

**Technical Report for**

**XTO Energy**

**PCU 296-7A**

**1007-02**

**Accutest Job Number: D32216**

**Sampling Date: 02/23/12**

**Report to:**

**dknudson@krwconsulting.com**

**Total number of pages in report: 49**



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.



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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: D32216**

**PCU 296-7A**

**Project No: 1007-02**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D32216-1	02/23/12	10:20 DS	02/27/12	SO	Soil	RP TP-1:(-8')-(-10')
D32216-2	02/23/12	11:45 DS	02/27/12	SO	Soil	RP TP-2:(0')-(-2')
D32216-3	02/23/12	12:00 DS	02/27/12	SO	Soil	RP TP-2:(-4')-(-6')
D32216-4	02/23/12	12:20 DS	02/27/12	SO	Soil	RP TP-2:(-6')-(-8')
D32216-5	02/23/12	12:30 DS	02/27/12	SO	Soil	RP TP-2:(-8')-(-10')
D32216-6	02/23/12	12:45 DS	02/27/12	SO	Soil	RP TP-3:(0')-(-2')
D32216-7	02/23/12	12:55 DS	02/27/12	SO	Soil	RP TP-3:(-2')-(-4')
D32216-8	02/23/12	13:00 DS	02/27/12	SO	Soil	RP TP-3:(-4')-(-6')
D32216-9	02/23/12	13:15 DS	02/27/12	SO	Soil	RP TP-4:(0')-(-2')
D32216-10	02/23/12	13:25 DS	02/27/12	SO	Soil	RP TP-4:(-2')-(-4')
D32216-11	02/23/12	13:35 DS	02/27/12	SO	Soil	RP TP-4:(-4')-(-6')
D32216-12	02/23/12	13:45 DS	02/27/12	SO	Soil	RP TP-5:(0')-(-2')
D32216-13	02/23/12	14:00 DS	02/27/12	SO	Soil	RP TP-5:(-2')-(-4')

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



### Sample Summary (continued)

XTO Energy

Job No: D32216

PCU 296-7A

Project No: 1007-02

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D32216-14	02/23/12	14:15 DS	02/27/12	SO	Soil	RP TP-5:(-4')-(-6')

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

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** XTO Energy

**Job No** D32216

**Site:** PCU 296-7A

**Report Date** 3/5/2012 11:12:20 AM

On 02/27/2012, 14 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D32216 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

<b>Matrix</b> SO	<b>Batch ID:</b> GGB848
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D32208-1MS, D32208-1MSD were used as the QC samples indicated.

<b>Matrix</b> SO	<b>Batch ID:</b> GGB849
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- 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

<b>Matrix</b> SO	<b>Batch ID:</b> OP5459
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- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D32298-1MS, D32298-1MSD were used as the QC samples indicated.

### Wet Chemistry By Method SM19 2540B M

<b>Matrix</b> SO	<b>Batch ID:</b> GN13861
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- The data for SM19 2540B M meets quality control requirements.

<b>Matrix</b> SO	<b>Batch ID:</b> GN13866
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- 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**

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**Report of Analysis**

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## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> RP TP-1:(-8')-(-10') <b>Lab Sample ID:</b> D32216-1 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.2
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15107.D	1	02/28/12	SK	n/a	n/a	GGB848
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	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		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

3.1  
3

<b>Client Sample ID:</b> RP TP-1:(-8')-(-10')	
<b>Lab Sample ID:</b> D32216-1	<b>Date Sampled:</b> 02/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 02/27/12
<b>Method:</b> SW846-8015B SW846 3546	<b>Percent Solids:</b> 85.2
<b>Project:</b> PCU 296-7A	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001899.D	1	03/03/12	TR	03/01/12	OP5459	GFH96
Run #2							

Run #	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)	281	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		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

32  
3

<b>Client Sample ID:</b> RP TP-2:(0')-(-2') <b>Lab Sample ID:</b> D32216-2 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 83.7
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15108.D	1	02/28/12	SK	n/a	n/a	GGB848
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	14	6.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	102%		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

<b>Client Sample ID:</b> RP TP-2:(0')-(-2') <b>Lab Sample ID:</b> D32216-2 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 83.7
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001901.D	1	03/03/12	TR	03/01/12	OP5459	GFH96
Run #2							

Run #	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)	113	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	75%		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

<b>Client Sample ID:</b> RP TP-2:(-4')-(-6') <b>Lab Sample ID:</b> D32216-3 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.2
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15109.D	1	02/28/12	SK	n/a	n/a	GGB848
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	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	102%		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

<b>Client Sample ID:</b> RP TP-2:(-4')-(-6') <b>Lab Sample ID:</b> D32216-3 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.2
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001903.D	1	03/03/12	TR	03/01/12	OP5459	GFH96
Run #2							

Run #	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)	181	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	75%		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

3.4  
3

<b>Client Sample ID:</b> RP TP-2:(-6')-(-8') <b>Lab Sample ID:</b> D32216-4 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 83.9
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15110.D	1	02/28/12	SK	n/a	n/a	GGB848
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	14	6.9	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	102%		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

3.4  
3

<b>Client Sample ID:</b> RP TP-2:(-6')-(-8')	
<b>Lab Sample ID:</b> D32216-4	<b>Date Sampled:</b> 02/23/12
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 02/27/12
<b>Method:</b> SW846-8015B SW846 3546	<b>Percent Solids:</b> 83.9
<b>Project:</b> PCU 296-7A	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001905.D	1	03/03/12	TR	03/01/12	OP5459	GFH96
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	234	16	10	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

## Report of Analysis

3.5  
3

<b>Client Sample ID:</b> RP TP-2:(-8')-(-10') <b>Lab Sample ID:</b> D32216-5 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.0
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15111.D	1	02/28/12	SK	n/a	n/a	GGB848
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	6.7	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

3.5  
3

<b>Client Sample ID:</b> RP TP-2:(-8')-(-10') <b>Lab Sample ID:</b> D32216-5 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.0
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001939.D	1	03/04/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	385	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		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

3.6  
3

<b>Client Sample ID:</b> RP TP-3:(0')-(-2') <b>Lab Sample ID:</b> D32216-6 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.0
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15112.D	1	02/28/12	SK	n/a	n/a	GGB848
Run #2							

Run #	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)	ND	13	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	91%		60-140%		

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

3.6  
3

<b>Client Sample ID:</b> RP TP-3:(0')-(-2') <b>Lab Sample ID:</b> D32216-6 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.0
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001941.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	12.2	16	10	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	79%		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

37  
3

<b>Client Sample ID:</b> RP TP-3:(-2')-(-4') <b>Lab Sample ID:</b> D32216-7 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.2
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15113.D	1	02/28/12	SK	n/a	n/a	GGB848
Run #2							

Run #	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)	ND	13	6.6	mg/kg	
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

37  
3

<b>Client Sample ID:</b> RP TP-3:(-2')-(-4') <b>Lab Sample ID:</b> D32216-7 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.2
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001943.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	21.0	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	71%		43-136%		

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

<b>Client Sample ID:</b> RP TP-3:(-4')-(-6')	<b>Date Sampled:</b> 02/23/12
<b>Lab Sample ID:</b> D32216-8	<b>Date Received:</b> 02/27/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 85.7
<b>Method:</b> SW846 8015B	
<b>Project:</b> PCU 296-7A	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15125.D	1	02/28/12	SK	n/a	n/a	GGB849
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	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		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

<b>Client Sample ID:</b> RP TP-3:(-4')-(-6') <b>Lab Sample ID:</b> D32216-8 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.7
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001945.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		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

3.9  
3

<b>Client Sample ID:</b> RP TP-4:(0')-(-2') <b>Lab Sample ID:</b> D32216-9 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.7
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15126.D	1	02/28/12	SK	n/a	n/a	GGB849
Run #2							

Run #	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)	ND	13	6.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	98%		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

3.9  
3

<b>Client Sample ID:</b> RP TP-4:(0')-(-2') <b>Lab Sample ID:</b> D32216-9 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.7
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001947.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	41.7	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		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

<b>Client Sample ID:</b> RP TP-4:(-2')-(-4')	<b>Date Sampled:</b> 02/23/12
<b>Lab Sample ID:</b> D32216-10	<b>Date Received:</b> 02/27/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 86.1
<b>Method:</b> SW846 8015B	
<b>Project:</b> PCU 296-7A	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15127.D	1	02/28/12	SK	n/a	n/a	GGB849
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	98%		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

<b>Client Sample ID:</b> RP TP-4:(-2')-(-4') <b>Lab Sample ID:</b> D32216-10 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 86.1
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001949.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	29.9	15	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	79%		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

<b>Client Sample ID:</b> RP TP-4:(-4')-(-6') <b>Lab Sample ID:</b> D32216-11 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.6
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15129.D	1	02/28/12	SK	n/a	n/a	GGB849
Run #2							

Run #	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)	ND	13	6.6	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

<b>Client Sample ID:</b> RP TP-4:(-4')-(-6') <b>Lab Sample ID:</b> D32216-11 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 85.6
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001951.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	47.7	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	78%		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

<b>Client Sample ID:</b> RP TP-5:(0')-(-2') <b>Lab Sample ID:</b> D32216-12 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 82.8
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15130.D	1	02/28/12	SK	n/a	n/a	GGB849
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)	7.63	14	7.0	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	101%		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

<b>Client Sample ID:</b> RP TP-5:(0')-(-2')	<b>Date Sampled:</b> 02/23/12
<b>Lab Sample ID:</b> D32216-12	<b>Date Received:</b> 02/27/12
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 82.8
<b>Method:</b> SW846-8015B SW846 3546	
<b>Project:</b> PCU 296-7A	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001953.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	781	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	76%		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

<b>Client Sample ID:</b> RP TP-5:(-2')-(-4') <b>Lab Sample ID:</b> D32216-13 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 84.4
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15131.D	1	02/28/12	SK	n/a	n/a	GGB849
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	14	6.8	mg/kg	
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

<b>Client Sample ID:</b> RP TP-5:(-2')-(-4') <b>Lab Sample ID:</b> D32216-13 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 84.4
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001955.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	483	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	78%		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

<b>Client Sample ID:</b> RP TP-5:(-4')-(-6') <b>Lab Sample ID:</b> D32216-14 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8015B <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 83.8
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB15132.D	1	02/28/12	SK	n/a	n/a	GGB849
Run #2							

Run #	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)	6.87	14	6.8	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	101%		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

<b>Client Sample ID:</b> RP TP-5:(-4')-(-6') <b>Lab Sample ID:</b> D32216-14 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846-8015B SW846 3546 <b>Project:</b> PCU 296-7A	<b>Date Sampled:</b> 02/23/12 <b>Date Received:</b> 02/27/12 <b>Percent Solids:</b> 83.8
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH001957.D	1	03/05/12	TR	03/01/12	OP5459	GFH98
Run #2							

Run #	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)	733	16	10	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	75%		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**

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**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody







# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D32216

Client: KRW CONSULTING

Immediate Client Services Action Required: No

Date / Time Received: 2/27/2012 12:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: XTO PCU 296-7A

Airbill #'s: Fedex

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>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. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>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

Empty box for comments.

Accutest Laboratories  
V:(303) 425-6021

4036 Youngfield Street  
F: (303) 425-6854

Wheat Ridge, CO  
www.accutest.com

4.1  
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## GC Volatiles

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## QC Data Summaries

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### Includes the following where applicable:

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

## Method Blank Summary

Job Number: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB848-MB	GB15089.D	1	02/27/12	SK	n/a	n/a	GGB848

The QC reported here applies to the following samples:

Method: SW846 8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7

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	101% 60-140%

## Method Blank Summary

Job Number: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

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

D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

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: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB848-BS	GB15090.D	1	02/27/12	SK	n/a	n/a	GGB848

The QC reported here applies to the following samples:

Method: SW846 8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	108	98	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	110%	60-140%

# Blank Spike Summary

Job Number: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

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

D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

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: D32216  
 Account: XTOKRWR XTO Energy  
 Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D32208-1MS	GB15092.D	1	02/27/12	SK	n/a	n/a	GGB848
D32208-1MSD	GB15093.D	1	02/27/12	SK	n/a	n/a	GGB848
D32208-1	GB15091.D	1	02/27/12	SK	n/a	n/a	GGB848

The QC reported here applies to the following samples:

Method: SW846 8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7

CAS No.	Compound	D32208-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	142	139	98	141	99	1	70-130/30	

CAS No.	Surrogate Recoveries	MS	MSD	D32208-1	Limits
120-82-1	1,2,4-Trichlorobenzene	102%	106%	96%	60-140%

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# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D32216  
 Account: XTOKRWR XTO Energy  
 Project: PCU 296-7A

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

D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

CAS No.	Compound	D32234-1 mg/kg	Spike Q	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%

5.3.2  
5

## GC Semi-volatiles

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### QC Data Summaries

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#### Includes the following where applicable:

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

# Method Blank Summary

Job Number: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5459-MB	FH001854.D	1	03/01/12	TR	03/01/12	OP5459	GFH94

The QC reported here applies to the following samples:

Method: SW846-8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7, D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

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	89% 43-136%

6.1.1

6

# Blank Spike Summary

Job Number: D32216  
Account: XTOKRWR XTO Energy  
Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5459-BS	FH001856.D	1	03/02/12	TR	03/01/12	OP5459	GFH94

The QC reported here applies to the following samples:

Method: SW846-8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7, D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	580	87	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	43-136%

6.2.1

6

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D32216  
 Account: XTOKRWR XTO Energy  
 Project: PCU 296-7A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5459-MS	FH001858.D	1	03/02/12	TR	03/01/12	OP5459	GFH94
OP5459-MSD	FH001860.D	1	03/02/12	TR	03/01/12	OP5459	GFH94
D32298-1	FH001862.D	1	03/02/12	TR	03/01/12	OP5459	GFH94

The QC reported here applies to the following samples:

Method: SW846-8015B

D32216-1, D32216-2, D32216-3, D32216-4, D32216-5, D32216-6, D32216-7, D32216-8, D32216-9, D32216-10, D32216-11, D32216-12, D32216-13, D32216-14

CAS No.	Compound	D32298-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	173	804	807	79	772	75	4	20-183/43	

CAS No.	Surrogate Recoveries	MS	MSD	D32298-1	Limits
84-15-1	o-Terphenyl	72%	70%	74%	43-136%