

Technical Report for

XTO Energy

XTO Love Ranch 8

1108-07A

Accutest Job Number: D42514

Sampling Date: 01/08/13

Report to:

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Total number of pages in report: 20



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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Sample Summary

XTO Energy

Job No: D42514

XTO Love Ranch 8

Project No: 1108-07A

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D42514-1	01/08/13	10:00 DS	01/10/13	SO	Soil	RP SUBLINER (1)
D42514-2	01/08/13	10:10 DS	01/10/13	SO	Soil	RP SUBLINER (2)
D42514-3	01/08/13	10:20 DS	01/10/13	SO	Soil	RP SUBLINER (3)
D42514-4	01/08/13	10:30 DS	01/10/13	SO	Soil	RP SUBLINER (4)
D42514-5	01/08/13	10:40 DS	01/10/13	SO	Soil	RP SUBLINER (5)
D42514-6	01/08/13	10:50 DS	01/10/13	SO	Soil	RP SUBLINER (6)

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

Summary of Hits

Job Number: D42514
Account: XTO Energy
Project: XTO Love Ranch 8
Collected: 01/08/13

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D42514-1		RP SUBLINER (1)				
TPH-GRO (C6-C10)		9.64 J	14	7.0	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		630	8.0	4.8	mg/kg	SW846-8015B
D42514-2		RP SUBLINER (2)				
TPH-GRO (C6-C10)		13.7	13	6.3	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		2850	76	45	mg/kg	SW846-8015B
D42514-3		RP SUBLINER (3)				
TPH-GRO (C6-C10)		61.7	16	8.0	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		1660	8.7	5.2	mg/kg	SW846-8015B
D42514-4		RP SUBLINER (4)				
TPH-DRO (C10-C28)		279	7.8	4.7	mg/kg	SW846-8015B
D42514-5		RP SUBLINER (5)				
TPH-DRO (C10-C28)		794	7.7	4.6	mg/kg	SW846-8015B
D42514-6		RP SUBLINER (6)				
TPH-GRO (C6-C10)		82.8	13	6.4	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		1610	7.7	4.6	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Report of Analysis

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3

Client Sample ID: RP SUBLINER (1)	
Lab Sample ID: D42514-1	Date Sampled: 01/08/13
Matrix: SO - Soil	Date Received: 01/10/13
Method: SW846 8015B	Percent Solids: 83.6
Project: XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19179.D	1	01/18/13	BD	n/a	n/a	GGB1048
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)	9.64	14	7.0	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	94%		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

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Client Sample ID: RP SUBLINER (1)	Date Sampled: 01/08/13
Lab Sample ID: D42514-1	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 83.6
Method: SW846-8015B SW846 3546	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008712.D	1	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	630	8.0	4.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	82%		35-130%		

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

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3

Client Sample ID: RP SUBLINER (2)	Date Sampled: 01/08/13
Lab Sample ID: D42514-2	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 88.2
Method: SW846 8015B	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19182.D	1	01/18/13	BD	n/a	n/a	GGB1048
Run #2							

Run #	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)	13.7	13	6.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	104%		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

32
3

Client Sample ID: RP SUBLINER (2)	Date Sampled: 01/08/13
Lab Sample ID: D42514-2	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 88.2
Method: SW846-8015B SW846 3546	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008714.D	10	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2850	76	45	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	84%		35-130%		

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: RP SUBLINER (3)	
Lab Sample ID: D42514-3	Date Sampled: 01/08/13
Matrix: SO - Soil	Date Received: 01/10/13
Method: SW846 8015B	Percent Solids: 76.3
Project: XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19183.D	1	01/18/13	BD	n/a	n/a	GGB1048
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	61.7	16	8.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	111%		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: RP SUBLINER (3)	Date Sampled: 01/08/13
Lab Sample ID: D42514-3	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 76.3
Method: SW846-8015B SW846 3546	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008716.D	1	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1660	8.7	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	88%		35-130%		

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

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Client Sample ID: RP SUBLINER (4)	Date Sampled: 01/08/13
Lab Sample ID: D42514-4	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 85.8
Method: SW846 8015B	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19184.D	1	01/18/13	BD	n/a	n/a	GGB1048
Run #2							

Run #	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	13	6.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	89%		60-140%		

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

Report of Analysis

Client Sample ID: RP SUBLINER (4)	
Lab Sample ID: D42514-4	Date Sampled: 01/08/13
Matrix: SO - Soil	Date Received: 01/10/13
Method: SW846-8015B SW846 3546	Percent Solids: 85.8
Project: XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008718.D	1	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	279	7.8	4.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	82%		35-130%		

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

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3

Client Sample ID: RP SUBLINER (5)	
Lab Sample ID: D42514-5	Date Sampled: 01/08/13
Matrix: SO - Soil	Date Received: 01/10/13
Method: SW846 8015B	Percent Solids: 86.6
Project: XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19185.D	1	01/18/13	BD	n/a	n/a	GGB1048
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	13	6.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	96%		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

3.5
3

Client Sample ID: RP SUBLINER (5)	Date Sampled: 01/08/13
Lab Sample ID: D42514-5	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 86.6
Method: SW846-8015B SW846 3546	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008720.D	1	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	794	7.7	4.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	79%		35-130%		

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

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Client Sample ID: RP SUBLINER (6)	Date Sampled: 01/08/13
Lab Sample ID: D42514-6	Date Received: 01/10/13
Matrix: SO - Soil	Percent Solids: 87.0
Method: SW846 8015B	
Project: XTO Love Ranch 8	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB19186.D	1	01/18/13	BD	n/a	n/a	GGB1048
Run #2							

Run #	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)	82.8	13	6.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	135%		60-140%		

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

Report of Analysis

Client Sample ID: RP SUBLINER (6)	
Lab Sample ID: D42514-6	Date Sampled: 01/08/13
Matrix: SO - Soil	Date Received: 01/10/13
Method: SW846-8015B SW846 3546	Percent Solids: 87.0
Project: XTO Love Ranch 8	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH008722.D	1	01/24/13	AV	01/21/13	OP7253	GFH483
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1610	7.7	4.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	81%		35-130%		

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job # D42514

Client / Reporting Information: KRW Consulting, 8000 West 14th Street; Suite 200, Lakewood, CO 80214. Project Name: XTO Love Ranch 8. Project Information: XTO Energy, 21459 CR 5, Rifle, CO 81650. Requested Analysis (see TEST CODE sheet). 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.

Table with columns: Accutest Sample #, Field ID / Point of Collection, MECH/CI Viol #, Date, Time, Sampled by, Matrix, # of bottles, and various analysis codes (PCE, MCHL, PANDS, TSS/CO, NONE, DI/WHIP, MCHN, ENCLURE, Residue). Rows include RP Subliner (12) through (17) with dates and times.

Data Deliverable Information: Turnaround Time (Business days), Approved By (Accutest PM) / Date, Commercial "A" (Level 1), Commercial "B" (Level 2), COMMBN, COMMBN+, State Forms Required, Send Forms to State, Report by Fax, Report by PDF ONLY, EDD Format. Comments / Special Instructions: ON HOLD UNTILL KRW CONTACTS.

Sample Custody must be documented below each time samples change possession, including courier delivery. Relinquished by: [Signature], Date Time: 1-9-13, Received By: [Signature], Date Time: 16:00. Relinquished by: [Signature], Date Time: 1/10/13 13:00, Received By: [Signature].

4.1
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OR 1/10

D42514: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D42514

Client: KRW

Immediate Client Services Action Required: No

Date / Time Received: 1/10/2013 1:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO LOVE RANCH 8

Airbill #'s: HDCCO

<u>Cooler Security</u>	<u>Y or N</u>		<u>Y or N</u>	
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smp'l Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y or N</u>	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume rec'd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

4.1
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