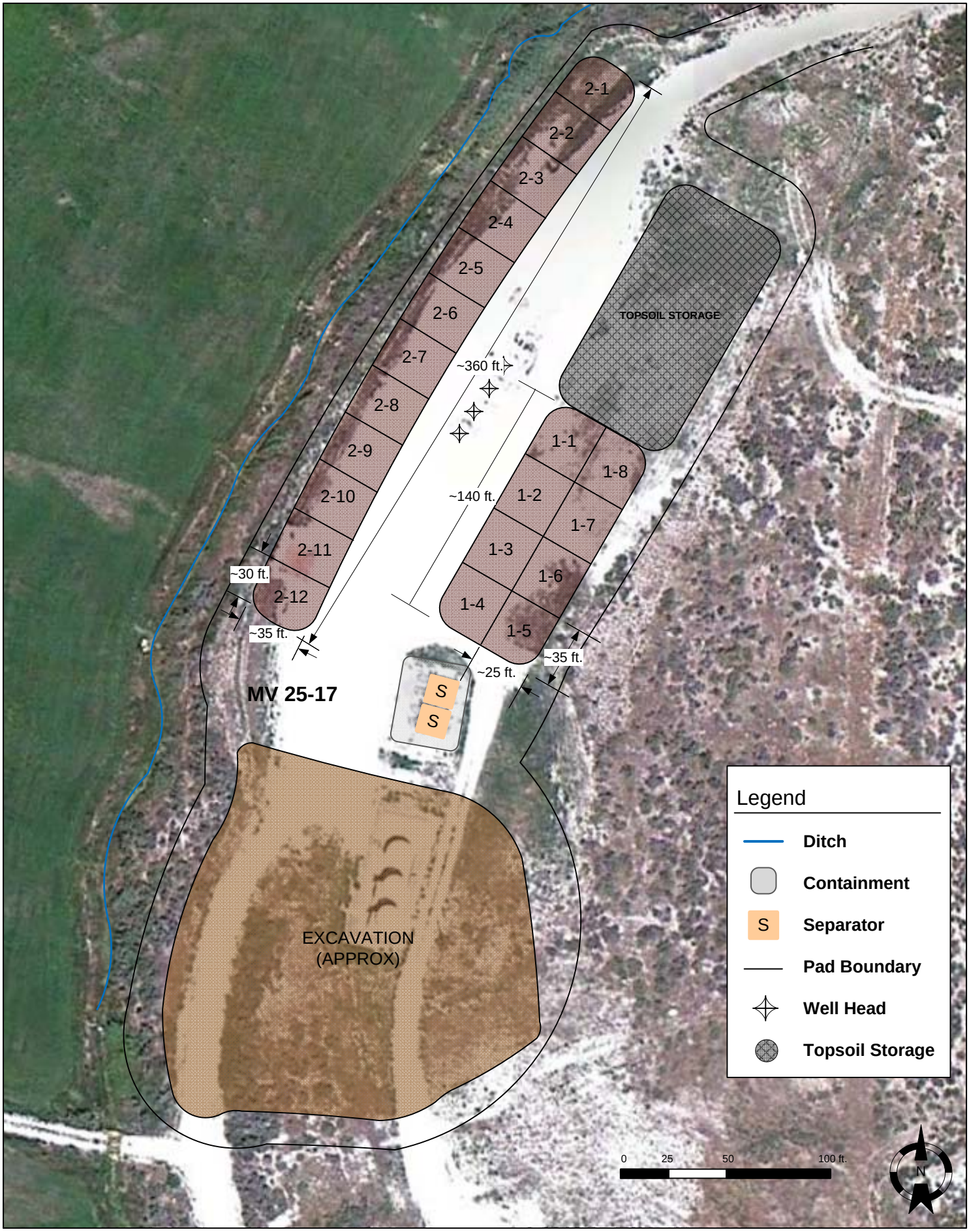

PROJECT NO: 012-1538	Landfarm Sampling Diagram **Location: MV 25-17** WPX Energy Rocky Mountain, LLC	OLSSON ASSOCIATES	760 Horizon Drive, Suite 102 Grand Junction, CO 81506 TEL 970.263.7800 FAX 970.263.7456	FIGURE
DRAWN BY: KJG				1
DATE: 5/10/13				

Mountain States ACCUTEST LABORATORIES

06/12/13

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

NXEEPPARACH

Accutest Job Number: D46975

Sampling Date: 06/06/13

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: **30**

ACCREDITED IN ACCORDANCE WITH nelac

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)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D46975

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D46975-1	06/06/13	10:25	JS	06/07/13	SO	Soil	MV 25-17 LF 2-12(0-24 IN)

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**	D46975
Site:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline	**Report Date**	6/12/2013 4:47:43 PM

On 06/07/2013, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D46975 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:** V5V1665

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP8005

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46975-1MS, D46975-1MSD were used as the QC samples indicated.
- The matrix spike (MS) recovery(s) of Naphthalene are outside control limits. Outside control limits due to possible matrix interference.
- The RPD(s) for the MS and MSD recoveries of Naphthalene are outside control limits for sample OP8005-MSD. Variability of recovery may be due to sample matrix/homogeneity.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB1134

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP7991

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46996-8MS, D46996-8MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN20525

- 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.

Summary of Hits

Job Number: D46975
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline
Collected: 06/06/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D46975-1	**MV 25-17 LF 2-12(0-24 IN)**					
Naphthalene		12.0 J	13	11	ug/kg	SW846 8270C BY SIM
TPH-DRO (C10-C28)		34.1	7.3	5.5	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MV 25-17 LF 2-12(0-24 IN)		
Lab Sample ID:	D46975-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8260B	**Percent Solids:**	91.0
Project:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V27337.D	1	06/07/13	BD	n/a	n/a	V5V1665
Run #2							

	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	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)	ND	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	106%		62-131%
17060-07-0	1,2-Dichloroethane-D4	105%		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

Report of Analysis

Client Sample ID: MV 25-17 LF 2-12(0-24 IN)
Lab Sample ID: D46975-1
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 91.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15064.D	1	06/12/13	DC	06/12/13	OP8005	E3G736
Run #2							

	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	9.2	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	ND	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	12.0	13	11	ug/kg	J
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	64%		10-159%
321-60-8	2-Fluorobiphenyl	64%		19-131%
1718-51-0	Terphenyl-d14	73%		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

Report of Analysis

Client Sample ID:	MV 25-17 LF 2-12(0-24 IN)		
Lab Sample ID:	D46975-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8015B	**Percent Solids:**	91.0
Project:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB20728.D	1	06/07/13	BD	n/a	n/a	GGB1134
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	5.9	mg/kg	

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

Report of Analysis

Client Sample ID: MV 25-17 LF 2-12(0-24 IN)
Lab Sample ID: D46975-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 91.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD25252.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
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)	34.1	7.3	5.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	56%		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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

WPX CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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

PAGE 1 OF 1

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # D46975

Client / Reporting Information

Company Name: Olsson Associates
Street Address: 760 Horizon Drive, STE 102
City: Grand Junction, CO 81506
Project Contact: Tim Dobransky Email: tdobransky@olssonassociates.c
Phone #: 970-263-7800
Sampler(s) Name(s): J Sutrina

Project Information

Project Name: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline
Street
City State
Project #
Client Purchase Order #: NXEEPPARACH
Project Manager

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)

GRO/DRO | BTEX | PAH (COGCC Table 910 List)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB- Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	GRO/DRO	BTEX	PAH (COGCC Table 910 List)	LAB USE ONLY
	MV 25-17 LF 2-12 (0-24in)		6/6/13	1025	JS	SO	1					1				X	X	X	01

DR 4/7/13

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [ ] 5 Business Day Std. (per contract)
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [X] 1 Day Emergency
- [ ] Emergency & Rush T/A data available VIA Lablink

JGM 12/6/12

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] COMMBN
- [ ] COMMBN+
- [ ] State Forms Required
- [ ] Send Forms to State
- [ ] Report by Fax
- [X] Report by PDF
- [ ] EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Also email final report to: Karolina.Blaney@wpxenergy.com

PLEASE RUSH 24 HR TAT

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/6/13 1130	Rifle Service Center			
2						6/7/13 12:50
3						
4						
5						

Custody Seal # HD/CO [X] Intact [ ] Not Intact | Preserved where applicable [ ] | On Ice [X] | Cooler Temp. 3.1

D46975: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D46975 **Client:** OLSSON ASS. **Immediate Client Services Action Required:** No

Date / Time Received: 6/7/2013 3:50:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: MV 25-17 LANDFARMS 2 BATCH BASELIN **Airbill #'s:** HD-CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

5.1

5

D46975: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

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: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-MB	5V27324.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46975-1

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	99%	64-130%
460-00-4	4-Bromofluorobenzene	92%	62-131%
17060-07-0	1,2-Dichloroethane-D4	107%	70-130%

Blank Spike Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-BS	5V27325.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46975-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2450	98	70-130
100-41-4	Ethylbenzene	2500	2690	108	70-130
108-88-3	Toluene	2500	2440	98	70-130
1330-20-7	Xylene (total)	7500	8020	107	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	103%	64-130%
460-00-4	4-Bromofluorobenzene	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	5V27327.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5MSD	5V27328.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5	5V27326.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46975-1

CAS No.	Compound	D46865-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3210	3170	99	3070	96	3	64-139/30
100-41-4	Ethylbenzene	ND		3210	3300	103	3250	101	2	68-136/30
108-88-3	Toluene	ND		3210	3000	94	2920	91	3	60-130/30
1330-20-7	Xylene (total)	ND		9620	10200	106	9920	103	3	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
2037-26-5	Toluene-D8	96%	95%	95%	64-130%
460-00-4	4-Bromofluorobenzene	115%	113%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	99%	104%	103%	70-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8005-MB	3G15062.D	1	06/12/13	DC	06/12/13	OP8005	E3G736

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46975-1

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	78%	10-159%
321-60-8	2-Fluorobiphenyl	82%	19-131%
1718-51-0	Terphenyl-d14	88%	18-150%

Blank Spike Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8005-BS	3G15063.D	1	06/12/13	DC	06/12/13	OP8005	E3G736

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46975-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	64.8	78	68-130
120-12-7	Anthracene	83.3	68.9	83	67-130
56-55-3	Benzo(a)anthracene	83.3	70.1	84	65-130
205-99-2	Benzo(b)fluoranthene	83.3	74.1	89	44-130
207-08-9	Benzo(k)fluoranthene	83.3	70.5	85	56-131
50-32-8	Benzo(a)pyrene	83.3	70.9	85	62-130
218-01-9	Chrysene	83.3	76.3	92	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	73.3	88	55-130
206-44-0	Fluoranthene	83.3	62.6	75	70-130
86-73-7	Fluorene	83.3	64.1	77	70-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	74.1	89	56-130
91-20-3	Naphthalene	83.3	69.7	84	70-130
129-00-0	Pyrene	83.3	71.5	86	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	76%	10-159%
321-60-8	2-Fluorobiphenyl	82%	19-131%
1718-51-0	Terphenyl-d14	91%	18-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8005-MS	3G15065.D	1	06/12/13	DC	06/12/13	OP8005	E3G736
OP8005-MSD	3G15066.D	1	06/12/13	DC	06/12/13	OP8005	E3G736
D46975-1	3G15064.D	1	06/12/13	DC	06/12/13	OP8005	E3G736

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46975-1

CAS No.	Compound	D46975-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		91.1	53.9	59	68.5	75	24	25-151/30
120-12-7	Anthracene	ND		91.1	63.9	70	79.6	87	22	39-159/30
56-55-3	Benzo(a)anthracene	ND		91.1	65.5	72	85.0	93	26	39-168/30
205-99-2	Benzo(b)fluoranthene	ND		91.1	87.7	96	100	109	13	24-163/30
207-08-9	Benzo(k)fluoranthene	ND		91.1	45.3	50	48.8	53	7	10-188/30
50-32-8	Benzo(a)pyrene	ND		91.1	61.1	67	74.0	81	19	32-144/30
218-01-9	Chrysene	ND		91.1	61.1	67	78.9	86	25	43-150/30
53-70-3	Dibenzo(a,h)anthracene	ND		91.1	56.7	62	67.1	73	17	21-152/30
206-44-0	Fluoranthene	ND		91.1	64.8	71	79.8	87	21	36-157/30
86-73-7	Fluorene	ND		91.1	65.8	72	78.0	85	17	10-182/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		91.1	57.2	63	67.0	73	16	20-154/30
91-20-3	Naphthalene	12.0	J	91.1	199	205* [a]	103	99	64* [b]	10-163/30
129-00-0	Pyrene	ND		91.1	73.8	81	95.2	104	25	25-180/30

CAS No.	Surrogate Recoveries	MS	MSD	D46975-1	Limits
4165-60-0	Nitrobenzene-d5	69%	74%	64%	10-159%
321-60-8	2-Fluorobiphenyl	72%	77%	64%	19-131%
1718-51-0	Terphenyl-d14	79%	87%	73%	18-150%

(a) Outside control limits due to possible matrix interference.
(b) Variability of recovery may be due to sample matrix/homogeneity.

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-MB	GB20717.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46975-1

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: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-BS	GB20718.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46975-1

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	97%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	GB20720.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5MSD	GB20721.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5	GB20719.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46975-1

CAS No.	Compound	D46865-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		141	140	99	139	98	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	96%	90%	60-140%

8.3.1

8

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MB	FD25242.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46975-1

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	67%	35-130%

Blank Spike Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-BS	FD25243.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46975-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	517	78	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	77%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46975
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 2 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MS	FD25244.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
OP7991-MSD	FD25245.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
D46996-8	FD25262.D	1	06/11/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46975-1

CAS No.	Compound	D46996-8 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	25.4		721	535	71	473	62	12	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D46996-8	Limits
84-15-1	o-Terphenyl	74%	60%	58%	35-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

06/12/13

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

NXEEPPARACH

Accutest Job Number: D46974

Sampling Date: 06/06/13

Report to:

Olsson Associates
760 Horizon Drive Suite 102
Grand Junction, CO 81505
tdobransky@olssonassociates.com; karolina.blaney@wpxenergy.com

ATTN: Tim Dobransky

Total number of pages in report: **30**

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)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D46974

CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline
Project No: NXEEPPARACH

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D46974-1	06/06/13	10:30	JS	06/07/13	SO	Soil	MV 25-17 LF 2-1(0-24 IN)

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**	D46974
Site:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline	**Report Date**	6/12/2013 8:19:32 AM

On 06/07/2013, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D46974 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:** V5V1665

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP7990

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46973-1MS, D46973-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB1134

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP7991

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46996-8MS, D46996-8MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN20525

- 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.

Summary of Hits

Job Number: D46974
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline
Collected: 06/06/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D46974-1	**MV 25-17 LF 2-1(0-24 IN)**					
Naphthalene		13.1	13	11	ug/kg	SW846 8270C BY SIM
TPH-DRO (C10-C28)		39.8	7.3	5.5	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MV 25-17 LF 2-1(0-24 IN)		
Lab Sample ID:	D46974-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8260B	**Percent Solids:**	90.8
Project:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V27336.D	1	06/07/13	BD	n/a	n/a	V5V1665
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 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)	ND	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	106%		62-131%
17060-07-0	1,2-Dichloroethane-D4	105%		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

Report of Analysis

Client Sample ID: MV 25-17 LF 2-1(0-24 IN)
Lab Sample ID: D46974-1
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 90.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15027.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
Run #2							

	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	9.2	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	ND	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	13.1	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	68%		10-159%
321-60-8	2-Fluorobiphenyl	81%		19-131%
1718-51-0	Terphenyl-d14	87%		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

Report of Analysis

Client Sample ID:	MV 25-17 LF 2-1(0-24 IN)		
Lab Sample ID:	D46974-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8015B	**Percent Solids:**	90.8
Project:	CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB20727.D	1	06/07/13	BD	n/a	n/a	GGB1134
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	85%		60-140%

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

Report of Analysis

Client Sample ID: MV 25-17 LF 2-1(0-24 IN)
Lab Sample ID: D46974-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 90.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD25251.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
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)	39.8	7.3	5.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	65%		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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

WPX CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D46974

Client / Reporting Information

Company Name: Olsson Associates
Street Address: 760 Horizon Drive, STE 102
City: Grand Junction, CO 81506
Project Contact / Email: Tim Dobransky tdobransky@olssonassociates.
Phone #: 970-263-7800
Sampler(s) Name(s): J. Sutrina

Project Information

Project Name: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline
Street:
City / State:
Project #:
Client Purchase Order #: NXEEPPARACH
Project Manager:

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

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB-Rinse Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	GRO/DRO	BTEX	PAH (COGCC Table 910 List)	LAB USE ONLY
	MV 05-17 LF 2-1(0-24in)		6/6/13	1030	JS	SO	1					1				X	X	X	01

DR 6/7/13

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- 5 Business Day Std. (per contract) — JGM 12/8/12
- 3 Day Emergency
- 2 Day Emergency
- X 1 Day Emergency

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- COMMBN
- COMMBN+
- State Forms Required
- Send Forms to State
- Report by Fax
- X Report by PDF
- EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/narrative (+ = chromatograms)

Comments / Special Instructions

Also email final report to: Karolina.Blaney@wpxenergy.com

PLEASE RUSH 24 HR TAT

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	6/6/13 1030	Fluid Service Center	2		2 6/7/13 12:50
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by:	Date Time:	Received By:	Custody Seal # HD/CO ☑ Intact	Preserved where applicable	On Ice ☑ Cooler Temp. 3.1

5.1 5

D46974: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D46974 **Client:** OLSSON ASS. **Immediate Client Services Action Required:** No

Date / Time Received: 6/7/2013 12:50:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: MV 25 17 LANDFARM 2 BATCH 3 BASELINE **Airbill #'s:** HD-CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

5.1

5

D46974: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

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: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-MB	5V27324.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46974-1

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	99%	64-130%
460-00-4	4-Bromofluorobenzene	92%	62-131%
17060-07-0	1,2-Dichloroethane-D4	107%	70-130%

Blank Spike Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-BS	5V27325.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46974-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2450	98	70-130
100-41-4	Ethylbenzene	2500	2690	108	70-130
108-88-3	Toluene	2500	2440	98	70-130
1330-20-7	Xylene (total)	7500	8020	107	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	103%	64-130%
460-00-4	4-Bromofluorobenzene	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	5V27327.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5MSD	5V27328.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5	5V27326.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46974-1

CAS No.	Compound	D46865-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3210	3170	99	3070	96	3	64-139/30
100-41-4	Ethylbenzene	ND		3210	3300	103	3250	101	2	68-136/30
108-88-3	Toluene	ND		3210	3000	94	2920	91	3	60-130/30
1330-20-7	Xylene (total)	ND		9620	10200	106	9920	103	3	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
2037-26-5	Toluene-D8	96%	95%	95%	64-130%
460-00-4	4-Bromofluorobenzene	115%	113%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	99%	104%	103%	70-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-MB	3G15020.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46974-1

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	58%	10-159%
321-60-8	2-Fluorobiphenyl	62%	19-131%
1718-51-0	Terphenyl-d14	93%	18-150%

Blank Spike Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-BS	3G15021.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46974-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	68.9	83	68-130
120-12-7	Anthracene	83.3	69.7	84	67-130
56-55-3	Benzo(a)anthracene	83.3	67.9	81	65-130
205-99-2	Benzo(b)fluoranthene	83.3	75.2	90	44-130
207-08-9	Benzo(k)fluoranthene	83.3	74.3	89	56-131
50-32-8	Benzo(a)pyrene	83.3	71.9	86	62-130
218-01-9	Chrysene	83.3	72.8	87	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	74.6	90	55-130
206-44-0	Fluoranthene	83.3	66.8	80	70-130
86-73-7	Fluorene	83.3	65.2	78	70-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	75.4	90	56-130
91-20-3	Naphthalene	83.3	59.0	71	70-130
129-00-0	Pyrene	83.3	67.5	81	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	63%	10-159%
321-60-8	2-Fluorobiphenyl	82%	19-131%
1718-51-0	Terphenyl-d14	87%	18-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-MS	3G15023.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
OP7990-MSD	3G15024.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
D46973-1	3G15022.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46974-1

CAS No.	Compound	D46973-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		90.3	82.2	91	83.4	92	1	25-151/30
120-12-7	Anthracene	ND		90.3	83.0	92	85.1	94	2	39-159/30
56-55-3	Benzo(a)anthracene	ND		90.3	79.7	88	81.1	90	2	39-168/30
205-99-2	Benzo(b)fluoranthene	ND		90.3	79.4	88	82.3	91	4	24-163/30
207-08-9	Benzo(k)fluoranthene	ND		90.3	79.8	88	80.1	88	0	10-188/30
50-32-8	Benzo(a)pyrene	ND		90.3	74.6	83	75.7	84	1	32-144/30
218-01-9	Chrysene	ND		90.3	79.2	88	80.2	89	1	43-150/30
53-70-3	Dibenzo(a,h)anthracene	ND		90.3	71.2	79	72.8	80	2	21-152/30
206-44-0	Fluoranthene	ND		90.3	84.4	93	85.7	95	2	36-157/30
86-73-7	Fluorene	ND		90.3	87.8	97	92.4	102	5	10-182/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		90.3	71.3	79	72.2	80	1	20-154/30
91-20-3	Naphthalene	12.9	J	90.3	92.8	88	97.7	94	5	10-163/30
129-00-0	Pyrene	ND		90.3	84.7	94	87.0	96	3	25-180/30

CAS No.	Surrogate Recoveries	MS	MSD	D46973-1	Limits
4165-60-0	Nitrobenzene-d5	68%	74%	56%	10-159%
321-60-8	2-Fluorobiphenyl	85%	86%	74%	19-131%
1718-51-0	Terphenyl-d14	84%	86%	77%	18-150%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-MB	GB20717.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46974-1

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: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-BS	GB20718.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46974-1

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	97%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	GB20720.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5MSD	GB20721.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5	GB20719.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46974-1

CAS No.	Compound	D46865-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		141	140	99	139	98	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	96%	90%	60-140%

8.3.1

8

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MB	FD25242.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46974-1

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	67%	35-130%

Blank Spike Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-BS	FD25243.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46974-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	517	78	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	77%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46974
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 2 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MS	FD25244.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
OP7991-MSD	FD25245.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
D46996-8	FD25262.D	1	06/11/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46974-1

CAS No.	Compound	D46996-8 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	25.4		721	535	71	473	62	12	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D46996-8	Limits
84-15-1	o-Terphenyl	74%	60%	58%	35-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

06/12/13

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

NXEEPPARACH

Accutest Job Number: D46973

Sampling Date: 06/06/13

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: **34**

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)

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D46973

CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline
Project No: NXEEPPARACH

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D46973-1	06/06/13	10:15	JS	06/07/13	SO	Soil	MV 25-17 LF 1-6 (0-24 IN)
D46973-2	06/06/13	10:20	JS	06/07/13	SO	Soil	MV 25-17 LF 1-7 (0-24 IN)

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**	D46973
Site:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline	**Report Date**	6/12/2013 8:15:49 AM

On 06/07/2013, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D46973 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:** V5V1665

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP7990

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46973-1MS, D46973-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB1134

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46865-5MS, D46865-5MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP7991

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D46996-8MS, D46996-8MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN20525

- 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.

Summary of Hits

Job Number: D46973
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline
Collected: 06/06/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D46973-1	**MV 25-17 LF 1-6 (0-24 IN)**					
Naphthalene		12.9 J	13	11	ug/kg	SW846 8270C BY SIM
TPH-DRO (C10-C28)		38.7	7.2	5.4	mg/kg	SW846-8015B
D46973-2	**MV 25-17 LF 1-7 (0-24 IN)**					
TPH-DRO (C10-C28)		69.9	7.3	5.4	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MV 25-17 LF 1-6 (0-24 IN)		
Lab Sample ID:	D46973-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8260B	**Percent Solids:**	92.1
Project:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V27334.D	1	06/07/13	BD	n/a	n/a	V5V1665
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	59	29	ug/kg	
108-88-3	Toluene	ND	120	59	ug/kg	
100-41-4	Ethylbenzene	ND	120	22	ug/kg	
1330-20-7	Xylene (total)	ND	230	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		64-130%
460-00-4	4-Bromofluorobenzene	107%		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

Report of Analysis

Client Sample ID: MV 25-17 LF 1-6 (0-24 IN)
Lab Sample ID: D46973-1
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 92.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15022.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
Run #2							

	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	9.0	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	ND	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	12.9	13	11	ug/kg	J
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	56%		10-159%
321-60-8	2-Fluorobiphenyl	74%		19-131%
1718-51-0	Terphenyl-d14	77%		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

Report of Analysis

Client Sample ID:	MV 25-17 LF 1-6 (0-24 IN)		
Lab Sample ID:	D46973-1	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8015B	**Percent Solids:**	92.1
Project:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB20725.D	1	06/07/13	BD	n/a	n/a	GGB1134
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	5.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	86%		60-140%

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

Report of Analysis

Client Sample ID: MV 25-17 LF 1-6 (0-24 IN)
Lab Sample ID: D46973-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 92.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD25249.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
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)	38.7	7.2	5.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		35-130%

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

Report of Analysis

Client Sample ID:	MV 25-17 LF 1-7 (0-24 IN)		
Lab Sample ID:	D46973-2	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8260B	**Percent Solids:**	91.7
Project:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V27335.D	1	06/07/13	BD	n/a	n/a	V5V1665
Run #2							

	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	29	ug/kg	
108-88-3	Toluene	ND	120	59	ug/kg	
100-41-4	Ethylbenzene	ND	120	22	ug/kg	
1330-20-7	Xylene (total)	ND	230	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	105%		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

Report of Analysis

Client Sample ID: MV 25-17 LF 1-7 (0-24 IN)
Lab Sample ID: D46973-2
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 91.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G15026.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
Run #2							

	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	9.1	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	ND	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	ND	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	69%		10-159%
321-60-8	2-Fluorobiphenyl	81%		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

Report of Analysis

Client Sample ID:	MV 25-17 LF 1-7 (0-24 IN)		
Lab Sample ID:	D46973-2	**Date Sampled:**	06/06/13
Matrix:	SO - Soil	**Date Received:**	06/07/13
Method:	SW846 8015B	**Percent Solids:**	91.7
Project:	CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB20726.D	1	06/07/13	BD	n/a	n/a	GGB1134
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	5.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	86%		60-140%

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

Report of Analysis

Client Sample ID: MV 25-17 LF 1-7 (0-24 IN)
Lab Sample ID: D46973-2
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Date Sampled: 06/06/13
Date Received: 06/07/13
Percent Solids: 91.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD25250.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
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)	69.9	7.3	5.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

WPX CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST LABORATORIES

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

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D46973

Client / Reporting Information

Company Name: Olsson Associates
Street Address: 760 Horizon Drive, STE 102
City: Grand Junction, CO 81506
Project Contact / Email: Tim Dobransky tdobransky@olssonassociates.
Phone #: 970-263-7800
Sampler(s) Name(s): J. Sutrina

Project Information

Project Name: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline
Street:
City / State:
Project #:
Client Purchase Order #: NXEEPPARACH
Project Manager:

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

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB-Rinse Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	GRO/DRO	BTEX	PAH (COGCC Table 910 List)	LAB USE ONLY
	MV 25-17 LF 1-6 (0-24in)		6/6/13	1015	JS	SO	1					1				X	X	X	01
	MV 25-17 LF 1-7 (0-24in)		6/6/13	1020	JS	SO	1					1				X	X	X	02

DR 6/7/13

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- 5 Business Day Std. (per contract)
- 3 Day Emergency
- 2 Day Emergency
- [X] 1 Day Emergency

JGM 12/6/12

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- COMMBN
- COMMBN+

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

- State Forms Required
- Send Forms to State
- Report by Fax
- [X] Report by PDF
- EDD Format

Comments / Special Instructions

Also email final report to: Karolina.Blaney@wpxenergy.com

PLEASE RUSH 24 HR TAT

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/6/13 1130	1 Rifle Service Center	2		2 6/7/13 12:50
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal # 110/CO [✓] Intact	Preserved where applicable	On Ice [✓] Cooler Temp. 3.1

5.1 5

D46973: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D46973 **Client:** OLSSON ASS. **Immediate Client Services Action Required:** No

Date / Time Received: 6/7/2013 12:50:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: MV 25-17 LANDFARM 1 BATCH 3 BASELINE **Airbill #'s:** HD-CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

D46973: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

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: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-MB	5V27324.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46973-1, D46973-2

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	99%	64-130%
460-00-4	4-Bromofluorobenzene	92%	62-131%
17060-07-0	1,2-Dichloroethane-D4	107%	70-130%

Blank Spike Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1665-BS	5V27325.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46973-1, D46973-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	2500	2450	98	70-130
100-41-4	Ethylbenzene	2500	2690	108	70-130
108-88-3	Toluene	2500	2440	98	70-130
1330-20-7	Xylene (total)	7500	8020	107	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	103%	64-130%
460-00-4	4-Bromofluorobenzene	101%	62-131%
17060-07-0	1,2-Dichloroethane-D4	100%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	5V27327.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5MSD	5V27328.D	1	06/07/13	BD	n/a	n/a	V5V1665
D46865-5	5V27326.D	1	06/07/13	BD	n/a	n/a	V5V1665

The QC reported here applies to the following samples: **Method:** SW846 8260B

D46973-1, D46973-2

CAS No.	Compound	D46865-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3210	3170	99	3070	96	3	64-139/30
100-41-4	Ethylbenzene	ND		3210	3300	103	3250	101	2	68-136/30
108-88-3	Toluene	ND		3210	3000	94	2920	91	3	60-130/30
1330-20-7	Xylene (total)	ND		9620	10200	106	9920	103	3	58-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
2037-26-5	Toluene-D8	96%	95%	95%	64-130%
460-00-4	4-Bromofluorobenzene	115%	113%	104%	62-131%
17060-07-0	1,2-Dichloroethane-D4	99%	104%	103%	70-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-MB	3G15020.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46973-1, D46973-2

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	58%	10-159%
321-60-8	2-Fluorobiphenyl	62%	19-131%
1718-51-0	Terphenyl-d14	93%	18-150%

Blank Spike Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-BS	3G15021.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46973-1, D46973-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	68.9	83	68-130
120-12-7	Anthracene	83.3	69.7	84	67-130
56-55-3	Benzo(a)anthracene	83.3	67.9	81	65-130
205-99-2	Benzo(b)fluoranthene	83.3	75.2	90	44-130
207-08-9	Benzo(k)fluoranthene	83.3	74.3	89	56-131
50-32-8	Benzo(a)pyrene	83.3	71.9	86	62-130
218-01-9	Chrysene	83.3	72.8	87	70-130
53-70-3	Dibenzo(a,h)anthracene	83.3	74.6	90	55-130
206-44-0	Fluoranthene	83.3	66.8	80	70-130
86-73-7	Fluorene	83.3	65.2	78	70-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	75.4	90	56-130
91-20-3	Naphthalene	83.3	59.0	71	70-130
129-00-0	Pyrene	83.3	67.5	81	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	63%	10-159%
321-60-8	2-Fluorobiphenyl	82%	19-131%
1718-51-0	Terphenyl-d14	87%	18-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7990-MS	3G15023.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
OP7990-MSD	3G15024.D	1	06/10/13	DC	06/10/13	OP7990	E3G734
D46973-1	3G15022.D	1	06/10/13	DC	06/10/13	OP7990	E3G734

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D46973-1, D46973-2

CAS No.	Compound	D46973-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		90.3	82.2	91	83.4	92	1	25-151/30
120-12-7	Anthracene	ND		90.3	83.0	92	85.1	94	2	39-159/30
56-55-3	Benzo(a)anthracene	ND		90.3	79.7	88	81.1	90	2	39-168/30
205-99-2	Benzo(b)fluoranthene	ND		90.3	79.4	88	82.3	91	4	24-163/30
207-08-9	Benzo(k)fluoranthene	ND		90.3	79.8	88	80.1	88	0	10-188/30
50-32-8	Benzo(a)pyrene	ND		90.3	74.6	83	75.7	84	1	32-144/30
218-01-9	Chrysene	ND		90.3	79.2	88	80.2	89	1	43-150/30
53-70-3	Dibenzo(a,h)anthracene	ND		90.3	71.2	79	72.8	80	2	21-152/30
206-44-0	Fluoranthene	ND		90.3	84.4	93	85.7	95	2	36-157/30
86-73-7	Fluorene	ND		90.3	87.8	97	92.4	102	5	10-182/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		90.3	71.3	79	72.2	80	1	20-154/30
91-20-3	Naphthalene	12.9	J	90.3	92.8	88	97.7	94	5	10-163/30
129-00-0	Pyrene	ND		90.3	84.7	94	87.0	96	3	25-180/30

CAS No.	Surrogate Recoveries	MS	MSD	D46973-1	Limits
4165-60-0	Nitrobenzene-d5	68%	74%	56%	10-159%
321-60-8	2-Fluorobiphenyl	85%	86%	74%	19-131%
1718-51-0	Terphenyl-d14	84%	86%	77%	18-150%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-MB	GB20717.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46973-1, D46973-2

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	90%	60-140%

Blank Spike Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1134-BS	GB20718.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46973-1, D46973-2

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

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	97%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D46865-5MS	GB20720.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5MSD	GB20721.D	1	06/07/13	BD	n/a	n/a	GGB1134
D46865-5	GB20719.D	1	06/07/13	BD	n/a	n/a	GGB1134

The QC reported here applies to the following samples: **Method:** SW846 8015B

D46973-1, D46973-2

CAS No.	Compound	D46865-5 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		141	140	99	139	98	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D46865-5	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	96%	90%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

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: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MB	FD25242.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46973-1, D46973-2

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	67%	35-130%

Blank Spike Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-BS	FD25243.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46973-1, D46973-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	517	78	48-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	77%	35-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D46973
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: MV 25-17 Landfarm 1 Batch 3 Baseline

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7991-MS	FD25244.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
OP7991-MSD	FD25245.D	1	06/10/13	TU	06/10/13	OP7991	GFD1252
D46996-8	FD25262.D	1	06/11/13	TU	06/10/13	OP7991	GFD1252

The QC reported here applies to the following samples: **Method:** SW846-8015B

D46973-1, D46973-2

CAS No.	Compound	D46996-8 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	25.4		721	535	71	473	62	12	20-168/30

CAS No.	Surrogate Recoveries	MS	MSD	D46996-8	Limits
84-15-1	o-Terphenyl	74%	60%	58%	35-130%

* = Outside of Control Limits.