Federal 2S-95-15-42	**Report Date**	9/13/2012 8:42:23 AM

On 09/05/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D38362 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix SO **Batch ID:** V3V1181

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38360-1MS, D38360-1MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP6573

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D38362-1MS, D38362-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB956

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38128-1MS, D38128-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP6572

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) D38128-1MS, D38128-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP8322

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38361-1AMS, D38361-1AMSD, D38361-1ASDL were used as the QC samples for the metals analysis.

Matrix	SO	Batch ID:	MP8331

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38360-1MS, D38360-1MSD, D38360-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Cadmium, Lead, Silver, Copper are outside control limits for sample MP8331-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP8331-SD1 for Copper: Serial dilution indicates possible matrix interference.

Metals By Method SW846 6020A

Matrix	SO	Batch ID:	MP8332

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38360-1MS, D38360-1MSD, D38360-1SDL were used as the QC samples for the metals analysis.

Metals By Method SW846 7471B

Matrix	SO	Batch ID:	MP8324

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38289-1MS, D38289-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D1498-76M

Matrix	SO	Batch ID:	GN16631

- Sample(s) D38289-1DUP were used as the QC samples for the Redox Potential Vs H2 analysis.

Wet Chemistry By Method DEPT.OF AG, BOOK N9

Matrix	SO	Batch ID:	GP8108

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM19 2540B M

Matrix	SO	Batch ID:	GN16620

- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix	SO	Batch ID:	R14332

- The data for SW846 3060/7196A M meets quality control requirements.
- D38362-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 3060A/7196A

Matrix	SO	Batch ID:	GP8138

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D38513-1MS, D38513-1MSD, D38513-1DUP were used as the QC samples for the Chromium, Hexavalent analysis.
- The duplicate RPD(s) for Chromium, Hexavalent are outside control limits for sample GP8138-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SW846 9045D

Matrix	SO	Batch ID:	GN16627

- The following samples were run outside of holding time for method SW846 9045D: D38362-1

Wet Chemistry By Method USDA HANDBOOK 60

Matrix	SO	Batch ID:	MP8322

- D38362-1A for Sodium Adsorption Ratio: Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+(Mg meq/L)/2]

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D38362
Account: XTO Energy, Inc.
Project: Federal 2S-95-15-42
Collected: 09/04/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D38362-1	**PARTIALLY BURIED TANK PIT**					
Arsenic		5.9	0.11		mg/kg	SW846 6020A
Barium		361	1.1		mg/kg	SW846 6010C
Chromium		26.8	1.1		mg/kg	SW846 6010C
Copper		10.2	1.1		mg/kg	SW846 6010C
Lead		7.8	5.3		mg/kg	SW846 6010C
Nickel		18.6	3.2		mg/kg	SW846 6010C
Zinc		37.3	3.2		mg/kg	SW846 6010C
Chromium, Trivalent [a]		26.8	2.1		mg/kg	SW846 3060/7196A M
Redox Potential Vs H2		251			mv	ASTM D1498-76M
Specific Conductivity		194	1.0		umhos/cm	DEPT.OF AG, BOOK N9
pH		9.37			su	SW846 9045D
D38362-1A	**PARTIALLY BURIED TANK PIT**					
Calcium		20.4	2.0		mg/l	SW846 6010C
Magnesium		3.32	1.0		mg/l	SW846 6010C
Sodium		11.3	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio [b]		0.611			ratio	USDA HANDBOOK 60

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)
(b) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PARTIALLY BURIED TANK PIT		
Lab Sample ID:	D38362-1	**Date Sampled:**	09/04/12
Matrix:	SO - Soil	**Date Received:**	09/05/12
Method:	SW846 8260B	**Percent Solids:**	94.0
Project:	Federal 2S-95-15-42		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V20294.D	1	09/06/12	BD	n/a	n/a	V3V1181
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	56	21	ug/kg	
108-88-3	Toluene	ND	110	56	ug/kg	
100-41-4	Ethylbenzene	ND	110	21	ug/kg	
1330-20-7	Xylene (total)	ND	220	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	95%		64-130%
460-00-4	4-Bromofluorobenzene	104%		62-131%
17060-07-0	1,2-Dichloroethane-D4	108%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3546
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G11044.D	1	09/06/12	DC	09/06/12	OP6573	E3G512
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.8	4.6	ug/kg	
120-12-7	Anthracene	ND	8.8	4.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.8	4.6	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.8	4.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.8	4.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.8	4.6	ug/kg	
218-01-9	Chrysene	ND	8.8	4.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.8	4.6	ug/kg	
206-44-0	Fluoranthene	ND	8.8	4.6	ug/kg	
86-73-7	Fluorene	ND	8.8	4.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.8	4.6	ug/kg	
91-20-3	Naphthalene	ND	12	11	ug/kg	
129-00-0	Pyrene	ND	8.8	4.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		10-145%
321-60-8	2-Fluorobiphenyl	53%		10-130%
1718-51-0	Terphenyl-d14	67%		22-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1
Matrix: SO - Soil
Method: SW846 8015B
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB17419.D	1	09/05/12	SK	n/a	n/a	GGB956
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	90%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH006263.D	1	09/07/12	AW	09/06/12	OP6572	GFH348
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	14	9.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		43-136%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1
Matrix: SO - Soil
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.9	0.11	mg/kg	5	09/07/12	09/12/12	JM	SW846 6020A [3]	SW846 3050B [6]
Barium	361	1.1	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Cadmium	< 1.1	1.1	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Chromium	26.8	1.1	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Copper	10.2	1.1	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Lead	7.8	5.3	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Mercury	< 0.11	0.11	mg/kg	1	09/07/12	09/07/12	JM	SW846 7471B [1]	SW846 3050B [4]
Nickel	18.6	3.2	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Selenium	< 5.3	5.3	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Silver	< 3.2	3.2	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]
Zinc	37.3	3.2	mg/kg	1	09/07/12	09/07/12	JB	SW846 6010C [2]	SW846 3050B [5]

(1) Instrument QC Batch: MA2781
(2) Instrument QC Batch: MA2782
(3) Instrument QC Batch: MA2794
(4) Prep QC Batch: MP8324
(5) Prep QC Batch: MP8331
(6) Prep QC Batch: MP8332

RL = Reporting Limit

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1
Matrix: SO - Soil
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 1.0	1.0	mg/kg	1	09/11/12	CJ	SW846 3060A/7196A
Chromium, Trivalent [a]	26.8	2.1	mg/kg	1	09/11/12	CJ	SW846 3060/7196A M
Redox Potential Vs H2	251		mv	1	09/06/12	CT	ASTM D1498-76M
Solids, Percent	94		%	1	09/06/12	SWT	SM19 2540B M
Specific Conductivity	194	1.0	umhos/cm	1	09/06/12	JK	DEPT.OF AG, BOOK N9
pH	9.37		su	1	09/06/12 08:30	CT	SW846 9045D

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID: PARTIALLY BURIED TANK PIT
Lab Sample ID: D38362-1A
Matrix: SO - Soil
Project: Federal 2S-95-15-42

Date Sampled: 09/04/12
Date Received: 09/05/12
Percent Solids: 94.0

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	20.4	2.0	mg/l	1	09/06/12	09/06/12	JB	SW846 6010C [1]	SW846 3010A/M [2]
Magnesium	3.32	1.0	mg/l	1	09/06/12	09/06/12	JB	SW846 6010C [1]	SW846 3010A/M [2]
Sodium	11.3	2.0	mg/l	1	09/06/12	09/06/12	JB	SW846 6010C [1]	SW846 3010A/M [2]

(1) Instrument QC Batch: MA2780
(2) Prep QC Batch: MP8322

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PARTIALLY BURIED TANK PIT		
Lab Sample ID:	D38362-1A	**Date Sampled:**	09/04/12
Matrix:	SO - Soil	**Date Received:**	09/05/12
		Percent Solids:	94.0
Project:	Federal 2S-95-15-42		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	0.611		ratio	1	09/06/12 14:18	JB	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

PAGE 1 OF 1

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # D38362

Client / Reporting Information

Company Name: XTO Energy
Street Address: 21459 CR 3
City: Rifle State: CO Zip: 81650
Project Contact: Jes Dooling E-mail:
Phone #: 970-675-4122 Fax #:
Sampler(s) Name(s): B. Steele Phone #:

Project Information

Project Name: Federal 23-95-15-42
Street:
City:
Project#: partially burned tankpit
Client PO#:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention: PO#

Requested Analysis (see TEST CODE sheet)

Table 910

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Table 910	LAB USE ONLY
	partially burned tankpit		9/4/2012	10:00	BS	SOL	5										5	

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] Commercial "B" +Narrative
- [ ] FULLT1 (Level 3+4)
- [ ] State Forms
- [ ] EDD Format
- [ ] PDF

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

email results to KRW
Preconce Team

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9/4/2012 1:00				
2					9/4/12 5:00	Rifle Service Center
3	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time: 9/5/12 12:45	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal # 4020	Intact / Not Intact	Preserved where applicable

On Ice | Cooler Temp. 3.9

D38362: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D38362 **Client:** XTO ENERGY **Immediate Client Services Action Required:** No

Date / Time Received: 9/5/2012 12:45:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: FEDERAL 25-95-15-42 **Airbill #'s:** HDCO

Cooler Security

	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature

	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation

	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation

	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition

	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions

	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1181-MB	3V20287.D	1	09/06/12	BD	n/a	n/a	V3V1181

The QC reported here applies to the following samples: **Method:** SW846 8260B

D38362-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	19	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	102%	64-130%
460-00-4	4-Bromofluorobenzene	95%	62-131%
17060-07-0	1,2-Dichloroethane-D4	113%	70-130%

Blank Spike Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1181-BS	3V20288.D	1	09/06/12	BD	n/a	n/a	V3V1181

The QC reported here applies to the following samples: **Method:** SW846 8260B

D38362-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	46.2	92	70-130
100-41-4	Ethylbenzene	50	48.4	97	70-130
108-88-3	Toluene	50	44.6	89	70-130
1330-20-7	Xylene (total)	150	147	98	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	101%	64-130%
460-00-4	4-Bromofluorobenzene	105%	62-131%
17060-07-0	1,2-Dichloroethane-D4	112%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D38360-1MS	3V20290.D	1	09/06/12	BD	n/a	n/a	V3V1181
D38360-1MSD	3V20291.D	1	09/06/12	BD	n/a	n/a	V3V1181
D38360-1	3V20289.D	1	09/06/12	BD	n/a	n/a	V3V1181

The QC reported here applies to the following samples: **Method:** SW846 8260B

D38362-1

CAS No.	Compound	D38360-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		2820	2610	93	2400	85	8	64-139/30
100-41-4	Ethylbenzene	ND		2820	2750	97	2520	89	9	68-136/30
108-88-3	Toluene	ND		2820	2440	87	2250	80	8	60-130/30
1330-20-7	Xylene (total)	ND		8460	8450	100	7720	91	9	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D38360-1	Limits
2037-26-5	Toluene-D8	95%	93%	97%	64-130%
460-00-4	4-Bromofluorobenzene	108%	110%	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	109%	109%	112%	70-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6573-MB	3G11042.D	1	09/06/12	DC	09/06/12	OP6573	E3G512

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D38362-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.3	4.3	ug/kg	
120-12-7	Anthracene	ND	8.3	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.3	4.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.3	4.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.3	4.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.3	4.3	ug/kg	
218-01-9	Chrysene	ND	8.3	4.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.3	4.3	ug/kg	
206-44-0	Fluoranthene	ND	8.3	4.3	ug/kg	
86-73-7	Fluorene	ND	8.3	4.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.3	4.3	ug/kg	
91-20-3	Naphthalene	ND	12	10	ug/kg	
129-00-0	Pyrene	ND	8.3	4.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	98%	10-145%
321-60-8	2-Fluorobiphenyl	85%	10-130%
1718-51-0	Terphenyl-d14	93%	22-130%

Blank Spike Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6573-BS	3G11043.D	1	09/06/12	DC	09/06/12	OP6573	E3G512

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D38362-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	74.2	89	34-130
120-12-7	Anthracene	83.3	74.2	89	35-130
56-55-3	Benzo(a)anthracene	83.3	77.3	93	36-130
50-32-8	Benzo(a)pyrene	83.3	75.0	90	36-130
205-99-2	Benzo(b)fluoranthene	83.3	77.5	93	35-130
207-08-9	Benzo(k)fluoranthene	83.3	72.8	87	37-130
218-01-9	Chrysene	83.3	79.3	95	40-130
53-70-3	Dibenzo(a,h)anthracene	83.3	77.9	93	32-130
206-44-0	Fluoranthene	83.3	74.1	89	38-130
86-73-7	Fluorene	83.3	75.2	90	35-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	77.4	93	28-130
91-20-3	Naphthalene	83.3	77.3	93	35-130
129-00-0	Pyrene	83.3	78.5	94	37-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	98%	10-145%
321-60-8	2-Fluorobiphenyl	84%	10-130%
1718-51-0	Terphenyl-d14	91%	22-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6573-MS	3G11045.D	1	09/06/12	DC	09/06/12	OP6573	E3G512
OP6573-MSD	3G11046.D	1	09/06/12	DC	09/06/12	OP6573	E3G512
D38362-1	3G11044.D	1	09/06/12	DC	09/06/12	OP6573	E3G512

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D38362-1

CAS No.	Compound	D38362-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		88.5	69.0	78	68.6	78	1	10-155/30
120-12-7	Anthracene	ND		88.5	77.0	87	73.6	83	5	10-155/30
56-55-3	Benzo(a)anthracene	ND		88.5	85.7	97	78.0	88	9	10-175/30
50-32-8	Benzo(a)pyrene	ND		88.5	75.7	86	69.1	78	9	10-164/30
205-99-2	Benzo(b)fluoranthene	ND		88.5	79.6	90	72.5	82	9	10-165/30
207-08-9	Benzo(k)fluoranthene	ND		88.5	74.8	85	69.6	79	7	10-178/30
218-01-9	Chrysene	ND		88.5	80.8	91	73.1	83	10	10-147/30
53-70-3	Dibenzo(a,h)anthracene	ND		88.5	77.8	88	72.2	82	7	10-144/30
206-44-0	Fluoranthene	ND		88.5	82.4	93	76.7	87	7	10-207/30
86-73-7	Fluorene	ND		88.5	77.9	88	74.7	85	4	10-163/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		88.5	78.4	89	73.2	83	7	10-180/30
91-20-3	Naphthalene	ND		88.5	68.0	77	66.5	75	2	10-198/30
129-00-0	Pyrene	ND		88.5	87.5	99	80.2	91	9	10-189/30

CAS No.	Surrogate Recoveries	MS	MSD	D38362-1	Limits
4165-60-0	Nitrobenzene-d5	72%	69%	57%	10-145%
321-60-8	2-Fluorobiphenyl	62%	61%	53%	10-130%
1718-51-0	Terphenyl-d14	72%	62%	67%	22-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB956-MB	GB17408.D	1	09/05/12	SK	n/a	n/a	GGB956

The QC reported here applies to the following samples: **Method:** SW846 8015B

D38362-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	92%	60-140%

Blank Spike Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB956-BS	GB17409.D	1	09/05/12	SK	n/a	n/a	GGB956

The QC reported here applies to the following samples: **Method:** SW846 8015B

D38362-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	128	116	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	102%	60-140%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D38128-1MS	GB17411.D	1	09/05/12	SK	n/a	n/a	GGB956
D38128-1MSD	GB17412.D	1	09/05/12	SK	n/a	n/a	GGB956
D38128-1	GB17410.D	1	09/05/12	SK	n/a	n/a	GGB956

The QC reported here applies to the following samples: **Method:** SW846 8015B

D38362-1

CAS No.	Compound	D38128-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		132	150	114	149	113	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D38128-1	Limits
120-82-1	1,2,4-Trichlorobenzene	101%	99%	90%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6572-MB	FH006277.D	1	09/10/12	AW	09/06/12	OP6572	GFH350

The QC reported here applies to the following samples: **Method:** SW846-8015B

D38362-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	113%	43-136%

Blank Spike Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6572-BS	FH006239.D	1	09/07/12	AW	09/06/12	OP6572	GFH348

The QC reported here applies to the following samples: **Method:** SW846-8015B

D38362-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	525	79	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	84%	43-136%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D38362
Account: XTOECOR XTO Energy, Inc.
Project: Federal 2S-95-15-42

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6572-MS	FH006241A.D	1	09/07/12	AW	09/06/12	OP6572	GFH348
OP6572-MSD	FH006243A.D	1	09/07/12	AW	09/06/12	OP6572	GFH348
D38128-1	FH006245.D	1	09/07/12	AW	09/06/12	OP6572	GFH348

The QC reported here applies to the following samples: **Method:** SW846-8015B

D38362-1

CAS No.	Compound	D38128-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	126		735	661	73	728	82	10	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D38128-1	Limits
84-15-1	o-Terphenyl	73%	73%	67%	43-136%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 09/06/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	100	130		
Antimony	150	18	18		
Arsenic	130	27	42		
Barium	50	4	9		
Beryllium	50	6.5	16		
Boron	250	22	22		
Cadmium	50	3	3		
Calcium	2000	42	80	17.5	<2000
Chromium	50	1.5	2.8		
Cobalt	25	2	2.1		
Copper	50	6	15		
Iron	350	9.5	100		
Lead	250	12	15		
Lithium	10	14			
Magnesium	1000	110	110	0.50	<1000
Manganese	25	6	6		
Molybdenum	50	11	11		
Nickel	150	2.5	2.9		
Phosphorus	500	70	300		
Potassium	5000	730	750		
Selenium	250	31	55		
Silicon	250	33			
Silver	150	2.5	4.9		
Sodium	2000	110	490	-210	<2000
Strontium	25	1	7.5		
Thallium	50	15	43		
Tin	250	60			
Titanium	50	.5			
Uranium	250	23	23		
Vanadium	50	1.5	2.4		
Zinc	150	4	12		

Associated samples MP8322: D38362-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 09/06/12

Metal	D38361-1A Original MS		Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	17900	150000	125000	105.7	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	3720	133000	125000	103.4	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	42200	179000	125000	109.4	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8322: D38362-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 09/06/12

Metal	D38361-1A Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	17900	150000	125000	105.7	0.0	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	3720	134000	125000	104.2	0.7	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	42200	180000	125000	110.2	0.6	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8322: D38362-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 09/06/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	132000	125000	105.6	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	129000	125000	103.2	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	138000	125000	110.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8322: D38362-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 09/06/12

Metal	D38361-1A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	3570	3620	1.3	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	743	709	4.7	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	8450	8620	2.0	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8322: D38362-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8322
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8324 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/07/12

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.10	.0011	.0009	-0.00086	<0.10

Associated samples MP8324: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8324 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/07/12

Metal	D38289-1 Original	MS	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.015	0.45	0.437	99.6	75-125

Associated samples MP8324: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8324 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/07/12

Metal	D38289-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.015	0.49	0.482	98.5	8.5	

Associated samples MP8324: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8324
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 09/07/12

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.38	0.4	95.0	80-120

Associated samples MP8324: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/07/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	2.1	.57		
Antimony	3.0	.36	.12		
Arsenic	2.5	.54	.56		
Barium	1.0	.08	.11	0.050	<1.0
Beryllium	1.0	.13	.15		
Boron	5.0	.43	.06		
Cadmium	1.0	.06	.036	-0.010	<1.0
Calcium	40	.84	9		
Chromium	1.0	.03	.03	-0.010	<1.0
Cobalt	0.50	.04	.07		
Copper	1.0	.12	.15	-0.060	<1.0
Iron	7.0	.19	.87		
Lead	5.0	.24	.24	0.10	<5.0
Lithium	0.20	.28	.054		
Magnesium	20	2.2	.98		
Manganese	0.50	.12	.022		
Molybdenum	1.0	.21	.08		
Nickel	3.0	.05	.026	0.0	<3.0
Phosphorus	10	1.4	1.9		
Potassium	200	15	7		
Selenium	5.0	.61	.36	-0.020	<5.0
Silicon	5.0	.65	.37		
Silver	3.0	.05	.06	0.070	<3.0
Sodium	40	2.1	1.9		
Strontium	5.0	.02	.017		
Thallium	1.0	.29	.53		
Tin	5.0	1.2	2		
Titanium	1.0	.01	.038		
Uranium	5.0	.46	.26		
Vanadium	1.0	.03	.036		
Zinc	3.0	.08	.37	0.40	<3.0

Associated samples MP8331: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/07/12

Metal	D38360-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	102	295	201	96.1	75-125
Beryllium					
Boron					
Cadmium	0.16	46.6	50.2	92.4	75-125
Calcium	anr				
Chromium	8.3	51.7	50.2	86.4	75-125
Cobalt					
Copper	9.0	57.0	50.2	95.6	75-125
Iron					
Lead	2.9	91.7	100	88.4	75-125
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum	anr				
Nickel	21.1	63.6	50.2	84.6	75-125
Potassium	anr				
Selenium	0.0	87.9	100	87.5	75-125
Silicon					
Silver	0.40	19.6	20.1	95.6	75-125
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	22.1	64.2	50.2	83.8	75-125

Associated samples MP8331: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/07/12

Metal	D38360-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	102	314	203	104.5	6.2	20
Beryllium						
Boron						
Cadmium	0.16	46.6	50.7	91.6	0.0	20
Calcium	anr					
Chromium	8.3	56.1	50.7	94.3	8.2	20
Cobalt						
Copper	9.0	58.3	50.7	97.2	2.3	20
Iron						
Lead	2.9	93.9	101	89.7	2.4	20
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	21.1	65.3	50.7	87.2	2.6	20
Potassium	anr					
Selenium	0.0	87.5	101	86.3	0.5	20
Silicon						
Silver	0.40	19.8	20.3	95.6	1.0	20
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	22.1	69.0	50.7	92.5	7.2	20

Associated samples MP8331: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 09/07/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	196	200	98.0	80-120
Beryllium				
Boron				
Cadmium	47.5	50	95.0	80-120
Calcium	anr			
Chromium	46.9	50	93.8	80-120
Cobalt				
Copper	47.0	50	94.0	80-120
Iron				
Lead	95.2	100	95.2	80-120
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	45.5	50	91.0	80-120
Phosphorus	anr			
Potassium	anr			
Selenium	91.6	100	91.6	80-120
Silicon				
Silver	19.5	20	97.5	80-120
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	46.7	50	93.4	80-120

Associated samples MP8331: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/07/12

Metal	D38360-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	1000	1030	3.1	0-10
Beryllium				
Boron				
Cadmium	1.60	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	81.8	85.5	4.5	0-10
Cobalt				
Copper	89.0	79.0	11.2*(b)	0-10
Iron				
Lead	28.3	40.5	43.1 (a)	0-10
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	208	220	5.3	0-10
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	3.90	8.00	105.1(a)	0-10
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	218	219	0.6	0-10

Associated samples MP8331: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

SERIAL DILUTION RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8331
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8332
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/07/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.22	.31		
Antimony	0.20	.0018	.0075		
Arsenic	0.10	.006	.06	0.0034	<0.10
Barium	1.0	.0065	.037		
Beryllium	0.10	.016	.09		
Boron	20	1.2	1.2		
Cadmium	0.050	.014	.021		
Calcium	200	7.9	8		
Chromium	1.0	.033	.19		
Cobalt	0.10	.0012	.015		
Copper	1.0	.017	.065		
Iron	20	.8	5		
Lead	0.25	.0011	.024		
Magnesium	50	.44	.85		
Manganese	0.50	.0043	.02		
Molybdenum	0.50	.018	.018		
Nickel	1.0	.0049	.011		
Phosphorus	30	1.4	3.6		
Potassium	100	9.8	10		
Selenium	0.20	.029	.14		
Silver	0.050	.0009	.0065		
Sodium	250	1.5	2.3		
Strontium	10	.036	.036		
Thallium	0.10	.00095	.0095		
Tin	5.0	.023	.34		
Titanium	1.0	.044	.1		
Uranium	0.25	.00085	.001		
Vanadium	2.0	.12	.21		
Zinc	5.0	.033	.35		

Associated samples MP8332: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8332
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/07/12

Metal	D38360-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	3.9	111	100	106.6	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP8332: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8332
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/07/12

Metal	D38360-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	3.9	113	101	107.6	1.8	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP8332: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8332
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 09/07/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	112	100	112.0	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8332: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

QC Batch ID: MP8332
Matrix Type: SOLID

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/07/12

Metal	D38360-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	38.6	42.5	10.0	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP8332: D38362-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP8138/GN16704	1.0	0.0	mg/kg	60.7	67.2	111.0	80-120%
Specific Conductivity	GP8108/GN16622	1.0	<1.0	umhos/cm	9989	9980	99.9	90-110%
pH	GN16627			su	8.00	7.98	99.8	99.3-100.7%

Associated Samples:
Batch GP8108: D38362-1
Batch GP8138: D38362-1
Batch GN16627: D38362-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP8138/GN16704	D38513-1	mg/kg	0.0	0.0	22.4(a)	0-20%
Redox Potential Vs H2	GN16631	D38289-1	mv	208	211	1.4	0-20%

Associated Samples:
Batch GP8138: D38362-1
Batch GN16631: D38362-1
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP8138/GN16704	D38513-1	mg/kg	0.0	40	40.5	101.0	75-125%

Associated Samples:
Batch GP8138: D38362-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D38362
Account: XTOECOR - XTO Energy, Inc.
Project: Federal 2S-95-15-42

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chromium, Hexavalent	GP8138/GN16704	D38513-1	mg/kg	0.0	40	41.0	1.2	

Associated Samples:
Batch GP8138: D38362-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits