

Legend

- Water Well
- Existing Road
- Existing Pad

Location Map
March 2, 2016



		Location	GM 11-2 Batch 1	GM 11-2 Batch 2	GM 11-2 Batch 3	GM 11-2 Batch 4	GM 11-2 Batch 5
Contaminant of Concern ↓	COGCC standards	Date	5/14/2015	7/17/2015	8/7/2015	9/28/2015	10/22/2015
Organic Compounds in Soil							
TPH (DRO+GRO)	500	mg/kg	20.3	135	174	17	147
DRO			17	76	110	17	37
GRO			3.3	59	64	ND	110
Benzene	0.17	mg/kg	ND	ND	ND	ND	ND
Toluene	85	mg/kg	ND	ND	ND	ND	ND
Ethylbenzene	100	mg/kg	ND	ND	ND	ND	ND
Xylenes (Total)	175	mg/kg	ND	ND	0.12	ND	ND
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND	ND
Anthracene	1,000	mg/kg	ND	ND	ND	ND	ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND	ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND	ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	0.0075	ND	ND	ND
Benzo(A)pyrene	0.022	mg/kg	ND	0.011	ND	ND	ND
Chrysene	22	mg/kg	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND	ND
Fluoranthene	1,000	mg/kg	0.0082	ND	ND	ND	ND
Fluorene	1,000	mg/kg	ND	0.018	0.041	0.013	ND
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	ND	0.014	ND	ND	ND
Naphthalene	23	mg/kg	ND	ND	0.055	ND	ND
Pyrene	1,000	mg/kg	ND	ND	ND	ND	ND
Inorganics in Soil							
EC	<4	mmhos/cm	0.86	13	NT	11	10
SAR	<12		14	12	NT	10	10
pH	6-9		7.6	7.8	NT	7.7	7.8

Note:

ND = Non Detect

mg/Kg = milligrams per kilogram = parts per million

Exceeds COGCC standards



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Est. 1970

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

Report Summary

Tuesday May 26, 2015

Report Number: L765416

Samples Received: 05/15/15

Client Project: GM 11-2 BATCH 1

Description: GM 11-2 BATCH 1

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

May 26, 2015

Date Received : May 15, 2015
Description : GM 11-2 BATCH 1
Sample ID : GM 11-2 BATCH 1
Collected By :
Collection Date : 05/14/15 14:50

ESC Sample # : L765416-01

Site ID :

Project # : GM 11-2 BATCH 1

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	05/22/15	5
Toluene	BDL	0.025	mg/kg	8021	05/22/15	5
Ethylbenzene	0.025	0.0025	mg/kg	8021	05/22/15	5
Total Xylene	BDL	0.0075	mg/kg	8021	05/22/15	5
TPH (GC/FID) Low Fraction	3.3	0.50	mg/kg	8015	05/22/15	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	90.1		% Rec.	8015	05/22/15	1
a,a,a-Trifluorotoluene(PID)	97.0		% Rec.	8021	05/22/15	1
TPH (GC/FID) High Fraction	17.	4.0	mg/kg	3546/DRO	05/17/15	1
Surrogate recovery(%)						
o-Terphenyl	72.9		% Rec.	3546/DRO	05/17/15	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Fluorene	0.0082	0.0060	mg/kg	8270C-SIM	05/18/15	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	05/18/15	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	05/18/15	1
1-Methylnaphthalene	0.046	0.020	mg/kg	8270C-SIM	05/18/15	1
2-Methylnaphthalene	0.074	0.020	mg/kg	8270C-SIM	05/18/15	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	05/18/15	1
Surrogate Recovery						
p-Terphenyl-d14	69.1		% Rec.	8270C-SIM	05/18/15	1
Nitrobenzene-d5	96.5		% Rec.	8270C-SIM	05/18/15	1
2-Fluorobiphenyl	74.0		% Rec.	8270C-SIM	05/18/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 05/26/15 13:28 Printed: 05/26/15 13:28



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REPORT OF ANALYSIS

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

May 26, 2015

Date Received : May 15, 2015
Description : GM 11-2 BATCH 1
Sample ID : GM 11-2 BATCH 1
Collected By :
Collection Date : 05/14/15 14:50

ESC Sample # : L765416-02

Site ID :

Project # : GM 11-2 BATCH 1

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	7.6	0.10	su	9045D	05/16/15	1
Sodium Adsorption Ratio	14.			Calc.	05/22/15	1
Specific Conductance	860		umhos/cm	9050AMod	05/17/15	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 05/26/15 13:28 Printed: 05/26/15 13:28
L765416-02 (PH) - 7.6 at 21.0c



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May 26, 2015

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) High Fraction	< 4	mg/kg			WG789376	05/17/15 08:05
o-Terphenyl		% Rec.	71.10	50-150	WG789376	05/17/15 08:05
Specific Conductance	1.18	umhos/cm			WG789315	05/17/15 08:00
1-Methylnaphthalene	< .02	mg/kg			WG789424	05/18/15 03:01
2-Chloronaphthalene	< .02	mg/kg			WG789424	05/18/15 03:01
2-Methylnaphthalene	< .02	mg/kg			WG789424	05/18/15 03:01
Acenaphthene	< .006	mg/kg			WG789424	05/18/15 03:01
Acenaphthylene	< .006	mg/kg			WG789424	05/18/15 03:01
Anthracene	< .006	mg/kg			WG789424	05/18/15 03:01
Benzo(a)anthracene	< .006	mg/kg			WG789424	05/18/15 03:01
Benzo(a)pyrene	< .006	mg/kg			WG789424	05/18/15 03:01
Benzo(b)fluoranthene	< .006	mg/kg			WG789424	05/18/15 03:01
Benzo(g,h,i)perylene	< .006	mg/kg			WG789424	05/18/15 03:01
Benzo(k)fluoranthene	< .006	mg/kg			WG789424	05/18/15 03:01
Chrysene	< .006	mg/kg			WG789424	05/18/15 03:01
Dibenz(a,h)anthracene	< .006	mg/kg			WG789424	05/18/15 03:01
Fluoranthene	< .006	mg/kg			WG789424	05/18/15 03:01
Fluorene	< .006	mg/kg			WG789424	05/18/15 03:01
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG789424	05/18/15 03:01
Naphthalene	< .02	mg/kg			WG789424	05/18/15 03:01
Phenanthrene	< .006	mg/kg			WG789424	05/18/15 03:01
Pyrene	< .006	mg/kg			WG789424	05/18/15 03:01
2-Fluorobiphenyl		% Rec.	73.00	40.6-122	WG789424	05/18/15 03:01
Nitrobenzene-d5		% Rec.	69.40	22.1-146	WG789424	05/18/15 03:01
p-Terphenyl-d14		% Rec.	62.80	32.2-131	WG789424	05/18/15 03:01
Benzene	< .0005	mg/kg			WG789536	05/22/15 12:32
Ethylbenzene	< .0005	mg/kg			WG789536	05/22/15 12:32
Toluene	< .005	mg/kg			WG789536	05/22/15 12:32
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG789536	05/22/15 12:32
Total Xylene	< .0015	mg/kg			WG789536	05/22/15 12:32
a,a,a-Trifluorotoluene(FID)		% Rec.	90.80	59-128	WG789536	05/22/15 12:32
a,a,a-Trifluorotoluene(PID)		% Rec.	97.70	54-144	WG789536	05/22/15 12:32

Analyte	Units	Result	Duplicate		Limit	Ref Samp	Batch
			Duplicate	RPD			
pH	su	7.70	7.80	0.901	1	L765212-01	WG789354
pH	su	8.40	8.40	0.593	1	L765462-10	WG789354

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) High Fraction	mg/kg	60	35.1	58.5	50-150	WG789376
o-Terphenyl				58.90	50-150	WG789376
Specific Conductance	umhos/cm	534	541.	101.	85-115	WG789315
Specific Conductance	umhos/cm	534	543.	102.	85-115	WG789315
pH	su	7.84	7.85	100.	98.3-101.7	WG789354

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	mg/kg	.08	0.0659	82.4	50.6-122	WG789424
2-Chloronaphthalene	mg/kg	.08	0.0550	68.7	53.9-121	WG789424
2-Methylnaphthalene	mg/kg	.08	0.0599	74.9	50.4-120	WG789424
Acenaphthene	mg/kg	.08	0.0581	72.6	52.4-120	WG789424
Acenaphthylene	mg/kg	.08	0.0558	69.8	49.6-120	WG789424
Anthracene	mg/kg	.08	0.0570	71.3	50.3-130	WG789424
Benzo(a)anthracene	mg/kg	.08	0.0530	66.2	46.7-125	WG789424
Benzo(a)pyrene	mg/kg	.08	0.0525	65.7	42.3-119	WG789424
Benzo(b)fluoranthene	mg/kg	.08	0.0542	67.7	43.6-124	WG789424
Benzo(g,h,i)perylene	mg/kg	.08	0.0570	71.2	45.1-132	WG789424
Benzo(k)fluoranthene	mg/kg	.08	0.0573	71.7	46.1-131	WG789424
Chrysene	mg/kg	.08	0.0576	72.0	49.5-131	WG789424
Dibenz(a,h)anthracene	mg/kg	.08	0.0611	76.4	44.8-133	WG789424
Fluoranthene	mg/kg	.08	0.0582	72.8	49.3-128	WG789424
Fluorene	mg/kg	.08	0.0561	70.1	50.6-121	WG789424
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0606	75.7	46.1-135	WG789424
Naphthalene	mg/kg	.08	0.0574	71.8	49.6-115	WG789424
Phenanthrene	mg/kg	.08	0.0520	64.9	48.8-121	WG789424
Pyrene	mg/kg	.08	0.0593	74.1	44.7-130	WG789424
2-Fluorobiphenyl				66.80	40.6-122	WG789424
Nitrobenzene-d5				69.80	22.1-146	WG789424
p-Terphenyl-d14				60.00	32.2-131	WG789424
Benzene	mg/kg	.05	0.0477	95.5	70-130	WG789536
Ethylbenzene	mg/kg	.05	0.0493	98.6	70-130	WG789536
Toluene	mg/kg	.05	0.0485	97.0	70-130	WG789536
Total Xylene	mg/kg	.15	0.147	98.1	70-130	WG789536
a,a,a-Trifluorotoluene(FID)				90.40	59-128	WG789536
a,a,a-Trifluorotoluene(PID)				96.60	54-144	WG789536
TPH (GC/FID) Low Fraction	mg/kg	5.5	4.63	84.2	63.5-137	WG789536
a,a,a-Trifluorotoluene(FID)				97.60	59-128	WG789536
a,a,a-Trifluorotoluene(PID)				107.0	54-144	WG789536

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
TPH (GC/FID) High Fraction	mg/kg	33.3	35.1	55.0	50-150	5.42	20	WG789376
o-Terphenyl				61.40	50-150			WG789376
Specific Conductance	umhos/	545.	543.	102.	85-115	0.368	20	WG789315
pH	su	7.85	7.85	100.	98.3-101.7	0.0	20	WG789354
1-Methylnaphthalene	mg/kg	0.0597	0.0659	75.0	50.6-122	9.87	20	WG789424
2-Chloronaphthalene	mg/kg	0.0514	0.0550	64.0	53.9-121	6.84	20	WG789424
2-Methylnaphthalene	mg/kg	0.0619	0.0599	77.0	50.4-120	3.32	20	WG789424
Acenaphthene	mg/kg	0.0609	0.0581	76.0	52.4-120	4.77	20	WG789424
Acenaphthylene	mg/kg	0.0544	0.0558	68.0	49.6-120	2.49	20	WG789424
Anthracene	mg/kg	0.0597	0.0570	75.0	50.3-130	4.61	20	WG789424
Benzo(a)anthracene	mg/kg	0.0580	0.0530	72.0	46.7-125	9.15	20	WG789424
Benzo(a)pyrene	mg/kg	0.0572	0.0525	72.0	42.3-119	8.53	20	WG789424
Benzo(b)fluoranthene	mg/kg	0.0595	0.0542	74.0	43.6-124	9.38	20	WG789424
Benzo(g,h,i)perylene	mg/kg	0.0604	0.0570	75.0	45.1-132	5.79	20	WG789424
Benzo(k)fluoranthene	mg/kg	0.0582	0.0573	73.0	46.1-131	1.55	20	WG789424
Chrysene	mg/kg	0.0599	0.0576	75.0	49.5-131	3.86	20	WG789424

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Dibenz(a,h)anthracene	mg/kg	0.0648	0.0611	81.0	44.8-133	5.86	20	WG789424
Fluoranthene	mg/kg	0.0610	0.0582	76.0	49.3-128	4.70	20	WG789424
Fluorene	mg/kg	0.0584	0.0561	73.0	50.6-121	3.99	20	WG789424
Indeno(1,2,3-cd)pyrene	mg/kg	0.0642	0.0606	80.0	46.1-135	5.82	20	WG789424
Naphthalene	mg/kg	0.0604	0.0574	75.0	49.6-115	5.01	20	WG789424
Phenanthrene	mg/kg	0.0553	0.0520	69.0	48.8-121	6.27	20	WG789424
Pyrene	mg/kg	0.0622	0.0593	78.0	44.7-130	4.75	20	WG789424
2-Fluorobiphenyl				63.30	40.6-122			WG789424
Nitrobenzene-d5				59.20	22.1-146			WG789424
p-Terphenyl-d14				64.40	32.2-131			WG789424
Benzene	mg/kg	0.0478	0.0477	96.0	70-130	0.160	20	WG789536
Ethylbenzene	mg/kg	0.0498	0.0493	100.	70-130	1.00	20	WG789536
Toluene	mg/kg	0.0483	0.0485	96.0	70-130	0.460	20	WG789536
Total Xylene	mg/kg	0.149	0.147	99.0	70-130	1.35	20	WG789536
a,a,a-Trifluorotoluene(FID)				90.60	59-128			WG789536
a,a,a-Trifluorotoluene(PID)				97.30	54-144			WG789536
TPH (GC/FID) Low Fraction	mg/kg	4.61	4.63	84.0	63.5-137	0.500	20	WG789536
a,a,a-Trifluorotoluene(FID)				97.00	59-128			WG789536
a,a,a-Trifluorotoluene(PID)				106.0	54-144			WG789536

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
TPH (GC/FID) High Fraction	mg/kg	44.9	2.94	60	70.0	50-150	L765146-07	WG789376
o-Terphenyl					71.80	50-150		WG789376
1-Methylnaphthalene	mg/kg	0.0563	0.00684	.08	62.0	28.4-137	L765419-01	WG789424
2-Chloronaphthalene	mg/kg	0.0393	0.0	.08	49.0	38.6-126	L765419-01	WG789424
2-Methylnaphthalene	mg/kg	0.0527	0.0108	.08	52.0	26.6-137	L765419-01	WG789424
Acenaphthene	mg/kg	0.0469	0.0	.08	59.0	31.9-130	L765419-01	WG789424
Acenaphthylene	mg/kg	0.0498	0.0	.08	62.0	33.7-129	L765419-01	WG789424
Anthracene	mg/kg	0.0489	0.0	.08	61.0	26.5-141	L765419-01	WG789424
Benzo(a)anthracene	mg/kg	0.0467	0.0	.08	58.0	18.3-136	L765419-01	WG789424
Benzo(a)pyrene	mg/kg	0.0457	0.0	.08	57.0	16.9-135	L765419-01	WG789424
Benzo(b)fluoranthene	mg/kg	0.0374	0.0	.08	47.0	10-134	L765419-01	WG789424
Benzo(g,h,i)perylene	mg/kg	0.0539	0.0	.08	67.0	14.1-140	L765419-01	WG789424
Benzo(k)fluoranthene	mg/kg	0.0450	0.0	.08	56.0	18.2-138	L765419-01	WG789424
Chrysene	mg/kg	0.0526	0.0	.08	66.0	17.1-145	L765419-01	WG789424
Dibenz(a,h)anthracene	mg/kg	0.0626	0.0	.08	78.0	18.5-138	L765419-01	WG789424
Fluoranthene	mg/kg	0.0495	0.0	.08	62.0	15.4-144	L765419-01	WG789424
Fluorene	mg/kg	0.0458	0.0	.08	57.0	23.5-136	L765419-01	WG789424
Indeno(1,2,3-cd)pyrene	mg/kg	0.0580	0.0	.08	72.0	14.5-142	L765419-01	WG789424
Naphthalene	mg/kg	0.0562	0.0	.08	70.0	29.2-128	L765419-01	WG789424
Phenanthrene	mg/kg	0.0438	0.0	.08	55.0	20.1-134	L765419-01	WG789424
Pyrene	mg/kg	0.0624	0.0	.08	78.0	11-148	L765419-01	WG789424
2-Fluorobiphenyl					63.10	40.6-122		WG789424
Nitrobenzene-d5					84.00	22.1-146		WG789424
p-Terphenyl-d14					84.20	32.2-131		WG789424
Benzene	mg/kg	0.211	0.000230	.05	84.0	49.7-127	L765212-01	WG789536
Ethylbenzene	mg/kg	0.197	0.000352	.05	78.0	40.8-141	L765212-01	WG789536
Toluene	mg/kg	0.203	0.00138	.05	81.0	49.8-132	L765212-01	WG789536
Total Xylene	mg/kg	0.587	0.00207	.15	78.0	41.2-140	L765212-01	WG789536
a,a,a-Trifluorotoluene(FID)					90.00	59-128		WG789536
a,a,a-Trifluorotoluene(PID)					96.40	54-144		WG789536

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L765416

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

May 26, 2015

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
TPH (GC/FID) Low Fraction	mg/kg	15.9	0.0	5.5	58.0	28.5-138	L765212-01	WG789536
a,a,a-Trifluorotoluene(FID)					94.70	59-128		WG789536
a,a,a-Trifluorotoluene(PID)					103.0	54-144		WG789536

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
TPH (GC/FID) High Fraction	mg/kg	45.0	44.9	70.1	50-150	0.260	20	L765146-07	WG789376
o-Terphenyl				75.10	50-150				WG789376
1-Methylnaphthalene	mg/kg	0.106	0.0563	124.	28.4-137	61.6*	20	L765419-01	WG789424
2-Chloronaphthalene	mg/kg	0.0496	0.0393	62.0	38.6-126	23.0*	20	L765419-01	WG789424
2-Methylnaphthalene	mg/kg	0.125	0.0527	143.*	26.6-137	81.3*	20	L765419-01	WG789424
Acenaphthene	mg/kg	0.0506	0.0469	63.2	31.9-130	7.45	20	L765419-01	WG789424
Acenaphthylene	mg/kg	0.0509	0.0498	63.6	33.7-129	2.20	20	L765419-01	WG789424
Anthracene	mg/kg	0.0564	0.0489	70.5	26.5-141	14.2	21.2	L765419-01	WG789424
Benzo(a)anthracene	mg/kg	0.0504	0.0467	63.0	18.3-136	7.65	24.6	L765419-01	WG789424
Benzo(a)pyrene	mg/kg	0.0521	0.0457	65.2	16.9-135	13.2	25.2	L765419-01	WG789424
Benzo(b)fluoranthene	mg/kg	0.0453	0.0374	56.6	10-134	19.1	30.9	L765419-01	WG789424
Benzo(g,h,i)perylene	mg/kg	0.0499	0.0539	62.4	14.1-140	7.72	25.5	L765419-01	WG789424
Benzo(k)fluoranthene	mg/kg	0.0535	0.0450	66.8	18.2-138	17.1	25.6	L765419-01	WG789424
Chrysene	mg/kg	0.0536	0.0526	67.0	17.1-145	1.90	24.2	L765419-01	WG789424
Dibenz(a,h)anthracene	mg/kg	0.0570	0.0626	71.2	18.5-138	9.42	24.3	L765419-01	WG789424
Fluoranthene	mg/kg	0.0516	0.0495	64.5	15.4-144	4.30	27.1	L765419-01	WG789424
Fluorene	mg/kg	0.0542	0.0458	67.7	23.5-136	16.7	20	L765419-01	WG789424
Indeno(1,2,3-cd)pyrene	mg/kg	0.0544	0.0580	68.0	14.5-142	6.39	25.8	L765419-01	WG789424
Naphthalene	mg/kg	0.0762	0.0562	95.2	29.2-128	30.2*	20	L765419-01	WG789424
Phenanthrene	mg/kg	0.0513	0.0438	64.1	20.1-134	15.6	23.6	L765419-01	WG789424
Pyrene	mg/kg	0.0494	0.0624	61.8	11-148	23.2	26.1	L765419-01	WG789424
2-Fluorobiphenyl				70.30	40.6-122				WG789424
Nitrobenzene-d5				84.00	22.1-146				WG789424
p-Terphenyl-d14				64.80	32.2-131				WG789424
Benzene	mg/kg	0.179	0.211	71.6	49.7-127	16.5	23.5	L765212-01	WG789536
Ethylbenzene	mg/kg	0.147	0.197	58.8	40.8-141	28.7*	23.8	L765212-01	WG789536
Toluene	mg/kg	0.163	0.203	64.5	49.8-132	22.1	23.5	L765212-01	WG789536
Total Xylene	mg/kg	0.448	0.587	59.5	41.2-140	26.7*	23.7	L765212-01	WG789536
a,a,a-Trifluorotoluene(FID)				90.30	59-128				WG789536
a,a,a-Trifluorotoluene(PID)				96.60	54-144				WG789536
TPH (GC/FID) Low Fraction	mg/kg	16.5	15.9	60.1	28.5-138	3.88	23.6	L765212-01	WG789536
a,a,a-Trifluorotoluene(FID)				94.70	59-128				WG789536
a,a,a-Trifluorotoluene(PID)				103.0	54-144				WG789536

Batch number /Run number / Sample number cross reference

WG789376: R3037560 R3037634: L765416-01
WG789315: R3037579: L765416-02
WG789354: R3037586: L765416-02
WG789424: R3037605: L765416-01
WG789953: R3038847: L765416-02
WG789536: R3039007: L765416-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

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Ms. Karolina Blaney
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Parachute, CO 81635

Quality Assurance Report
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Est. 1970

May 26, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address: WPX Energy 1058 County Road 215 Parachute, CO 81635				Billing Information: WPX Energy 1058 County Road 215 Parachute, CO 81635 Quote # WILPC001231552				Analysis / Container / Preservative										Chain of Custody Page ____ of ____	
Report to: Karolina Blaney				Email To: karolina.blaney@wpxenergy.com														ESC LAB SCIENCES YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Project Description: GM 11-2 Batch 1				City/State Collected:														L # 1765416	
Phone: 970-683-2295		Client Project #		Lab Project #		B053													
Fax:		GM 11-2 Batch 1																	
Collected by (print):		Site/Facility ID #		P.O. #		Acctnum:													
		GM 11-2 Batch 1						Template:											
Collected by (signature):		Rush? (Lab MUST Be Notified)		Date Results Needed				Prelogin:											
		Same Day200%						TSR:											
Immediately		Next Day100%		Email? ___ No ___ Yes				Cooler:											
Packed on Ice N ___ Y ___		Two Day50%		FAX? ___ No ___ Yes				Shipped Via:											
Three Day25%						No. of Cntrs		Rem./Contaminant											
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time		DRO + GRO	BTEX	PAHs listed in 910-1	pH, SAR, EC					Sample # (lab only)			
GM 11-2 Batch-1		Comp	SS		5/14/15	14:50	4	X	X	X	X					-01/-02			



24-Jul-2015

Karolina Blaney
WPX Energy Rocky Mountain, LLC
1058 Country Rd 215
Parachute, CO 81635

Re: **GM 11-2 Batch 2**

Work Order: **15071036**

Dear Karolina,

ALS Environmental received 1 sample on 18-Jul-2015 10:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 2
Work Order: 15071036

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
15071036-01	GM 11-2 Batch 2	Soil		7/17/2015 14:00	7/18/2015 10:30	<input type="checkbox"/>

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 24-Jul-15

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 2
Sample ID: GM 11-2 Batch 2
Collection Date: 7/17/2015 02:00 PM

Work Order: 15071036
Lab ID: 15071036-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	76		SW8015M		Prep: SW3541 / 7/21/15	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	74.9		4.4	mg/Kg-dry	1	7/23/2015 06:10 AM
			39-133	%REC	1	7/23/2015 06:10 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	59		SW8015D			Analyst: IT
<i>Surr: Toluene-d8</i>	98.1		2.7	mg/Kg-dry	1	7/21/2015 10:41 AM
			50-150	%REC	1	7/21/2015 10:41 AM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 7/22/15	Analyst: RH
Calcium	360		5.0	mg/L	10	7/22/2015 06:45 PM
Magnesium	140		2.0	mg/L	10	7/22/2015 06:45 PM
Sodium	1,100		2.0	mg/L	10	7/22/2015 06:45 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 7/22/15	Analyst: RH
Sodium Adsorption Ratio	12		0.010	none	1	7/22/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 7/21/15	Analyst: RS
Acenaphthene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Anthracene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Benzo(a)anthracene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Benzo(a)pyrene	11		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Benzo(b)fluoranthene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Benzo(g,h,i)perylene	8.9		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Benzo(k)fluoranthene	7.5		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Chrysene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Dibenzo(a,h)anthracene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Fluoranthene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Fluorene	18		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Indeno(1,2,3-cd)pyrene	14		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Naphthalene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
Pyrene	ND		7.1	µg/Kg-dry	1	7/21/2015 09:23 PM
<i>Surr: 2-Fluorobiphenyl</i>	62.2		12-100	%REC	1	7/21/2015 09:23 PM
<i>Surr: 4-Terphenyl-d14</i>	97.8		25-137	%REC	1	7/21/2015 09:23 PM
<i>Surr: Nitrobenzene-d5</i>	57.3		37-107	%REC	1	7/21/2015 09:23 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 7/20/15	Analyst: BG
Benzene	ND		33	µg/Kg-dry	1	7/21/2015 07:35 AM
Ethylbenzene	ND		33	µg/Kg-dry	1	7/21/2015 07:35 AM
m,p-Xylene	ND		65	µg/Kg-dry	1	7/21/2015 07:35 AM
o-Xylene	ND		33	µg/Kg-dry	1	7/21/2015 07:35 AM
Toluene	ND		33	µg/Kg-dry	1	7/21/2015 07:35 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp**Date:** 24-Jul-15

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 2
Sample ID: GM 11-2 Batch 2
Collection Date: 7/17/2015 02:00 PM

Work Order: 15071036
Lab ID: 15071036-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Xylenes, Total	ND		98	µg/Kg-dry	1	7/21/2015 07:35 AM
Surr: 1,2-Dichloroethane-d4	91.4		70-130	%REC	1	7/21/2015 07:35 AM
Surr: 4-Bromofluorobenzene	102		70-130	%REC	1	7/21/2015 07:35 AM
Surr: Dibromofluoromethane	93.6		70-130	%REC	1	7/21/2015 07:35 AM
Surr: Toluene-d8	89.6		70-130	%REC	1	7/21/2015 07:35 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO Prep: USDA Method 20B / 7/22/15 Analyst: JB			
Electrical Conductivity @ Saturation	13		0.050	mmhos/cm @2	10	7/23/2015 10:45 AM
MOISTURE			E160.3M Analyst: PT			
Moisture	8.0		0.050	% of sample	1	7/20/2015 04:40 PM
PH			SW9045D Prep: EXTRACT / 7/21/15 Analyst: STP			
pH	7.8			s.u.	1	7/21/2015 02:45 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 24-Jul-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73770** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-73770-73770				Units: mg/Kg		Analysis Date: 7/22/2015 12:27 PM		
Client ID:		Run ID: GC8_150721B				SeqNo: 3381125		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) ND 5.0
Surr: 4-Terphenyl-d14 1.596 0 2 0 79.8 39-133 0

LCS		Sample ID: DLCSS1-73770-73770				Units: mg/Kg		Analysis Date: 7/22/2015 12:57 PM		
Client ID:		Run ID: GC8_150721B				SeqNo: 3381127		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 168.2 5.0 200 0 84.1 61-109 0
Surr: 4-Terphenyl-d14 1.655 0 2 0 82.7 39-133 0

MS		Sample ID: 15071046-01D MS				Units: mg/Kg		Analysis Date: 7/22/2015 01:57 AM		
Client ID:		Run ID: GC8_150721B				SeqNo: 3381115		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 278 8.1 323.1 25.62 78.1 48-110 0
Surr: 4-Terphenyl-d14 2.67 0 3.231 0 82.7 39-133 0

MSD		Sample ID: 15071046-01D MSD				Units: mg/Kg		Analysis Date: 7/22/2015 02:27 AM		
Client ID:		Run ID: GC8_150721B				SeqNo: 3381118		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 284.3 8.3 330.2 25.62 78.3 48-110 278 2.25 30
Surr: 4-Terphenyl-d14 2.597 0 3.302 0 78.6 39-133 2.67 2.8 30

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73728A** Instrument ID **GC10** Method: **SW8015D**

MBLK		Sample ID: MBLK-73728-73728A				Units: µg/Kg		Analysis Date: 7/21/2015 07:25 AM		
Client ID:		Run ID: GC10_150720B				SeqNo: 3379858		Prep Date: 7/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	4842	0	5000	0	96.8	50-150	0			

LCS		Sample ID: LCS-73728-73728A				Units: µg/Kg		Analysis Date: 7/21/2015 06:36 AM		
Client ID:		Run ID: GC10_150720B				SeqNo: 3379856		Prep Date: 7/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	573500	2,500	500000	0	115	70-130	0			
<i>Surr: Toluene-d8</i>	4796	0	5000	0	95.9	50-150	0			

MS		Sample ID: 15071038-01A MS				Units: µg/Kg		Analysis Date: 7/21/2015 11:29 AM		
Client ID:		Run ID: GC10_150720B				SeqNo: 3379867		Prep Date: 7/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	794800	2,500	500000	187500	121	70-130	0			
<i>Surr: Toluene-d8</i>	4847	0	5000	0	96.9	50-150	0			

MSD		Sample ID: 15071038-01A MSD				Units: µg/Kg		Analysis Date: 7/21/2015 11:53 AM		
Client ID:		Run ID: GC10_150720B				SeqNo: 3379868		Prep Date: 7/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	805500	2,500	500000	187500	124	70-130	794800	1.33	30	
<i>Surr: Toluene-d8</i>	4888	0	5000	0	97.8	50-150	4847	0.832	30	

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73849** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 15071036-01ADUP				Units: none		Analysis Date: 7/22/2015		
Client ID: GM 11-2 Batch 2		Run ID: SAR_150722A				SeqNo: 3383802		Prep Date: 7/22/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	14.99	0.010	0	0	0		12.32	19.6	50	

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73767** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-73767-73767				Units: µg/Kg		Analysis Date: 7/21/2015 04:33 PM		
Client ID:		Run ID: SVMS5_150721A				SeqNo: 3381388		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1387	0	1667	0	83.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1622	0	1667	0	97.3	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1469	0	1667	0	88.1	37-107	0			

LCS		Sample ID: SLCSS1-73767-73767				Units: µg/Kg		Analysis Date: 7/21/2015 04:55 PM		
Client ID:		Run ID: SVMS5_150721A				SeqNo: 3381389		Prep Date: 7/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	564.3	6.7	666.7	0	84.6	45-110	0			
Anthracene	661	6.7	666.7	0	99.1	55-105	0			
Benzo(a)anthracene	661.3	6.7	666.7	0	99.2	50-110	0			
Benzo(a)pyrene	650	6.7	666.7	0	97.5	50-110	0			
Benzo(b)fluoranthene	672.7	6.7	666.7	0	101	45-115	0			
Benzo(g,h,i)perylene	622.7	6.7	666.7	0	93.4	40-125	0			
Benzo(k)fluoranthene	645.3	6.7	666.7	0	96.8	45-115	0			
Chrysene	655	6.7	666.7	0	98.2	55-110	0			
Dibenzo(a,h)anthracene	615	6.7	666.7	0	92.2	40-125	0			
Fluoranthene	694.3	6.7	666.7	0	104	55-115	0			
Fluorene	590	6.7	666.7	0	88.5	50-110	0			
Indeno(1,2,3-cd)pyrene	618.7	6.7	666.7	0	92.8	40-120	0			
Naphthalene	413.3	6.7	666.7	0	62	40-105	0			
Pyrene	674.3	6.7	666.7	0	101	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1442	0	1667	0	86.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1618	0	1667	0	97.1	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1449	0	1667	0	86.9	37-107	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73767** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 15071046-03A MS			Units: µg/Kg		Analysis Date: 7/21/2015 07:31 PM		
Client ID:			Run ID: SVMS5_150721A			SeqNo: 3381390		Prep Date: 7/21/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	976.6	13	1253	0	77.9	45-110	0				
Anthracene	1236	13	1253	6.894	98.1	55-105	0				
Benzo(a)anthracene	1274	13	1253	23.31	99.8	50-110	0				
Benzo(a)pyrene	1233	13	1253	24.62	96.4	50-110	0				
Benzo(b)fluoranthene	1330	13	1253	26.59	104	45-115	0				
Benzo(g,h,i)perylene	1158	13	1253	16.41	91.1	40-125	0				
Benzo(k)fluoranthene	1237	13	1253	16.09	97.4	45-115	0				
Chrysene	1272	13	1253	22.65	99.7	55-110	0				
Dibenzo(a,h)anthracene	1065	13	1253	0	85	40-125	0				
Fluoranthene	1334	13	1253	57.12	102	55-115	0				
Fluorene	1071	13	1253	0	85.5	50-110	0				
Indeno(1,2,3-cd)pyrene	1175	13	1253	22.32	92	40-120	0				
Naphthalene	628.3	13	1253	0	50.1	40-105	0				
Pyrene	1353	13	1253	34.47	105	45-125	0				
Surr: 2-Fluorobiphenyl	2259	0	3132	0	72.1	12-100	0				
Surr: 4-Terphenyl-d14	3156	0	3132	0	101	25-137	0				
Surr: Nitrobenzene-d5	2186	0	3132	0	69.8	37-107	0				

MSD				Sample ID: 15071046-03A MSD			Units: µg/Kg		Analysis Date: 7/21/2015 07:54 PM		
Client ID:			Run ID: SVMS5_150721A			SeqNo: 3381391		Prep Date: 7/21/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1176	13	1317	0	89.3	45-110	976.6	18.5	30		
Anthracene	1333	13	1317	6.894	101	55-105	1236	7.56	30		
Benzo(a)anthracene	1304	13	1317	23.31	97.2	50-110	1274	2.32	30		
Benzo(a)pyrene	1292	13	1317	24.62	96.2	50-110	1233	4.7	30		
Benzo(b)fluoranthene	1370	13	1317	26.59	102	45-115	1330	2.92	30		
Benzo(g,h,i)perylene	1210	13	1317	16.41	90.6	40-125	1158	4.41	30		
Benzo(k)fluoranthene	1310	13	1317	16.09	98.2	45-115	1237	5.76	30		
Chrysene	1291	13	1317	22.65	96.3	55-110	1272	1.5	30		
Dibenzo(a,h)anthracene	1125	13	1317	0	85.4	40-125	1065	5.48	30		
Fluoranthene	1397	13	1317	57.12	102	55-115	1334	4.63	30		
Fluorene	1226	13	1317	0	93	50-110	1071	13.5	30		
Indeno(1,2,3-cd)pyrene	1200	13	1317	22.32	89.4	40-120	1175	2.14	30		
Naphthalene	869.3	13	1317	0	66	40-105	628.3	32.2	30	R	
Pyrene	1359	13	1317	34.47	101	45-125	1353	0.415	30		
Surr: 2-Fluorobiphenyl	2963	0	3293	0	90	12-100	2259	26.9	40		
Surr: 4-Terphenyl-d14	3249	0	3293	0	98.7	25-137	3156	2.9	40		
Surr: Nitrobenzene-d5	3087	0	3293	0	93.8	37-107	2186	34.2	40		

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73727** Instrument ID **VMS9** Method: **SW8260B**

MBLK				Sample ID: MBLK-73727-73727				Units: µg/Kg			Analysis Date: 7/20/2015 12:07 PM			
Client ID:				Run ID: VMS9_150720A				SeqNo: 3377577			Prep Date: 7/20/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	ND	30												
Ethylbenzene	ND	30												
m,p-Xylene	ND	60												
o-Xylene	ND	30												
Toluene	ND	30												
Xylenes, Total	ND	90												
Surr: 1,2-Dichloroethane-d4	1035	0	1000	0	104	70-130	0							
Surr: 4-Bromofluorobenzene	885.5	0	1000	0	88.6	70-130	0							
Surr: Dibromofluoromethane	1032	0	1000	0	103	70-130	0							
Surr: Toluene-d8	951	0	1000	0	95.1	70-130	0							

LCS				Sample ID: LCS-73727-73727			Units: µg/Kg		Analysis Date: 7/20/2015 10:24 AM		
Client ID:			Run ID: VMS9_150720A			SeqNo: 3377576		Prep Date: 7/20/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1075	30	1000	0	108	75-125	0				
Ethylbenzene	1036	30	1000	0	104	75-125	0				
m,p-Xylene	2142	60	2000	0	107	80-125	0				
o-Xylene	1032	30	1000	0	103	75-125	0				
Toluene	1024	30	1000	0	102	70-125	0				
Xylenes, Total	3174	90	3000	0	106	75-125	0				
Surr: 1,2-Dichloroethane-d4	972	0	1000	0	97.2	70-130	0				
Surr: 4-Bromofluorobenzene	989.5	0	1000	0	99	70-130	0				
Surr: Dibromofluoromethane	991.5	0	1000	0	99.2	70-130	0				
Surr: Toluene-d8	983	0	1000	0	98.3	70-130	0				

MS				Sample ID: 15071026-01A MS			Units: µg/Kg		Analysis Date: 7/22/2015 12:05 PM		
Client ID:			Run ID: VMS6_150721A			SeqNo: 3381260		Prep Date: 7/20/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1090	30	1000	0	109	75-125	0				
Ethylbenzene	1046	30	1000	0	105	75-125	0				
m,p-Xylene	2136	60	2000	0	107	80-125	0				
o-Xylene	1006	30	1000	0	101	75-125	0				
Toluene	1053	30	1000	0	105	70-125	0				
Xylenes, Total	3141	90	3000	0	105	75-125	0				
Surr: 1,2-Dichloroethane-d4	976	0	1000	0	97.6	70-130	0				
Surr: 4-Bromofluorobenzene	1006	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	938	0	1000	0	93.8	70-130	0				
Surr: Toluene-d8	1006	0	1000	0	101	70-130	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73727** Instrument ID **VMS9** Method: **SW8260B**

MSD				Sample ID: 15071026-01A MSD			Units: µg/Kg		Analysis Date: 7/22/2015 12:29 PM		
Client ID:			Run ID: VMS6_150721A			SeqNo: 3381263		Prep Date: 7/20/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1118	30	1000	0	112	75-125	1090	2.45	30		
Ethylbenzene	1090	30	1000	0	109	75-125	1046	4.21	30		
m,p-Xylene	2194	60	2000	0	110	80-125	2136	2.7	30		
o-Xylene	1053	30	1000	0	105	75-125	1006	4.62	30		
Toluene	1092	30	1000	0	109	70-125	1053	3.59	30		
Xylenes, Total	3247	90	3000	0	108	75-125	3141	3.32	30		
Surr: 1,2-Dichloroethane-d4	977	0	1000	0	97.7	70-130	976	0.102	30		
Surr: 4-Bromofluorobenzene	1015	0	1000	0	102	70-130	1006	0.841	30		
Surr: Dibromofluoromethane	930	0	1000	0	93	70-130	938	0.857	30		
Surr: Toluene-d8	1019	0	1000	0	102	70-130	1006	1.23	30		

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73799** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-73799-73799				Units: s.u.			Analysis Date: 7/21/2015 02:45 PM			
Client ID:				Run ID: WETCHEM_150721I				SeqNo: 3379950			Prep Date: 7/21/2015		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	3.9	0	4	0	97.5	90-110	0			
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DUP		Sample ID: 15071031-01A DUP					Units: s.u.		Analysis Date: 7/21/2015 02:45 PM		
Client ID:		Run ID: WETCHEM_150721I			SeqNo: 3379954		Prep Date: 7/21/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	6.26	0	0	0	0	0-0	6.25	0.16	20	H
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DUP				Sample ID: 15071067-01A DUP				Units: s.u.			Analysis Date: 7/21/2015 02:45 PM			
Client ID:				Run ID: WETCHEM_150721I				SeqNo: 3379963			Prep Date: 7/21/2015		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	9.01	0	0	0	0	0-0	8.94	0.78	20	
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The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **73849** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 15071036-01A DUP				Units: mmhos/cm @25°		Analysis Date: 7/23/2015 10:45 AM		
Client ID: GM 11-2 Batch 2		Run ID: WETCHEM_150723B		SeqNo: 3383435		Prep Date: 7/22/2015		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	13.05	0.050	0	0	0		12.59	3.59	50	

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15071036
Project: GM 11-2 Batch 2

QC BATCH REPORT

Batch ID: **R168018** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R168018				Units: % of sample		Analysis Date: 7/20/2015 04:40 PM		
Client ID:		Run ID: MOIST_150720D				SeqNo: 3379551		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

LCS		Sample ID: LCS-R168018				Units: % of sample		Analysis Date: 7/20/2015 04:40 PM		
Client ID:		Run ID: MOIST_150720D			SeqNo: 3379550		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1507960-07C DUP				Units: % of sample		Analysis Date: 7/20/2015 04:40 PM		
Client ID:		Run ID: MOIST_150720D			SeqNo: 3379530		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 8.3 0.050 0 0 0 8.45 1.79 20

DUP		Sample ID: 1507960-17C DUP				Units: % of sample		Analysis Date: 7/20/2015 04:40 PM		
Client ID:		Run ID: MOIST_150720D			SeqNo: 3379541		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 5.78 0.050 0 0 0 5.49 5.15 20

The following samples were analyzed in this batch:

15071036-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER
#

15071036

PROJECT NAME		GM 11-2 Batch 2		SAMPLER				DATE		7/17/2015		PAGE		1 of 1	
PROJECT No.				SITE ID		GM 11-2 Batch 2		TURNAROUND		5 day		DISPOSAL		By Lab or Return to Client	
COMPANY NAME		WPX Energy		BILL TO COMPANY		WPX Energy		DRO + GRO BTX PAHs listed in 910-1 PH, SAR, EC							
SEND REPORT TO		Blaney		INVOICE ATTN TO		Karolina Blaney; Leo Braun									
ADDRESS				ADDRESS		1058 Co Rd 215									
CITY / STATE / ZIP				CITY / STATE / ZIP		Parachure CO 81635									
PHONE				PHONE		970-683-2295									
FAX				FAX											
E-MAIL		Karolina.blaney@wpxenergy.com;		E-MAIL		leo.braun@wpxenergy.com									
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC								
1	GM 11-2 Batch 2	S	7/17/2015	14:00	1		x	x	x	x	x				

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)
<p>3.2⁺</p>	<input checked="" type="checkbox"/> LEVEL II (Standard QC)
	<input type="checkbox"/> LEVEL III (Std QC + forms)
	<input type="checkbox"/> LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHCO4 7-Other 8-4 degrees C 9-5035	

SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY Karolina Blaney	Karolina Blaney	7/17/2015	16:00:00 PM
RECEIVED BY [Signature]	[Signature]	7-17-15	10:15
RELINQUISHED BY [Signature]	[Signature]	7-17-15	10:15
RECEIVED BY [Signature]	KEITH WIERMAN	7/18/15	10:30
RELINQUISHED BY			
RECEIVED BY			

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **18-Jul-15 10:30**

Work Order: **15071036**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

20-Jul-15
Date

Reviewed by: Chad Whelton
eSignature

20-Jul-15
Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>7/20/2015 10:06:14 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



17-Aug-2015

Karolina Blaney
WPX Energy Rocky Mountain, LLC
1058 Country Rd 215
Parachute, CO 81635

Re: **GM 11-2 Batch 3**

Work Order: **1508442**

Dear Karolina,

ALS Environmental received 1 sample on 08-Aug-2015 10:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

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Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 3
Work Order: 1508442

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1508442-01	GM 11-2 Batch 3	Soil		8/7/2015 11:30	8/8/2015 10:30	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 3
Work Order: 1508442

Case Narrative

Batch 74658, Method SVO_8270_S, Sample 1508442-01A MSD: The RPD between the MS and MSD was outside the control limit for Naphthalene. The corresponding result in the parent sample should be considered estimated.

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 3
WorkOrder: 1508442

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: 17-Aug-15

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 3
Sample ID: GM 11-2 Batch 3
Collection Date: 8/7/2015 11:30 AM

Work Order: 1508442
Lab ID: 1508442-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 8/11/15	Analyst: IT
DRO (C10-C28)	110		4.3	mg/Kg-dry	1	8/12/2015 12:03 PM
Surr: 4-Terphenyl-d14	58.9		39-133	%REC	1	8/12/2015 12:03 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 8/11/15	Analyst: IT
GRO (C6-C10)	64		2.7	mg/Kg-dry	1	8/11/2015 05:45 PM
Surr: Toluene-d8	97.5		50-150	%REC	1	8/11/2015 05:45 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 8/11/15	Analyst: RS
Acenaphthene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Anthracene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Benzo(a)anthracene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Benzo(a)pyrene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Benzo(b)fluoranthene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Benzo(g,h,i)perylene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Benzo(k)fluoranthene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Chrysene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Dibenzo(a,h)anthracene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Fluoranthene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Fluorene	41		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Indeno(1,2,3-cd)pyrene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Naphthalene	55		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Pyrene	ND		6.9	µg/Kg-dry	1	8/11/2015 06:51 PM
Surr: 2-Fluorobiphenyl	58.2		12-100	%REC	1	8/11/2015 06:51 PM
Surr: 4-Terphenyl-d14	72.1		25-137	%REC	1	8/11/2015 06:51 PM
Surr: Nitrobenzene-d5	40.4		37-107	%REC	1	8/11/2015 06:51 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 8/11/15	Analyst: JNJ
Benzene	ND		32	µg/Kg-dry	1	8/11/2015 09:27 PM
Ethylbenzene	ND		32	µg/Kg-dry	1	8/11/2015 09:27 PM
m,p-Xylene	120		64	µg/Kg-dry	1	8/11/2015 09:27 PM
o-Xylene	ND		32	µg/Kg-dry	1	8/11/2015 09:27 PM
Toluene	ND		32	µg/Kg-dry	1	8/11/2015 09:27 PM
Xylenes, Total	120		95	µg/Kg-dry	1	8/11/2015 09:27 PM
Surr: 1,2-Dichloroethane-d4	90.8		70-130	%REC	1	8/11/2015 09:27 PM
Surr: 4-Bromofluorobenzene	102		70-130	%REC	1	8/11/2015 09:27 PM
Surr: Dibromofluoromethane	94.7		70-130	%REC	1	8/11/2015 09:27 PM
Surr: Toluene-d8	92.1		70-130	%REC	1	8/11/2015 09:27 PM
MOISTURE						
			E160.3M			Analyst: EVB
Moisture	5.7		0.050	% of sample	1	8/13/2015 04:38 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 17-Aug-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74659** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-74659-74659				Units: mg/Kg		Analysis Date: 8/11/2015 10:15 PM		
Client ID:		Run ID: GC8_150811A				SeqNo: 3413608		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	1.689	0	2	0	84.5	39-133	0			

MBLK		Sample ID: DBLKS1-74659-74659				Units: mg/Kg		Analysis Date: 8/11/2015 10:15 PM		
Client ID:		Run ID: GC8_150811A				SeqNo: 3413639		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	1.689	0	2	0	84.5	39-133	0			

LCS		Sample ID: DLCSS1-74659-74659				Units: mg/Kg		Analysis Date: 8/11/2015 10:42 PM		
Client ID:		Run ID: GC8_150811A				SeqNo: 3413610		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	155.6	5.0	200	0	77.8	61-109	0			
Surr: 4-Terphenyl-d14	1.397	0	2	0	69.9	39-133	0			

LCS		Sample ID: DLCSS1-74659-74659				Units: mg/Kg		Analysis Date: 8/11/2015 10:42 PM		
Client ID:		Run ID: GC8_150811A				SeqNo: 3413641		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	155.6	5.0	200	0	77.8	61-109	0			
Surr: 4-Terphenyl-d14	1.397	0	2	0	69.9	39-133	0			

MS		Sample ID: 1508442-01A MS				Units: mg/Kg		Analysis Date: 8/11/2015 11:09 PM		
Client ID: GM 11-2 Batch 3		Run ID: GC8_150811A				SeqNo: 3413612		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	241.3	4.1	162.2	107.9	82.3	48-110	0			
Surr: 4-Terphenyl-d14	1.127	0	1.622	0	69.5	39-133	0			

MS		Sample ID: 1508442-01A MS				Units: mg/Kg		Analysis Date: 8/11/2015 11:09 PM		
Client ID: GM 11-2 Batch 3		Run ID: GC8_150811A				SeqNo: 3413644		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	241.3	4.1	162.2	107.9	82.3	48-110	0			
Surr: 4-Terphenyl-d14	1.127	0	1.622	0	69.5	39-133	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74659** Instrument ID **GC8** Method: **SW8015M**

MSD				Sample ID: 1508442-01A MSD				Units: mg/Kg		Analysis Date: 8/11/2015 11:36 PM	
Client ID: GM 11-2 Batch 3			Run ID: GC8_150811A			SeqNo: 3413614		Prep Date: 8/11/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	240.6	4.1	162.1	107.9	81.9	48-110	241.3	0.308	30		
Surr: 4-Terphenyl-d14	1.286	0	1.621	0	79.4	39-133	1.127	13.2	30		

MSD				Sample ID: 1508442-01A MSD			Units: mg/Kg		Analysis Date: 8/11/2015 11:36 PM		
Client ID: GM 11-2 Batch 3			Run ID: GC8_150811A			SeqNo: 3413647		Prep Date: 8/11/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	240.6	4.1	162.1	107.9	81.9	48-110	241.3	0.308	30		
Surr: 4-Terphenyl-d14	1.286	0	1.621	0	79.4	39-133	1.127	13.2	30		

The following samples were analyzed in this batch: | 1508442-01A |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74663** Instrument ID **GC10** Method: **SW8015D**

MBLK		Sample ID: MBLK-74663-74663				Units: µg/Kg		Analysis Date: 8/11/2015 03:41 PM		
Client ID:		Run ID: GC10_150811A				SeqNo: 3414240		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	4862	0	5000	0	97.2	50-150	0			

LCS		Sample ID: LCS-74663-74663				Units: µg/Kg		Analysis Date: 8/11/2015 03:16 PM		
Client ID:		Run ID: GC10_150811A				SeqNo: 3414239		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	581700	2,500	500000	0	116	70-130	0			
Surr: Toluene-d8	5461	0	5000	0	109	50-150	0			

MS		Sample ID: 1508441-01A MS				Units: µg/Kg		Analysis Date: 8/11/2015 04:57 PM		
Client ID:		Run ID: GC10_150811A				SeqNo: 3414242		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	672200	2,500	500000	0	134	70-130	0			S
Surr: Toluene-d8	4682	0	5000	0	93.6	50-150	0			

MSD		Sample ID: 1508441-01A MSD				Units: µg/Kg		Analysis Date: 8/11/2015 05:21 PM		
Client ID:		Run ID: GC10_150811A				SeqNo: 3414243		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	653000	2,500	500000	0	131	70-130	672200	2.9	30	S
Surr: Toluene-d8	4844	0	5000	0	96.9	50-150	4682	3.38	30	

The following samples were analyzed in this batch:

1508442-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74658** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-74658-74658				Units: µg/Kg		Analysis Date: 8/11/2015 04:35 PM		
Client ID:		Run ID: SVMS5_150811A				SeqNo: 3413528		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1317	0	1667	0	79	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1540	0	1667	0	92.4	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1358	0	1667	0	81.5	37-107	0			

LCS		Sample ID: SLCSS1-74658-74658				Units: µg/Kg		Analysis Date: 8/11/2015 04:58 PM		
Client ID:		Run ID: SVMS5_150811A				SeqNo: 3413530		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	560.7	6.7	666.7	0	84.1	45-110	0			
Anthracene	665	6.7	666.7	0	99.7	55-105	0			
Benzo(a)anthracene	660.7	6.7	666.7	0	99.1	50-110	0			
Benzo(a)pyrene	670.3	6.7	666.7	0	101	50-110	0			
Benzo(b)fluoranthene	689	6.7	666.7	0	103	45-115	0			
Benzo(g,h,i)perylene	661.3	6.7	666.7	0	99.2	40-125	0			
Benzo(k)fluoranthene	662.3	6.7	666.7	0	99.3	45-115	0			
Chrysene	638.7	6.7	666.7	0	95.8	55-110	0			
Dibenzo(a,h)anthracene	709.7	6.7	666.7	0	106	40-125	0			
Fluoranthene	667.7	6.7	666.7	0	100	55-115	0			
Fluorene	612.3	6.7	666.7	0	91.8	50-110	0			
Indeno(1,2,3-cd)pyrene	697	6.7	666.7	0	105	40-120	0			
Naphthalene	484.7	6.7	666.7	0	72.7	40-105	0			
Pyrene	673.7	6.7	666.7	0	101	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1261	0	1667	0	75.7	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1540	0	1667	0	92.4	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1214	0	1667	0	72.8	37-107	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74658** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1508442-01A MS			Units: µg/Kg		Analysis Date: 8/11/2015 06:06 PM	
Client ID: GM 11-2 Batch 3				Run ID: SVMS5_150811A			SeqNo: 3414005		Prep Date: 8/11/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	514.4	6.6	655.4	0	78.5	45-110	0			
Anthracene	562.9	6.6	655.4	0	85.9	55-105	0			
Benzo(a)anthracene	531.1	6.6	655.4	0	81	50-110	0			
Benzo(a)pyrene	538	6.6	655.4	0	82.1	50-110	0			
Benzo(b)fluoranthene	559	6.6	655.4	0	85.3	45-115	0			
Benzo(g,h,i)perylene	527.2	6.6	655.4	0	80.4	40-125	0			
Benzo(k)fluoranthene	526.2	6.6	655.4	0	80.3	45-115	0			
Chrysene	511.5	6.6	655.4	0	78	55-110	0			
Dibenzo(a,h)anthracene	569.2	6.6	655.4	0	86.8	40-125	0			
Fluoranthene	548.2	6.6	655.4	0	83.6	55-115	0			
Fluorene	580.3	6.6	655.4	38.64	82.7	50-110	0			
Indeno(1,2,3-cd)pyrene	566.5	6.6	655.4	0	86.4	40-120	0			
Naphthalene	498.4	6.6	655.4	52.06	68.1	40-105	0			
Pyrene	581.3	6.6	655.4	0	88.7	45-125	0			
Surr: 2-Fluorobiphenyl	1087	0	1638	0	66.3	12-100	0			
Surr: 4-Terphenyl-d14	1332	0	1638	0	81.3	25-137	0			
Surr: Nitrobenzene-d5	1007	0	1638	0	61.5	37-107	0			

MSD				Sample ID: 1508442-01A MSD			Units: µg/Kg		Analysis Date: 8/11/2015 06:29 PM	
Client ID: GM 11-2 Batch 3				Run ID: SVMS5_150811A			SeqNo: 3414006		Prep Date: 8/11/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	465.1	6.5	649.2	0	71.6	45-110	514.4	10.1	30	
Anthracene	546.9	6.5	649.2	0	84.2	55-105	562.9	2.89	30	
Benzo(a)anthracene	532	6.5	649.2	0	81.9	50-110	531.1	0.159	30	
Benzo(a)pyrene	533.9	6.5	649.2	0	82.2	50-110	538	0.763	30	
Benzo(b)fluoranthene	548.5	6.5	649.2	0	84.5	45-115	559	1.89	30	
Benzo(g,h,i)perylene	513.2	6.5	649.2	0	79	40-125	527.2	2.7	30	
Benzo(k)fluoranthene	529.7	6.5	649.2	0	81.6	45-115	526.2	0.66	30	
Chrysene	508	6.5	649.2	0	78.2	55-110	511.5	0.69	30	
Dibenzo(a,h)anthracene	561.8	6.5	649.2	0	86.5	40-125	569.2	1.29	30	
Fluoranthene	543	6.5	649.2	0	83.6	55-115	548.2	0.946	30	
Fluorene	557	6.5	649.2	38.64	79.8	50-110	580.3	4.1	30	
Indeno(1,2,3-cd)pyrene	559.9	6.5	649.2	0	86.2	40-120	566.5	1.18	30	
Naphthalene	313.2	6.5	649.2	52.06	40.2	40-105	498.4	45.6	30	R
Pyrene	579.1	6.5	649.2	0	89.2	45-125	581.3	0.384	30	
Surr: 2-Fluorobiphenyl	1006	0	1623	0	62	12-100	1087	7.71	40	
Surr: 4-Terphenyl-d14	1304	0	1623	0	80.3	25-137	1332	2.16	40	
Surr: Nitrobenzene-d5	509.6	0	1623	0	31.4	37-107	1007	65.6	40	SR

The following samples were analyzed in this batch: 1508442-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74662** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: MBLK-74662-74662				Units: µg/Kg		Analysis Date: 8/11/2015 01:16 PM		
Client ID:		Run ID: VMS5_150811A				SeqNo: 3414026		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	928	0	1000	0	92.8	70-130	0			
Surr: 4-Bromofluorobenzene	991	0	1000	0	99.1	70-130	0			
Surr: Dibromofluoromethane	976.5	0	1000	0	97.6	70-130	0			
Surr: Toluene-d8	930	0	1000	0	93	70-130	0			

LCS		Sample ID: LCS-74662-74662				Units: µg/Kg		Analysis Date: 8/11/2015 11:59 AM		
Client ID:		Run ID: VMS5_150811A				SeqNo: 3414025		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1092	30	1000	0	109	75-125	0			
Ethylbenzene	976.5	30	1000	0	97.6	75-125	0			
m,p-Xylene	1964	60	2000	0	98.2	80-125	0			
o-Xylene	946.5	30	1000	0	94.6	75-125	0			
Toluene	1008	30	1000	0	101	70-125	0			
Xylenes, Total	2910	90	3000	0	97	75-125	0			
Surr: 1,2-Dichloroethane-d4	898.5	0	1000	0	89.8	70-130	0			
Surr: 4-Bromofluorobenzene	997	0	1000	0	99.7	70-130	0			
Surr: Dibromofluoromethane	968.5	0	1000	0	96.8	70-130	0			
Surr: Toluene-d8	936	0	1000	0	93.6	70-130	0			

MS		Sample ID: 1508441-01A MS				Units: µg/Kg		Analysis Date: 8/12/2015 05:51 AM		
Client ID:		Run ID: VMS6_150811A				SeqNo: 3414349		Prep Date: 8/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1080	30	1000	0	108	75-125	0			
Ethylbenzene	1002	30	1000	0	100	75-125	0			
m,p-Xylene	2054	60	2000	21.5	102	80-125	0			
o-Xylene	1002	30	1000	0	100	75-125	0			
Toluene	1048	30	1000	17	103	70-125	0			
Xylenes, Total	3056	90	3000	0	102	75-125	0			
Surr: 1,2-Dichloroethane-d4	991.5	0	1000	0	99.2	70-130	0			
Surr: 4-Bromofluorobenzene	1022	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	990	0	1000	0	99	70-130	0			
Surr: Toluene-d8	961	0	1000	0	96.1	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74662** Instrument ID **VMS5** Method: **SW8260B**

MS				Sample ID: 1508460-12A MS				Units: µg/Kg			Analysis Date: 8/12/2015 09:20 PM			
Client ID:				Run ID: VMS5_150812A				SeqNo: 3415727			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	1235	30	1000	0	124	75-125	0							
Ethylbenzene	1046	30	1000	0	105	75-125	0							
m,p-Xylene	2093	60	2000	0	105	80-125	0							
o-Xylene	1007	30	1000	0	101	75-125	0							
Toluene	1084	30	1000	0	108	70-125	0							
Xylenes, Total	3100	90	3000	0	103	75-125	0							
Surr: 1,2-Dichloroethane-d4	880.5	0	1000	0	88	70-130	0							
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0							
Surr: Dibromofluoromethane	974.5	0	1000	0	97.4	70-130	0							
Surr: Toluene-d8	901	0	1000	0	90.1	70-130	0							

MSD				Sample ID: 1508441-01A MSD			Units: µg/Kg		Analysis Date: 8/12/2015 06:17 AM		
Client ID:			Run ID: VMS6_150811A			SeqNo: 3414350		Prep Date: 8/11/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1143	30	1000	0	114	75-125	1080	5.71	30		
Ethylbenzene	1049	30	1000	0	105	75-125	1002	4.63	30		
m,p-Xylene	2137	60	2000	21.5	106	80-125	2054	3.99	30		
o-Xylene	1037	30	1000	0	104	75-125	1002	3.43	30		
Toluene	1082	30	1000	17	107	70-125	1048	3.19	30		
Xylenes, Total	3174	90	3000	0	106	75-125	3056	3.8	30		
Surr: 1,2-Dichloroethane-d4	1000	0	1000	0	100	70-130	991.5	0.904	30		
Surr: 4-Bromofluorobenzene	1034	0	1000	0	103	70-130	1022	1.12	30		
Surr: Dibromofluoromethane	985.5	0	1000	0	98.6	70-130	990	0.456	30		
Surr: Toluene-d8	961.5	0	1000	0	96.2	70-130	961	0.052	30		

MSD				Sample ID: 1508460-12A MSD			Units: µg/Kg		Analysis Date: 8/12/2015 09:45 PM		
Client ID:			Run ID: VMS5_150812A			SeqNo: 3415728		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1183	30	1000	0	118	75-125	1235	4.3	30		
Ethylbenzene	1026	30	1000	0	103	75-125	1046	2.03	30		
m,p-Xylene	2069	60	2000	0	103	80-125	2093	1.15	30		
o-Xylene	997.5	30	1000	0	99.8	75-125	1007	0.948	30		
Toluene	1056	30	1000	0	106	70-125	1084	2.71	30		
Xylenes, Total	3066	90	3000	0	102	75-125	3100	1.09	30		
Surr: 1,2-Dichloroethane-d4	872.5	0	1000	0	87.2	70-130	880.5	0.913	30		
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	1018	0	30		
Surr: Dibromofluoromethane	952.5	0	1000	0	95.2	70-130	974.5	2.28	30		
Surr: Toluene-d8	902	0	1000	0	90.2	70-130	901	0.111	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **74662** Instrument ID **VMS5** Method: **SW8260B**

The following samples were analyzed in this batch:

1508442-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1508442
Project: GM 11-2 Batch 3

QC BATCH REPORT

Batch ID: **R169644** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R169644					Units: % of sample		Analysis Date: 8/13/2015 04:38 PM		
Client ID:			Run ID: MOIST_150813A			SeqNo: 3417574		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture ND 0.050

LCS		Sample ID: LCS-R169644					Units: % of sample		Analysis Date: 8/13/2015 04:38 PM		
Client ID:			Run ID: MOIST_150813A			SeqNo: 3417573		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1508443-01A DUP				Units: % of sample		Analysis Date: 8/13/2015 04:38 PM		
Client ID:		Run ID: MOIST_150813A			SeqNo: 3417552		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 8.43 0.050 0 0 0 8.49 0.709 20

DUP				Sample ID: 1508460-06B DUP				Units: % of sample			Analysis Date: 8/13/2015 04:38 PM			
Client ID:				Run ID: MOIST_150813A				SeqNo: 3417565			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 14.21 0.050 0 0 0 13.44 5.57 20

The following samples were analyzed in this batch:

1508442-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



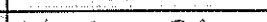





WORKORDER
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1508442

Form 202r8

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Karolina Blaney	8/7/2015	16:00:00 PM
RECEIVED BY			8-7-15	1600
RELINQUISHED BY			8-7-15	1600
RECEIVED BY		KATH WIERENKA	8/8/15	1030
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **08-Aug-15 10:30**

Work Order: **1508442**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

08-Aug-15
Date

Reviewed by: Chad Whelton
eSignature

10-Aug-15
Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 4.4/4.4 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 8/8/2015 10:48:58 AM

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



07-Oct-2015

Karolina Blaney
WPX Energy Rocky Mountain, LLC
1058 Country Rd 215
Parachute, CO 81635

Re: **GM 11-2 Batch 4**

Work Order: **15091655**

Dear Karolina,

ALS Environmental received 1 sample on 29-Sep-2015 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Les Arnold".

Electronically approved by: Les Arnold

Les Arnold
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 4
Work Order: 15091655

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
15091655-01	GM 11-2 Batch 4	Soil		9/28/2015 12:15	9/29/2015 09:00	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 4
Work Order: 15091655

Case Narrative

Samples for the above noted Work Order were received on 09/29/2015. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Sample Receiving:

No deviations or anomalies were noted.

Volatile Organics:

No deviations or anomalies were noted.

Extractable Organics:

No deviations or anomalies were noted.

Metals:

No deviations or anomalies were noted.

Wet Chemistry:

No deviations or anomalies were noted.

ALS Group USA, Corp

Date: 07-Oct-15

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 4
Sample ID: GM 11-2 Batch 4
Collection Date: 9/28/2015 12:15 PM

Work Order: 15091655
Lab ID: 15091655-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	17		SW8015M		Prep: SW3541 / 10/2/15	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	<i>52.3</i>		<i>39-133</i>	<i>%REC</i>	<i>1</i>	10/5/2015 12:31 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015D		Prep: SW5035 / 9/29/15	Analyst: IT
<i>Surr: Toluene-d8</i>	<i>109</i>		<i>50-150</i>	<i>%REC</i>	<i>1</i>	9/29/2015 04:33 PM
SOLUBLE CATIONS FOR SAR						
Calcium	560		SW846 6010C		Prep: USDA Method 20B / 10/5/15	Analyst: JEC
Magnesium	170		5.0	mg/L	10	10/5/2015 12:20 PM
Sodium	1,100		2.0	mg/L	10	10/5/2015 12:20 PM
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10		USDA H60 METHO		Prep: USDA Method 20B / 10/5/15	Analyst: JEC
			0.010	none	1	10/5/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
Acenaphthene	ND		SW846 8270D		Prep: SW3541 / 10/2/15	Analyst: RS
Anthracene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Benzo(a)anthracene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Benzo(a)pyrene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Benzo(b)fluoranthene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Benzo(k)fluoranthene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Chrysene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Dibenzo(a,h)anthracene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Fluoranthene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Fluorene	0.013		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Indeno(1,2,3-cd)pyrene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Naphthalene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
Pyrene	ND		0.0071	mg/Kg-dry	1	10/3/2015 05:49 AM
<i>Surr: 2-Fluorobiphenyl</i>	<i>49.6</i>		<i>12-100</i>	<i>%REC</i>	<i>1</i>	10/3/2015 05:49 AM
<i>Surr: 4-Terphenyl-d14</i>	<i>70.8</i>		<i>25-137</i>	<i>%REC</i>	<i>1</i>	10/3/2015 05:49 AM
<i>Surr: Nitrobenzene-d5</i>	<i>48.6</i>		<i>37-107</i>	<i>%REC</i>	<i>1</i>	10/3/2015 05:49 AM
VOLATILE ORGANIC COMPOUNDS						
Benzene	ND		SW8260B		Prep: SW5035 / 9/29/15	Analyst: AK
Ethylbenzene	ND		0.032	mg/Kg-dry	1	10/7/2015 01:42 PM
m,p-Xylene	ND		0.032	mg/Kg-dry	1	10/7/2015 01:42 PM
o-Xylene	ND		0.065	mg/Kg-dry	1	10/7/2015 01:42 PM
Toluene	ND		0.032	mg/Kg-dry	1	10/7/2015 01:42 PM
Xylenes, Total	ND		0.032	mg/Kg-dry	1	10/7/2015 01:42 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 07-Oct-15

Client: WPX Energy Rocky Mountain, LLC

Project: GM 11-2 Batch 4

Work Order: 15091655

Sample ID: GM 11-2 Batch 4

Lab ID: 15091655-01

Collection Date: 9/28/2015 12:15 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	101		70-130	%REC	1	10/7/2015 01:42 PM
Surr: 4-Bromofluorobenzene	99.6		70-130	%REC	1	10/7/2015 01:42 PM
Surr: Dibromofluoromethane	96.4		70-130	%REC	1	10/7/2015 01:42 PM
Surr: Toluene-d8	95.1		70-130	%REC	1	10/7/2015 01:42 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO			Prep: USDA Method 20B / 10/5/15
Electrical Conductivity @ Saturation	11		0.050	mmhos/cm @2	10	Analyst: JB 10/5/2015 04:30 PM
MOISTURE			E160.3M			Analyst: TM
Moisture	7.0		0.050	% of sample	1	9/30/2015 04:16 PM
PH			SW9045D			Prep: EXTRACT / 9/30/15
pH	7.7			s.u.	1	Analyst: STP 9/30/2015 02:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **29-Sep-15 09:00**

Work Order: **15091655**

Received by: **NML**

Checklist completed by Diane Shaw 29-Sep-15
eSignature Date

Reviewed by: Lee Arnold 29-Sep-15
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2/3.2 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>9/29/2015 1:49:02 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

WORKORDER
#

15091655

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

[illegible]

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: <div style="text-align: center; font-size: 2em; margin-top: 50px;">3.200</div>	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
	<input type="checkbox"/>	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-NaHSO ₄ 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	9/28/2015	16:00:00 PM
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	9-28-15	1610
RELINQUISHED BY	<i>[Signature]</i>	<i>[Signature]</i>	9-28-15	1030
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	9-28-15	900
RELINQUISHED BY				
RECEIVED BY				

ORIGIN ID: RILA (816) 298-1033
 NICK MARTINEZ
 ALS ENVIRONMENTAL PARACHUTE
 PARACHUTE SERVICE CENTER
 127 EAST 1ST ST
 PARACHUTE, CO 81635
 UNITED STATES US

SHIP DATE: 28SEP15
 ACTWGT: 78.00 LB
 CAD: 2284840/NET3670
 DIMS: 24x15x15 IN
 BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE

HOLLAND MI 49424

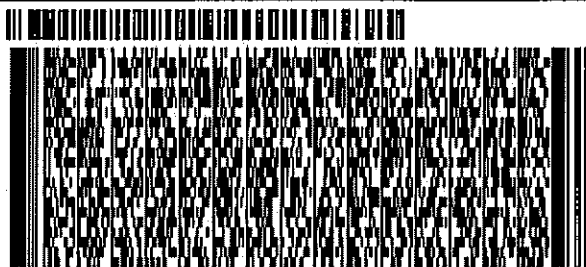
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Client

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Analysis

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31-Oct-2015

Karolina Blaney
WPX Energy Rocky Mountain, LLC
1058 Country Rd 215
Parachute, CO 81635

Re: **GM 11-2 Batch 5**

Work Order: **15101510**

Dear Karolina,

ALS Environmental received 1 sample on 23-Oct-2015 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Les Arnold".

Electronically approved by: Les Arnold

Les Arnold
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

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RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 5
Work Order: 15101510

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
15101510-01	GM 11-2 Batch 5	Soil		10/22/2015 09:00	10/23/2015 10:00	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 5
Work Order: 15101510

Case Narrative

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

NO DEVIATIONS OR ANOMALIES WERE NOTED.

ALS Group USA, Corp

Date: 31-Oct-15

Client: WPX Energy Rocky Mountain, LLC

Project: GM 11-2 Batch 5

Sample ID: GM 11-2 Batch 5

Collection Date: 10/22/2015 09:00 AM

Work Order: 15101510

Lab ID: 15101510-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	37		SW8015M		Prep: SW3541 / 10/27/15	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	65.1		4.8	mg/Kg-dry	1	10/29/2015 02:17 AM
			39-133	%REC	1	10/29/2015 02:17 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	110		SW8015D		Prep: SW5035 / 10/26/15	Analyst: IT
<i>Surr: Toluene-d8</i>	103		2.9	mg/Kg-dry	1	10/26/2015 04:12 PM
			50-150	%REC	1	10/26/2015 04:12 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 10/27/15	Analyst: JEC
Calcium	570		5.0	mg/L	10	10/27/2015 12:24 PM
Magnesium	120		2.0	mg/L	10	10/27/2015 12:24 PM
Sodium	1,000		2.0	mg/L	10	10/27/2015 12:24 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 10/27/15	Analyst: JEC
Sodium Adsorption Ratio	10		0.010	none	1	10/27/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 10/27/15	Analyst: RM
Acenaphthene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Anthracene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Benzo(a)anthracene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Benzo(a)pyrene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Benzo(b)fluoranthene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Benzo(k)fluoranthene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Chrysene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Dibenzo(a,h)anthracene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Fluoranthene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Fluorene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Indeno(1,2,3-cd)pyrene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Naphthalene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
Pyrene	ND		0.0076	mg/Kg-dry	1	10/28/2015 05:47 PM
<i>Surr: 2-Fluorobiphenyl</i>	77.3		12-100	%REC	1	10/28/2015 05:47 PM
<i>Surr: 4-Terphenyl-d14</i>	87.7		25-137	%REC	1	10/28/2015 05:47 PM
<i>Surr: Nitrobenzene-d5</i>	75.3		37-107	%REC	1	10/28/2015 05:47 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260B		Prep: SW5035 / 10/26/15	Analyst: BG
Benzene	ND		0.035	mg/Kg-dry	1	10/30/2015 02:18 PM
Ethylbenzene	ND		0.035	mg/Kg-dry	1	10/30/2015 02:18 PM
m,p-Xylene	ND		0.069	mg/Kg-dry	1	10/30/2015 02:18 PM
o-Xylene	ND		0.035	mg/Kg-dry	1	10/30/2015 02:18 PM
Toluene	ND		0.035	mg/Kg-dry	1	10/30/2015 02:18 PM
Xylenes, Total	ND		0.10	mg/Kg-dry	1	10/30/2015 02:18 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 31-Oct-15

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 5
Sample ID: GM 11-2 Batch 5
Collection Date: 10/22/2015 09:00 AM

Work Order: 15101510
Lab ID: 15101510-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	98.0		70-130	%REC	1	10/30/2015 02:18 PM
Surr: 4-Bromofluorobenzene	94.8		70-130	%REC	1	10/30/2015 02:18 PM
Surr: Dibromofluoromethane	93.9		70-130	%REC	1	10/30/2015 02:18 PM
Surr: Toluene-d8	102		70-130	%REC	1	10/30/2015 02:18 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD Prep: USDA Method 20B / 10/27/15 Analyst: JB			
Electrical Conductivity @ Saturation	10		0.050	mmhos/cm @25	10	10/27/2015 05:00 PM
MOISTURE			E160.3M Analyst: TM			
Moisture	14		0.050	% of sample	1	10/28/2015 01:36 PM
PH			SW9045D Prep: EXTRACT / 10/26/15 Analyst: JB			
pH	7.8			s.u.	1	10/26/2015 04:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: WPX Energy Rocky Mountain, LLC
Project: GM 11-2 Batch 5
WorkOrder: 15101510

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 31-Oct-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **78033** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-78033-78033				Units: mg/Kg		Analysis Date: 10/29/2015 12:17 PM		
Client ID:		Run ID: GC8_151028A				SeqNo: 3537140		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	1.718	0	2	0	85.9	39-133		0		

LCS		Sample ID: DLCSS1-78033-78033				Units: mg/Kg		Analysis Date: 10/29/2015 12:47 PM		
Client ID:		Run ID: GC8_151028A				SeqNo: 3537141		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	166.2	5.0	200	0	83.1	61-109		0		
Surr: 4-Terphenyl-d14	1.234	0	2	0	61.7	39-133		0		

MS		Sample ID: 15101510-01A MS				Units: mg/Kg		Analysis Date: 10/29/2015 01:17 AM		
Client ID: GM 11-2 Batch 5		Run ID: GC8_151028A				SeqNo: 3537118		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	145.5	4.1	165.8	32.08	68.4	48-110		0		
Surr: 4-Terphenyl-d14	1.019	0	1.658	0	61.5	39-133		0		

MSD		Sample ID: 15101510-01A MSD				Units: mg/Kg		Analysis Date: 10/29/2015 01:47 AM		
Client ID: GM 11-2 Batch 5		Run ID: GC8_151028A				SeqNo: 3537120		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	161.7	4.1	162.8	32.08	79.7	48-110	145.5	10.6	30	
Surr: 4-Terphenyl-d14	1.104	0	1.628	0	67.8	39-133	1.019	7.95	30	

The following samples were analyzed in this batch: 15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **78000** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-78000-78000				Units: µg/Kg		Analysis Date: 10/26/2015 03:47 PM		
Client ID:		Run ID: GC9_151026A				SeqNo: 3531509		Prep Date: 10/26/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5276	0	5000	0	106	50-150	0			

LCS		Sample ID: LCS-78000-78000				Units: µg/Kg		Analysis Date: 10/26/2015 03:23 PM		
Client ID:		Run ID: GC9_151026A				SeqNo: 3531507		Prep Date: 10/26/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	508800	2,500	500000	0	102	70-130	0			
<i>Surr: Toluene-d8</i>	5336	0	5000	0	107	50-150	0			

MS		Sample ID: 15101510-01A MS				Units: µg/Kg		Analysis Date: 10/26/2015 06:44 PM		
Client ID: GM 11-2 Batch 5		Run ID: GC9_151026A				SeqNo: 3531528		Prep Date: 10/26/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	535500	2,500	500000	95470	88	70-130	0			
<i>Surr: Toluene-d8</i>	5102	0	5000	0	102	50-150	0			

MSD		Sample ID: 15101510-01A MSD				Units: µg/Kg		Analysis Date: 10/26/2015 07:10 PM		
Client ID: GM 11-2 Batch 5		Run ID: GC9_151026A				SeqNo: 3531529		Prep Date: 10/26/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	483400	2,500	500000	95470	77.6	70-130	535500	10.2	30	
<i>Surr: Toluene-d8</i>	4940	0	5000	0	98.8	50-150	5102	3.25	30	

The following samples were analyzed in this batch: 15101510-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **77949** Instrument ID **SAR** Method: **USDA H60 Method**

DUP		Sample ID: 15101442-01CDUP				Units: none		Analysis Date: 10/27/2015		
Client ID:		Run ID: SAR_151027A				SeqNo: 3533121		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	4.674	0.010	0	0	0		4.658	0.349	50	

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **78057** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-78057-78057				Units: µg/Kg		Analysis Date: 10/28/2015 04:27 PM		
Client ID:		Run ID: SVMS8_151028A				SeqNo: 3537490		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	1521	0	1667	0	91.2	12-100	0			
Surr: 4-Terphenyl-d14	1761	0	1667	0	106	25-137	0			
Surr: Nitrobenzene-d5	1482	0	1667	0	88.9	37-107	0			

LCS		Sample ID: SLCSS1-78057-78057				Units: µg/Kg		Analysis Date: 10/28/2015 04:47 PM		
Client ID:		Run ID: SVMS8_151028A				SeqNo: 3537498		Prep Date: 10/27/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	562.3	6.7	666.7	0	84.3	45-110	0			
Anthracene	569.7	6.7	666.7	0	85.4	55-105	0			
Benzo(a)anthracene	622.3	6.7	666.7	0	93.3	50-110	0			
Benzo(a)pyrene	622.3	6.7	666.7	0	93.3	50-110	0			
Benzo(b)fluoranthene	640.7	6.7	666.7	0	96.1	45-115	0			
Benzo(k)fluoranthene	649.3	6.7	666.7	0	97.4	45-115	0			
Chrysene	623.3	6.7	666.7	0	93.5	55-110	0			
Dibenzo(a,h)anthracene	651.7	6.7	666.7	0	97.7	40-125	0			
Fluoranthene	593.3	6.7	666.7	0	89	55-115	0			
Fluorene	618	6.7	666.7	0	92.7	50-110	0			
Indeno(1,2,3-cd)pyrene	656	6.7	666.7	0	98.4	40-120	0			
Naphthalene	548	6.7	666.7	0	82.2	40-105	0			
Pyrene	660.7	6.7	666.7	0	99.1	45-125	0			
Surr: 2-Fluorobiphenyl	1484	0	1667	0	89.1	12-100	0			
Surr: 4-Terphenyl-d14	1701	0	1667	0	102	25-137	0			
Surr: Nitrobenzene-d5	1468	0	1667	0	88.1	37-107	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
 Work Order: 15101510
 Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **78057** Instrument ID **SVMS8** Method: **SW846 8270D**

MS				Sample ID: 15101510-01A MS			Units: µg/Kg		Analysis Date: 10/28/2015 05:07 PM	
Client ID: GM 11-2 Batch 5				Run ID: SVMS8_151028A			SeqNo: 3537499		Prep Date: 10/27/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	483.9	6.5	651.3	0	74.3	45-110	0			
Anthracene	541.5	6.5	651.3	0	83.1	55-105	0			
Benzo(a)anthracene	543.8	6.5	651.3	0	83.5	50-110	0			
Benzo(a)pyrene	557.5	6.5	651.3	0	85.6	50-110	0			
Benzo(b)fluoranthene	580	6.5	651.3	0	89	45-115	0			
Benzo(k)fluoranthene	538	6.5	651.3	0	82.6	45-115	0			
Chrysene	538.6	6.5	651.3	0	82.7	55-110	0			
Dibenzo(a,h)anthracene	602.1	6.5	651.3	0	92.4	40-125	0			
Fluoranthene	534.7	6.5	651.3	5.285	81.3	55-115	0			
Fluorene	579	6.5	651.3	0	88.9	50-110	0			
Indeno(1,2,3-cd)pyrene	629.5	6.5	651.3	0	96.6	40-120	0			
Naphthalene	391.7	6.5	651.3	0	60.1	40-105	0			
Pyrene	594.3	6.5	651.3	4.955	90.5	45-125	0			
Surr: 2-Fluorobiphenyl	1189	0	1628	0	73	12-100	0			
Surr: 4-Terphenyl-d14	1447	0	1628	0	88.9	25-137	0			
Surr: Nitrobenzene-d5	1008	0	1628	0	61.9	37-107	0			

MSD				Sample ID: 15101510-01A MSD			Units: µg/Kg		Analysis Date: 10/28/2015 05:27 PM	
Client ID: GM 11-2 Batch 5				Run ID: SVMS8_151028A			SeqNo: 3537503		Prep Date: 10/27/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	520.9	6.6	659.8	0	78.9	45-110	483.9	7.36	30	
Anthracene	573	6.6	659.8	0	86.8	55-105	541.5	5.65	30	
Benzo(a)anthracene	597.1	6.6	659.8	0	90.5	50-110	543.8	9.34	30	
Benzo(a)pyrene	598.1	6.6	659.8	0	90.6	50-110	557.5	7.03	30	
Benzo(b)fluoranthene	600.1	6.6	659.8	0	90.9	45-115	580	3.41	30	
Benzo(k)fluoranthene	570.1	6.6	659.8	0	86.4	45-115	538	5.79	30	
Chrysene	584.9	6.6	659.8	0	88.6	55-110	538.6	8.24	30	
Dibenzo(a,h)anthracene	636	6.6	659.8	0	96.4	40-125	602.1	5.48	30	
Fluoranthene	570.4	6.6	659.8	5.285	85.6	55-115	534.7	6.46	30	
Fluorene	595.8	6.6	659.8	0	90.3	50-110	579	2.86	30	
Indeno(1,2,3-cd)pyrene	655.5	6.6	659.8	0	99.3	40-120	629.5	4.05	30	
Naphthalene	481	6.6	659.8	0	72.9	40-105	391.7	20.5	30	
Pyrene	635	6.6	659.8	4.955	95.5	45-125	594.3	6.63	30	
Surr: 2-Fluorobiphenyl	1381	0	1649	0	83.7	12-100	1189	14.9	40	
Surr: 4-Terphenyl-d14	1601	0	1649	0	97	25-137	1447	10.1	40	
Surr: Nitrobenzene-d5	1288	0	1649	0	78.1	37-107	1008	24.3	40	

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **77982** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-77982-77982				Units: µg/Kg			Analysis Date: 10/26/2015 12:08 PM			
Client ID:				Run ID: VMS5_151026A				SeqNo:3530303			Prep Date: 10/26/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	ND	30												
Ethylbenzene	ND	30												
m,p-Xylene	ND	60												
o-Xylene	ND	30												
Toluene	ND	30												
Xylenes, Total	ND	90												
Surr: 1,2-Dichloroethane-d4	983.5	0	1000	0	98.4	70-130	0							
Surr: 4-Bromofluorobenzene	992.5	0	1000	0	99.2	70-130	0							
Surr: Dibromofluoromethane	978.5	0	1000	0	97.8	70-130	0							
Surr: Toluene-d8	985.5	0	1000	0	98.6	70-130	0							

LCS				Sample ID: LCS-77982-77982			Units: µg/Kg		Analysis Date: 10/26/2015 10:52 AM		
Client ID:			Run ID: VMS5_151026A			SeqNo:3530301		Prep Date: 10/26/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1010	30	1000	0	101	75-125	0				
Ethylbenzene	1018	30	1000	0	102	75-125	0				
m,p-Xylene	2064	60	2000	0	103	80-125	0				
o-Xylene	988.5	30	1000	0	98.8	75-125	0				
Toluene	975.5	30	1000	0	97.6	70-125	0				
Xylenes, Total	3053	90	3000	0	102	75-125	0				
Surr: 1,2-Dichloroethane-d4	971	0	1000	0	97.1	70-130	0				
Surr: 4-Bromofluorobenzene	1010	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	978	0	1000	0	97.8	70-130	0				
Surr: Toluene-d8	996	0	1000	0	99.6	70-130	0				

MS					Sample ID: 15101510-01A MS		Units: µg/Kg		Analysis Date: 10/30/2015 07:06 PM		
Client ID: GM 11-2 Batch 5			Run ID: VMS6_151030A			SeqNo:3540626		Prep Date: 10/26/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1189	30	1000	0	119	75-125	0				
Ethylbenzene	1156	30	1000	0	116	75-125	0				
m,p-Xylene	2384	60	2000	38.5	117	80-125	0				
o-Xylene	1142	30	1000	0	114	75-125	0				
Toluene	1128	30	1000	0	113	70-125	0				
Xylenes, Total	3526	90	3000	38	116	75-125	0				
Surr: 1,2-Dichloroethane-d4	980.5	0	1000	0	98	70-130	0				
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0				
Surr: Dibromofluoromethane	1010	0	1000	0	101	70-130	0				
Surr: Toluene-d8	968	0	1000	0	96.8	70-130	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **77982** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 15101510-01A MSD			Units: µg/Kg		Analysis Date: 10/30/2015 07:31 PM	
Client ID: GM 11-2 Batch 5				Run ID: VMS6_151030A			SeqNo: 3540627		Prep Date: 10/26/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1138	30	1000	0	114	75-125	1189	4.38	30	
Ethylbenzene	1126	30	1000	0	113	75-125	1156	2.67	30	
m,p-Xylene	2309	60	2000	38.5	114	80-125	2384	3.22	30	
o-Xylene	1120	30	1000	0	112	75-125	1142	1.99	30	
Toluene	1086	30	1000	0	109	70-125	1128	3.84	30	
Xylenes, Total	3428	90	3000	38	113	75-125	3526	2.82	30	
Surr: 1,2-Dichloroethane-d4	944.5	0	1000	0	94.4	70-130	980.5	3.74	30	
Surr: 4-Bromofluorobenzene	1006	0	1000	0	101	70-130	1018	1.19	30	
Surr: Dibromofluoromethane	984	0	1000	0	98.4	70-130	1010	2.66	30	
Surr: Toluene-d8	986.5	0	1000	0	98.6	70-130	968	1.89	30	

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **77949** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 15101442-01C DUP				Units: mmhos/cm @25°C		Analysis Date: 10/27/2015 05:00 PM		
Client ID:		Run ID: WETCHEM_151027S				SeqNo: 3533450		Prep Date: 10/27/2015		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	5.91	0.050	0	0	0		5.83	1.36	50	

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **78012** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-78012-78012				Units:s.u.			Analysis Date: 10/26/2015 04:00 PM			
Client ID:				Run ID: WETCHEM_151026N				SeqNo:3530143			Prep Date: 10/26/2015		DF: 1	
Analyte				Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH				3.71	0	4	0	92.8	90-110	0				

DUP					Sample ID: 15101448-01B DUP					Units:s.u.			Analysis Date: 10/26/2015 04:00 PM		
Client ID:			Run ID: WETCHEM_151026N			SeqNo: 3530145			Prep Date: 10/26/2015			DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		9.46	0	0	0	0	0-0	9.45	0.106	20					

DUP				Sample ID: 15101511-01A DUP				Units: s.u.			Analysis Date: 10/26/2015 04:00 PM			
Client ID:				Run ID: WETCHEM_151026N				SeqNo: 3530150			Prep Date: 10/26/2015		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		7.32	0	0	0	0	0-0	7.32	0	20				

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15101510
Project: GM 11-2 Batch 5

QC BATCH REPORT

Batch ID: **R174980** Instrument ID **MOIST** Method: **E160.3M**

MBLK				Sample ID: WBLKS-R174980				Units: % of sample			Analysis Date: 10/28/2015 01:36 PM			
Client ID:				Run ID: MOIST_151028B				SeqNo: 3537917			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

LCS		Sample ID: LCS-R174980					Units: % of sample		Analysis Date: 10/28/2015 01:36 PM		
Client ID:			Run ID: MOIST_151028B			SeqNo: 3537915		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP				Sample ID: 15101506-07A DUP				Units: % of sample			Analysis Date: 10/28/2015 01:36 PM			
Client ID:				Run ID: MOIST_151028B				SeqNo: 3537870			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 16.57 0.050 0 0 0 16.16 2.51 20

DUP				Sample ID: 15101508-05B DUP				Units: % of sample		Analysis Date: 10/28/2015 01:36 PM			
Client ID:				Run ID: MOIST_151028B				SeqNo: 3537889		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Moisture 25.74 0.050 0 0 0 24.11 6.54 20

The following samples were analyzed in this batch:

15101510-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



WORKORDER
#

15/0/5/0

Form 202r8

[illegible]

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: <div style="text-align: center; font-size: 2em;">4.82</div>	QC PACKAGE (check below)	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-NaHSO ₄ 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	10/22/2015	16:00:00 PM
RECEIVED BY	MM	MM	10-22-15	1600
RELINQUISHED BY	[Signature]	[Signature]	10/22/15	1630
RECEIVED BY	2-2-22	Diane E. She	10/23/15	1000
RELINQUISHED BY				
RECEIVED BY				

ORIGIN ID: RILA (818) 298-1033
 NICK MARTINEZ
 ALS ENVIRONMENTAL PARACHUTE
 PARACHUTE SERVICE CENTER
 127 EAST 1ST ST
 PARACHUTE, CO 81835
 UNITED STATES US

SHIP DATE: 22OCT15
 ACTWGT: 80.00 LB
 CAD: 2284840/NET 3670
 DIMS: 24x15x15 IN
 BILL SENDER

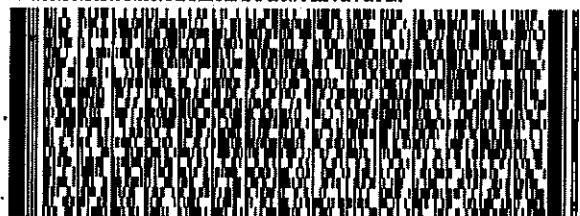
TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE

HOLLAND MI 49424

(818) 398-8070
 INV
 PO: PARACHUTE

REF: 102215-1

DEPT:



FedEx
 Express



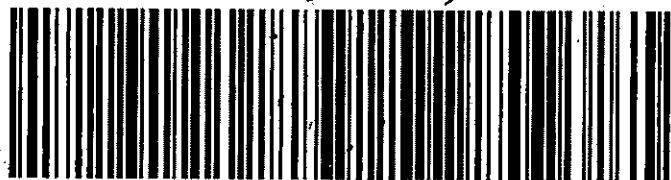
REL#
 3785346

FRI - 23 OCT 10:30A
PRIORITY OVERNIGHT

TRK#
0201 7748 0685 7778

XX HLMA

49424
GRR
 MI-US



539.0401A3100

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **23-Oct-15 10:00**

Work Order: **15101510**

Received by: **DS**

Checklist completed by Diane Shaw
eSignature

23-Oct-15
Date

Reviewed by: Lee Arnold
eSignature

23-Oct-15
Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.8/4.8 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>10/23/2015 3:47:18 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: