

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 10/03/2014  
REM 8669  
DOC 2141847

**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.

OGCC Employee:

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No:

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

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

OGCC Operator Number: 100264

Name of Operator: XTO Energy Inc.

Address: 72 Suttle Street, Suite J

City: Durango State: CO Zip: 81303

Contact Name and Telephone:

Logan Hixon

No: (970) 247-7708

Fax: (970) 247-7745

API Number: 05-067-05187

County: La Plata

Facility Name:

Facility Number:

Well Name: Marjorie Smith

Well Number: 1

Location: (QtrQtr, Sec, Twp, Rng, Meridian): E2NW, 2, 32N, 7W, N PM

Latitude: 37.04972 Longitude: -107.58155

**TECHNICAL CONDITIONS**

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

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.): Center Pivot Irrigated-Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Zyme clay loam, 3-25% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Domestic Water Wells with in 1/2 mi- 1 Total,

Closest Domestic Water Well-approx 1677 ft Ground Water - Approx 50-110 ft deep Surface Water-approx 885 ft

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

Impacted Media (check):

☐

Soils

☐

Vegetation

☐

Groundwater

☐

Surface Water

Extent of Impact:

N/A

N/A

N/A

N/A

How Determined:

**REMEDIAL ACTION WORKPLAN**

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

No initial action has been taken.

Describe how source is to be removed:

N/A

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.:

Bottom of the hole will be ripped up and the soil will be added.



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

OGCC Employee: \_\_\_\_\_

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

N/A

**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 on-site pit tank was removed due to the plugging and abandoning of the Marjorie Smith 1 well site. The tank was removed from the cellar and placed into spare inventory for future use. A discrete sample was collected from the southeast corner of the cellar and another discrete sample was collected from the northwest cellar corner, these two points are the lowest points in the cellar, and (2) two background samples were collected to the northwest and northeast off of location and sent for laboratory analysis. No material was removed from the location. The pit tank cellar will be backfilled and contoured accordingly after COGCC approval. \*See attached sampling points, sample results, and area overview.

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:

Comparative composite samples of the hole and perimeter are included for review.

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

N/A

### IMPLEMENTATION SCHEDULE

Date Site Investigation Began: September 18, 2014	Date Site Investigation Completed: TBD	Date Remediation Plan Submitted: N/A
Remediation Start Date: Contingent on COGCC Approval	Anticipated Completion Date: Contingent on COGCC Approval	Actual Completion Date: TBD

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

Print Name: Logan Hixon Signed: [Signature]

Title: EHS Coordinator Date: 9/26/14

OGCC Approved: [Signature] Title: Environmental Protection Specialist Date: 10/7/14

Marjorie Smith 1  
05-067-05187  
Lat. 37.04972  
Long. -107.58155  
Sec. Tw. Rng. 2-32N-7W N PM  
La Plata County  
Colorado

Background Sample (BG1)-  
DURLH-091814-1500

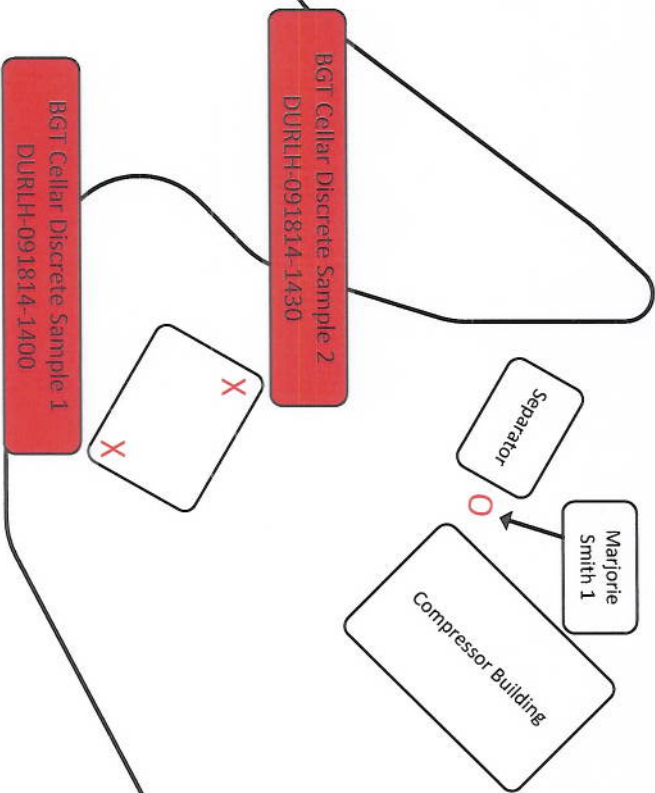
X

Background Sample (BG2)-  
DURLH-091814-1530

X



M/R







Maps ▾

Layers

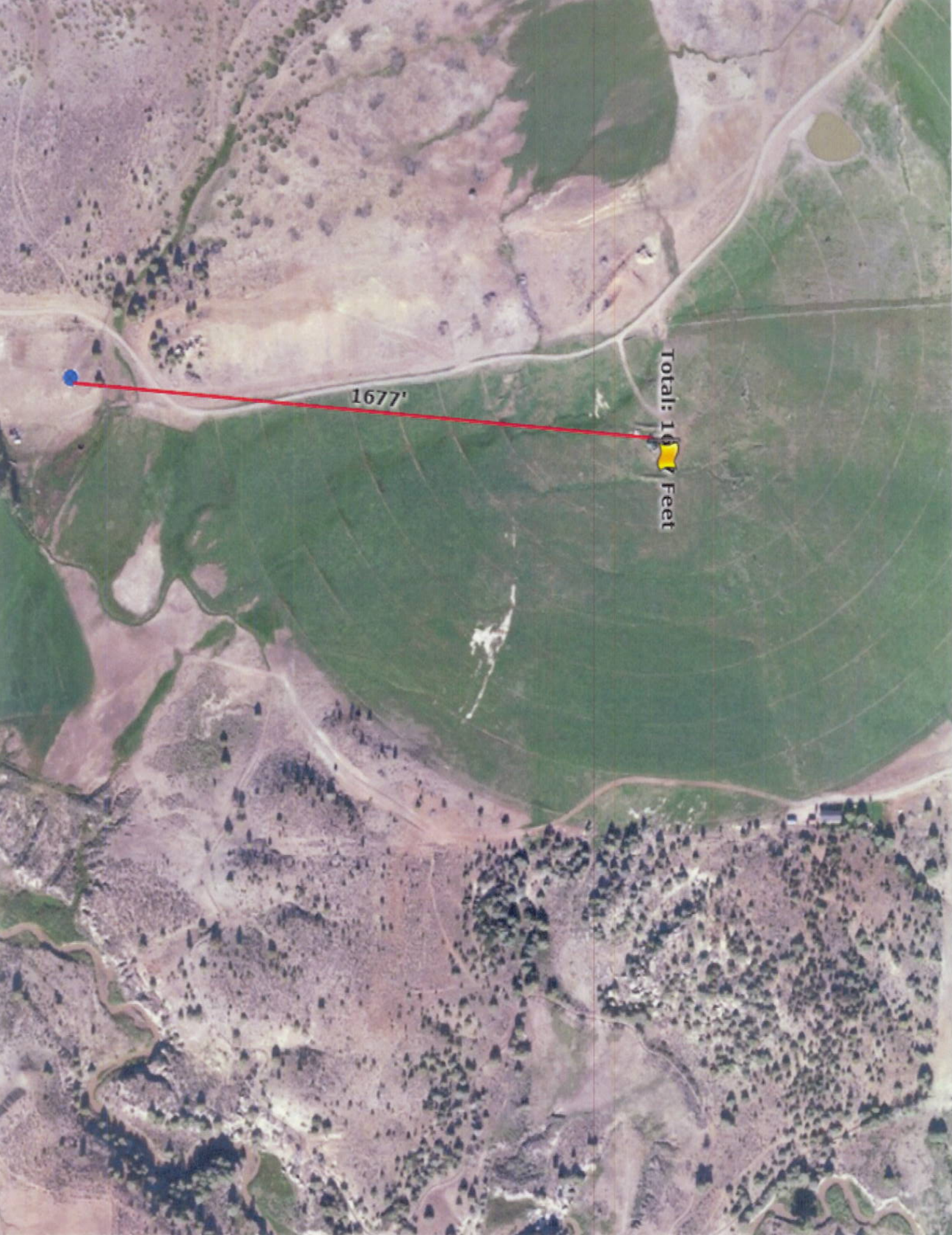
Legend

Transparency

2644.9 Feet







1677'

Total: 1677 Feet



# COGIS - Environmental Sample Site Information

## #700311 Information

Sample Site ID:	700311	ProjNumber:	426
Facility Type:	unk	Location:	NENE 2 32N 7W
County:	LA PLATA - #067	Lat/Long:	37.050298/-107.568958
Elevation:	0	WellDepth:	110
WWR Receipt #:			

## COGCC Water Quality Database Disclaimer:

The analytical data and other information in this database are a compilation of data collected by COGCC staff, data submitted to COGCC from a variety of third parties, and historical data. All analytical data collected by or submitted to the COGCC is public information and COGCC posts the data to this database as a public service. The data is provided for informational purposes only. COGCC does not conduct detailed review of quality control/quality assurance protocols, chain of custody procedures, or field or laboratory methodologies on data received from third parties. The level of review performed on historical data is unknown. COGCC does not regularly perform formal data validation for any of the data posted to this database. The COGCC makes no warranties or representations of any kind, express or implied, regarding the quality, accuracy, reliability, merchantability, or fitness for a particular purpose of the data provided herein.

## Sample(s)

☐ All [Export to CSV](#)

<input type="checkbox"/> Sample ID:	<a href="#">458899</a>	Sample Date:	9/21/2000	Matrix:	WATER	Lab:
<input type="checkbox"/> Sample ID:	<a href="#">458898</a>	Sample Date:	11/25/1994	Matrix:	WATER	Lab:







Search

Map Unit Legend

La Plata County Area, Colorado (CO669)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
14	Bodot clay, 3 to 10 percent slopes	0.0	0.0%
81	Zyme clay loam, 3 to 25 percent slopes	1.1	100.0%
Totals for Area of Interest		1.1	100.0%

Legend

Soil Map

[Home](#) | 
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 [Layers](#) | 
 [Legend](#) | 
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 [Print](#) | 
 [Full Screen](#)

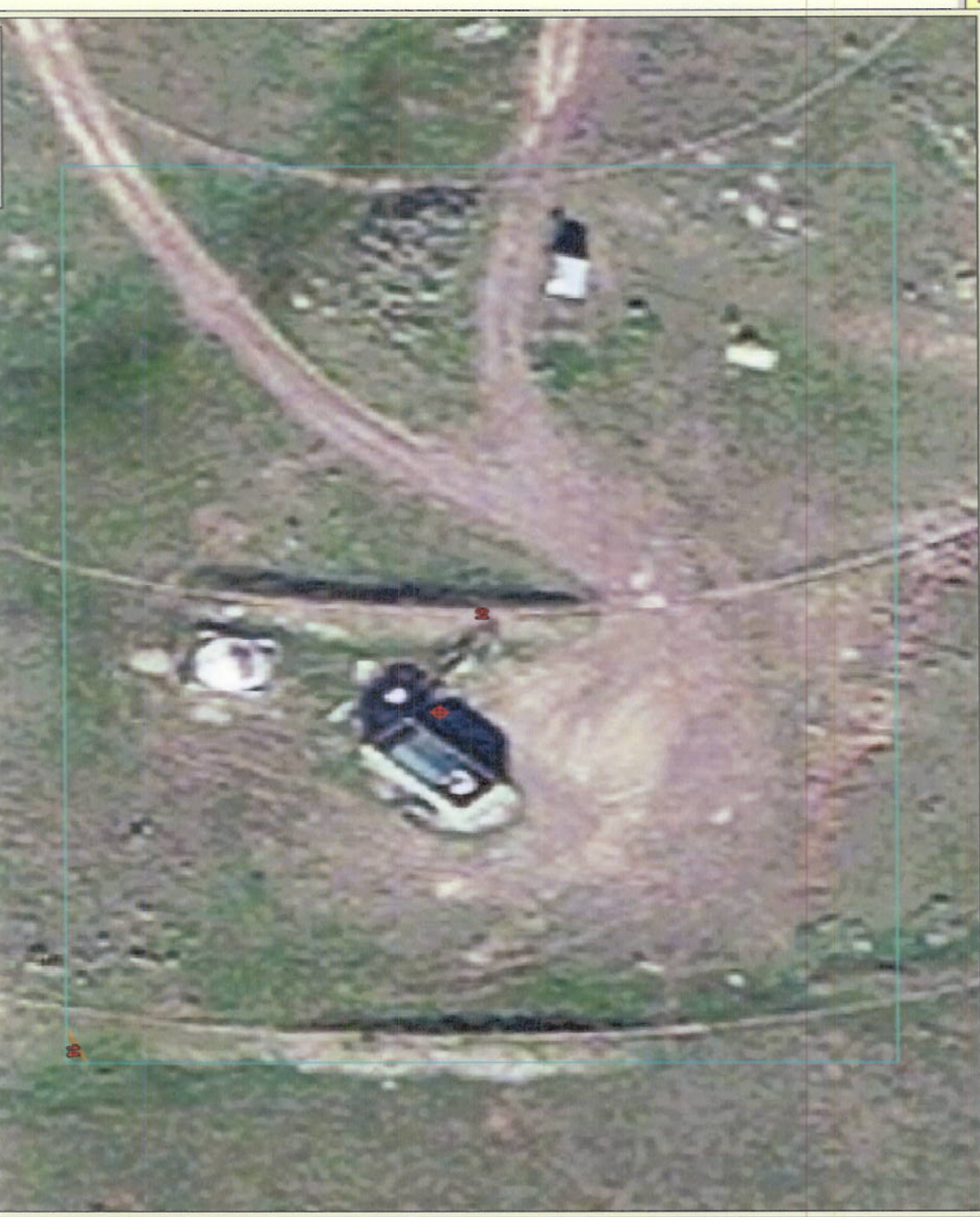




Table 910-1 CONCENTRATION LEVELS		Marjorie Smith 1					
Contaminant of Concern	Concentrations						
	Below detection level-BDL						
TPH (total volatile & extractable petroleum hydrocarbons)		Background Sample 1 (BG1) Background Sample 2 (BG2) Background Range Discrete Sample (S1) Discrete Sample (S2)					
Benzene	500mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	0.17 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	85 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (total)	100mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
	175 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Electrical Conductivity (EC)		Inorganics in Soils					
Sodium Adsorption Ratio (SAR)	<4 mmhos/cm or 2x background	110	180	220-360	280	320	
pH	<12	0.3	0.25	0.25-0.3	0.66	0.25	
	6.0-9.0	8	8.1	8.6-1	8.8	8.8	
Metals in Soils							
Arsenic	0.39 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Barium (LDNR True Total Barium)	15,000 mg/kg	500	480	480-500	380	460	
Boron (TCLP)	2 mg/l	BDL	BDL	BDL	BDL	BDL	BDL
Cadmium	70 mg/kg	BDL	BDL	BDL	BDL	BDL	0.69
Chromium (III)	120,000 mg/kg	7.9	6.8	6.8-7.9	11	8.2	
Chromium (VI)	23 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Copper	3,100 mg/kg	15	10	10.0-15.0	21	14	
Lead (inorganic)	400 mg/kg	12	13	12.0-13.0	21	23	
Mercury	23 mg/kg	BDL	BDL	BDL	0.12	0.094	
Nickel (soluble salts)	1,600 mg/kg	8.5	8.4	8.4-8.5	8.9	8.4	
Selenium	390 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Silver	390 mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	23,000 mg/kg	49	46	46-49	60	52	





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Est. 1970

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

### Report Summary

Thursday September 25, 2014

Report Number: L722961

Samples Received: 09/20/14

Client Project:

Description: Marjorie Smith 1

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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

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# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

ESC Sample # : L722961-01

Date Received : September 20, 2014  
Description : Marjorie Smith 1

Site ID :

Sample ID : DURLH-091814-1400

Project # :

Collected By : Logan Hixon  
Collection Date : 09/15/14 14:00

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.5	mg/kg	3060A/7196A	09/22/14	1
Chromium, Trivalent	11.	2.5	mg/kg	Calc.	09/24/14	1
ORP	120		mV	2580 B-2011	09/22/14	1
pH	8.8		su	9045D	09/23/14	1
Sodium Adsorption Ratio	0.66			Calc.	09/22/14	1
Specific Conductance	280		umhos/cm	9050AMod	09/24/14	1
Total Solids	80.9		%	2540 G-2011	09/25/14	1
Mercury	0.12	0.025	mg/kg	7471	09/22/14	1
Arsenic	BDL	2.5	mg/kg	6010B	09/24/14	1
Barium	380	0.62	mg/kg	6010B	09/24/14	1
Cadmium	BDL	0.62	mg/kg	6010B	09/24/14	1
Chromium	11.	1.2	mg/kg	6010B	09/24/14	1
Copper	21.	2.5	mg/kg	6010B	09/24/14	1
Lead	21.	0.62	mg/kg	6010B	09/24/14	1
Nickel	8.9	2.5	mg/kg	6010B	09/24/14	1
Selenium	BDL	2.5	mg/kg	6010B	09/24/14	1
Silver	BDL	1.2	mg/kg	6010B	09/24/14	1
Zinc	60.	6.2	mg/kg	6010B	09/24/14	1
TPH (GC/FID) Low Fraction	BDL	0.62	mg/kg	8015D/GRO	09/23/14	5
Surrogate Recovery (70-130) a, a, a-Trifluorotoluene (FID)	97.0		% Rec.	8015D/GRO	09/23/14	5
Benzene	BDL	0.0062	mg/kg	8260B	09/22/14	5
Toluene	BDL	0.031	mg/kg	8260B	09/22/14	5
Ethylbenzene	BDL	0.0062	mg/kg	8260B	09/22/14	5
Total Xylenes	BDL	0.018	mg/kg	8260B	09/22/14	5
Surrogate Recovery			% Rec.	8260B	09/22/14	5
Toluene-d8	107.		% Rec.	8260B	09/22/14	5
Dibromofluoromethane	106.		% Rec.	8260B	09/22/14	5
a, a, a-Trifluorotoluene	104.		% Rec.	8260B	09/22/14	5
4-Bromofluorobenzene	103.		% Rec.	8260B	09/22/14	5
TPH (GC/FID) High Fraction	22.	4.9	mg/kg	3546/DRO	09/23/14	1
Surrogate recovery(%) o-Terphenyl	74.6		% Rec.	3546/DRO	09/23/14	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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L722961-01 (PH) - 7.1@20.3c





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# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

ESC Sample # : L722961-02

Date Received : September 20, 2014  
Description : Marjorie Smith 1

Site ID :

Sample ID : DURLH-091814-1430

Project # :

Collected By : Logan Hixon  
Collection Date : 09/15/14 14:50

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.5	mg/kg	3060A/7196A	09/22/14	1
Chromium, Trivalent	8.2	2.5	mg/kg	Calc.	09/24/14	1
ORP	120		mV	2580 B-2011	09/22/14	1
pH	8.8		su	9045D	09/23/14	1
Sodium Adsorption Ratio	0.25			Calc.	09/22/14	1
Specific Conductance	320		umhos/cm	9050AMod	09/24/14	1
Total Solids	78.5		%	2540 G-2011	09/25/14	1
Mercury	0.094	0.025	mg/kg	7471	09/22/14	1
Arsenic	BDL	2.5	mg/kg	6010B	09/24/14	1
Barium	460	0.64	mg/kg	6010B	09/24/14	1
Cadmium	0.69	0.64	mg/kg	6010B	09/24/14	1
Chromium	8.2	1.3	mg/kg	6010B	09/24/14	1
Copper	14.	2.5	mg/kg	6010B	09/24/14	1
Lead	23.	0.64	mg/kg	6010B	09/24/14	1
Nickel	8.4	2.5	mg/kg	6010B	09/24/14	1
Selenium	BDL	2.5	mg/kg	6010B	09/24/14	1
Silver	BDL	1.3	mg/kg	6010B	09/24/14	1
Zinc	52.	6.4	mg/kg	6010B	09/24/14	1
TPH (GC/FID) Low Fraction	BDL	0.64	mg/kg	8015D/GRO	09/23/14	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	95.2		% Rec.	8015D/GRO	09/23/14	5
Benzene	BDL	0.0064	mg/kg	8260B	09/23/14	5
Toluene	BDL	0.032	mg/kg	8260B	09/23/14	5
Ethylbenzene	BDL	0.0064	mg/kg	8260B	09/23/14	5
Total Xylenes	BDL	0.019	mg/kg	8260B	09/23/14	5
Surrogate Recovery			% Rec.			
Toluene-d8	106.		% Rec.	8260B	09/23/14	5
Dibromofluoromethane	108.		% Rec.	8260B	09/23/14	5
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	09/23/14	5
4-Bromofluorobenzene	95.9		% Rec.	8260B	09/23/14	5
TPH (GC/FID) High Fraction	120	5.1	mg/kg	3546/DRO	09/23/14	1
Surrogate recovery(%) o-Terphenyl	80.9		% Rec.	3546/DRO	09/23/14	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

Date Received : September 20, 2014  
Description : Marjorie Smith 1

Sample ID : DURLH-091814-1500

Collected By : Logan Hixon  
Collection Date : 09/15/14 15:00

ESC Sample # : L722961-03

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.3	mg/kg	3060A/7196A	09/22/14	1
Chromium, Trivalent	7.9	2.3	mg/kg	Calc.	09/24/14	1
ORP	100		mV	2580 B-2011	09/22/14	1
pH	8.0		su	9045D	09/23/14	1
Sodium Adsorption Ratio	0.30			Calc.	09/22/14	1
Specific Conductance	110		umhos/cm	9050AMod	09/24/14	1
Total Solids	88.3		%	2540 G-2011	09/25/14	1
Mercury	BDL	0.023	mg/kg	7471	09/22/14	1
Arsenic	BDL	2.3	mg/kg	6010B	09/24/14	1
Barium	500	0.57	mg/kg	6010B	09/24/14	1
Cadmium	BDL	0.57	mg/kg	6010B	09/24/14	1
Chromium	7.9	1.1	mg/kg	6010B	09/24/14	1
Copper	15.	2.3	mg/kg	6010B	09/24/14	1
Lead	12.	0.57	mg/kg	6010B	09/24/14	1
Nickel	8.5	2.3	mg/kg	6010B	09/24/14	1
Selenium	BDL	2.3	mg/kg	6010B	09/24/14	1
Silver	BDL	1.1	mg/kg	6010B	09/24/14	1
Zinc	49.	5.7	mg/kg	6010B	09/24/14	1
TPH (GC/FID) Low Fraction	BDL	0.57	mg/kg	8015D/GRO	09/23/14	5
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene (FID)	97.2		% Rec.	8015D/GRO	09/23/14	5
Benzene	BDL	0.0057	mg/kg	8260B	09/23/14	5
Toluene	BDL	0.028	mg/kg	8260B	09/23/14	5
Ethylbenzene	BDL	0.0057	mg/kg	8260B	09/23/14	5
Total Xylenes	BDL	0.017	mg/kg	8260B	09/23/14	5
Surrogate Recovery			% Rec.			
Toluene-d8	108.		% Rec.	8260B	09/23/14	5
Dibromofluoromethane	109.		% Rec.	8260B	09/23/14	5
a,a,a-Trifluorotoluene	104.		% Rec.	8260B	09/23/14	5
4-Bromofluorobenzene	106.		% Rec.	8260B	09/23/14	5
TPH (GC/FID) High Fraction	BDL	4.5	mg/kg	3546/DRO	09/23/14	1
Surrogate recovery(%) o-Terphenyl	89.4		% Rec.	3546/DRO	09/23/14	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

ESC Sample # : L722961-04

Date Received : September 20, 2014  
Description : Marjorie Smith 1

Site ID :

Sample ID : DURLH-091814-1530

Project # :

Collected By : Logan Hixon  
Collection Date : 09/15/14 15:30

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Chromium, Hexavalent	BDL	2.3	mg/kg	3060A/7196A	09/22/14	1
Chromium, Trivalent	6.8	2.3	mg/kg	Calc.	09/24/14	1
ORP	100		mV	2580 B-2011	09/22/14	1
pH	8.1		su	9045D	09/23/14	1
Sodium Adsorption Ratio	0.25			Calc.	09/22/14	1
Specific Conductance	180		umhos/cm	9050AMod	09/24/14	1
Total Solids	87.2		%	2540 G-2011	09/25/14	1
Mercury	BDL	0.023	mg/kg	7471	09/22/14	1
Arsenic	BDL	2.3	mg/kg	6010B	09/24/14	1
Barium	490	0.57	mg/kg	6010B	09/24/14	1
Cadmium	BDL	0.57	mg/kg	6010B	09/24/14	1
Chromium	6.8	1.1	mg/kg	6010B	09/24/14	1
Copper	10.	2.3	mg/kg	6010B	09/24/14	1
Lead	13.	0.57	mg/kg	6010B	09/24/14	1
Nickel	8.4	2.3	mg/kg	6010B	09/24/14	1
Selenium	BDL	2.3	mg/kg	6010B	09/24/14	1
Silver	BDL	1.1	mg/kg	6010B	09/24/14	1
Zinc	46.	5.7	mg/kg	6010B	09/24/14	1
TPH (GC/FID) Low Fraction	BDL	0.57	mg/kg	8015D/GRO	09/23/14	5
Surrogate Recovery (70-130)			% Rec.	8015D/GRO	09/23/14	5
a,a,a-Trifluorotoluene (FID)	97.1					
Benzene	BDL	0.0057	mg/kg	8260B	09/23/14	5
Toluene	BDL	0.029	mg/kg	8260B	09/23/14	5
Ethylbenzene	BDL	0.0057	mg/kg	8260B	09/23/14	5
Total Xylenes	BDL	0.017	mg/kg	8260B	09/23/14	5
Surrogate Recovery			% Rec.	8260B	09/23/14	5
Toluene-d8	109.		% Rec.	8260B	09/23/14	5
Dibromofluoromethane	108.		% Rec.	8260B	09/23/14	5
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	09/23/14	5
4-Bromofluorobenzene	103.		% Rec.	8260B	09/23/14	5
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	09/23/14	1
Surrogate recovery(%)			% Rec.	3546/DRO	09/23/14	1
o-Terphenyl	78.8					

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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L722961-04 (PH) - 7.1@20.1c



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Est. 1970

# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

Date Received : September 20, 2014  
Description : Marjorie Smith 1  
Sample ID : DURLH-091814-1400  
Collected By : Logan Hixon  
Collection Date : 09/15/14 14:00

ESC Sample # : L722961-05

Site ID :

Project :

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/23/14 0754	LJN	1
Boron	BDL	9.0	mg/l		6010B	09/23/14 2304	ST	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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REPORT OF ANALYSIS

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

September 25, 2014

Date Received : September 20, 2014  
Description : Marjorie Smith 1  
Sample ID : DURLH-091814-1430  
Collected By : Logan Hixon  
Collection Date : 09/15/14 14:50

ESC Sample # : L722961-06

Site ID :

Project :

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/23/14 0754	LJN	1
Boron	BDL	9.0	mg/l		6010B	09/23/14 2308	ST	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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# REPORT OF ANALYSIS

September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

Date Received : September 20, 2014  
Description : Marjorie Smith 1  
Sample ID : DURLH-091814-1500  
Collected By : Logan Hixon  
Collection Date : 09/15/14 15:00

ESC Sample # : L722961-07

Site ID :

Project :

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/23/14 0754	LJN	1
Boron	BDL	9.0	mg/l		6010B	09/23/14 2312	ST	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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September 25, 2014

Logan Hixon  
XTO Energy - San Juan Division  
382 County Road 3100  
Aztec, NM 87410

Date Received : September 20, 2014  
Description : Marjorie Smith 1  
Sample ID : DURLH-091814-1530  
Collected By : Logan Hixon  
Collection Date : 09/15/14 15:30

ESC Sample # : L722961-08

Site ID :  
Project :

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/23/14 0754	LJN	1
Boron	BDL	9.0	mg/l		6010B	09/23/14 2315	ST	1

BDL - Below Detection Limit  
Det. Limit - Estimated Quantitation Limit (EQL)  
Limit - Maximum Contaminant Level as established by the US EPA  
Note:

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Summary of Remarks For Samples Printed  
09/25/14 at 11:50:58

TSR Signing Reports: 288  
R2 - Rush: Next Day

Domestic Water Well Sampling-see L609759 Lobato for tests EDD's on ALL projects email James,  
Kurt and Logan all reports

Sample: L722961-01 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Changed BTEXGRO to V8260BTEX/GRO per DR. AV9/22  
Sample: L722961-02 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Changed BTEXGRO to V8260BTEX/GRO per DR. AV9/22  
Sample: L722961-03 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Changed BTEXGRO to V8260BTEX/GRO per DR. AV9/22  
Sample: L722961-04 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Changed BTEXGRO to V8260BTEX/GRO per DR. AV9/22  
Sample: L722961-05 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Use container from -01. Added per coc. AV 9/22  
Sample: L722961-06 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Use container from -02. Added per coc. AV 9/22  
Sample: L722961-07 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Use container from -03. Added per coc. AV 9/22  
Sample: L722961-08 Account: XTORNM Received: 09/20/14 09:00 Due Date: 09/25/14 00:00 RPT Date: 09/25/14 11:50  
Use container from -04. Added per coc. AV 9/22





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Analyte	Result	Laboratory Blank Units % Rec	Limit	Batch	Date Analyzed
Mercury	< .02	mg/kg		WG744146	09/22/14 11:29
Chromium, Hexavalent	< 2	mg/kg		WG744201	09/22/14 15:21
TPH (GC/FID) High Fraction	< 4	mg/kg		WG744203	09/22/14 21:38
o-Terphenyl		% Rec. 74.00	50-150	WG744203	09/22/14 21:38
Benzene	< .001	mg/kg		WG744454	09/22/14 23:02
Ethylbenzene	< .001	mg/kg		WG744454	09/22/14 23:02
Toluene	< .005	mg/kg		WG744454	09/22/14 23:02
Total Xylenes	< .003	mg/kg		WG744454	09/22/14 23:02
4-Bromofluorobenzene		% Rec. 102.0	71-126	WG744454	09/22/14 23:02
Dibromofluoromethane		% Rec. 103.0	78.3-121	WG744454	09/22/14 23:02
Toluene-d8		% Rec. 108.0	88.5-111	WG744454	09/22/14 23:02
a,a,a-Trifluorotoluene		% Rec. 107.0	85-114	WG744454	09/22/14 23:02
Boron	< 9	mg/l		WG744670	09/23/14 22:27
TPH (GC/FID) Low Fraction	< .1	mg/kg		WG744224	09/23/14 20:03
a,a,a-Trifluorotoluene (FID)		% Rec. 98.20	59-128	WG744224	09/23/14 20:03
Arsenic	< 2	mg/kg		WG744114	09/23/14 22:14
Barium	< .5	mg/kg		WG744114	09/23/14 22:14
Cadmium	< .5	mg/kg		WG744114	09/23/14 22:14
Chromium	< 1	mg/kg		WG744114	09/23/14 22:14
Copper	< 2	mg/kg		WG744114	09/23/14 22:14
Lead	< .5	mg/kg		WG744114	09/23/14 22:14
Nickel	< 2	mg/kg		WG744114	09/23/14 22:14
Selenium	< 2	mg/kg		WG744114	09/23/14 22:14
Silver	< 1	mg/kg		WG744114	09/23/14 22:14
Zinc	< 5	mg/kg		WG744114	09/23/14 22:14
Specific Conductance	0.950	umhos/cm		WG744604	09/24/14 13:30
Total Solids	< .1	%		WG744862	09/25/14 08:47

Analyte	Units	Result	Duplicate Duplicate	RPD	Limit	Ref Samp	Batch
Mercury	mg/kg	0.0740	0.0403	59.0*	20	L722681-67	WG744146
ORP	mV	20.0	20.0	0.0	20	L722424-01	WG744131
Chromium, Hexavalent	mg/kg	0.0	0.0	0.0	20	L722683-01	WG744201
Chromium, Hexavalent	mg/kg	0.0	0.0	0.0	20	L722979-04	WG744201
pH	su	6.70	6.70	0.149	1	L722931-01	WG744523
pH	su	7.10	7.10	0.423	1	L722961-04	WG744523

\* Performance of this Analyte is outside of established criteria.  
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Duplicate			Limit	Ref Samp	Batch
		Result	Duplicate	RPD			
Specific Conductance	umhos/cm	2100	2200	3.23	20	L722057-10	WG744604
Specific Conductance	umhos/cm	140.	160.	14.0	20	L722961-04	WG744604
Total Solids	%	76.7	78.2	1.87	5	L723310-09	WG744862
Analyte	Units	Laboratory Known Val	Control Sample Result	% Rec	Limit	Batch	
Mercury	mg/kg	12.4	9.34	75.0	71.6-128	WG744146	
ORP	mV		110.	0.0*	90-20	WG744131	
ORP	mV		110.	0.0*	90-20	WG744131	
Chromium, Hexavalent	mg/kg	187	184.	98.4	80-120	WG744201	
pH	su	6.33	6.32	99.8	98.3-101.7	WG744523	
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	60	48.3	80.5 83.30	50-150 50-150	WG744203 WG744203	
Benzene	mg/kg	.025	0.0243	97.3	77.1-121	WG744454	
Ethylbenzene	mg/kg	.025	0.0245	97.9	79.7-122	WG744454	
Toluene	mg/kg	.025	0.0238	95.2	79.7-118	WG744454	
Total Xylenes	mg/kg	.075	0.0708	94.5	78.8-121	WG744454	
4-Bromofluorobenzene				102.0	71-126	WG744454	
Dibromofluoromethane				105.0	78.3-121	WG744454	
Toluene-d8				106.0	88.5-111	WG744454	
a,a,a-Trifluorotoluene				106.0	85-114	WG744454	
Boron	mg/l	9	8.78	98.0	80-120	WG744670	
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID)	mg/kg	5.5	4.18	75.9 97.30	63.5-137 59-128	WG744224 WG744224	
Arsenic	mg/kg	237	237.	100.	83.1-117	WG744114	
Barium	mg/kg	252	239.	95.0	84.1-116	WG744114	
Cadmium	mg/kg	191	190.	99.0	83.2-117	WG744114	
Chromium	mg/kg	128	127.	99.0	81.3-118	WG744114	
Copper	mg/kg	123	119.	97.0	83.7-116	WG744114	
Lead	mg/kg	103	102.	99.0	83.1-117	WG744114	
Nickel	mg/kg	118	111.	94.0	82-118	WG744114	
Selenium	mg/kg	110	109.	99.0	78.7-122	WG744114	
Silver	mg/kg	47.3	45.6	96.0	66.2-134	WG744114	
Zinc	mg/kg	183	176.	96.0	82-118	WG744114	
Specific Conductance	umhos/cm	1040	1000	96.2	85-115	WG744604	
Total Solids	%	50	50.0	100.	85-115	WG744862	

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
ORP	mV	100.	110.	10000*	-20	9.52	20	WG744131
ORP	mV	100.	110.	10000*	-20	9.52	20	WG744131
Chromium, Hexavalent	mg/kg	184.	184.	98.0	80-120	0.0	20	WG744201
pH	su	6.31	6.32	100.	98.3-101.7	0.158	20	WG744523
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	48.1	48.3	80.0 81.70	50-150 50-150	0.310	20	WG744203 WG744203
Benzene	mg/kg	0.0248	0.0243	99.0	77.1-121	1.85	20	WG744454
Ethylbenzene	mg/kg	0.0260	0.0245	104.	79.7-122	6.18	20	WG744454
Toluene	mg/kg	0.0245	0.0238	98.0	79.7-118	2.79	20	WG744454
Total Xylenes	mg/kg	0.0741	0.0708	99.0	78.8-121	4.49	20	WG744454
4-Bromofluorobenzene				106.0	71-126			WG744454
Dibromofluoromethane				105.0	78.3-121			WG744454
Toluene-d8				105.0	88.5-111			WG744454
a,a,a-Trifluorotoluene				107.0	85-114			WG744454
Boron	mg/l	8.61	8.78	96.0	80-120	2.00	20	WG744670
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	3.99	4.18	73.0 98.50	63.5-137 59-128	4.43	20	WG744224 WG744224
Arsenic	mg/kg	248.	237.	105.	83.1-117	4.00	20	WG744114
Barium	mg/kg	249.	239.	99.0	84.1-116	4.00	20	WG744114
Cadmium	mg/kg	198.	190.	104.	83.2-117	4.00	20	WG744114
Chromium	mg/kg	132.	127.	103.	81.3-118	4.00	20	WG744114
Copper	mg/kg	125.	119.	102.	83.7-116	5.00	20	WG744114
Lead	mg/kg	105.	102.	102.	83.1-117	3.00	20	WG744114
Nickel	mg/kg	116.	111.	98.0	82-118	4.00	20	WG744114
Selenium	mg/kg	114.	109.	104.	78.7-122	4.00	20	WG744114
Silver	mg/kg	48.1	45.6	102.	66.2-134	5.00	20	WG744114
Zinc	mg/kg	183.	176.	100.	82-118	4.00	20	WG744114
Specific Conductance	umhos/	1000	1000	96.0	85-115	0.0	20	WG744604

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Mercury	mg/kg	0.542	0.0403	.5	100.	80-120	L722681-67	WG744146
Chromium, Hexavalent	mg/kg	19.5	0.0	20	98.0	75-125	L722683-01	WG744201
TPH (GC/FID) High Fraction o-Terphenyl	mg/kg	45.3	0.332	60	75.0 75.90	50-150 50-150	L722229-03	WG744203 WG744203
Benzene	mg/kg	0.114	0.0	.025	91.0	54.3-133	L722961-01	WG744454

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Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Ethylbenzene	mg/kg	0.102	0.0	.025	81.0	61.4-133	L722961-01	WG744454
Toluene	mg/kg	0.107	0.0	.025	86.0	61.4-130	L722961-01	WG744454
Total Xylenes	mg/kg	0.303	0.000773	.075	81.0	63.3-131	L722961-01	WG744454
4-Bromofluorobenzene					104.0	71-126		WG744454
Dibromofluoromethane					106.0	78.3-121		WG744454
Toluene-d8					106.0	88.5-111		WG744454
a,a,a-Trifluorotoluene					107.0	85-114		WG744454
TPH (GC/FID) Low Fraction	mg/kg	14.8	6.42	5.5	30.0	28.5-138	L722424-02	WG744224
a,a,a-Trifluorotoluene (FID)					90.90	59-128		WG744224
Arsenic	mg/kg	103.	5.68	100	97.0	75-125	L722681-21	WG744114
Cadmium	mg/kg	99.8	1.02	100	99.0	75-125	L722681-21	WG744114
Chromium	mg/kg	126.	27.5	100	99.0	75-125	L722681-21	WG744114
Copper	mg/kg	117.	19.4	100	97.0	75-125	L722681-21	WG744114
Lead	mg/kg	122.	21.0	100	100.	75-125	L722681-21	WG744114
Nickel	mg/kg	136.	37.0	100	99.0	75-125	L722681-21	WG744114
Selenium	mg/kg	99.2	2.54	100	97.0	75-125	L722681-21	WG744114
Silver	mg/kg	93.8	0.377	100	93.0	75-125	L722681-21	WG744114
Zinc	mg/kg	215.	124.	100	91.0	75-125	L722681-21	WG744114

Analyte	Units	MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Mercury	mg/kg	0.509	0.542	93.7	80-120	6.00	20	L722681-67	WG744146
Chromium, Hexavalent	mg/kg	19.6	19.5	98.0	75-125	0.512	20	L722683-01	WG744201
TPH (GC/FID) High Fraction	mg/kg	41.2	45.3	68.1	50-150	9.50	20	L722229-03	WG744203
o-Terphenyl				69.90	50-150				WG744203
Benzene	mg/kg	0.108	0.114	86.6	54.3-133	4.79	20	L722961-01	WG744454
Ethylbenzene	mg/kg	0.0972	0.102	77.7	61.4-133	4.58	20	L722961-01	WG744454
Toluene	mg/kg	0.100	0.107	80.4	61.4-130	6.26	20	L722961-01	WG744454
Total Xylenes	mg/kg	0.279	0.303	74.2	63.3-131	8.23	20	L722961-01	WG744454
4-Bromofluorobenzene				104.0	71-126				WG744454
Dibromofluoromethane				105.0	78.3-121				WG744454
Toluene-d8				105.0	88.5-111				WG744454
a,a,a-Trifluorotoluene				103.0	85-114				WG744454
TPH (GC/FID) Low Fraction	mg/kg	17.0	14.8	38.4	28.5-138	13.7	23.6	L722424-02	WG744224
a,a,a-Trifluorotoluene (FID)				88.00	59-128				WG744224
Arsenic	mg/kg	107.	103.	101.	75-125	4.00	20	L722681-21	WG744114
Cadmium	mg/kg	100.	99.8	99.4	75-125	1.00	20	L722681-21	WG744114
Chromium	mg/kg	132.	126.	104.	75-125	5.00	20	L722681-21	WG744114
Copper	mg/kg	122.	117.	102.	75-125	4.00	20	L722681-21	WG744114
Lead	mg/kg	122.	122.	101.	75-125	1.00	20	L722681-21	WG744114
Nickel	mg/kg	135.	136.	98.5	75-125	1.00	20	L722681-21	WG744114
Selenium	mg/kg	102.	99.2	99.1	75-125	2.00	20	L722681-21	WG744114
Silver	mg/kg	94.6	93.8	94.3	75-125	1.00	20	L722681-21	WG744114
Zinc	mg/kg	236.	215.	112.	75-125	9.00	20	L722681-21	WG744114

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'





YOUR LAB OF CHOICE

XTO Energy - San Juan Division  
Logan Hixon  
382 County Road 3100

Aztec, NM 87410

Quality Assurance Report  
Level II

L722961

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

September 25, 2014

Post Spike

Serial Dilution

Batch number / Run number / Sample number cross reference

WG744146: R2991746: L722961-01 02 03 04  
WG744131: R2991830: L722961-01 02 03 04  
WG744122: R2991843: L722961-01 02 03 04  
WG744201: R2991855: L722961-01 02 03 04  
WG744409: R2992038: L722961-05 06 07 08  
WG744523: R2992060: L722961-01 02 03 04  
WG744203: R2992115: L722961-01 02 03 04  
WG744454: R2992117: L722961-01 02 03 04  
WG744670: R2992327: L722961-05 06 07 08  
WG744224: R2992370: L722961-01 02 03 04  
WG744114: R2992415: L722961-01 02 03 04  
WG744604: R2992532: L722961-01 02 03 04  
WG744862: R2992748: L722961-01 02 03 04

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



Page 1 of 1

**XTO Contact Phone #**  
505 386 8018

Logan, Kurt, James

Test Reason	Bgt Closure (P+A)
Turnaround	

**Turnaround  
Standard**

Standard  
(X) Next Day \*Rush

### Three Day

**Std. 5 Bus. Days (by contract)**

**Date Needed**

**Gray Areas for Lab Use Only!**

No. of  
Conts.

Sample Number

Sample Name	Media	Date	Time	Preservative	Conts.
Durck-091814-1400 Bgt cellular discick 1	S	9-18	1400	COOI	3-467
-1430 Bgt cellular discick 2			1450		
-1500 Background 1			1500		
-1530 Background 2			1530		

Media : Filter = F Soil = S Wastewater = WW Groundwater = GW Drinking Waster = DW Sludge = SG Surface Water = SW Air = A Drill Mud = DM Other = OT

Sample Condition	Sample	Mean	Standard Deviation	Standard Error	95% CI for Mean	t-Statistic	p-Value
Control	1	1.00	0.00	0.00	1.00	0.00	0.00
Control	2	1.00	0.00	0.00	1.00	0.00	0.00
Control	3	1.00	0.00	0.00	1.00	0.00	0.00
Control	4	1.00	0.00	0.00	1.00	0.00	0.00
Control	5	1.00	0.00	0.00	1.00	0.00	0.00
Control	6	1.00	0.00	0.00	1.00	0.00	0.00
Control	7	1.00	0.00	0.00	1.00	0.00	0.00
Control	8	1.00	0.00	0.00	1.00	0.00	0.00
Control	9	1.00	0.00	0.00	1.00	0.00	0.00
Control	10	1.00	0.00	0.00	1.00	0.00	0.00
Control	11	1.00	0.00	0.00	1.00	0.00	0.00
Control	12	1.00	0.00	0.00	1.00	0.00	0.00
Control	13	1.00	0.00	0.00	1.00	0.00	0.00
Control	14	1.00	0.00	0.00	1.00	0.00	0.00
Control	15	1.00	0.00	0.00	1.00	0.00	0.00
Control	16	1.00	0.00	0.00	1.00	0.00	0.00
Control	17	1.00	0.00	0.00	1.00	0.00	0.00
Control	18	1.00	0.00	0.00	1.00	0.00	0.00
Control	19	1.00	0.00	0.00	1.00	0.00	0.00
Control	20	1.00	0.00	0.00	1.00	0.00	0.00
Control	21	1.00	0.00	0.00	1.00	0.00	0.00
Control	22	1.00	0.00	0.00	1.00	0.00	0.00
Control	23	1.00	0.00	0.00	1.00	0.00	0.00
Control	24	1.00	0.00	0.00	1.00	0.00	0.00
Control	25	1.00	0.00	0.00	1.00	0.00	0.00
Control	26	1.00	0.00	0.00	1.00	0.00	0.00
Control	27	1.00	0.00	0.00	1.00	0.00	0.00
Control	28	1.00	0.00	0.00	1.00	0.00	0.00
Control	29	1.00	0.00	0.00	1.00	0.00	0.00
Control	30	1.00	0.00	0.00	1.00	0.00	0.00
Control	31	1.00	0.00	0.00	1.00	0.00	0.00
Control	32	1.00	0.00	0.00	1.00	0.00	0.00
Control	33	1.00	0.00	0.00	1.00	0.00	0.00
Control	34	1.00	0.00	0.00	1.00	0.00	0.00
Control	35	1.00	0.00	0.00	1.00	0.00	0.00
Control	36	1.00	0.00	0.00	1.00	0.00	0.00
Control	37	1.00	0.00	0.00	1.00	0.00	0.00
Control	38	1.00	0.00	0.00	1.00	0.00	0.00
Control	39	1.00	0.00	0.00	1.00	0.00	0.00
Control	40	1.00	0.00	0.00	1.00	0.00	0.00
Control	41	1.00	0.00	0.00	1.00	0.00	0.00
Control	42	1.00	0.00	0.00	1.00	0.00	0.00
Control	43	1.00	0.00	0.00	1.00	0.00	0.00
Control	44	1.00	0.00	0.00	1.00	0.00	0.00
Control	45	1.00	0.00	0.00	1.00	0.00	0.00
Control	46	1.00	0.00	0.00	1.00	0.00	0.00
Control	47	1.00	0.00	0.00	1.00	0.00	0.00
Control	48	1.00	0.00	0.00	1.00	0.00	0.00
Control	49	1.00	0.00	0.00	1.00	0.00	0.00

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### Other Information

### Relinquish

\* Sample ID will be the office and sampler-date-military time FARJM-MMDDYY-1200

0398

Table 910-1		Marjorie Smith 1				
CONCENTRATION LEVELS						
Contaminant of Concern	Concentrations	Background Sample 1 (BG1)	Background Sample 2 (BG2)	Background Range	Discrete Sample (S1)	Discrete Sample (S2)
	Below detection level-BDL					
Organic Compounds in Soil						
TPH (total volatile & extractable petroleum hydrocarbons)	500mg/kg					
Benzene	6.17 mg/kg					
Toluene	86 mg/kg					
Ethylbenzene	100mg/kg					
Xylenes (total)	175 mg/kg					
Inorganic in Soil						
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background					
Sodium Adsorption Ratio (SAR)	<12					
pH	5.0-9.0					
Metals in Soil						
Arsenic	0.39 mg/kg					
Barium (LDNR True Total Barium)	15,000 mg/kg					
Boron (TCLP)	2 mg/l					
Cadmium	70 mg/kg					
Chromium (III)	120,000 mg/kg					
Chromium (VI)	23 mg/kg					
Copper	3,100 mg/kg					
Lead (inorganic)	400 mg/kg					
Mercury	23 mg/kg					
Nickel (soluble salts)	1,600 mg/kg					
Selenium	300 mg/kg					
Silver	300 mg/kg					
Zinc	23,000 mg/kg					