



03/05/12

Technical Report for

XTO Energy

FRU 197-33A

1103-03A

Accutest Job Number: D32263

Sampling Date: 02/27/12


Report to:

dknudson@krwconsulting.com

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

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

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Test results relate only to samples analyzed.

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Sample Summary

XTO Energy

Job No: D32263

FRU 197-33A

Project No: 1103-03A

Sample Number	Collected		Matrix Code	Type	Client Sample ID
	Date	Time By			
D32263-1	02/27/12	10:20 CB	02/28/12	SO Soil	CUT 1MB DAY 8 (2/23)
D32263-2	02/27/12	10:30 CB	02/28/12	SO Soil	CUT 1MB DAY 9 (2/24)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: XTO Energy

Job No D32263

Site: FRU 197-33A

Report Date 3/1/2012 11:47:23 AM

On 02/28/2012, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.3 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D32263 was assigned to the project. The lab sample IDs, client sample IDs, 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 GC By Method SW846 8015B

Matrix SO

Batch ID: GGB849

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D32234-1MS, D32234-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO

Batch ID: OP5445

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D32234-1MS, D32234-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN13887

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

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.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CUT 1MB DAY 8 (2/23)	
Lab Sample ID:	D32263-1	Date Sampled: 02/27/12
Matrix:	SO - Soil	Date Received: 02/28/12
Method:	SW846 8015B	Percent Solids: 90.7
Project:	FRU 197-33A	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15140.D	1	02/29/12	SK	n/a	n/a	GGB849
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)	8.80	12	6.0	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	92%		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:	CUT 1MB DAY 8 (2/23)	
Lab Sample ID:	D32263-1	Date Sampled: 02/27/12
Matrix:	SO - Soil	Date Received: 02/28/12
Method:	SW846-8015B SW846 3546	Percent Solids: 90.7
Project:	FRU 197-33A	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001808.D	1	02/29/12	TR	02/28/12	OP5445	GFH93
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	118	15	9.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	43%		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:	CUT 1MB DAY 9 (2/24)	
Lab Sample ID:	D32263-2	Date Sampled: 02/27/12
Matrix:	SO - Soil	Date Received: 02/28/12
Method:	SW846 8015B	Percent Solids: 92.9
Project:	FRU 197-33A	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15141.D	1	02/29/12	SK	n/a	n/a	GGB849
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)	8.56	11	5.7	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	99%		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:	CUT 1MB DAY 9 (2/24)	
Lab Sample ID:	D32263-2	Date Sampled: 02/27/12
Matrix:	SO - Soil	Date Received: 02/28/12
Method:	SW846-8015B SW846 3546	Percent Solids: 92.9
Project:	FRU 197-33A	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001810.D	1	02/29/12	TR	02/28/12	OP5445	GFH93
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	176	14	9.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	73%		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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

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 # 132263

[illegible]

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D32263

Client: KRW CONSULTING INC

Immediate Client Services Action Required: No

Date / Time Received: 2/28/2012 12:52:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO FRU 197-33A

Airbill #'s: HD CO

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 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. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 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"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 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"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 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 | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 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

GC Volatiles

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QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB849-MB	GB15116.D	1	02/28/12	SK	n/a	n/a	GGB849

The QC reported here applies to the following samples:

Method: SW846 8015B

D32263-1, D32263-2

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	99% 60-140%

Blank Spike Summary

Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB849-BS	GB15117.D	1	02/28/12	SK	n/a	n/a	GGB849

The QC reported here applies to the following samples:

Method: SW846 8015B

D32263-1, D32263-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	110	100	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D32234-1MS	GB15119.D	1	02/28/12	SK	n/a	n/a	GGB849
D32234-1MSD	GB15120.D	1	02/28/12	SK	n/a	n/a	GGB849
D32234-1	GB15118.D	1	02/28/12	SK	n/a	n/a	GGB849

The QC reported here applies to the following samples:

Method: SW846 8015B

D32263-1, D32263-2

CAS No.	Compound	D32234-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	8.92	J	140	139	93	141	95	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D32234-1	Limits
120-82-1	1,2,4-Trichlorobenzene	109%	108%	101%	60-140%

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

Page 1 of 1

Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5445-MB	FH001772.D	1	02/28/12	TR	02/28/12	OP5445	GFH93

The QC reported here applies to the following samples:

Method: SW846-8015B

D32263-1, D32263-2

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	104% 43-136%

Blank Spike Summary

Page 1 of 1

Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5445-BS	FH001774.D	1	02/28/12	TR	02/28/12	OP5445	GFH93

The QC reported here applies to the following samples:

Method: SW846-8015B

D32263-1, D32263-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	550	82	58-130

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

6.2.1

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Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: D32263
Account: XTOKRWR XTO Energy
Project: FRU 197-33A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5445-MS	FH001776.D	1	02/28/12	TR	02/28/12	OP5445	GFH93
OP5445-MSD	FH001778.D	1	02/28/12	TR	02/28/12	OP5445	GFH93
D32234-1	FH001780.D	1	02/28/12	TR	02/28/12	OP5445	GFH93

The QC reported here applies to the following samples:

Method: SW846-8015B

D32263-1, D32263-2

CAS No.	Compound	D32234-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	20.9		755	553	70	585	75	6	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D32234-1	Limits
84-15-1	o-Terphenyl	75%	79%	80%	43-136%