



Legend

- Ditch
- Containment
- S Separator
- Pad Boundary
- ◆ Well Head
- Topsoil Storage

PROJECT NO:	012-1538
DRAWN BY:	KJG
DATE:	5/10/13

Landfarm Sampling Diagram
Location: MV 25-17
 WPX Energy Rocky Mountain, LLC



760 Horizon Drive, Suite 102
 Grand Junction, CO 81506
 TEL 970.263.7800
 FAX 970.263.7456

FIGURE	1
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Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

NXEEPPARACH

Accutest Job Number: D48702

Sampling Date: 07/29/13

Report to:

Williams Production

karolina.blaney@wpxenergy.com

ATTN: Karolina Blaney

Total number of pages in report: **36**



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.



Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

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Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D48702

CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline
Project No: NXEEPPARACH

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D48702-1	07/29/13	16:30 JS	07/30/13	SO	Soil	MV 25-17 LF 1-2 (0-24")
D48702-2	07/29/13	16:35 JS	07/30/13	SO	Soil	MV 25-17 LF 1-4 (0-24")

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: WPX Energy Rocky Mountain, LLC

Job No D48702

Site: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Report Date 7/31/2013 4:24:53 PM

On 07/30/2013, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D48702 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

Volatiles by GCMS By Method SW846 8260B

Matrix SO	Batch ID: V5V1712
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48664-2MS, D48664-2MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP8285
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48703-1MS, D48703-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB1176
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48675-1MS, D48675-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP8284
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48604-4MS, D48604-4MSD were used as the QC samples indicated.

Wet Chemistry By Method SM2540B-2011 M

Matrix SO	Batch ID: GN21246
------------------	--------------------------

- The data for SM2540B-2011 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.

Summary of Hits

Job Number: D48702
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline
Collected: 07/29/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D48702-1	MV 25-17 LF 1-2 (0-24")					
Fluorene		13.3	9.0	5.4	ug/kg	SW846 8270C BY SIM
Naphthalene		229	13	11	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		8.28 J	11	5.7	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		121	7.2	5.4	mg/kg	SW846-8015B
D48702-2	MV 25-17 LF 1-4 (0-24")					
Xylene (total)		266	240	120	ug/kg	SW846 8260B
Fluorene		10.3	9.2	5.5	ug/kg	SW846 8270C BY SIM
Naphthalene		227	13	11	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		12.3	12	6.0	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		132	7.4	5.5	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MV 25-17 LF 1-2 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 92.6
Method: SW846 8260B	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28354.D	1	07/30/13	BD	n/a	n/a	V5V1712
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.06 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	57	29	ug/kg	
108-88-3	Toluene	ND	110	57	ug/kg	
100-41-4	Ethylbenzene	ND	110	22	ug/kg	
1330-20-7	Xylene (total)	ND	230	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		64-130%
460-00-4	4-Bromofluorobenzene	106%		62-131%
17060-07-0	1,2-Dichloroethane-D4	100%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-2 (0-24")	
Lab Sample ID: D48702-1	Date Sampled: 07/29/13
Matrix: SO - Soil	Date Received: 07/30/13
Method: SW846 8270C BY SIM SW846 3546	Percent Solids: 92.6
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15665.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
Run #2							

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

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	9.0	4.7	ug/kg	
120-12-7	Anthracene	ND	9.0	4.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	9.0	4.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	9.0	4.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.0	4.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	9.0	4.7	ug/kg	
218-01-9	Chrysene	ND	9.0	4.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.0	4.7	ug/kg	
206-44-0	Fluoranthene	ND	9.0	4.7	ug/kg	
86-73-7	Fluorene	13.3	9.0	5.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	9.0	4.7	ug/kg	
91-20-3	Naphthalene	229	13	11	ug/kg	
129-00-0	Pyrene	ND	9.0	4.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	95%		10-159%
321-60-8	2-Fluorobiphenyl	86%		19-131%
1718-51-0	Terphenyl-d14	92%		18-150%

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

4.1
 4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-2 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 92.6
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21420.D	1	07/30/13	EV	n/a	n/a	GGB1176
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)	8.28	11	5.7	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	91%		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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-2 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 92.6
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD27092.D	1	07/31/13	TU	07/30/13	OP8284	GFD1324
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)	121	7.2	5.4	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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-4 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.3
Method: SW846 8260B	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28355.D	1	07/30/13	BD	n/a	n/a	V5V1712
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	60	30	ug/kg	
108-88-3	Toluene	ND	120	60	ug/kg	
100-41-4	Ethylbenzene	ND	120	23	ug/kg	
1330-20-7	Xylene (total)	266	240	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	94%		64-130%
460-00-4	4-Bromofluorobenzene	109%		62-131%
17060-07-0	1,2-Dichloroethane-D4	99%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.2
4

Report of Analysis

Client Sample ID:	MV 25-17 LF 1-4 (0-24")	Date Sampled:	07/29/13
Lab Sample ID:	D48702-2	Date Received:	07/30/13
Matrix:	SO - Soil	Percent Solids:	90.3
Method:	SW846 8270C BY SIM SW846 3546		
Project:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15666.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	9.2	4.8	ug/kg	
120-12-7	Anthracene	ND	9.2	4.8	ug/kg	
56-55-3	Benzo(a)anthracene	ND	9.2	4.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	9.2	4.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.2	4.8	ug/kg	
50-32-8	Benzo(a)pyrene	ND	9.2	4.8	ug/kg	
218-01-9	Chrysene	ND	9.2	4.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.2	4.8	ug/kg	
206-44-0	Fluoranthene	ND	9.2	4.8	ug/kg	
86-73-7	Fluorene	10.3	9.2	5.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	9.2	4.8	ug/kg	
91-20-3	Naphthalene	227	13	11	ug/kg	
129-00-0	Pyrene	ND	9.2	4.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	94%		10-159%
321-60-8	2-Fluorobiphenyl	78%		19-131%
1718-51-0	Terphenyl-d14	85%		18-150%

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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-4 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.3
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21421.D	1	07/30/13	EV	n/a	n/a	GGB1176
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)	12.3	12	6.0	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	91%		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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 1-4 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48702-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.3
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD27094.D	1	07/31/13	TU	07/30/13	OP8284	GFD1324
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)	132	7.4	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	80%		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

4.2
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Misc. Forms

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Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D48702

Client: OLSSON ASS.

Immediate Client Services Action Required: No

Date / Time Received: 7/30/2013 12:20:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: MV-17-LANDFARM 1 BATCH 6 BASELINE

Airbill #'s: HD-CO

<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 or 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 or 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 or 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 or 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

5.1
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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-MB	5V28344.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48702-1, D48702-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	95% 64-130%
460-00-4	4-Bromofluorobenzene	92% 62-131%
17060-07-0	1,2-Dichloroethane-D4	102% 70-130%

Blank Spike Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-BS	5V28345.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48702-1, D48702-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2540	102	70-130
100-41-4	Ethylbenzene	2500	2670	107	70-130
108-88-3	Toluene	2500	2480	99	70-130
1330-20-7	Xylene (total)	7500	8190	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	99%	64-130%
460-00-4	4-Bromofluorobenzene	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-BS	5V28346.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48702-1, D48702-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	97%	64-130%
460-00-4	4-Bromofluorobenzene	95%	62-131%
17060-07-0	1,2-Dichloroethane-D4	93%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48664-2MS	5V28348.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2MSD	5V28349.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2	5V28347.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48702-1, D48702-2

CAS No.	Compound	D48664-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	3690	3610	98	3760	102	4	64-139/30
100-41-4	Ethylbenzene	ND	3690	3690	100	3920	106	6	68-136/30
108-88-3	Toluene	ND	3690	3290	89	3540	96	7	60-130/30
1330-20-7	Xylene (total)	ND	11100	11500	104	12100	109	5	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D48664-2	Limits
2037-26-5	Toluene-D8	90%	92%	93%	64-130%
460-00-4	4-Bromofluorobenzene	111%	113%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	95%	93%	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48664-2MS	5V28350.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2MSD	5V28351.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2	5V28347.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48702-1, D48702-2

CAS No.	Compound	D48664-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
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CAS No.	Surrogate Recoveries	MS	MSD	D48664-2	Limits
2037-26-5	Toluene-D8	93%	95%	93%	64-130%
460-00-4	4-Bromofluorobenzene	107%	107%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	95%	90%	101%	70-130%

* = Outside of Control Limits.

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-MB	3G15652.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48702-1, D48702-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.3	4.3	ug/kg	
120-12-7	Anthracene	ND	8.3	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.3	4.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.3	4.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.3	4.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.3	4.3	ug/kg	
218-01-9	Chrysene	ND	8.3	4.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.3	4.3	ug/kg	
206-44-0	Fluoranthene	ND	8.3	4.3	ug/kg	
86-73-7	Fluorene	ND	8.3	5.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.3	4.3	ug/kg	
91-20-3	Naphthalene	ND	12	10	ug/kg	
129-00-0	Pyrene	ND	8.3	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	79% 10-159%
321-60-8	2-Fluorobiphenyl	99% 19-131%
1718-51-0	Terphenyl-d14	102% 18-150%

Blank Spike Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-BS	3G15653.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48702-1, D48702-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	67.2	81	68-130
120-12-7	Anthracene	83.3	72.8	87	67-130
56-55-3	Benzo(a)anthracene	83.3	76.0	91	65-130
205-99-2	Benzo(b)fluoranthene	83.3	71.5	86	44-130
207-08-9	Benzo(k)fluoranthene	83.3	78.6	94	56-131
50-32-8	Benzo(a)pyrene	83.3	72.6	87	62-130
218-01-9	Chrysene	83.3	74.9	90	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	78.3	94	55-130
206-44-0	Fluoranthene	83.3	71.3	86	70-130
86-73-7	Fluorene	83.3	68.6	82	70-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	78.5	94	56-130
91-20-3	Naphthalene	83.3	76.0	91	70-130
129-00-0	Pyrene	83.3	76.0	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	101%	10-159%
321-60-8	2-Fluorobiphenyl	80%	19-131%
1718-51-0	Terphenyl-d14	100%	18-150%

* = Outside of Control Limits.

7.2.1
 7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-MS	3G15655.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
OP8285-MSD	3G15656.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
D48703-1	3G15654.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48702-1, D48702-2

CAS No.	Compound	D48703-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		94.1	85.0	90	84.3	90	1	25-151/30
120-12-7	Anthracene	ND		94.1	83.3	89	85.5	91	3	39-159/30
56-55-3	Benzo(a)anthracene	ND		94.1	86.2	92	86.1	91	0	39-168/30
205-99-2	Benzo(b)fluoranthene	ND		94.1	91.5	97	95.8	102	5	24-163/30
207-08-9	Benzo(k)fluoranthene	ND		94.1	69.6	74	69.2	74	1	10-188/30
50-32-8	Benzo(a)pyrene	ND		94.1	80.8	86	81.9	87	1	32-144/30
218-01-9	Chrysene	ND		94.1	82.9	88	83.5	89	1	43-150/30
53-70-3	Dibenzo(a,h)anthracene	ND		94.1	83.2	88	85.5	91	3	21-152/30
206-44-0	Fluoranthene	ND		94.1	84.3	90	86.5	92	3	36-157/30
86-73-7	Fluorene	ND		94.1	99.0	105	99.2	105	0	10-182/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		94.1	84.2	89	85.3	91	1	20-154/30
91-20-3	Naphthalene	14.2		94.1	84.7	75	88.4	79	4	10-163/30
129-00-0	Pyrene	8.6	J	94.1	97.4	94	95.5	92	2	25-180/30

CAS No.	Surrogate Recoveries	MS	MSD	D48703-1	Limits
4165-60-0	Nitrobenzene-d5	83%	87%	90%	10-159%
321-60-8	2-Fluorobiphenyl	80%	82%	75%	19-131%
1718-51-0	Terphenyl-d14	89%	91%	96%	18-150%

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1176-MB	GB21410.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48702-1, D48702-2

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	88% 60-140%

Blank Spike Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1176-BS	GB21423.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48702-1, D48702-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	109	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	99%	60-140%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48675-1MS	GB21413.D	1	07/30/13	EV	n/a	n/a	GGB1176
D48675-1MSD	GB21414.D	1	07/30/13	EV	n/a	n/a	GGB1176
D48675-1	GB21412.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48702-1, D48702-2

CAS No.	Compound	D48675-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	8.43	J	158	157	94	151	90	4	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D48675-1	Limits
120-82-1	1,2,4-Trichlorobenzene	88%	88%	78%	60-140%

8.3.1
8

* = Outside of Control Limits.

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-MB	FD27028.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48702-1, D48702-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	89% 35-130%

9.1.1
9

Blank Spike Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-BS	FD27030.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48702-1, D48702-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	639	96	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	92%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48702
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 6 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-MS	FD27032.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322
OP8284-MSD	FD27034.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322
D48604-4	FD27036.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48702-1, D48702-2

CAS No.	Compound	D48604-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	795	604	76	695	87	14	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D48604-4	Limits
84-15-1	o-Terphenyl	75%	85%	78%	35-130%

9.3.1
9

* = Outside of Control Limits.



07/31/13

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

NXEEPPARACH

Accutest Job Number: D48701

Sampling Date: 07/29/13

Report to:

Williams Production

karolina.blaney@wpxenergy.com

ATTN: Karolina Blaney

Total number of pages in report: **40**



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.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

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Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D48701

CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline
Project No: NXEEPPARACH

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D48701-1	07/29/13	17:15 JS	07/30/13	SO	Soil	MV 25-17 LF 2-10(0-24")
D48701-2	07/29/13	17:20 JS	07/30/13	SO	Soil	MV 25-17 LF 2-8 (0-24")
D48701-3	07/29/13	17:25 JS	07/30/13	SO	Soil	MV 25-17 LF 2-6 (0-24")

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: WPX Energy Rocky Mountain, LLC

Job No D48701

Site: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Report Date 7/31/2013 4:24:14 PM

On 07/30/2013, 3 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D48701 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

Volatiles by GCMS By Method SW846 8260B

Matrix SO **Batch ID:** V5V1712

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48664-2MS, D48664-2MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP8285

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48703-1MS, D48703-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB1176

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48675-1MS, D48675-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP8284

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D48604-4MS, D48604-4MSD were used as the QC samples indicated.

Wet Chemistry By Method SM2540B-2011 M

Matrix SO **Batch ID:** GN21246

- The data for SM2540B-2011 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.

Summary of Hits

Job Number: D48701
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline
Collected: 07/29/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D48701-1	MV 25-17 LF 2-10(0-24")					
Xylene (total)		1320	240	120	ug/kg	SW846 8260B
Fluorene		12.1	9.1	5.5	ug/kg	SW846 8270C BY SIM
Naphthalene		324	13	11	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		22.4	12	5.9	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		175	7.3	5.5	mg/kg	SW846-8015B
D48701-2	MV 25-17 LF 2-8 (0-24")					
Toluene		685	120	61	ug/kg	SW846 8260B
Xylene (total)		10800	240	120	ug/kg	SW846 8260B
Fluorene		32.9	9.3	5.6	ug/kg	SW846 8270C BY SIM
Naphthalene		938	13	11	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		179	12	6.1	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		522	74	55	mg/kg	SW846-8015B
D48701-3	MV 25-17 LF 2-6 (0-24")					
Xylene (total)		665	240	120	ug/kg	SW846 8260B
Fluorene		9.1 J	9.2	5.5	ug/kg	SW846 8270C BY SIM
Naphthalene		329	13	11	ug/kg	SW846 8270C BY SIM
TPH-GRO (C6-C10)		15.7	12	5.9	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		215	7.4	5.5	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MV 25-17 LF 2-10(0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 91.2
Method: SW846 8260B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28352.D	1	07/30/13	BD	n/a	n/a	V5V1712
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.03 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	59	30	ug/kg	
108-88-3	Toluene	ND	120	59	ug/kg	
100-41-4	Ethylbenzene	ND	120	23	ug/kg	
1330-20-7	Xylene (total)	1320	240	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		64-130%
460-00-4	4-Bromofluorobenzene	112%		62-131%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MV 25-17 LF 2-10(0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 91.2
Method: SW846 8270C BY SIM SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15662.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
Run #2							

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

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	9.1	4.7	ug/kg	
120-12-7	Anthracene	ND	9.1	4.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	9.1	4.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	9.1	4.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.1	4.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	9.1	4.7	ug/kg	
218-01-9	Chrysene	ND	9.1	4.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.1	4.7	ug/kg	
206-44-0	Fluoranthene	ND	9.1	4.7	ug/kg	
86-73-7	Fluorene	12.1	9.1	5.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	9.1	4.7	ug/kg	
91-20-3	Naphthalene	324	13	11	ug/kg	
129-00-0	Pyrene	ND	9.1	4.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		10-159%
321-60-8	2-Fluorobiphenyl	84%		19-131%
1718-51-0	Terphenyl-d14	84%		18-150%

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

4.1
 4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-10(0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 91.2
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21417.D	1	07/30/13	EV	n/a	n/a	GGB1176
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)	22.4	12	5.9	mg/kg	
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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-10(0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-1	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 91.2
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD27088.D	1	07/31/13	TU	07/30/13	OP8284	GFD1324
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)	175	7.3	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	99%		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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-8 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.0
Method: SW846 8260B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28357.D	1	07/30/13	BD	n/a	n/a	V5V1712
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.03 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	61	30	ug/kg	
108-88-3	Toluene	685	120	61	ug/kg	
100-41-4	Ethylbenzene	ND	120	23	ug/kg	
1330-20-7	Xylene (total)	10800	240	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		64-130%
460-00-4	4-Bromofluorobenzene	125%		62-131%
17060-07-0	1,2-Dichloroethane-D4	102%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-8 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.0
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21418.D	1	07/30/13	EV	n/a	n/a	GGB1176
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)	179	12	6.1	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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-8 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-2	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.0
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD27040.D	10	07/30/13	TU	07/30/13	OP8284	GFD1322
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)	522	74	55	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	80%		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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-6 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-3	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.6
Method: SW846 8260B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V28353.D	1	07/30/13	BD	n/a	n/a	V5V1712
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.08 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	59	30	ug/kg	
108-88-3	Toluene	ND	120	59	ug/kg	
100-41-4	Ethylbenzene	ND	120	23	ug/kg	
1330-20-7	Xylene (total)	665	240	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		64-130%
460-00-4	4-Bromofluorobenzene	112%		62-131%
17060-07-0	1,2-Dichloroethane-D4	103%		70-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-6 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-3	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.6
Method: SW846 8270C BY SIM SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15664.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
Run #2							

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

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	9.2	4.8	ug/kg	
120-12-7	Anthracene	ND	9.2	4.8	ug/kg	
56-55-3	Benzo(a)anthracene	ND	9.2	4.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	9.2	4.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.2	4.8	ug/kg	
50-32-8	Benzo(a)pyrene	ND	9.2	4.8	ug/kg	
218-01-9	Chrysene	ND	9.2	4.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.2	4.8	ug/kg	
206-44-0	Fluoranthene	ND	9.2	4.8	ug/kg	
86-73-7	Fluorene	9.1	9.2	5.5	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	9.2	4.8	ug/kg	
91-20-3	Naphthalene	329	13	11	ug/kg	
129-00-0	Pyrene	ND	9.2	4.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	108%		10-159%
321-60-8	2-Fluorobiphenyl	85%		19-131%
1718-51-0	Terphenyl-d14	93%		18-150%

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

4.3
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-6 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-3	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.6
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21419.D	1	07/30/13	EV	n/a	n/a	GGB1176
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)	15.7	12	5.9	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
 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

4.3
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-6 (0-24")	Date Sampled: 07/29/13
Lab Sample ID: D48701-3	Date Received: 07/30/13
Matrix: SO - Soil	Percent Solids: 90.6
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD27090.D	1	07/31/13	TU	07/30/13	OP8284	GFD1324
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)	215	7.4	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	108%		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

4.3
4

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D48701

Client: OLSSON ASS.

Immediate Client Services Action Required: No

Date / Time Received: 7/30/2013 12:20:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: MV-25-17 LANDFARM 2 BATCH 8 BASELINE

Airbill #'s: HD/Co

<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 or 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 or 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 or 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 or 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

5.1
5

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-MB	5V28344.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
2037-26-5	Toluene-D8	95%	64-130%
460-00-4	4-Bromofluorobenzene	92%	62-131%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%

Blank Spike Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-BS	5V28345.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2540	102	70-130
100-41-4	Ethylbenzene	2500	2670	107	70-130
108-88-3	Toluene	2500	2480	99	70-130
1330-20-7	Xylene (total)	7500	8190	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	99%	64-130%
460-00-4	4-Bromofluorobenzene	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1712-BS	5V28346.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	97%	64-130%
460-00-4	4-Bromofluorobenzene	95%	62-131%
17060-07-0	1,2-Dichloroethane-D4	93%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48664-2MS	5V28348.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2MSD	5V28349.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2	5V28347.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	D48664-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	3690	3610	98	3760	102	4	64-139/30
100-41-4	Ethylbenzene	ND	3690	3690	100	3920	106	6	68-136/30
108-88-3	Toluene	ND	3690	3290	89	3540	96	7	60-130/30
1330-20-7	Xylene (total)	ND	11100	11500	104	12100	109	5	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D48664-2	Limits
2037-26-5	Toluene-D8	90%	92%	93%	64-130%
460-00-4	4-Bromofluorobenzene	111%	113%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	95%	93%	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48664-2MS	5V28350.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2MSD	5V28351.D	1	07/30/13	BD	n/a	n/a	V5V1712
D48664-2	5V28347.D	1	07/30/13	BD	n/a	n/a	V5V1712

The QC reported here applies to the following samples:

Method: SW846 8260B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	D48664-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
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CAS No.	Surrogate Recoveries	MS	MSD	D48664-2	Limits
2037-26-5	Toluene-D8	93%	95%	93%	64-130%
460-00-4	4-Bromofluorobenzene	107%	107%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	95%	90%	101%	70-130%

* = Outside of Control Limits.

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-MB	3G15652.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	8.3	4.3	ug/kg	
120-12-7	Anthracene	ND	8.3	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	8.3	4.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	8.3	4.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	8.3	4.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	8.3	4.3	ug/kg	
218-01-9	Chrysene	ND	8.3	4.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.3	4.3	ug/kg	
206-44-0	Fluoranthene	ND	8.3	4.3	ug/kg	
86-73-7	Fluorene	ND	8.3	5.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	8.3	4.3	ug/kg	
91-20-3	Naphthalene	ND	12	10	ug/kg	
129-00-0	Pyrene	ND	8.3	4.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	79% 10-159%
321-60-8	2-Fluorobiphenyl	99% 19-131%
1718-51-0	Terphenyl-d14	102% 18-150%

Blank Spike Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-BS	3G15653.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	67.2	81	68-130
120-12-7	Anthracene	83.3	72.8	87	67-130
56-55-3	Benzo(a)anthracene	83.3	76.0	91	65-130
205-99-2	Benzo(b)fluoranthene	83.3	71.5	86	44-130
207-08-9	Benzo(k)fluoranthene	83.3	78.6	94	56-131
50-32-8	Benzo(a)pyrene	83.3	72.6	87	62-130
218-01-9	Chrysene	83.3	74.9	90	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	78.3	94	55-130
206-44-0	Fluoranthene	83.3	71.3	86	70-130
86-73-7	Fluorene	83.3	68.6	82	70-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	78.5	94	56-130
91-20-3	Naphthalene	83.3	76.0	91	70-130
129-00-0	Pyrene	83.3	76.0	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	101%	10-159%
321-60-8	2-Fluorobiphenyl	80%	19-131%
1718-51-0	Terphenyl-d14	100%	18-150%

* = Outside of Control Limits.

7.2.1
 7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8285-MS	3G15655.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
OP8285-MSD	3G15656.D	1	07/30/13	DC	07/30/13	OP8285	E3G770
D48703-1	3G15654.D	1	07/30/13	DC	07/30/13	OP8285	E3G770

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D48701-1, D48701-2, D48701-3

CAS No.	Compound	D48703-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		94.1	85.0	90	84.3	90	1	25-151/30
120-12-7	Anthracene	ND		94.1	83.3	89	85.5	91	3	39-159/30
56-55-3	Benzo(a)anthracene	ND		94.1	86.2	92	86.1	91	0	39-168/30
205-99-2	Benzo(b)fluoranthene	ND		94.1	91.5	97	95.8	102	5	24-163/30
207-08-9	Benzo(k)fluoranthene	ND		94.1	69.6	74	69.2	74	1	10-188/30
50-32-8	Benzo(a)pyrene	ND		94.1	80.8	86	81.9	87	1	32-144/30
218-01-9	Chrysene	ND		94.1	82.9	88	83.5	89	1	43-150/30
53-70-3	Dibenzo(a,h)anthracene	ND		94.1	83.2	88	85.5	91	3	21-152/30
206-44-0	Fluoranthene	ND		94.1	84.3	90	86.5	92	3	36-157/30
86-73-7	Fluorene	ND		94.1	99.0	105	99.2	105	0	10-182/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		94.1	84.2	89	85.3	91	1	20-154/30
91-20-3	Naphthalene	14.2		94.1	84.7	75	88.4	79	4	10-163/30
129-00-0	Pyrene	8.6	J	94.1	97.4	94	95.5	92	2	25-180/30

CAS No.	Surrogate Recoveries	MS	MSD	D48703-1	Limits
4165-60-0	Nitrobenzene-d5	83%	87%	90%	10-159%
321-60-8	2-Fluorobiphenyl	80%	82%	75%	19-131%
1718-51-0	Terphenyl-d14	89%	91%	96%	18-150%

* = Outside of Control Limits.

7.3.1
 7

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1176-MB	GB21410.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48701-1, D48701-2, D48701-3

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	88% 60-140%

Blank Spike Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1176-BS	GB21423.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	109	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	99%	60-140%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D48675-1MS	GB21413.D	1	07/30/13	EV	n/a	n/a	GGB1176
D48675-1MSD	GB21414.D	1	07/30/13	EV	n/a	n/a	GGB1176
D48675-1	GB21412.D	1	07/30/13	EV	n/a	n/a	GGB1176

The QC reported here applies to the following samples:

Method: SW846 8015B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	D48675-1 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	8.43	J	158	157	94	151	90	4	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D48675-1	Limits
120-82-1	1,2,4-Trichlorobenzene	88%	88%	78%	60-140%

8.3.1
8

* = Outside of Control Limits.

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-MB	FD27028.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	89% 35-130%

9.1.1
9

Blank Spike Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-BS	FD27030.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	639	96	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	92%	35-130%

9.2.1
9

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D48701
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8284-MS	FD27032.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322
OP8284-MSD	FD27034.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322
D48604-4	FD27036.D	1	07/30/13	TU	07/30/13	OP8284	GFD1322

The QC reported here applies to the following samples:

Method: SW846-8015B

D48701-1, D48701-2, D48701-3

CAS No.	Compound	D48604-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	795	604	76	695	87	14	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D48604-4	Limits
84-15-1	o-Terphenyl	75%	85%	78%	35-130%

9.3.1
9

* = Outside of Control Limits.

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

NXEPPARACH

Accutest Job Number: D49570

Sampling Date: 08/19/13

Report to:

**Olsson Associates
760 Horizon Drive Suite 102
Grand Junction, CO 81505
tdobransky@oaconsulting.com; karolina.blaney@wpxenergy.com
ATTN: Tim Dobransky**

Total number of pages in report: 23



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.



**Scott Heideman
Laboratory Director**

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

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Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D49570

CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline
Project No: NXEEPPARACH

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D49570-1	08/19/13	14:20 JS	08/20/13	SO	Soil	MV 25-17 LF 2-8(0-24")
D49570-2	08/19/13	14:25 JS	08/20/13	SO	Soil	MV 25-17 LF 2-2(0-24")
D49570-3	08/19/13	14:30 JS	08/20/13	SO	Soil	MV 25-17 LF 2-4(0-24")

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



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: WPX Energy Rocky Mountain, LLC

Job No D49570

Site: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Report Date 8/21/2013 1:31:24 PM

On 08/20/2013, 3 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 D49570 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

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

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB1196
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49469-1MS, D49469-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP8406
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49572-1MS, D49572-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM2540B-2011 M

Matrix SO	Batch ID: GN21563
------------------	--------------------------

- The data for SM2540B-2011 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.

Summary of Hits

Job Number: D49570
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline
Collected: 08/19/13

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D49570-1	MV 25-17 LF 2-8(0-24")					
TPH-GRO (C6-C10)		10.7 J	12	6.0	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		142	7.4	5.5	mg/kg	SW846-8015B
D49570-2	MV 25-17 LF 2-2(0-24")					
TPH-DRO (C10-C28)		97.8	7.4	5.5	mg/kg	SW846-8015B
D49570-3	MV 25-17 LF 2-4(0-24")					
TPH-GRO (C6-C10)		7.32 J	12	5.9	mg/kg	SW846 8015B
TPH-DRO (C10-C28)		83.0	7.3	5.4	mg/kg	SW846-8015B

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MV 25-17 LF 2-8(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-1	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 90.3
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21725.D	1	08/20/13	EV	n/a	n/a	GGB1196
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)	10.7	12	6.0	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	88%		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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-8(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-1	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 90.3
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH012285.D	1	08/20/13	TU	08/20/13	OP8406	GFH667
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)	142	7.4	5.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	62%		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

4.1
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-2(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-2	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 89.9
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21726.D	1	08/20/13	EV	n/a	n/a	GGB1196
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	12	6.1	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	83%		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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-2(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-2	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 89.9
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH012286.D	1	08/20/13	TU	08/20/13	OP8406	GFH667
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)	97.8	7.4	5.5	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

4.2
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-4(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-3	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 91.8
Method: SW846 8015B	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB21727.D	1	08/20/13	EV	n/a	n/a	GGB1196
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)	7.32	12	5.9	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	87%		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

4.3
4

Report of Analysis

Client Sample ID: MV 25-17 LF 2-4(0-24")	Date Sampled: 08/19/13
Lab Sample ID: D49570-3	Date Received: 08/20/13
Matrix: SO - Soil	Percent Solids: 91.8
Method: SW846-8015B SW846 3546	
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH012287.D	1	08/20/13	TU	08/20/13	OP8406	GFH667
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)	83.0	7.3	5.4	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	80%		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

4.3
4

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- 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 #																			
Accident Quote #	Accident Job # D49570																			
Client / Reporting Information																				
Company Name: Olson Associates																				
Street Address: 760 Horizon Drive, STE 102																				
City: Grand Junction, CO 81506																				
Project Contact: Tim Dobransky Email: tdobransky@olsonassociates.com Phone #: 970-263-7800																				
Sampler(s) Name(s): J Sutrina																				
Project Information																				
Project Name: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline																				
Billing Information (if different from Report to): Company Name: WPX Energy Rocky Mountain, LLC (WILLCOP) Street Address: 1058 County Road 215 City: Parachute, CO 81635 Attention: Leo Braun Email Invoices: Leo.Braun@wpxenergy.com																				
Requested Analysis (see TEST CODE sheet)																				
Matrix Codes: 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 - Wpse FB - Field Blank EB - Equipment Blank RB - Rinsate TB - Tin Blank																				
LAB USE ONLY																				
Accident Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NHCl	HNCO	LRSA	LRSE	LRNE	DI Water	MEOH	ENCORE	GRO/DRO	BTEX	PAH (COGCC Table 910 List)	LAB USE ONLY
	MV 25-17 LF 2-8 (0-24in)		8/19/13	1420	JS	SO	1										X			01
	MV 25-17 LF 2-2 (0-24in)		8/19/13	1408	JS	SO	1										X			02
	MV 25-17 LF 2-4 (0-24in)		8/19/13	1430	JS	SO	1										X			03
Turnaround Time (Business days)		Data Deliverable Information															Comments / Special Instructions			
<input type="checkbox"/> 8 Business Day Std. (per contract) <input type="checkbox"/> 3 Day Emergency <input type="checkbox"/> 2 Day Emergency <input checked="" type="checkbox"/> 1 Day Emergency Emergency & Rush T/A data available VIA Lablink		Approved By (Accutest PM): / Date: JGM 12/6/12		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> State Forms Required <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> Send Forms to State <input type="checkbox"/> COMMBN <input type="checkbox"/> Report by Fax <input type="checkbox"/> COMMBN+ <input checked="" type="checkbox"/> Report by PDF <input type="checkbox"/> <input type="checkbox"/> EDD Format Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial BN = Results/QC/Narrative (+ = chromatograms)										Also email final report to: Karolina.Blaney@wpxenergy.com PLEASE RUSH 24 HR TAT						
Relinquished by Sampler: [Signature] Date Time: 8/19/13 1515		Received By: [Signature] Date Time: 8/19/13 1515		Sample Custody must be documented below each time samples change possession, including courier delivery. Time Service Center										Relinquished By: [Signature] Date Time: 8/20/13 12:53						
Relinquished by Sampler: [Signature] Date Time: 8/19/13 1515		Received By: [Signature] Date Time: 8/19/13 1515		Custody Seal # HD100 <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact										Received By: [Signature] Date Time: 8/19/13 1515						
Relinquished by: [Signature] Date Time: 8/19/13 1515		Received By: [Signature] Date Time: 8/19/13 1515		Preserved where applicable <input type="checkbox"/>										On Ice B Cooler Temp: 4.5						

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D49570

Client: OLSSON

Immediate Client Services Action Required: No

Date / Time Received: 8/20/2013 12:55:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: MV 25-17

Airbill #'s: CO

Cooler Security	<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. Smp'l Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Cooler Temperature	<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)

Quality Control Preservation	<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"/>

Sample Integrity - Documentation	<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"/>

Sample Integrity - Condition	<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

Sample Integrity - Instructions	<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

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www.accutest.com

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1196-MB	GB21719.D	1	08/20/13	EV	n/a	n/a	GGB1196

The QC reported here applies to the following samples:

Method: SW846 8015B

D49570-1, D49570-2, D49570-3

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	90% 60-140%

Blank Spike Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1196-BS	GB21720.D	1	08/20/13	EV	n/a	n/a	GGB1196

The QC reported here applies to the following samples:

Method: SW846 8015B

D49570-1, D49570-2, D49570-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	101	92	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	101%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D49469-1MS	GB21722.D	1	08/20/13	EV	n/a	n/a	GGB1196
D49469-1MSD	GB21723.D	1	08/20/13	EV	n/a	n/a	GGB1196
D49469-1	GB21721.D	1	08/20/13	EV	n/a	n/a	GGB1196

The QC reported here applies to the following samples:

Method: SW846 8015B

D49570-1, D49570-2, D49570-3

CAS No.	Compound	D49469-1 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	143	143	100	143	100	0	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D49469-1	Limits
120-82-1	1,2,4-Trichlorobenzene	100%	100%	91%	60-140%

* = Outside of Control Limits.

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8406-MB	FH012279.D	1	08/20/13	TU	08/20/13	OP8406	GFH667

The QC reported here applies to the following samples:

Method: SW846-8015B

D49570-1, D49570-2, D49570-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	80% 35-130%

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Blank Spike Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8406-BS	FH012280.D	1	08/20/13	TU	08/20/13	OP8406	GFH667

The QC reported here applies to the following samples:

Method: SW846-8015B

D49570-1, D49570-2, D49570-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	375	56	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	61%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D49570
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 8 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8406-MS	FH012281.D	1	08/20/13	TU	08/20/13	OP8406	GFH667
OP8406-MSD	FH012282.D	1	08/20/13	TU	08/20/13	OP8406	GFH667
D49572-1	FH012289.D	1	08/20/13	TU	08/20/13	OP8406	GFH667

The QC reported here applies to the following samples:

Method: SW846-8015B

D49570-1, D49570-2, D49570-3

CAS No.	Compound	D49572-1 mg/kg	Spike Q	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	1240	764	1660	55	1860	81	11	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D49572-1	Limits
84-15-1	o-Terphenyl	65%	68%	71%	35-130%

* = Outside of Control Limits.

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