



June 28, 2015

Stan Spencer
NW Environmental Protection Specialist
Colorado Oil and Gas Conservation Commission
796 Megan Ave, Suite 201,
Rifle, CO 81650

Re : PA 23-33 Condensate Spill Closure Request

Dear Mr. Spencer,

Attached are the laboratory reports and the sample location map for soil samples collected from the excavated area and landfarmed material in order to close the condensate spill that occurred at the production facility for the PA 23-33 and PA 323-33 well pads. The spill occurred on May 14, 2014.

The impacted soil was excavated and confirmation samples were collected from the bottom and walls of the excavation. The excavated soil was landfarmed at both above mentioned well pads in ten batches. A composite sample was collected from each batch. All samples were analyzed for the constituents listed in Table 910-1.

As the attached lab reports indicate, all constituents of concern listed in the COGCC Table 910-1 are in compliance with the cleanup requirements. The excavated area was backfilled with clean soil.

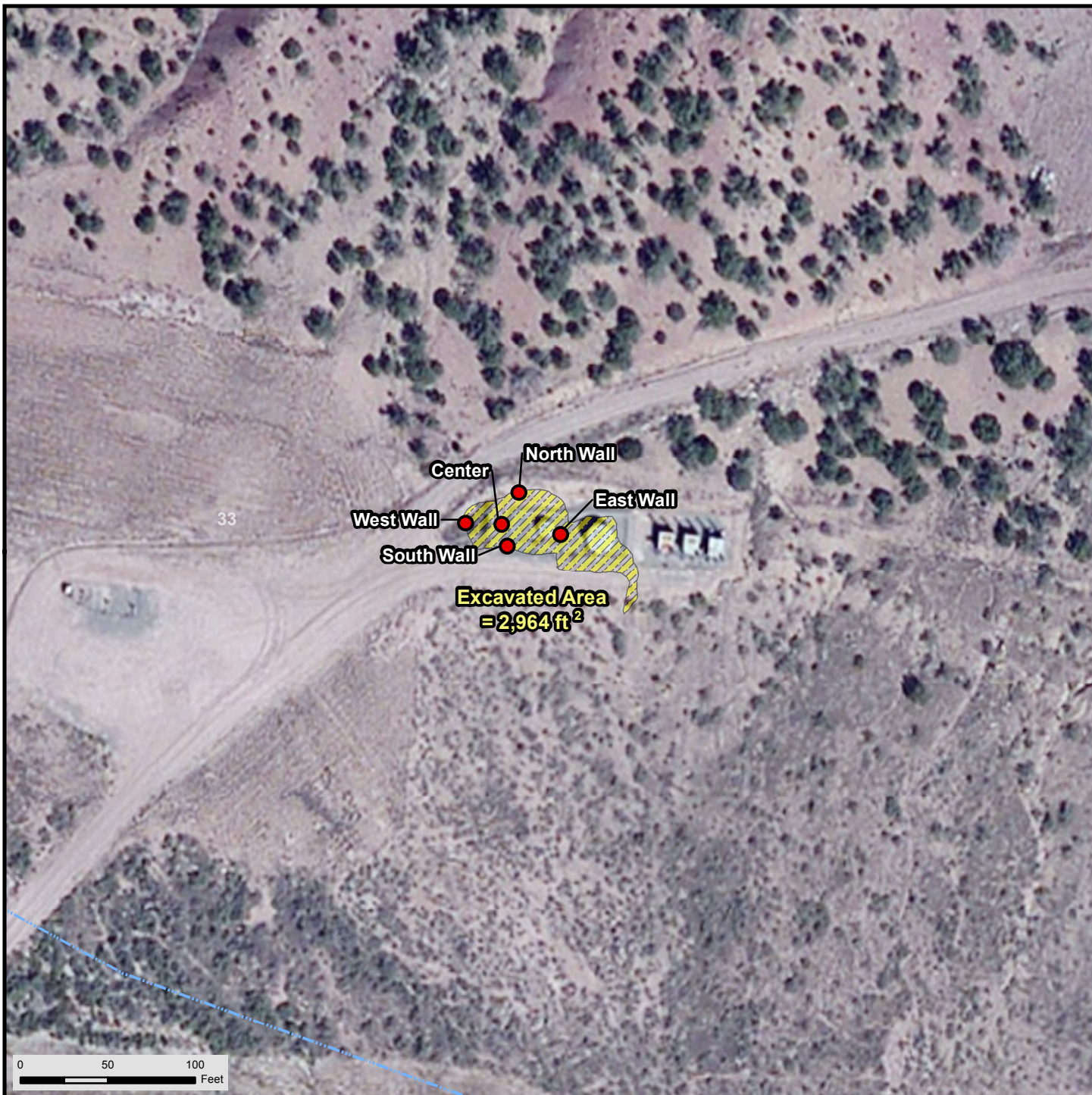
Please do not hesitate to contact me at (970) 683-2295 should you have any questions or concerns regarding this information.

Sincerely,

Karolina Blaney
Environmental Specialist

Attachments (2)

- Sampling Location Map
- Laboratory Reports

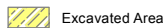


Spill Closure Map: PA 23-33

39.479561 -108.006302
Section 33, Township 6 South, Range 95 West



Sample



Excavated Area

PLSS

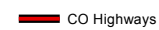


Township

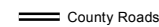


Section

Transportation



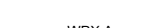
CO Highways



County Roads



Local Streets

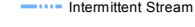


WPX Access

Hydrography



Ditch



Intermittent Stream



Perennial Stream



Waterbody



Watershed



HRI COMPLIANCE SOLUTIONS, INC.
Environmental Consultants



Author: E. Fought

Revision: 1

Date: 6/26/2015

Analytical Results

Contaminant of Concern ↓	COGCC standards	Location →	Bottom	North Wall	East Wall	South Wall	West Wall	West Wall	PA 23-33 Batch 1	PA 23-33 Batch 2	PA 23-33 Batch 3	PA 23-33 Batch 4	PA 23-33 Batch 4
		Date Sampled	5/19/2014	5/19/2014	5/19/2014	5/19/2014	5/19/2014	5/22/2014	6/27/2014	7/16/2014	9/18/2014	10/23/2014	12/3/2014
Organic Compounds in Soil													
TPH	500	mg/kg	380	ND	ND	ND	1,300	ND	390	260	322	3,020	318
DRO		mg/kg	110	ND	ND	ND	410	ND	110	140	92	520	290
GRO		mg/kg	270	ND	ND	ND	890	ND	280	120	230	2,500	28
Benzene	0.17	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Toluene	85	mg/kg	0.055	ND	ND	ND	0.69		0.17	ND	ND	0.56	
Ethylbenzene	100	mg/kg	0.1	ND	ND	ND	1		0.19	ND	ND	0.45	
Xylenes (Total)	175	mg/kg	2.1	ND	ND	ND	25		10	ND	0.760	19	
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Anthracene	1,000	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Chrysene	22	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Fluorene	1,000	mg/kg	ND	ND	ND	ND	0.032		0.033	0.013	ND	0.029	
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Naphthalene	23	mg/kg	ND	ND	ND	ND	170		0.26	0.013	0.011	ND	
Pyrene	1,000	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Inorganics in Soil													
EC	<4 or 2 x background	mmhos/cm	2.1	0.93	0.65	1.2	2.8		4.4	7	2.7	1.8	
SAR	<12		7.7	15	2.8	4.2	6.7		5	4.2	4.5	5.6	
pH	6-9		8.1	9.5	8.9	8.9	8.9		8.1	8	8.2	8.3	
Metals in Soil													
Arsenic	0.39	mg/kg	5	9.1	7.6	9.5	10		11	9.5	13	14	
Barium total	15,000	mg/kg	160	640	450	400	350		300	350	440	380	
Cadmium	70	mg/kg	ND	ND	0.91	ND	ND		ND	ND	ND	ND	
Chromium (III)	120,000	mg/kg	10	10	9.7	10	12		15	12	15	12	
Chromium (VI)	23	mg/kg	ND	0.71	0.79	ND	ND		ND	ND	ND	ND	
Copper	3,100	mg/kg	6.3	9.3	8.3	11	11		12	11	13	14	
Lead	400	mg/kg	11	14	12	11	12		15	13	15	20	
Mercury	23	mg/kg	0.039	0.023	0.034	0.032	0.025		0.02	0.029	0.037	0.022	
Nickel	1,600	mg/kg	15	14	14	14	15		17	16	16	13	
Selenium	390	mg/kg	4.4	ND	ND	2.4	2.6		ND	1.9	2.4	ND	
Silver	390	mg/kg	ND	ND	ND	ND	ND		ND	ND	ND	ND	
Zinc	23,000	mg/kg	47	54	46	43	48		59	52	56	62	

Analytical Results

Contaminant of Concern ↓	COGCC standards	Location →	PA 323-33 Batch 1	PA 323-33 Batch 2	PA 323-33 Batch 2	PA 323-33 Batch 3	PA 323-33 Batch 3	PA 323-33 Batch 4	PA 323-33 Batch 5	PA 323-33 Batch 5	PA 323-33 Batch 6
		Date Sampled	6/27/2014	7/16/2015	8/25/2014	9/18/2014	12/3/2014	2/4/2015	3/5/2015	4/16/2015	6/2/2015
Organic Compounds in Soil											
TPH	500	mg/kg	270	560	74	2,070	110	57	2,370	344	185
DRO		mg/kg	160	190	44	170	110	57	870	290	150
GRO		mg/kg	110	370	30	1,900	ND	ND	1,500	54	35
Benzene	0.17	mg/kg	ND	ND		1.3		ND	ND		ND
Toluene	85	mg/kg	ND	ND		23		ND	1.4		ND
Ethylbenzene	100	mg/kg	0.39	ND		3.6		ND	0.6		ND
Xylenes (Total)	175	mg/kg	3.4	0.19		89		ND	54		0.21
Acenaphthene	1,000	mg/kg	ND	ND		ND		ND	ND		ND
Anthracene	1,000	mg/kg	ND	ND		ND		ND	ND		ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND		ND		ND	ND		ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND		ND		ND	ND		ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND		ND		ND	ND		ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND		ND		ND	ND		ND
Chrysene	22	mg/kg	ND	ND		ND		ND	ND		ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND		ND		ND	ND		ND
Fluoranthene	1,000	mg/kg	ND	ND		ND		ND	ND		ND
Fluorene	1,000	mg/kg	0.024	0.013		0.011		ND	0.073		ND
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	ND	ND		ND		ND	ND		ND
Naphthalene	23	mg/kg	0.15	0.008		0.12		ND	0.830		ND
Pyrene	1,000	mg/kg	ND	ND		ND		ND	ND		ND
Inorganics in Soil											
EC	<4 or 2 x background	mmhos/cm	6.8	7.1		2.9		0.83	2.3		2.5
SAR	<12		3.6	3.8		8.8		3	5.2		7.2
pH	6-9		7.8	8		8.7		8.5	8.6		8.4
Metals in Soil											
Arsenic	0.39	mg/kg	9.4	13		10		5.6	10		13
Barium total	15,000	mg/kg	250	390		360		270	340		730
Cadmium	70	mg/kg	ND	0.8		ND		ND	ND		ND
Chromium (III)	120,000	mg/kg	12	13		14		ND	13		12
Chromium (VI)	23	mg/kg	ND	ND		ND		ND	ND		ND
Copper	3,100	mg/kg	8.9	13		12		9.4	12		14
Lead	400	mg/kg	14	17		15		9	14		13
Mercury	23	mg/kg	0.028	0.027		0.024		0.029	0.024		0.025
Nickel	1,600	mg/kg	16	17		16		7.9	15		15
Selenium	390	mg/kg	ND	2.7		2.5		ND	ND		ND
Silver	390	mg/kg	ND	ND		ND		ND	ND		ND
Zinc	23,000	mg/kg	53	58		54		30	60		67



28-May-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Condensate Spill 5.19.14**

Work Order: **1405983**

Dear Mark,

ALS Environmental received 5 samples on 20-May-2014 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 31.

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

Sincerely,

Ann Preston

Electronically approved by: Chad Whelton

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Work Order: 1405983

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>
1405983-01	North Wall	Soil		5/19/2014 08:40	5/20/2014 10:00	<input type="checkbox"/>
1405983-02	East Wall	Soil		5/19/2014 08:25	5/20/2014 10:00	<input type="checkbox"/>
1405983-03	South Wall	Soil		5/19/2014 07:20	5/20/2014 10:00	<input type="checkbox"/>
1405983-04	West Wall	Soil		5/19/2014 07:25	5/20/2014 10:00	<input type="checkbox"/>
1405983-05	Bottom	Soil		5/19/2014 07:15	5/20/2014 10:00	<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

<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: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: North Wall
Collection Date: 5/19/2014 08:40 AM

Work Order: 1405983
Lab ID: 1405983-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 5/20/14	Analyst: IT
DRO (C10-C28)	ND		4.7	mg/Kg-dry	1	5/20/2014 09:24 PM
Surr: 4-Terphenyl-d14	89.3		39-133	%REC	1	5/20/2014 09:24 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 5/20/14	Analyst: IT
GRO (C6-C10)	ND		2.9	mg/Kg-dry	1	5/20/2014 04:44 PM
Surr: Toluene-d8	110		50-150	%REC	1	5/20/2014 04:44 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 5/22/14	Analyst: LR
Mercury	0.023		0.017	mg/Kg-dry	1	5/22/2014 11:52 AM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 5/20/14	Analyst: ML
Arsenic	9.1		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Barium	640		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Cadmium	ND		0.84	mg/Kg-dry	5	5/21/2014 09:12 AM
Chromium	11		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Copper	9.3		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Lead	17		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Nickel	14		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Selenium	ND		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Silver	ND		2.1	mg/Kg-dry	5	5/21/2014 09:12 AM
Zinc	54		4.2	mg/Kg-dry	5	5/21/2014 09:12 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Calcium	ND		10	mg/L	20	5/22/2014 10:20 PM
Magnesium	ND		4.0	mg/L	20	5/22/2014 10:20 PM
Sodium	180		4.0	mg/L	20	5/22/2014 10:20 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Sodium Adsorption Ratio	15		0.010	none	1	5/22/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 5/20/14	Analyst: RM
Acenaphthene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Acenaphthylene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Benzo(a)anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Benzo(a)pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Benzo(b)fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Benzo(g,h,i)perylene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Benzo(k)fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Chrysene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: North Wall
Collection Date: 5/19/2014 08:40 AM

Work Order: 1405983
Lab ID: 1405983-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Fluorene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Indeno(1,2,3-cd)pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Naphthalene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 02:47 AM
Surr: 2-Fluorobiphenyl	33.9		12-100	%REC	1	5/21/2014 02:47 AM
Surr: 4-Terphenyl-d14	44.6		25-137	%REC	1	5/21/2014 02:47 AM
Surr: Nitrobenzene-d5	46.8		37-107	%REC	1	5/21/2014 02:47 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 5/20/14	Analyst: AK	
Benzene	ND		34	µg/Kg-dry	1	5/21/2014 03:44 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	5/21/2014 03:44 PM
m,p-Xylene	90		69	µg/Kg-dry	1	5/21/2014 03:44 PM
o-Xylene	ND		34	µg/Kg-dry	1	5/21/2014 03:44 PM
Toluene	ND		34	µg/Kg-dry	1	5/21/2014 03:44 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	5/21/2014 03:44 PM
Surr: 1,2-Dichloroethane-d4	96.7		70-130	%REC	1	5/21/2014 03:44 PM
Surr: 4-Bromofluorobenzene	95.6		70-130	%REC	1	5/21/2014 03:44 PM
Surr: Dibromofluoromethane	95.1		70-130	%REC	1	5/21/2014 03:44 PM
Surr: Toluene-d8	98.4		70-130	%REC	1	5/21/2014 03:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 5/22/14	Analyst: JB	
Electrical Conductivity @ Saturation	0.93		0.050	mmhos/cm @2	10	5/22/2014 12:30 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: EE		
Chromium, Trivalent	10		0.57	mg/Kg-dry	1	5/22/2014 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 5/21/14	Analyst: EE	
Chromium, Hexavalent	0.71		0.55	mg/Kg-dry	1	5/21/2014 01:00 PM
MOISTURE			A2540 G	Analyst: AT		
Moisture	12		0.050	% of sample	1	5/20/2014 02:33 PM
PH			SW9045D	Prep: EXTRACT / 5/21/14	Analyst: EE	
pH	9.5			s.u.	1	5/21/2014 09:00 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: East Wall
Collection Date: 5/19/2014 08:25 AM

Work Order: 1405983
Lab ID: 1405983-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 5/20/14	Analyst: IT
DRO (C10-C28)	ND		4.6	mg/Kg-dry	1	5/20/2014 09:54 PM
Surr: 4-Terphenyl-d14	93.7		39-133	%REC	1	5/20/2014 09:54 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 5/20/14	Analyst: IT
GRO (C6-C10)	ND		2.8	mg/Kg-dry	1	5/20/2014 05:09 PM
Surr: Toluene-d8	103		50-150	%REC	1	5/20/2014 05:09 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 5/22/14	Analyst: LR
Mercury	0.034		0.017	mg/Kg-dry	1	5/22/2014 11:54 AM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 5/20/14	Analyst: ML
Arsenic	7.6		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Barium	450		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Cadmium	0.91		0.79	mg/Kg-dry	5	5/21/2014 09:18 AM
Chromium	10		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Copper	8.3		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Lead	12		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Nickel	14		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Selenium	ND		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Silver	ND		2.0	mg/Kg-dry	5	5/21/2014 09:18 AM
Zinc	46		3.9	mg/Kg-dry	5	5/21/2014 09:18 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Calcium	20		10	mg/L	20	5/22/2014 10:26 PM
Magnesium	15		4.0	mg/L	20	5/22/2014 10:26 PM
Sodium	67		4.0	mg/L	20	5/22/2014 10:26 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Sodium Adsorption Ratio	2.8		0.010	none	1	5/22/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 5/20/14	Analyst: RM
Acenaphthene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Acenaphthylene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Benzo(a)anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Benzo(a)pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Benzo(b)fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Benzo(g,h,i)perylene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Benzo(k)fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Chrysene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: East Wall
Collection Date: 5/19/2014 08:25 AM

Work Order: 1405983
Lab ID: 1405983-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Fluoranthene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Fluorene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Indeno(1,2,3-cd)pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Naphthalene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Pyrene	ND		7.6	µg/Kg-dry	1	5/21/2014 03:09 AM
Surr: 2-Fluorobiphenyl	32.1		12-100	%REC	1	5/21/2014 03:09 AM
Surr: 4-Terphenyl-d14	46.3		25-137	%REC	1	5/21/2014 03:09 AM
Surr: Nitrobenzene-d5	43.3		37-107	%REC	1	5/21/2014 03:09 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 5/20/14		Analyst: BG
Benzene	ND		34	µg/Kg-dry	1	5/20/2014 07:18 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	5/20/2014 07:18 PM
m,p-Xylene	ND		68	µg/Kg-dry	1	5/20/2014 07:18 PM
o-Xylene	ND		34	µg/Kg-dry	1	5/20/2014 07:18 PM
Toluene	ND		34	µg/Kg-dry	1	5/20/2014 07:18 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	5/20/2014 07:18 PM
Surr: 1,2-Dichloroethane-d4	84.6		70-130	%REC	1	5/20/2014 07:18 PM
Surr: 4-Bromofluorobenzene	96.1		70-130	%REC	1	5/20/2014 07:18 PM
Surr: Dibromofluoromethane	93.0		70-130	%REC	1	5/20/2014 07:18 PM
Surr: Toluene-d8	94.8		70-130	%REC	1	5/20/2014 07:18 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 5/22/14		Analyst: JB
Electrical Conductivity @ Saturation	0.65		0.050	mmhos/cm @2	10	5/22/2014 12:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	9.7		0.57	mg/Kg-dry	1	5/22/2014 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 5/21/14		Analyst: EE
Chromium, Hexavalent	0.79		0.57	mg/Kg-dry	1	5/21/2014 01:00 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	12		0.050	% of sample	1	5/20/2014 02:33 PM
PH			SW9045D	Prep: EXTRACT / 5/21/14		Analyst: EE
pH	8.9			s.u.	1	5/21/2014 09:00 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: South Wall
Collection Date: 5/19/2014 07:20 AM

Work Order: 1405983
Lab ID: 1405983-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 5/20/14	Analyst: IT
DRO (C10-C28)	ND		4.7	mg/Kg-dry	1	5/20/2014 10:53 PM
Surr: 4-Terphenyl-d14	83.5		39-133	%REC	1	5/20/2014 10:53 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 5/20/14	Analyst: IT
GRO (C6-C10)	ND		2.8	mg/Kg-dry	1	5/20/2014 06:01 PM
Surr: Toluene-d8	104		50-150	%REC	1	5/20/2014 06:01 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 5/22/14	Analyst: LR
Mercury	0.032		0.016	mg/Kg-dry	1	5/22/2014 11:56 AM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 5/20/14	Analyst: ML
Arsenic	9.5		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Barium	400		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Cadmium	ND		0.92	mg/Kg-dry	5	5/21/2014 09:24 AM
Chromium	11		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Copper	11		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Lead	11		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Nickel	14		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Selenium	2.4		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Silver	ND		2.3	mg/Kg-dry	5	5/21/2014 09:24 AM
Zinc	43		4.6	mg/Kg-dry	5	5/21/2014 09:24 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Calcium	38		10	mg/L	20	5/22/2014 10:38 PM
Magnesium	25		4.0	mg/L	20	5/22/2014 10:38 PM
Sodium	140		4.0	mg/L	20	5/22/2014 10:38 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Sodium Adsorption Ratio	4.2		0.010	none	1	5/22/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 5/20/14	Analyst: RM
Acenaphthene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Acenaphthylene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Benzo(a)anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Benzo(a)pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Benzo(b)fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Benzo(g,h,i)perylene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Benzo(k)fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Chrysene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: South Wall
Collection Date: 5/19/2014 07:20 AM

Work Order: 1405983
Lab ID: 1405983-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Fluorene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Indeno(1,2,3-cd)pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Naphthalene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 03:31 AM
Surr: 2-Fluorobiphenyl	27.2		12-100	%REC	1	5/21/2014 03:31 AM
Surr: 4-Terphenyl-d14	44.6		25-137	%REC	1	5/21/2014 03:31 AM
Surr: Nitrobenzene-d5	38.5		37-107	%REC	1	5/21/2014 03:31 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 5/20/14		Analyst: RS
Benzene	ND		34	µg/Kg-dry	1	5/20/2014 07:23 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	5/20/2014 07:23 PM
m,p-Xylene	ND		68	µg/Kg-dry	1	5/20/2014 07:23 PM
o-Xylene	ND		34	µg/Kg-dry	1	5/20/2014 07:23 PM
Toluene	ND		34	µg/Kg-dry	1	5/20/2014 07:23 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	5/20/2014 07:23 PM
Surr: 1,2-Dichloroethane-d4	102		70-130	%REC	1	5/20/2014 07:23 PM
Surr: 4-Bromofluorobenzene	101		70-130	%REC	1	5/20/2014 07:23 PM
Surr: Dibromofluoromethane	93.6		70-130	%REC	1	5/20/2014 07:23 PM
Surr: Toluene-d8	99.4		70-130	%REC	1	5/20/2014 07:23 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 5/22/14		Analyst: JB
Electrical Conductivity @ Saturation	1.2		0.050	mmhos/cm @2	10	5/22/2014 12:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	10		0.57	mg/Kg-dry	1	5/22/2014 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 5/21/14		Analyst: EE
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	5/21/2014 01:00 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	12		0.050	% of sample	1	5/20/2014 02:33 PM
PH			SW9045D	Prep: EXTRACT / 5/21/14		Analyst: EE
pH	8.9			s.u.	1	5/21/2014 09:00 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: West Wall
Collection Date: 5/19/2014 07:25 AM

Work Order: 1405983
Lab ID: 1405983-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	410		SW8015M		Prep: SW3541 / 5/20/14	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	<i>80.3</i>		<i>4.6</i>	<i>mg/Kg-dry</i>	<i>1</i>	5/20/2014 11:23 PM
			<i>39-133</i>	<i>%REC</i>	<i>1</i>	5/20/2014 11:23 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	890		SW8015		Prep: SW5035 / 5/20/14	Analyst: IT
<i>Surr: Toluene-d8</i>	<i>104</i>		<i>2.8</i>	<i>mg/Kg-dry</i>	<i>1</i>	5/20/2014 06:27 PM
			<i>50-150</i>	<i>%REC</i>	<i>1</i>	5/20/2014 06:27 PM
MERCURY BY CVAA						
Mercury	0.025		SW7471		Prep: SW7471 / 5/22/14	Analyst: LR
			0.016	mg/Kg-dry	1	5/22/2014 12:07 PM
METALS BY ICP-MS						
Arsenic	10		SW6020A		Prep: SW3050B / 5/20/14	Analyst: ML
			2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Barium	350		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Cadmium	ND		0.87	mg/Kg-dry	5	5/21/2014 09:30 AM
Chromium	13		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Copper	11		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Lead	12		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Nickel	15		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Selenium	2.6		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Silver	ND		2.2	mg/Kg-dry	5	5/21/2014 09:30 AM
Zinc	48		4.4	mg/Kg-dry	5	5/21/2014 09:30 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Calcium	64		10	mg/L	20	5/22/2014 10:44 PM
Magnesium	68		4.0	mg/L	20	5/22/2014 10:44 PM
Sodium	320		4.0	mg/L	20	5/22/2014 10:44 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Sodium Adsorption Ratio	6.7		0.010	none	1	5/22/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 5/20/14	Analyst: RM
Acenaphthene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Acenaphthylene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Benzo(a)anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Benzo(a)pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Benzo(b)fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Benzo(g,h,i)perylene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Benzo(k)fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Chrysene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: West Wall
Collection Date: 5/19/2014 07:25 AM

Work Order: 1405983
Lab ID: 1405983-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Fluoranthene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Fluorene	32		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Indeno(1,2,3-cd)pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Naphthalene	170		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Pyrene	ND		7.5	µg/Kg-dry	1	5/21/2014 04:14 AM
Surr: 2-Fluorobiphenyl	32.7		12-100	%REC	1	5/21/2014 04:14 AM
Surr: 4-Terphenyl-d14	45.5		25-137	%REC	1	5/21/2014 04:14 AM
Surr: Nitrobenzene-d5	59.1		37-107	%REC	1	5/21/2014 04:14 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 5/20/14		Analyst: BG
Benzene	ND		34	µg/Kg-dry	1	5/20/2014 07:44 PM
Ethylbenzene	1,000		34	µg/Kg-dry	1	5/20/2014 07:44 PM
m,p-Xylene	21,000		340	µg/Kg-dry	5	5/21/2014 03:20 PM
o-Xylene	3,300		34	µg/Kg-dry	1	5/20/2014 07:44 PM
Toluene	690		34	µg/Kg-dry	1	5/20/2014 07:44 PM
Xylenes, Total	25,000		510	µg/Kg-dry	5	5/21/2014 03:20 PM
Surr: 1,2-Dichloroethane-d4	84.1		70-130	%REC	1	5/20/2014 07:44 PM
Surr: 1,2-Dichloroethane-d4	94.8		70-130	%REC	5	5/21/2014 03:20 PM
Surr: 4-Bromofluorobenzene	91.0		70-130	%REC	1	5/20/2014 07:44 PM
Surr: 4-Bromofluorobenzene	96.0		70-130	%REC	5	5/21/2014 03:20 PM
Surr: Dibromofluoromethane	92.1		70-130	%REC	1	5/20/2014 07:44 PM
Surr: Dibromofluoromethane	96.6		70-130	%REC	5	5/21/2014 03:20 PM
Surr: Toluene-d8	108		70-130	%REC	5	5/21/2014 03:20 PM
Surr: Toluene-d8	128		70-130	%REC	1	5/20/2014 07:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 5/22/14		Analyst: JB
Electrical Conductivity @ Saturation	2.8		0.050	mmhos/cm @2	10	5/22/2014 12:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	12		0.56	mg/Kg-dry	1	5/22/2014 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 5/21/14		Analyst: EE
Chromium, Hexavalent	ND		0.55	mg/Kg-dry	1	5/21/2014 01:00 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	11		0.050	% of sample	1	5/20/2014 02:33 PM
PH			SW9045D	Prep: EXTRACT / 5/21/14		Analyst: EE
pH	8.9			s.u.	1	5/21/2014 09:00 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: Bottom
Collection Date: 5/19/2014 07:15 AM

Work Order: 1405983
Lab ID: 1405983-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 5/20/14	Analyst: IT
DRO (C10-C28)	110		4.5	mg/Kg-dry	1	5/20/2014 11:53 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>80.9</i>		<i>39-133</i>	<i>%REC</i>	<i>1</i>	5/20/2014 11:53 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 5/20/14	Analyst: IT
GRO (C6-C10)	270		2.8	mg/Kg-dry	1	5/20/2014 06:53 PM
<i>Surr: Toluene-d8</i>	<i>103</i>		<i>50-150</i>	<i>%REC</i>	<i>1</i>	5/20/2014 06:53 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 5/22/14	Analyst: LR
Mercury	0.039		0.017	mg/Kg-dry	1	5/22/2014 12:09 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 5/20/14	Analyst: ML
Arsenic	5.0		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Barium	160		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Cadmium	ND		0.90	mg/Kg-dry	5	5/21/2014 09:54 AM
Chromium	11		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Copper	6.3		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Lead	11		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Nickel	15		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Selenium	4.4		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Silver	ND		2.3	mg/Kg-dry	5	5/21/2014 09:54 AM
Zinc	47		4.5	mg/Kg-dry	5	5/21/2014 09:54 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Calcium	72		10	mg/L	20	5/22/2014 10:50 PM
Magnesium	19		4.0	mg/L	20	5/22/2014 10:50 PM
Sodium	280		4.0	mg/L	20	5/22/2014 10:50 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 5/22/14	Analyst: RH
Sodium Adsorption Ratio	7.7		0.010	none	1	5/22/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 5/20/14	Analyst: RM
Acenaphthene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Anthracene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Chrysene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Spill 5.19.14
Sample ID: Bottom
Collection Date: 5/19/2014 07:15 AM

Work Order: 1405983
Lab ID: 1405983-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Fluoranthene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Fluorene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Naphthalene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Pyrene	ND		7.4	µg/Kg-dry	1	5/21/2014 03:52 AM
Surr: 2-Fluorobiphenyl	33.0		12-100	%REC	1	5/21/2014 03:52 AM
Surr: 4-Terphenyl-d14	44.6		25-137	%REC	1	5/21/2014 03:52 AM
Surr: Nitrobenzene-d5	38.9		37-107	%REC	1	5/21/2014 03:52 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 5/20/14		Analyst: BG
Benzene	ND		33	µg/Kg-dry	1	5/20/2014 08:10 PM
Ethylbenzene	100		33	µg/Kg-dry	1	5/20/2014 08:10 PM
m,p-Xylene	1,800		67	µg/Kg-dry	1	5/20/2014 08:10 PM
o-Xylene	320		33	µg/Kg-dry	1	5/20/2014 08:10 PM
Toluene	55		33	µg/Kg-dry	1	5/20/2014 08:10 PM
Xylenes, Total	2,100		100	µg/Kg-dry	1	5/20/2014 08:10 PM
Surr: 1,2-Dichloroethane-d4	84.6		70-130	%REC	1	5/20/2014 08:10 PM
Surr: 4-Bromofluorobenzene	89.2		70-130	%REC	1	5/20/2014 08:10 PM
Surr: Dibromofluoromethane	92.7		70-130	%REC	1	5/20/2014 08:10 PM
Surr: Toluene-d8	109		70-130	%REC	1	5/20/2014 08:10 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 5/22/14		Analyst: JB
Electrical Conductivity @ Saturation	2.1		0.050	mmhos/cm @2	10	5/22/2014 12:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	10		0.56	mg/Kg-dry	1	5/22/2014 01:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 5/21/14		Analyst: EE
Chromium, Hexavalent	ND		0.54	mg/Kg-dry	1	5/21/2014 01:00 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	10		0.050	% of sample	1	5/20/2014 02:33 PM
PH			SW9045D	Prep: EXTRACT / 5/21/14		Analyst: EE
pH	8.1			s.u.	1	5/21/2014 09:00 AM

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

ALS Group USA, Corp

Date: 28-May-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1405983

Project: WPX PA 23-33 Condensate Spill 5.19.14

Batch ID: **58818**

Instrument ID **GC8**

Method: **SW8015M**

MBLK		Sample ID: DBLKS1-58818-58818				Units: mg/Kg		Analysis Date: 5/20/2014 05:24 PM		
Client ID:		Run ID: GC8_140520A				SeqNo: 2772126		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.692	0	1.667	0	102	39-133		0		

LCS		Sample ID: DLCSS1-58818-58818				Units: mg/Kg		Analysis Date: 5/20/2014 05:54 PM		
Client ID:		Run ID: GC8_140520A				SeqNo: 2772127		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	139.3	4.2	166.7	0	83.6	61-109		0		
Surr: 4-Terphenyl-d14	1.45	0	1.667	0	87	39-133		0		

MS		Sample ID: 1405918-01A MS				Units: mg/Kg		Analysis Date: 5/20/2014 06:24 PM		
Client ID:		Run ID: GC8_140520A				SeqNo: 2772128		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	327.3	7.9	314	93.63	74.4	48-110		0		
Surr: 4-Terphenyl-d14	2.093	0	3.14	0	66.6	39-133		0		

MSD		Sample ID: 1405918-01A MSD				Units: mg/Kg		Analysis Date: 5/20/2014 06:54 PM		
Client ID:		Run ID: GC8_140520A				SeqNo: 2772129		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	354.5	8.1	324.5	93.63	80.4	48-110	327.3	7.96	30	
Surr: 4-Terphenyl-d14	2.156	0	3.245	0	66.4	39-133	2.093	2.97	30	

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58833** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-58833-58833				Units: µg/Kg		Analysis Date: 5/20/2014 03:26 PM		
Client ID:		Run ID: GC9_140520A				SeqNo: 2772036		Prep Date: 5/20/2014		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	4694	0	5000	0	93.9	50-150	0			

LCS		Sample ID: LCS-58833-58833				Units: µg/Kg		Analysis Date: 5/20/2014 03:00 PM		
Client ID:		Run ID: GC9_140520A				SeqNo: 2772034		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	467900	2,500	500000	0	93.6	70-130	0			
Surr: Toluene-d8	4518	0	5000	0	90.4	50-150	0			

MS		Sample ID: 1405981-01A MS				Units: µg/Kg		Analysis Date: 5/20/2014 09:04 PM		
Client ID:		Run ID: GC9_140520A				SeqNo: 2772054		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	468500	2,500	500000	0	93.7	70-130	0			
Surr: Toluene-d8	4704	0	5000	0	94.1	50-150	0			

MSD		Sample ID: 1405981-01A MSD				Units: µg/Kg		Analysis Date: 5/20/2014 09:30 PM		
Client ID:		Run ID: GC9_140520A				SeqNo: 2772056		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	467100	2,500	500000	0	93.4	70-130	468500	0.289	30	
Surr: Toluene-d8	4763	0	5000	0	95.3	50-150	4704	1.26	30	

The following samples were analyzed in this batch:

1405983-01A	1405983-02A	1405983-03A
1405983-04A	1405983-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58897** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-58897-58897				Units: mg/Kg		Analysis Date: 5/22/2014 11:36 AM		
Client ID:		Run ID: HG1_140522A				SeqNo: 2775167		Prep Date: 5/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-58897-58897				Units: mg/Kg		Analysis Date: 5/22/2014 11:38 AM		
Client ID:		Run ID: HG1_140522A				SeqNo: 2775168		Prep Date: 5/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1681 0.020 0.1665 0 101 80-120 0

MS		Sample ID: 1405940-01AMS					Units: mg/Kg		Analysis Date: 5/22/2014 11:45 AM		
Client ID:			Run ID: HG1_140522A			SeqNo: 2775231		Prep Date: 5/22/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.1322 0.015 0.1208 0.02488 88.8 75-125 0

MSD		Sample ID: 1405940-01AMSD				Units: mg/Kg		Analysis Date: 5/22/2014 11:47 AM		
Client ID:		Run ID: HG1_140522A				SeqNo: 2775232		Prep Date: 5/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1333 0.014 0.1171 0.02488 92.6 75-125 0.1322 0.851 35

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58836** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK				Sample ID: MBLK-58836-58836				Units: mg/Kg			Analysis Date: 5/21/2014 06:41 AM			
Client ID:				Run ID: ICPMS1_140520B				SeqNo: 2772363			Prep Date: 5/20/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic		ND	0.25											
Barium		ND	0.25											
Cadmium		ND	0.10											
Chromium		ND	0.25											
Copper		ND	0.25											
Lead		ND	0.25											
Nickel		ND	0.25											
Selenium		ND	0.25											
Silver		ND	0.25											
Zinc		0.04804	0.50								J			

LCS				Sample ID: LCS-58836-58836				Units: mg/Kg			Analysis Date: 5/21/2014 06:46 AM		
Client ID:			Run ID: ICPMS1_140520B				SeqNo: 2772364		Prep Date: 5/20/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic	4.555	0.25	5	0	91.1	80-120	0						
Barium	4.967	0.25	5	0	99.3	80-120	0						
Cadmium	4.717	0.10	5	0	94.3	80-120	0						
Chromium	4.983	0.25	5	0	99.7	80-120	0						
Copper	4.755	0.25	5	0	95.1	80-120	0						
Lead	4.718	0.25	5	0	94.4	80-120	0						
Nickel	4.866	0.25	5	0	97.3	80-120	0						
Selenium	4.067	0.25	5	0	81.3	80-120	0						
Silver	4.727	0.25	5	0	94.5	80-120	0						
Zinc	4.174	0.50	5	0	83.5	80-120	0						

MS				Sample ID: 1405675-07AMS			Units: mg/Kg		Analysis Date: 5/21/2014 07:39 AM		
Client ID:			Run ID: ICPMS1_140520B			SeqNo: 2772375		Prep Date: 5/20/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	7.429	0.37	7.474	1.291	82.1	75-125	0				
Barium	14.63	0.37	7.474	6.853	104	75-125	0				
Cadmium	6.805	0.15	7.474	0.02136	90.8	75-125	0				
Chromium	10.53	0.37	7.474	3.224	97.8	75-125	0				
Copper	8.587	0.37	7.474	1.922	89.2	75-125	0				
Lead	8.064	0.37	7.474	1.27	90.9	75-125	0				
Nickel	9.746	0.37	7.474	2.784	93.1	75-125	0				
Selenium	6.441	0.37	7.474	0.5072	79.4	75-125	0				
Silver	6.7	0.37	7.474	0.004244	89.6	75-125	0				
Zinc	10.43	0.75	7.474	4.537	78.8	75-125	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58836** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 1405675-07AMSD				Units: mg/Kg		Analysis Date: 5/21/2014 07:45 AM		
Client ID:		Run ID: ICPMS1_140520B				SeqNo: 2772376		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.223	0.36	7.278	1.291	81.5	75-125	7.429	2.81	25	
Barium	14.62	0.36	7.278	6.853	107	75-125	14.63	0.0326	25	
Cadmium	6.57	0.15	7.278	0.02136	90	75-125	6.805	3.52	25	
Chromium	10.14	0.36	7.278	3.224	95	75-125	10.53	3.8	25	
Copper	8.151	0.36	7.278	1.922	85.6	75-125	8.587	5.21	25	
Lead	8.071	0.36	7.278	1.27	93.5	75-125	8.064	0.0874	25	
Nickel	9.512	0.36	7.278	2.784	92.4	75-125	9.746	2.43	25	
Selenium	6.151	0.36	7.278	0.5072	77.6	75-125	6.441	4.6	25	
Silver	6.343	0.36	7.278	0.004244	87.1	75-125	6.7	5.48	25	
Zinc	10.48	0.73	7.278	4.537	81.7	75-125	10.43	0.52	25	

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58924** Instrument ID **ICPMS2** Method: **SW6020A**

DUP		Sample ID: 1405983-02CDUP				Units: mg/L		Analysis Date: 5/22/2014 10:32 PM		
Client ID: East Wall		Run ID: ICPMS2_140522A				SeqNo: 2776903		Prep Date: 5/22/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	18.08	10	0	0	0	0-0	19.54	7.75		
Magnesium	14.6	4.0	0	0	0	0-0	15.35	5.02		
Sodium	64.96	4.0	0	0	0	0-0	66.82	2.82		

DUP		Sample ID: 1405983-02CDUP				Units: none		Analysis Date: 5/22/2014		
Client ID: East Wall		Run ID: SAR_140522A				SeqNo: 2778272		Prep Date: 5/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	2.755	0.010	0	0	0		2.753	0.0762	50	

The following samples were analyzed in this batch:

1405983-01C	1405983-02C	1405983-03C
1405983-04C	1405983-05C	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58821** Instrument ID **SVMS8** Method: **SW8270**

MBLK		Sample ID: SBLKS1-58821-58821				Units: µg/Kg		Analysis Date: 5/20/2014 11:07 PM		
Client ID:		Run ID: SVMS8_140520A				SeqNo: 2772677		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1244	0	1667	0	74.6	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1707	0	1667	0	102	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1292	0	1667	0	77.5	37-107	0			

LCS		Sample ID: SLCSS1-58821-58821				Units: µg/Kg		Analysis Date: 5/20/2014 11:27 PM		
Client ID:		Run ID: SVMS8_140520A				SeqNo: 2772678		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	468	6.7	666.7	0	70.2	45-110	0			
Acenaphthylene	462.7	6.7	666.7	0	69.4	45-105	0			
Anthracene	569.3	6.7	666.7	0	85.4	55-105	0			
Benzo(a)anthracene	580.3	6.7	666.7	0	87	50-110	0			
Benzo(a)pyrene	607	6.7	666.7	0	91	50-110	0			
Benzo(b)fluoranthene	601	6.7	666.7	0	90.1	45-115	0			
Benzo(g,h,i)perylene	545	6.7	666.7	0	81.7	40-125	0			
Benzo(k)fluoranthene	614.7	6.7	666.7	0	92.2	45-115	0			
Chrysene	575.7	6.7	666.7	0	86.3	55-110	0			
Dibenzo(a,h)anthracene	525.3	6.7	666.7	0	78.8	40-125	0			
Fluoranthene	574.7	6.7	666.7	0	86.2	55-115	0			
Fluorene	493.7	6.7	666.7	0	74	50-110	0			
Indeno(1,2,3-cd)pyrene	517	6.7	666.7	0	77.5	40-120	0			
Naphthalene	411.7	6.7	666.7	0	61.7	40-105	0			
Pyrene	589.3	6.7	666.7	0	88.4	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1071	0	1667	0	64.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1682	0	1667	0	101	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1147	0	1667	0	68.8	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58821** Instrument ID **SVMS8** Method: **SW8270**

MS				Sample ID: 1405957-01C MS			Units: µg/Kg		Analysis Date: 5/21/2014 01:17 AM	
Client ID:		Run ID: SVMS8_140520A			SeqNo: 2772777		Prep Date: 5/20/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1447	20	1996	0	72.5	45-110	0			
Acenaphthylene	1439	20	1996	0	72.1	45-105	0			
Anthracene	1629	20	1996	0	81.6	55-105	0			
Benzo(a)anthracene	1729	20	1996	71.39	83	50-110	0			
Benzo(a)pyrene	1817	20	1996	65.61	87.8	50-110	0			
Benzo(b)fluoranthene	1749	20	1996	97.44	82.7	45-115	0			
Benzo(g,h,i)perylene	1844	20	1996	59.82	89.4	40-125	0			
Benzo(k)fluoranthene	1714	20	1996	41.49	83.8	45-115	0			
Chrysene	1644	20	1996	78.15	78.4	55-110	0			
Dibenzo(a,h)anthracene	1716	20	1996	17.37	85.1	40-125	0			
Fluoranthene	1728	20	1996	129.3	80.1	55-115	0			
Fluorene	1515	20	1996	0	75.9	50-110	0			
Indeno(1,2,3-cd)pyrene	1823	20	1996	66.57	88	40-120	0			
Naphthalene	1190	20	1996	11.58	59	40-105	0			
Pyrene	1730	20	1996	115.8	80.8	45-125	0			
Surr: 2-Fluorobiphenyl	3206	0	4990	0	64.2	12-100	0			
Surr: 4-Terphenyl-d14	4728	0	4990	0	94.7	25-137	0			
Surr: Nitrobenzene-d5	3370	0	4990	0	67.5	37-107	0			

MSD				Sample ID: 1405957-01C MSD			Units: µg/Kg		Analysis Date: 5/21/2014 01:37 AM	
Client ID:		Run ID: SVMS8_140520A			SeqNo: 2772778		Prep Date: 5/20/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1246	19	1876	0	66.4	45-110	1447	14.9	30	
Acenaphthylene	1259	19	1876	0	67.1	45-105	1439	13.3	30	
Anthracene	1410	19	1876	0	75.2	55-105	1629	14.4	30	
Benzo(a)anthracene	1489	19	1876	71.39	75.6	50-110	1729	14.9	30	
Benzo(a)pyrene	1557	19	1876	65.61	79.5	50-110	1817	15.4	30	
Benzo(b)fluoranthene	1485	19	1876	97.44	74	45-115	1749	16.3	30	
Benzo(g,h,i)perylene	1561	19	1876	59.82	80.1	40-125	1844	16.6	30	
Benzo(k)fluoranthene	1489	19	1876	41.49	77.2	45-115	1714	14	30	
Chrysene	1426	19	1876	78.15	71.9	55-110	1644	14.2	30	
Dibenzo(a,h)anthracene	1463	19	1876	17.37	77.1	40-125	1716	15.9	30	
Fluoranthene	1414	19	1876	129.3	68.5	55-115	1728	19.9	30	
Fluorene	1253	19	1876	0	66.8	50-110	1515	18.9	30	
Indeno(1,2,3-cd)pyrene	1564	19	1876	66.57	79.8	40-120	1823	15.3	30	
Naphthalene	1145	19	1876	11.58	60.4	40-105	1190	3.82	30	
Pyrene	1576	19	1876	115.8	77.8	45-125	1730	9.32	30	
Surr: 2-Fluorobiphenyl	3099	0	4689	0	66.1	12-100	3206	3.4	40	
Surr: 4-Terphenyl-d14	4246	0	4689	0	90.6	25-137	4728	10.7	40	
Surr: Nitrobenzene-d5	3393	0	4689	0	72.4	37-107	3370	0.674	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58821** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58823** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: MBLK-58823-58823				Units: µg/Kg		Analysis Date: 5/20/2014 02:09 PM		
Client ID:		Run ID: VMS6_140520A				SeqNo: 2772173		Prep Date: 5/20/2014		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	1009	0	1000	0	101	70-130	0			
Surr: 4-Bromofluorobenzene	993	0	1000	0	99.3	70-130	0			
Surr: Dibromofluoromethane	987.5	0	1000	0	98.8	70-130	0			
Surr: Toluene-d8	1013	0	1000	0	101	70-130	0			

LCS		Sample ID: LCS-58823-58823				Units: µg/Kg		Analysis Date: 5/20/2014 12:52 PM		
Client ID:		Run ID: VMS6_140520A				SeqNo: 2772172		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	970	30	1000	0	97	75-125	0			
Ethylbenzene	992	30	1000	0	99.2	75-125	0			
m,p-Xylene	1968	60	2000	0	98.4	80-125	0			
o-Xylene	980	30	1000	0	98	75-125	0			
Toluene	962	30	1000	0	96.2	70-125	0			
Xylenes, Total	2948	90	3000	0	98.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	976	0	1000	0	97.6	70-130	0			
Surr: 4-Bromofluorobenzene	999.5	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	1022	0	1000	0	102	70-130	0			
Surr: Toluene-d8	999	0	1000	0	99.9	70-130	0			

MS		Sample ID: 1405983-03A MS				Units: µg/Kg		Analysis Date: 5/20/2014 10:00 PM		
Client ID: South Wall		Run ID: VMS6_140520A				SeqNo: 2772175		Prep Date: 5/20/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	936	30	1000	0	93.6	75-125	0			
Ethylbenzene	947	30	1000	0	94.7	75-125	0			
m,p-Xylene	1896	60	2000	31	93.2	80-125	0			
o-Xylene	954.5	30	1000	0	95.4	75-125	0			
Toluene	918	30	1000	0	91.8	70-125	0			
Xylenes, Total	2850	90	3000	31	94	75-125	0			
Surr: 1,2-Dichloroethane-d4	994.5	0	1000	0	99.4	70-130	0			
Surr: 4-Bromofluorobenzene	1028	0	1000	0	103	70-130	0			
Surr: Dibromofluoromethane	997	0	1000	0	99.7	70-130	0			
Surr: Toluene-d8	1003	0	1000	0	100	70-130	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58823** Instrument ID **VMS6** Method: **SW8260B**

MSD				Sample ID: 1405983-03A MSD			Units: µg/Kg		Analysis Date: 5/20/2014 10:26 PM	
Client ID: South Wall				Run ID: VMS6_140520A			SeqNo: 2772176		Prep Date: 5/20/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	916	30	1000	0	91.6	75-125	936	2.16	30	
Ethylbenzene	940	30	1000	0	94	75-125	947	0.742	30	
m,p-Xylene	1891	60	2000	31	93	80-125	1896	0.264	30	
o-Xylene	952	30	1000	0	95.2	75-125	954.5	0.262	30	
Toluene	915	30	1000	0	91.5	70-125	918	0.327	30	
Xylenes, Total	2843	90	3000	31	93.7	75-125	2850	0.263	30	
Surr: 1,2-Dichloroethane-d4	989.5	0	1000	0	99	70-130	994.5	0.504	30	
Surr: 4-Bromofluorobenzene	1042	0	1000	0	104	70-130	1028	1.35	30	
Surr: Dibromofluoromethane	999	0	1000	0	99.9	70-130	997	0.2	30	
Surr: Toluene-d8	1002	0	1000	0	100	70-130	1003	0.0499	30	

The following samples were analyzed in this batch:

1405983-01A	1405983-02A	1405983-03A
1405983-04A	1405983-05A	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58849** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-58849-58849				Units: mg/Kg		Analysis Date: 5/21/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140521F		SeqNo: 2773387		Prep Date: 5/21/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-58849-58849				Units: mg/Kg		Analysis Date: 5/21/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140521F		SeqNo: 2773388		Prep Date: 5/21/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.708 0.50 2 0 85.4 80-120 0

MS		Sample ID: 1405981-01BMS				Units: mg/Kg		Analysis Date: 5/21/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140521F		SeqNo: 2773395		Prep Date: 5/21/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.198 0.50 1.984 0.3789 91.7 75-125 0

MS		Sample ID: 1405981-01BMSI				Units: mg/Kg		Analysis Date: 5/21/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140521F		SeqNo: 2773397		Prep Date: 5/21/2014		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1169 49 1452 0.3789 80.5 75-125 0

MSD		Sample ID: 1405981-01BMSD				Units: mg/Kg		Analysis Date: 5/21/2014 01:00 PM		
Client ID:		Run ID: WETCHEM_140521F		SeqNo: 2773396		Prep Date: 5/21/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.42 0.49 1.961 0.3789 104 75-125 2.198 9.58 20

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58867** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-58867-58867					Units: s.u.		Analysis Date: 5/21/2014 09:00 AM		
Client ID:			Run ID: WETCHEM_140521N			SeqNo: 2773877		Prep Date: 5/21/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	4.04	0	4	0	101	90-110	0			
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DUP		Sample ID: 14051022-01C DUP					Units: s.u.		Analysis Date: 5/21/2014 09:00 AM		
Client ID:			Run ID: WETCHEM_140521N			SeqNo: 2773879		Prep Date: 5/21/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	8.56	0	0	0	0	0-0	8.59	0.35	20	
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The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **58924** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1405983-02C DUP				Units: mmhos/cm @25°		Analysis Date: 5/22/2014 12:30 PM		
Client ID: East Wall		Run ID: WETCHEM_140522H				SeqNo: 2775317		Prep Date: 5/22/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.667	0.050	0	0	0		0.654	1.97	50	

The following samples were analyzed in this batch:

1405983-01C	1405983-02C	1405983-03C
1405983-04C	1405983-05C	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1405983
Project: WPX PA 23-33 Condensate Spill 5.19.14

QC BATCH REPORT

Batch ID: **R141130** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R141130				Units: % of sample		Analysis Date: 5/20/2014 02:33 PM		
Client ID:		Run ID: MOIST_140520A				SeqNo: 2772162		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-R141130				Units: % of sample		Analysis Date: 5/20/2014 02:33 PM		
Client ID:		Run ID: MOIST_140520A				SeqNo: 2772161		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.99 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1405916-15A DUP				Units: % of sample		Analysis Date: 5/20/2014 02:33 PM		
Client ID:		Run ID: MOIST_140520A				SeqNo: 2772141		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.26 0.050 0 0 0 0-0 12.84 3.22 20

DUP		Sample ID: 1405983-04B DUP				Units: % of sample		Analysis Date: 5/20/2014 02:33 PM		
Client ID: West Wall		Run ID: MOIST_140520A				SeqNo: 2772159		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.82 0.050 0 0 0 0-0 11.1 2.55 20

The following samples were analyzed in this batch:

1405983-01B	1405983-02B	1405983-03B
1405983-04B	1405983-05B	

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

ALS Parachute Custody Seal
 Time 1700 Date 5-19
 Name [Signature]

fedex.com 1800.GoFedEx 1800.463.3339

FedEx Express **NEW Package US Airbill**

8001 2142 2524

0200

Form 10 No.

FedEx Retrieval Copy

1 From
 Date 5-19

Sender's Name Parachute Phone 616 298-1033

Company ALS

Address 127 F. 7th St.

City Parachute State CO ZIP 81635

2 Your Internal Billing Reference

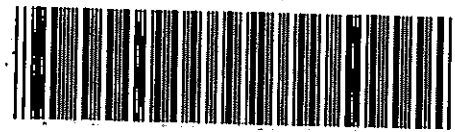
3 To Recipient's Name Sample Receiving Phone 616 399-6070

Company ALS Lab Group

Address 3352 10th AVE

Address Holland State MI ZIP 49424-9263

City Holland State MI ZIP 49424-9263



8001 2142 2524

4 Express Package Service *To meet location. NOTE: Service order has changed. Please select carefully. Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

- 06 ☐ FedEx First Overnight
 01 ☒ FedEx Priority Overnight
 05 ☐ FedEx Standard Overnight

2 or 3 Business Days

- 49 ☐ NEW FedEx 2Day A.M.
 03 ☐ FedEx 2Day
 20 ☐ FedEx Express Saver

5 Packaging *Declared value limit \$500.

- 06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other 24x #613

6 Special Handling and Delivery Signature Options

03 ☐ SATURDAY DELIVERY

- ☐ No Signature Required ☐ Direct Signature ☐ Indirect Signature

Does this shipment contain dangerous goods?

- ☒ No 04 ☐ Yes ☐ Shipper's Declaration ☐ Shipper's Declaration ☐ Dry Ice ☐ Cargo Aircraft Only

7 Payment Bill to:

- 1 ☒ Sender ☐ Recipient ☐ Third Party ☐ Credit C ☐ C. v. Check

Total Packages 1 Total Weight 55 lbs.

*Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 20-May-14 10:00

Work Order: 1405983

Received by: DS

Checklist completed by Diane Shaw

20-May-14

Reviewed by: Ann Preston

20-May-14

eSignature

Date

eSignature

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):

3.0 c

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

5/20/2014 11:41:04 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:



28-May-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Condensate Leak 5.22.14**

Work Order: **14051314**

Dear Mark,

ALS Environmental received 1 sample on 27-May-2014 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 10.

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

Sincerely,

Ann Preston

Electronically approved by: Chad Whelton

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Leak 5.22.14
Work Order: 14051314

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>
14051314-01	West Wall	Soil		5/22/2014 16:50	5/27/2014 09:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Leak 5.22.14
WorkOrder: 14051314

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

<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

ALS Group USA, Corp**Date:** 28-May-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Condensate Leak 5.22.14
Sample ID: West Wall
Collection Date: 5/22/2014 04:50 PM

Work Order: 14051314
Lab ID: 14051314-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 5/27/14	Analyst: IT
DRO (C10-C28)	ND		4.7	mg/Kg-dry	1	5/28/2014 11:10 AM
Surr: 4-Terphenyl-d14	85.4		39-133	%REC	1	5/28/2014 11:10 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 5/27/14	Analyst: IT
GRO (C6-C10)	ND		2.8	mg/Kg-dry	1	5/27/2014 07:34 PM
Surr: Toluene-d8	121		50-150	%REC	1	5/27/2014 07:34 PM
MOISTURE						
			A2540 G			Analyst: AT
Moisture	11		0.050	% of sample	1	5/27/2014 12:15 PM

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

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 14051314

Project: WPX PA 23-33 Condensate Leak 5.22.14

Batch ID: 59015

Instrument ID GC8

Method: SW8015M

MBLK		Sample ID: DBLKS1-59015-59015				Units: mg/Kg		Analysis Date: 5/27/2014 09:40 PM		
Client ID:		Run ID: GC8_140527A				SeqNo: 2782274		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.688	0	1.667	0	101	39-133	0			

LCS		Sample ID: DLCSS1-59015-59015				Units: mg/Kg		Analysis Date: 5/27/2014 10:10 PM		
Client ID:		Run ID: GC8_140527A				SeqNo: 2782275		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	143	4.2	166.7	0	85.8	61-109	0			
Surr: 4-Terphenyl-d14	1.37	0	1.667	0	82.2	39-133	0			

MS		Sample ID: 14051288-01B MS				Units: mg/Kg		Analysis Date: 5/27/2014 10:40 PM		
Client ID:		Run ID: GC8_140527A				SeqNo: 2782276		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	300.8	8.0	319.8	30.4	84.5	48-110	0			
Surr: 4-Terphenyl-d14	3.026	0	3.198	0	94.6	39-133	0			

MSD		Sample ID: 14051288-01B MSD				Units: mg/Kg		Analysis Date: 5/27/2014 11:10 PM		
Client ID:		Run ID: GC8_140527A				SeqNo: 2782277		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	265.6	7.9	314	30.4	74.9	48-110	300.8	12.4	30	
Surr: 4-Terphenyl-d14	2.707	0	3.14	0	86.2	39-133	3.026	11.1	30	

The following samples were analyzed in this batch:

14051314-01A

Client: HRL Compliance Solutions, Inc
Work Order: 14051314
Project: WPX PA 23-33 Condensate Leak 5.22.14

QC BATCH REPORT

Batch ID: **59027** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: MBLK-59027-59027				Units: µg/Kg		Analysis Date: 5/27/2014 04:19 PM		
Client ID:		Run ID: GC10_140527A				SeqNo: 2783424		Prep Date: 5/27/2014		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	6304	0	5000	0	126	50-150	0			

LCS		Sample ID: LCS-59027-59027				Units: µg/Kg		Analysis Date: 5/27/2014 02:32 PM		
Client ID:		Run ID: GC10_140527A				SeqNo: 2783422		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	451900	2,500	500000	0	90.4	70-130	0			
Surr: Toluene-d8	5562	0	5000	0	111	50-150	0			

MS		Sample ID: 14051314-01A MS				Units: µg/Kg		Analysis Date: 5/28/2014 12:48 PM		
Client ID: West Wall		Run ID: GC10_140527A				SeqNo: 2783447		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	456300	2,500	500000	0	91.3	70-130	0			
Surr: Toluene-d8	5710	0	5000	0	114	50-150	0			

MSD		Sample ID: 14051314-01A MSD				Units: µg/Kg		Analysis Date: 5/28/2014 01:12 AM		
Client ID: West Wall		Run ID: GC10_140527A				SeqNo: 2783444		Prep Date: 5/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	461300	2,500	500000	0	92.3	70-130	456300	1.1	30	
Surr: Toluene-d8	5624	0	5000	0	112	50-150	5710	1.53	30	

The following samples were analyzed in this batch:

14051314-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14051314
Project: WPX PA 23-33 Condensate Leak 5.22.14

QC BATCH REPORT

Batch ID: **R141485** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R141485					Units: % of sample		Analysis Date: 5/27/2014 12:15 PM		
Client ID:			Run ID: MOIST_140527B			SeqNo: 2782770		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-R141485					Units: % of sample		Analysis Date: 5/27/2014 12:15 PM		
Client ID:			Run ID: MOIST_140527B			SeqNo: 2782769		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 99.99 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 14051232-05B DUP					Units: % of sample		Analysis Date: 5/27/2014 12:15 PM		
Client ID:			Run ID: MOIST_140527B			SeqNo: 2782756		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 12.13 0.050 0 0 0 0-0 11.67 3.87 20

DUP		Sample ID: 14051311-01A DUP				Units: % of sample		Analysis Date: 5/27/2014 12:15 PM		
Client ID:		Run ID: MOIST_140527B			SeqNo: 2782760		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.6 0.050 0 0 0 0-0 12.56 0.318 20

The following samples were analyzed in this batch:

14051314-01A

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

From: (818) 399-8070
 Sample Receiving
 ALS Laboratory Group
 3352 128th Avenue
 Holland, MI 49424

Origin ID: GRRR



Ship Date: 20MAY14
 ActWgt: 54.9 LB
 GND: 22840448NET3400

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 05234-1
 Invoice #
 PO # Parachute
 Dept #

SHIP TO: (818) 399-8070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL SENDER

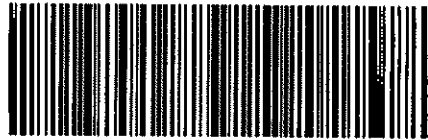
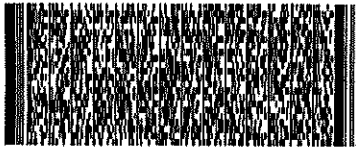
HOLLAND, MI 49424

SATURDAY 12:00P
 PRIORITY OVERNIGHT

TRK# 7700 8717 0897
 8281

68 GRRR

49424
 MI-US
 GRR



8225 M5234F220

After printing this label:

1. Use the "Print" button on this page to print your label to your laser or inkjet printer.
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ALS Parachute Custody Seal

Time 1700

Date 5-23

Name [Signature]

[Large handwritten signature]

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 27-May-14 09:00

Work Order: 14051314

Received by: DS

Checklist completed by Diane Shaw

27-May-14

Reviewed by: Chad Whelton

28-May-14

eSignature

Date

eSignature

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):

14.8 c

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

5/27/2014 10:17:26 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-Jul-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Landfarm 6.27.14**

Work Order: **14061529**

Dear Mark,

ALS Environmental received 1 sample on 28-Jun-2014 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 23.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Joseph Ribar

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Landfarm 6.27.14
Work Order: 14061529

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>
14061529-01	Batch 1 PA 23-33	Soil		6/27/2014 12:10	6/28/2014 10:00	<input type="checkbox"/>

ALS Group USA, Corp

Date: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Landfarm 6.27.14
Sample ID: Batch 1 PA 23-33
Collection Date: 6/27/2014 12:10 PM

Work Order: 14061529
Lab ID: 14061529-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 6/30/14	Analyst: IT
DRO (C10-C28)	110		4.6	mg/Kg-dry	1	7/1/2014 05:49 AM
Surr: 4-Terphenyl-d14	72.8		39-133	%REC	1	7/1/2014 05:49 AM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 6/30/14	Analyst: IT
GRO (C6-C10)	280		2.8	mg/Kg-dry	1	7/1/2014 06:37 AM
Surr: Toluene-d8	101		50-150	%REC	1	7/1/2014 06:37 AM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 6/30/14	Analyst: LR
Mercury	0.020		0.015	mg/Kg-dry	1	7/1/2014 04:41 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 6/30/14	Analyst: ML
Arsenic	11		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Barium	300		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Cadmium	ND		0.87	mg/Kg-dry	5	7/1/2014 03:31 AM
Chromium	15		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Copper	12		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Lead	15		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Nickel	17		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Selenium	ND		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Silver	ND		2.2	mg/Kg-dry	5	7/1/2014 03:31 AM
Zinc	59		4.4	mg/Kg-dry	5	7/1/2014 03:31 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Calcium	250		10	mg/L	20	7/2/2014 06:39 PM
Magnesium	110		4.0	mg/L	20	7/2/2014 06:39 PM
Sodium	380		4.0	mg/L	20	7/2/2014 06:39 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Sodium Adsorption Ratio	5.0		0.010	none	1	7/2/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 7/1/14	Analyst: RM
Acenaphthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Chrysene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM

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

ALS Group USA, Corp

Date: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Landfarm 6.27.14
Sample ID: Batch 1 PA 23-33
Collection Date: 6/27/2014 12:10 PM

Work Order: 14061529
Lab ID: 14061529-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Fluorene	33		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Naphthalene	260		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:06 PM
Surr: 2-Fluorobiphenyl	71.9		12-100	%REC	1	7/1/2014 10:06 PM
Surr: 4-Terphenyl-d14	121		25-137	%REC	1	7/1/2014 10:06 PM
Surr: Nitrobenzene-d5	62.7		37-107	%REC	1	7/1/2014 10:06 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/30/14	Analyst: RS	
Benzene	ND		34	µg/Kg-dry	1	6/30/2014 06:29 PM
Ethylbenzene	190		34	µg/Kg-dry	1	6/30/2014 06:29 PM
m,p-Xylene	8,700		68	µg/Kg-dry	1	6/30/2014 06:29 PM
o-Xylene	1,700		34	µg/Kg-dry	1	6/30/2014 06:29 PM
Toluene	170		34	µg/Kg-dry	1	6/30/2014 06:29 PM
Xylenes, Total	10,000		100	µg/Kg-dry	1	6/30/2014 06:29 PM
Surr: 1,2-Dichloroethane-d4	96.4		70-130	%REC	1	6/30/2014 06:29 PM
Surr: 4-Bromofluorobenzene	100		70-130	%REC	1	6/30/2014 06:29 PM
Surr: Dibromofluoromethane	94.9		70-130	%REC	1	6/30/2014 06:29 PM
Surr: Toluene-d8	106		70-130	%REC	1	6/30/2014 06:29 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 7/2/14	Analyst: JB	
Electrical Conductivity @ Saturation	4.4		0.050	mmhos/cm @25	10	7/2/2014 05:00 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: EE		
Chromium, Trivalent	15		0.57	mg/Kg-dry	1	7/2/2014 04:15 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 7/1/14	Analyst: JI	
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	7/1/2014 03:30 PM
MOISTURE			A2540 G	Analyst: TM		
Moisture	12		0.050	% of sample	1	6/30/2014 02:35 PM
PH			SW9045D	Prep: EXTRACT / 6/30/14	Analyst: AT	
pH	8.1		s.u.		1	7/1/2014 02:08 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

<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: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60160** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-60160-60160				Units: mg/Kg		Analysis Date: 6/30/2014 06:18 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830660		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.563	0	1.667	0	93.8	39-133	0			

LCS		Sample ID: DLCSS1-60160-60160				Units: mg/Kg		Analysis Date: 6/30/2014 06:48 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830662		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	123.7	4.2	166.7	0	74.2	61-109	0			
Surr: 4-Terphenyl-d14	1.134	0	1.667	0	68	39-133	0			

MS		Sample ID: 14061532-01B MS				Units: mg/Kg		Analysis Date: 6/30/2014 07:18 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830664		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	298.1	8.0	319.1	96.45	63.2	48-110	0			
Surr: 4-Terphenyl-d14	1.934	0	3.191	0	60.6	39-133	0			

MSD		Sample ID: 14061532-01B MSD				Units: mg/Kg		Analysis Date: 6/30/2014 07:48 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830666		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	325	8.0	319.2	96.45	71.6	48-110	298.1	8.64	30	
Surr: 4-Terphenyl-d14	2.178	0	3.192	0	68.2	39-133	1.934	11.9	30	

The following samples were analyzed in this batch:

14061529-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60154** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-60154-60154				Units: µg/Kg		Analysis Date: 7/1/2014 02:21 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831010		Prep Date: 6/30/2014		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>	4768	0	5000	0	95.4	50-150	0			

LCS		Sample ID: LCS-60154-60154				Units: µg/Kg		Analysis Date: 7/1/2014 01:55 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831009		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	452200	2,500	500000	0	90.4	70-130	0			
<i>Surr: Toluene-d8</i>	5792	0	5000	0	116	50-150	0			

MS		Sample ID: 14061495-01A MS				Units: µg/Kg		Analysis Date: 7/1/2014 03:12 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831012		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1015000	2,500	500000	305100	142	70-130	0			S
<i>Surr: Toluene-d8</i>	6626	0	5000	0	133	50-150	0			

MSD		Sample ID: 14061495-01A MSD				Units: µg/Kg		Analysis Date: 7/1/2014 03:38 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831013		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1050000	2,500	500000	305100	149	70-130	1015000	3.41	30	S
<i>Surr: Toluene-d8</i>	7222	0	5000	0	144	50-150	6626	8.61	30	

The following samples were analyzed in this batch:

14061529-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60152** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-60152-60152				Units: mg/Kg		Analysis Date: 7/1/2014 01:32 PM		
Client ID:		Run ID: HG1_140701A				SeqNo: 2831625		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-60152-60152				Units: mg/Kg		Analysis Date: 7/1/2014 01:35 PM		
Client ID:		Run ID: HG1_140701A				SeqNo: 2831626		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1727 0.020 0.1665 0 104 80-120 0

MS		Sample ID: 14061448-08AMS				Units: mg/Kg		Analysis Date: 7/1/2014 01:39 PM		
Client ID:		Run ID: HG1_140701A				SeqNo: 2831628		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.135 0.013 0.1116 0.01755 105 75-125 0

MSD		Sample ID: 14061448-08AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 01:41 PM		
Client ID:		Run ID: HG1_140701A				SeqNo: 2831629		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1334 0.014 0.1125 0.01755 103 75-125 0.135 1.22 35

The following samples were analyzed in this batch:

14061529-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60166** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60166-60166				Units: mg/Kg		Analysis Date: 6/30/2014 10:52 PM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830427		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	0.003018	0.25								J
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.04484	0.50								J

LCS		Sample ID: LCS-60166-60166				Units: mg/Kg		Analysis Date: 6/30/2014 10:58 PM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830428		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.678	0.25	5	0	93.6	80-120	0			
Barium	4.859	0.25	5	0	97.2	80-120	0			
Cadmium	4.724	0.10	5	0	94.5	80-120	0			
Chromium	4.852	0.25	5	0	97	80-120	0			
Copper	4.722	0.25	5	0	94.4	80-120	0			
Lead	4.869	0.25	5	0	97.4	80-120	0			
Nickel	4.82	0.25	5	0	96.4	80-120	0			
Selenium	4.583	0.25	5	0	91.7	80-120	0			
Zinc	4.712	0.50	5	0	94.2	80-120	0			

MS		Sample ID: 14061516-01AMS				Units: mg/Kg		Analysis Date: 7/1/2014 03:07 AM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830468		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.701	0.38	7.587	0.6424	93	75-125	0			
Barium	14.31	0.38	7.587	5.608	115	75-125	0			
Cadmium	7.261	0.15	7.587	0.0284	95.3	75-125	0			
Chromium	10.42	0.38	7.587	2.247	108	75-125	0			
Copper	8.278	0.38	7.587	1.118	94.4	75-125	0			
Lead	9.537	0.38	7.587	1.204	110	75-125	0			
Nickel	9.393	0.38	7.587	1.901	98.7	75-125	0			
Selenium	6.832	0.38	7.587	0.3487	85.4	75-125	0			
Silver	7.091	0.38	7.587	0.002946	93.4	75-125	0			
Zinc	14.35	0.76	7.587	5.144	121	75-125	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60166** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 14061516-01AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 03:13 AM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830469		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.523	0.38	7.508	0.6424	91.6	75-125	7.701	2.35	25	
Barium	14.46	0.38	7.508	5.608	118	75-125	14.31	1.04	25	
Cadmium	7.233	0.15	7.508	0.0284	96	75-125	7.261	0.39	25	
Chromium	10.4	0.38	7.508	2.247	109	75-125	10.42	0.186	25	
Copper	8.138	0.38	7.508	1.118	93.5	75-125	8.278	1.7	25	
Lead	8.461	0.38	7.508	1.204	96.7	75-125	9.537	12	25	
Nickel	9.542	0.38	7.508	1.901	102	75-125	9.393	1.57	25	
Selenium	7.161	0.38	7.508	0.3487	90.7	75-125	6.832	4.7	25	
Silver	7.121	0.38	7.508	0.002946	94.8	75-125	7.091	0.42	25	
Zinc	12.66	0.75	7.508	5.144	100	75-125	14.35	12.5	25	

The following samples were analyzed in this batch:

14061529-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60187** Instrument ID **ICPMS1** Method: **SW6020A**

DUP		Sample ID: 14061529-01CDUP				Units: mg/L		Analysis Date: 7/2/2014 06:46 PM		
Client ID: Batch 1 PA 23-33		Run ID: ICPMS1_140702A				SeqNo: 2834621		Prep Date: 7/2/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	222.6	10	0	0	0	0-0	253.8	13.1		
Magnesium	97.06	4.0	0	0	0	0-0	111.2	13.6		
Sodium	333.2	4.0	0	0	0	0-0	377.8	12.5		

DUP		Sample ID: 14061529-01CDUP				Units: none		Analysis Date: 7/2/2014		
Client ID: Batch 1 PA 23-33		Run ID: SAR_140702A				SeqNo: 2837120		Prep Date: 7/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	4.691	0.010	0	0	0		4.976	5.9	50	

The following samples were analyzed in this batch:

14061529-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

MBLK		Sample ID: SBLKS1-60200-60200				Units: µg/Kg		Analysis Date: 7/1/2014 10:59 PM		
Client ID:		Run ID: SVMS8_140701A				SeqNo: 2833652		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1158	0	1667	0	69.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1651	0	1667	0	99.1	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1196	0	1667	0	71.7	37-107	0			

LCS		Sample ID: SLCSS1-60200-60200				Units: µg/Kg		Analysis Date: 7/1/2014 11:19 PM		
Client ID:		Run ID: SVMS8_140701A				SeqNo: 2833654		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	488	6.7	666.7	0	73.2	45-110	0			
Acenaphthylene	550.7	6.7	666.7	0	82.6	45-105	0			
Anthracene	623	6.7	666.7	0	93.4	55-105	0			
Benzo(a)anthracene	653	6.7	666.7	0	97.9	50-110	0			
Benzo(a)pyrene	709	6.7	666.7	0	106	50-110	0			
Benzo(b)fluoranthene	675.3	6.7	666.7	0	101	45-115	0			
Benzo(g,h,i)perylene	616	6.7	666.7	0	92.4	40-125	0			
Benzo(k)fluoranthene	611.3	6.7	666.7	0	91.7	45-115	0			
Chrysene	620	6.7	666.7	0	93	55-110	0			
Dibenzo(a,h)anthracene	711.3	6.7	666.7	0	107	40-125	0			
Fluoranthene	656.3	6.7	666.7	0	98.4	55-115	0			
Fluorene	547.7	6.7	666.7	0	82.1	50-110	0			
Indeno(1,2,3-cd)pyrene	764.3	6.7	666.7	0	115	40-120	0			
Naphthalene	465	6.7	666.7	0	69.7	40-105	0			
Pyrene	619	6.7	666.7	0	92.8	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1214	0	1667	0	72.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1709	0	1667	0	103	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1290	0	1667	0	77.4	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

MS				Sample ID: 14061475-02A MS			Units: µg/Kg		Analysis Date: 7/2/2014 12:20 AM		
Client ID:			Run ID: SVMS8_140701A			SeqNo: 2833660		Prep Date: 7/1/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	873.8	13	1294	7.288	67	45-110	0				
Acenaphthylene	1105	13	1294	129.9	75.4	45-105	0				
Anthracene	1139	13	1294	101.7	80.2	55-105	0				
Benzo(a)anthracene	1474	13	1294	340.5	87.6	50-110	0				
Benzo(a)pyrene	1561	13	1294	349.1	93.7	50-110	0				
Benzo(b)fluoranthene	1821	13	1294	637.7	91.4	45-115	0				
Benzo(g,h,i)perylene	1261	13	1294	271.3	76.5	40-125	0				
Benzo(k)fluoranthene	1311	13	1294	195.1	86.3	45-115	0				
Chrysene	1510	13	1294	373.3	87.9	55-110	0				
Dibenzo(a,h)anthracene	1297	13	1294	107.3	92	40-125	0				
Fluoranthene	1797	13	1294	556.2	95.9	55-115	0				
Fluorene	996.6	13	1294	14.24	75.9	50-110	0				
Indeno(1,2,3-cd)pyrene	1582	13	1294	334.9	96.4	40-120	0				
Naphthalene	818.8	13	1294	84.14	56.8	40-105	0				
Pyrene	1565	13	1294	564.1	77.4	45-125	0				
Surr: 2-Fluorobiphenyl	2061	0	3234	0	63.7	12-100	0				
Surr: 4-Terphenyl-d14	2721	0	3234	0	84.1	25-137	0				
Surr: Nitrobenzene-d5	2048	0	3234	0	63.3	37-107	0				

MSD				Sample ID: 14061475-02A MSD			Units: µg/Kg		Analysis Date: 7/2/2014 12:40 AM		
Client ID:			Run ID: SVMS8_140701A			SeqNo: 2833662		Prep Date: 7/1/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	909.4	13	1290	7.288	69.9	45-110	873.8	4	30		
Acenaphthylene	1131	13	1290	129.9	77.6	45-105	1105	2.33	30		
Anthracene	1224	13	1290	101.7	87	55-105	1139	7.16	30		
Benzo(a)anthracene	1495	13	1290	340.5	89.5	50-110	1474	1.43	30		
Benzo(a)pyrene	1614	13	1290	349.1	98.1	50-110	1561	3.39	30		
Benzo(b)fluoranthene	1828	13	1290	637.7	92.3	45-115	1821	0.401	30		
Benzo(g,h,i)perylene	1357	13	1290	271.3	84.2	40-125	1261	7.33	30		
Benzo(k)fluoranthene	1325	13	1290	195.1	87.6	45-115	1311	1.05	30		
Chrysene	1467	13	1290	373.3	84.8	55-110	1510	2.92	30		
Dibenzo(a,h)anthracene	1327	13	1290	107.3	94.6	40-125	1297	2.29	30		
Fluoranthene	1671	13	1290	556.2	86.4	55-115	1797	7.31	30		
Fluorene	1035	13	1290	14.24	79.1	50-110	996.6	3.8	30		
Indeno(1,2,3-cd)pyrene	1704	13	1290	334.9	106	40-120	1582	7.43	30		
Naphthalene	895.9	13	1290	84.14	62.9	40-105	818.8	8.99	30		
Pyrene	1568	13	1290	564.1	77.8	45-125	1565	0.182	30		
Surr: 2-Fluorobiphenyl	2153	0	3225	0	66.8	12-100	2061	4.39	40		
Surr: 4-Terphenyl-d14	3099	0	3225	0	96.1	25-137	2721	13	40		
Surr: Nitrobenzene-d5	2166	0	3225	0	67.2	37-107	2048	5.58	40		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

14061529- 01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60099** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: MBLK-60099-60099				Units: µg/Kg		Analysis Date: 7/1/2014 04:36 PM		
Client ID:		Run ID: VMS6_140701A				SeqNo: 2832873		Prep Date: 6/30/2014		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	930.5	0	1000	0	93	70-130	0			
Surr: 4-Bromofluorobenzene	937.5	0	1000	0	93.8	70-130	0			
Surr: Dibromofluoromethane	944	0	1000	0	94.4	70-130	0			
Surr: Toluene-d8	1004	0	1000	0	100	70-130	0			

LCS		Sample ID: LCS-60099-60099				Units: µg/Kg		Analysis Date: 6/30/2014 01:10 PM		
Client ID:		Run ID: VMS6_140630A				SeqNo: 2830864		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	907.5	30	1000	0	90.8	75-125	0			
Ethylbenzene	910	30	1000	0	91	75-125	0			
m,p-Xylene	1838	60	2000	0	91.9	80-125	0			
o-Xylene	944.5	30	1000	0	94.4	75-125	0			
Toluene	879.5	30	1000	0	88	70-125	0			
Xylenes, Total	2782	90	3000	0	92.7	75-125	0			
Surr: 1,2-Dichloroethane-d4	928.5	0	1000	0	92.8	70-130	0			
Surr: 4-Bromofluorobenzene	1051	0	1000	0	105	70-130	0			
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0			
Surr: Toluene-d8	997.5	0	1000	0	99.8	70-130	0			

MS		Sample ID: 14061516-04B MS				Units: µg/Kg		Analysis Date: 7/2/2014 01:52 PM		
Client ID:		Run ID: VMS6_140701B				SeqNo: 2833686		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	974.5	30	1000	0	97.4	75-125	0			
Ethylbenzene	932	30	1000	0	93.2	75-125	0			
m,p-Xylene	1875	60	2000	0	93.8	80-125	0			
o-Xylene	922.5	30	1000	0	92.2	75-125	0			
Toluene	932	30	1000	58.5	87.4	70-125	0			
Xylenes, Total	2798	90	3000	0	93.2	75-125	0			
Surr: 1,2-Dichloroethane-d4	907	0	1000	0	90.7	70-130	0			
Surr: 4-Bromofluorobenzene	1010	0	1000	0	101	70-130	0			
Surr: Dibromofluoromethane	974	0	1000	0	97.4	70-130	0			
Surr: Toluene-d8	962	0	1000	0	96.2	70-130	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60099** Instrument ID **VMS6** Method: **SW8260B**

MSD				Sample ID: 14061516-04B MSD			Units: µg/Kg		Analysis Date: 7/2/2014 02:18 PM	
Client ID:				Run ID: VMS6_140701B			SeqNo: 2833687		Prep Date: 6/30/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	934.5	30	1000	0	93.4	75-125	974.5	4.19	30	
Ethylbenzene	906	30	1000	0	90.6	75-125	932	2.83	30	
m,p-Xylene	1822	60	2000	0	91.1	80-125	1875	2.89	30	
o-Xylene	899	30	1000	0	89.9	75-125	922.5	2.58	30	
Toluene	908	30	1000	58.5	85	70-125	932	2.61	30	
Xylenes, Total	2720	90	3000	0	90.7	75-125	2798	2.79	30	
Surr: 1,2-Dichloroethane-d4	891.5	0	1000	0	89.2	70-130	907	1.72	30	
Surr: 4-Bromofluorobenzene	1016	0	1000	0	102	70-130	1010	0.642	30	
Surr: Dibromofluoromethane	963	0	1000	0	96.3	70-130	974	1.14	30	
Surr: Toluene-d8	961.5	0	1000	0	96.2	70-130	962	0.052	30	

The following samples were analyzed in this batch:

14061529-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60176** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-60176-60176				Units: s.u.		Analysis Date: 7/1/2014 02:08 PM		
Client ID:		Run ID: WETCHEM_140701F				SeqNo: 2831636		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.98	0	4	0	99.5	90-110	0			

DUP				Sample ID: 14061442-01B DUP				Units: s.u.			Analysis Date: 7/1/2014 02:08 PM			
Client ID:				Run ID: WETCHEM_140701F				SeqNo: 2831639			Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH	10.14	0	0	0	0	0-0	10.22	0.786	20					

DUP				Sample ID: 14061448-10A DUP				Units: s.u.			Analysis Date: 7/1/2014 02:08 PM			
Client ID:				Run ID: WETCHEM_140701F				SeqNo: 2831647			Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH	8.8	0	0	0	0	0-0	8.73	0.799	20					

The following samples were analyzed in this batch:

14061529-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60187** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14061529-01C DUP				Units: mmhos/cm @25°		Analysis Date: 7/2/2014 05:00 PM		
Client ID: Batch 1 PA 23-33			Run ID: WETCHEM_140702T			SeqNo: 2834078		Prep Date: 7/2/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4	0.050	0	0	0		4.39	9.3	50	

The following samples were analyzed in this batch:

14061529-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **60209** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-60209-60209				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831993		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.49

LCS		Sample ID: LCS-60209-60209				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831994		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.984 0.49 1.961 0 101 80-120 0

MS		Sample ID: 14061374-01AMS				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831996		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.256 0.49 1.969 1.407 -7.68 75-125 0 S

MS		Sample ID: 14061374-01AMSI				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831998		Prep Date: 7/1/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 632.3 50 1603 1.407 39.4 75-125 0 S

MSD		Sample ID: 14061374-01AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831997		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.524 0.50 2 1.407 5.84 75-125 1.256 19.3 20 S

The following samples were analyzed in this batch:

14061529-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061529
Project: WPX PA 23-33 Landfarm 6.27.14

QC BATCH REPORT

Batch ID: **R143660** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R143660				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831312		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-R143660				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831311		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: 14061442-01B DUP				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831301		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 11.67 0.050 0 0 0 0-0 11.51 1.38 20

The following samples were analyzed in this batch:

14061529-01B

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



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER #

14061529

PROJECT NAME		WPX PA23-33 landform		SAMPLER		Reed Wold		DATE		6/27/14		PAGE		1 of 1	
PROJECT No.				SITE ID		PA 23-33		TURNAROUND		3 Day		DISPOSAL		By Lab or Return to Client	
COMPANY NAME		HRL Compliance		BILL TO COMPANY		WPX									
SEND REPORT TO		Mark Mumby		INVOICE ATTN TO		Karolina Blaney									
ADDRESS		2385 F 1/2 Rd		ADDRESS		1058 Co Rd 215									
CITY / STATE / ZIP		Grand Junction, CO 81506		CITY / STATE / ZIP		Parachute CO 81635									
PHONE		970-243-3271		PHONE		970-683-2295									
FAX		970-243-3280		FAX											
E-MAIL		mmumby@hrlcomp.com rwold@hrlcomp.com		E-MAIL		Karolina.blaney@wpxenergy.com									
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC								
1	Batch 1 PA 23-33	SO	6/27/14	12:10	3	8		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)

X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	6/27/14	12:50
RECEIVED BY	MM	MM	6-27	2:50
RELINQUISHED BY	MM	MM	6-27	1400
RECEIVED BY	Diane F. Shan	Diane F. Shan	6/28/14	1000
RELINQUISHED BY				
RECEIVED BY				

From: (970) 245-5783 Nick Martinez ALS Environmental 127 E. 1st Street PARACHUTE, CO 81635		Origin ID: RLA FedEx Express		Ship Date: 22 JUN14 Actual: 20 JUL14 CAO: 2244840NET3400		Dim: 24 X 15 X 15 IN	
BHP TO: (416) 359-5870 sample receiving ALS Laboratory Group 3352 128TH AVE HOLLAND, MI 49424		Delivery Address Bar Code 		Ref # 062714-1 Invoice # PO # Dept #		SATURDAY 12:00P PRIORITY OVERNIGHT	
		TRK# 7704 5169 6272 0291		49424 MLUS GRR			
						5210506C4F23	

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 28-Jun-14 10:00

Work Order: 14061529

Received by: DS

Checklist completed by Diane Shaw 30-Jun-14
eSignature Date

Reviewed by: Ann Preston 01-Jul-14
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 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 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/30/2014 8:17:57 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



28-Jul-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA23-33 Landfarm 7.16.14**

Work Order: **14071140**

Dear Mark,

ALS Environmental received 1 sample on 23-Jul-2014 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA23-33 Landfarm 7.16.14
Work Order: 14071140

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>
14071140-01	PA 23-33 Batch 2	Soil		7/16/2014 12:30	7/23/2014 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA23-33 Landfarm 7.16.14
Work Order: 14071140

Case Narrative

Batch 60893 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 60917 MS/MSD data for BTEX is not related to this project's samples. No data requires qualification.

Batch 61002 sample PA 23-33 Batch 2 MS/MSD recoveries for Hexavalent Chromium were below the lower control limit. The corresponding result in the parent sample may be biased low for Hexavalent Chromium.

<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

<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: 28-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA23-33 Landfarm 7.16.14
Sample ID: PA 23-33 Batch 2
Collection Date: 7/16/2014 12:30 PM

Work Order: 14071140
Lab ID: 14071140-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 7/24/14	Analyst: IT
DRO (C10-C28)	140		4.5	mg/Kg-dry	1	7/24/2014 05:40 PM
Surr: 4-Terphenyl-d14	72.4		39-133	%REC	1	7/24/2014 05:40 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 7/24/14	Analyst: IT
GRO (C6-C10)	120		2.7	mg/Kg-dry	1	7/24/2014 06:19 PM
Surr: Toluene-d8	110		50-150	%REC	1	7/24/2014 06:19 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 7/24/14	Analyst: LR
Mercury	0.029		0.015	mg/Kg-dry	1	7/24/2014 03:54 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 7/23/14	Analyst: ML
Arsenic	9.5		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Barium	350		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Cadmium	ND		0.68	mg/Kg-dry	5	7/24/2014 12:40 AM
Chromium	12		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Copper	11		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Lead	13		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Nickel	16		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Selenium	1.9		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Silver	ND		1.7	mg/Kg-dry	5	7/24/2014 12:40 AM
Zinc	52		3.4	mg/Kg-dry	5	7/24/2014 12:40 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 7/25/14	Analyst: ML
Calcium	510		10	mg/L	20	7/25/2014 01:18 PM
Magnesium	190		4.0	mg/L	20	7/25/2014 01:18 PM
Sodium	440		4.0	mg/L	20	7/25/2014 01:18 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 7/25/14	Analyst: RH
Sodium Adsorption Ratio	4.2		0.010	none	1	7/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 7/24/14	Analyst: RM
Acenaphthene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Acenaphthylene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Anthracene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Benzo(a)anthracene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Benzo(a)pyrene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Benzo(b)fluoranthene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Benzo(g,h,i)perylene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Benzo(k)fluoranthene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Chrysene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM

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

ALS Group USA, Corp

Date: 28-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA23-33 Landfarm 7.16.14
Sample ID: PA 23-33 Batch 2
Collection Date: 7/16/2014 12:30 PM

Work Order: 14071140
Lab ID: 14071140-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Fluoranthene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Fluorene	13		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Indeno(1,2,3-cd)pyrene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Naphthalene	13		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Pyrene	ND		7.2	µg/Kg-dry	1	7/25/2014 03:52 PM
Surr: 2-Fluorobiphenyl	63.3		12-100	%REC	1	7/25/2014 03:52 PM
Surr: 4-Terphenyl-d14	78.4		25-137	%REC	1	7/25/2014 03:52 PM
Surr: Nitrobenzene-d5	57.2		37-107	%REC	1	7/25/2014 03:52 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 7/24/14		Analyst: AK
Benzene	ND		33	µg/Kg-dry	1	7/24/2014 05:48 PM
Ethylbenzene	ND		33	µg/Kg-dry	1	7/24/2014 05:48 PM
m,p-Xylene	190		65	µg/Kg-dry	1	7/24/2014 05:48 PM
o-Xylene	62		33	µg/Kg-dry	1	7/24/2014 05:48 PM
Toluene	ND		33	µg/Kg-dry	1	7/24/2014 05:48 PM
Xylenes, Total	250		98	µg/Kg-dry	1	7/24/2014 05:48 PM
Surr: 1,2-Dichloroethane-d4	100		70-130	%REC	1	7/24/2014 05:48 PM
Surr: 4-Bromofluorobenzene	94.5		70-130	%REC	1	7/24/2014 05:48 PM
Surr: Dibromofluoromethane	96.6		70-130	%REC	1	7/24/2014 05:48 PM
Surr: Toluene-d8	95.1		70-130	%REC	1	7/24/2014 05:48 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 7/25/14		Analyst: JB
Electrical Conductivity @ Saturation	7.0		0.050	mmhos/cm @25	10	7/25/2014 11:15 AM
CHROMIUM, TRIVALENT			CALCULATION	Prep: SW3060A / 7/25/14		Analyst: JJG
Chromium, Trivalent	12		0.54	mg/Kg-dry	1	7/25/2014 04:43 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 7/25/14		Analyst: EE
Chromium, Hexavalent	ND		0.54	mg/Kg-dry	1	7/25/2014 02:30 PM
MOISTURE			A2540 G	Prep: EXTRACT / 7/23/14		Analyst: TM
Moisture	7.9		0.050	% of sample	1	7/23/2014 04:36 PM
PH			SW9045D	Prep: EXTRACT / 7/23/14		Analyst: AT
pH	8.0			s.u.	1	7/23/2014 10:30 AM

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

ALS Group USA, Corp

Date: 28-Jul-14

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60907** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-60907-60907				Units: mg/Kg		Analysis Date: 7/24/2014 03:10 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862339		Prep Date: 7/24/2014		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	1.488	0	2	0	74.4	39-133	0			

LCS		Sample ID: DLCSS1-60907-60907				Units: mg/Kg		Analysis Date: 7/24/2014 03:40 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862340		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	153.6	5.0	200	0	76.8	61-109	0			
Surr: 4-Terphenyl-d14	1.44	0	2	0	72	39-133	0			

MS		Sample ID: 14071150-12A MS				Units: mg/Kg		Analysis Date: 7/24/2014 04:10 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862341		Prep Date: 7/24/2014		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	582.5	16	317.1	379.9	63.9	48-110	0			
Surr: 4-Terphenyl-d14	2.944	0	3.171	0	92.8	39-133	0			

MSD		Sample ID: 14071150-12A MSD				Units: mg/Kg		Analysis Date: 7/24/2014 04:40 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862342		Prep Date: 7/24/2014		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	563.6	16	326.7	379.9	56.2	48-110	582.5	3.3	30	
Surr: 4-Terphenyl-d14	3.446	0	3.267	0	105	39-133	2.944	15.7	30	

The following samples were analyzed in this batch: 14071140-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60919** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-60919-60919				Units: µg/Kg		Analysis Date: 7/24/2014 12:37 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2861752		Prep Date: 7/24/2014		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>	5364	0	5000	0	107	50-150	0			

LCS		Sample ID: LCS-60919-60919				Units: µg/Kg		Analysis Date: 7/24/2014 12:12 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2861751		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	536300	2,500	500000	0	107	70-130	0			
<i>Surr: Toluene-d8</i>	4578	0	5000	0	91.6	50-150	0			

MS		Sample ID: 14071147-01A MS				Units: µg/Kg		Analysis Date: 7/24/2014 05:28 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2862638		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	485800	2,500	500000	0	97.2	70-130	0			
<i>Surr: Toluene-d8</i>	4562	0	5000	0	91.2	50-150	0			

MSD		Sample ID: 14071147-01A MSD				Units: µg/Kg		Analysis Date: 7/24/2014 05:54 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2862639		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	469600	2,500	500000	0	93.9	70-130	485800	3.38	30	
<i>Surr: Toluene-d8</i>	4513	0	5000	0	90.3	50-150	4562	1.07	30	

The following samples were analyzed in this batch:

14071140-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60823** Instrument ID **HG1** Method: **SW7471**

MBLK				Sample ID: MBLK-60823-60823				Units: mg/Kg		Analysis Date: 7/24/2014 03:26 PM													
Client ID:				Run ID: HG1_140724A				SeqNo: 2861734		Prep Date: 7/24/2014		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury ND 0.020

LCS		Sample ID: LCS-60823-60823				Units:mg/Kg		Analysis Date: 7/24/2014 03:36 PM		
Client ID:			Run ID: HG1_140724A		SeqNo:2861738		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1701 0.020 0.1665 0 102 80-120 0

MS				Sample ID: 14071148-01BMS				Units: mg/Kg			Analysis Date: 7/24/2014 03:50 PM												
Client ID:				Run ID: HG1_140724A				SeqNo: 2861744			Prep Date: 7/24/2014		DF: 1										
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.146 0.013 0.1106 0.03853 97.1 75-125 0

MSD				Sample ID: 14071148-01BMSD				Units:mg/Kg			Analysis Date: 7/24/2014 03:52 PM												
Client ID:				Run ID: HG1_140724A				SeqNo:2861745		Prep Date: 7/24/2014		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.141 0.013 0.1112 0.03853 92.1 75-125 0.146 3.47 35

The following samples were analyzed in this batch:

14071140-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60811** Instrument ID **ICPMS1** Method: **SW6020A**

DUP				Sample ID: 14071143-03BDUP				Units:mg/L			Analysis Date: 7/25/2014 01:36 PM												
Client ID:				Run ID: ICPMS1_140725A				SeqNo:2863204			Prep Date: 7/25/2014		DF: 20										
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	
Calcium				128.5		10		0		0		0		0-0		119.5		7.27					
Magnesium				18.8		4.0		0		0		0		0-0		18.15		3.54					
Sodium				7.21		4.0		0		0		0		0-0		8.564		17.2					

DUP				Sample ID: 14071143-03BDUP				Units: none			Analysis Date: 7/25/2014			
Client ID:				Run ID: SAR_140725A				SeqNo: 2863260			Prep Date: 7/25/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Sodium Adsorption Ratio		0.1572	0.010	0	0	0		0.1929	20.4	50				

The following samples were analyzed in this batch:

14071140-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60893** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60893-60893				Units: mg/Kg		Analysis Date: 7/23/2014 11:56 PM		
Client ID:		Run ID: ICPMS1_140723A				SeqNo: 2860669		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.001325	0.10								J
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.0568	0.50								J

LCS		Sample ID: LCS-60893-60893				Units: mg/Kg		Analysis Date: 7/24/2014 12:02 AM		
Client ID:		Run ID: ICPMS1_140723A				SeqNo: 2860671		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.254	0.25	5	0	85.1	80-120	0			
Cadmium	4.198	0.10	5	0	84	80-120	0			
Chromium	4.556	0.25	5	0	91.1	80-120	0			
Copper	4.392	0.25	5	0	87.8	80-120	0			
Lead	4.222	0.25	5	0	84.4	80-120	0			
Nickel	4.524	0.25	5	0	90.5	80-120	0			
Selenium	4.144	0.25	5	0	82.9	80-120	0			
Silver	4.398	0.25	5	0	88	80-120	0			
Zinc	4.501	0.50	5	0	90	80-120	0			

LCS		Sample ID: LCS-60893-60893				Units: mg/Kg		Analysis Date: 7/24/2014 01:34 PM		
Client ID:		Run ID: ICPMS1_140724A				SeqNo: 2862378		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.106	0.25	5	0	82.1	80-120	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60893** Instrument ID **ICPMS1** Method: **SW6020A**

MS				Sample ID: 14071143-02AMS			Units:mg/Kg		Analysis Date: 7/24/2014 01:24 AM		
Client ID:			Run ID: ICPMS1_140723A			SeqNo:2860688		Prep Date: 7/23/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	16.28	2.0	7.8	8.558	99	75-125	0				
Barium	194.5	2.0	7.8	190.2	55.7	75-125	0			SO	
Cadmium	8.522	0.78	7.8	0.7783	99.3	75-125	0				
Chromium	30.3	2.0	7.8	19.06	144	75-125	0			S	
Copper	26.24	2.0	7.8	19.01	92.7	75-125	0				
Lead	24.48	2.0	7.8	16.43	103	75-125	0				
Nickel	31.2	2.0	7.8	22.16	116	75-125	0				
Selenium	9.224	2.0	7.8	2.48	86.5	75-125	0				
Silver	7.083	2.0	7.8	0.0964	89.6	75-125	0				
Zinc	84.17	3.9	7.8	73.45	137	75-125	0			SO	

MSD				Sample ID: 14071143-02AMSD			Units:mg/Kg		Analysis Date: 7/24/2014 01:31 AM		
Client ID:			Run ID: ICPMS1_140723A			SeqNo:2860689		Prep Date: 7/23/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	17.38	2.0	7.837	8.558	113	75-125	16.28	6.53	25		
Barium	203.9	2.0	7.837	190.2	175	75-125	194.5	4.71	25	SO	
Cadmium	8.531	0.78	7.837	0.7783	98.9	75-125	8.522	0.102	25		
Chromium	30.62	2.0	7.837	19.06	148	75-125	30.3	1.07	25	S	
Copper	26.4	2.0	7.837	19.01	94.4	75-125	26.24	0.618	25		
Lead	24.53	2.0	7.837	16.43	103	75-125	24.48	0.182	25		
Nickel	31.1	2.0	7.837	22.16	114	75-125	31.2	0.334	25		
Selenium	9.334	2.0	7.837	2.48	87.5	75-125	9.224	1.19	25		
Silver	7.226	2.0	7.837	0.0964	91	75-125	7.083	2	25		
Zinc	85.42	3.9	7.837	73.45	153	75-125	84.17	1.48	25	SO	

The following samples were analyzed in this batch:

14071140-01B

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14071140
 Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: 60906 Instrument ID SVMS8 Method: SW8270

MBLK		Sample ID: SBLKS1-60906-60906				Units: µg/Kg		Analysis Date: 7/25/2014 09:24 AM		
Client ID:		Run ID: SVMS8_140725A				SeqNo: 2865522		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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								
Surr: 2-Fluorobiphenyl	1114	0	1667	0	66.8	12-100	0			
Surr: 4-Terphenyl-d14	1694	0	1667	0	102	25-137	0			
Surr: Nitrobenzene-d5	1222	0	1667	0	73.3	37-107	0			

LCS		Sample ID: SLCSS1-60906-60906				Units: µg/Kg		Analysis Date: 7/25/2014 09:44 AM		
Client ID:		Run ID: SVMS8_140725A				SeqNo: 2865535		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	444.3	6.7	666.7	0	66.6	45-110	0			
Acenaphthylene	457.3	6.7	666.7	0	68.6	45-105	0			
Anthracene	537.3	6.7	666.7	0	80.6	55-105	0			
Benzo(a)anthracene	579.3	6.7	666.7	0	86.9	50-110	0			
Benzo(a)pyrene	623.3	6.7	666.7	0	93.5	50-110	0			
Benzo(b)fluoranthene	637	6.7	666.7	0	95.5	45-115	0			
Benzo(g,h,i)perylene	539	6.7	666.7	0	80.8	40-125	0			
Benzo(k)fluoranthene	653.3	6.7	666.7	0	98	45-115	0			
Chrysene	538.3	6.7	666.7	0	80.7	55-110	0			
Dibenzo(a,h)anthracene	603.7	6.7	666.7	0	90.5	40-125	0			
Fluoranthene	589	6.7	666.7	0	88.3	55-115	0			
Fluorene	480.7	6.7	666.7	0	72.1	50-110	0			
Indeno(1,2,3-cd)pyrene	576.3	6.7	666.7	0	86.4	40-120	0			
Naphthalene	418	6.7	666.7	0	62.7	40-105	0			
Pyrene	572.3	6.7	666.7	0	85.8	45-125	0			
Surr: 2-Fluorobiphenyl	1029	0	1667	0	61.8	12-100	0			
Surr: 4-Terphenyl-d14	1593	0	1667	0	95.6	25-137	0			
Surr: Nitrobenzene-d5	1175	0	1667	0	70.5	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60906** Instrument ID **SVMS8** Method: **SW8270**

MS				Sample ID: 14071150-12A MS			Units: µg/Kg		Analysis Date: 7/25/2014 12:12 PM	
Client ID:		Run ID: SVMS8_140725A			SeqNo: 2865537		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	926.5	13	1283	0	72.2	45-110	0			
Acenaphthylene	988.1	13	1283	0	77	45-105	0			
Anthracene	1077	13	1283	4.548	83.5	55-105	0			
Benzo(a)anthracene	1115	13	1283	0	86.9	50-110	0			
Benzo(a)pyrene	1185	13	1283	0	92.3	50-110	0			
Benzo(b)fluoranthene	1191	13	1283	0	92.8	45-115	0			
Benzo(g,h,i)perylene	1088	13	1283	0	84.7	40-125	0			
Benzo(k)fluoranthene	1191	13	1283	0	92.8	45-115	0			
Chrysene	1047	13	1283	0	81.6	55-110	0			
Dibenzo(a,h)anthracene	1212	13	1283	0	94.4	40-125	0			
Fluoranthene	1130	13	1283	0	88	55-115	0			
Fluorene	1025	13	1283	10.4	79	50-110	0			
Indeno(1,2,3-cd)pyrene	1152	13	1283	0	89.8	40-120	0			
Naphthalene	1034	13	1283	38.01	77.6	40-105	0			
Pyrene	987.4	13	1283	0	76.9	45-125	0			
Surr: 2-Fluorobiphenyl	2294	0	3208	0	71.5	12-100	0			
Surr: 4-Terphenyl-d14	2766	0	3208	0	86.2	25-137	0			
Surr: Nitrobenzene-d5	2042	0	3208	0	63.6	37-107	0			

MSD				Sample ID: 14071150-12A MSD			Units: µg/Kg		Analysis Date: 7/25/2014 12:32 PM	
Client ID:		Run ID: SVMS8_140725A			SeqNo: 2865540		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1015	13	1302	0	78	45-110	926.5	9.14	30	
Acenaphthylene	1076	13	1302	0	82.7	45-105	988.1	8.55	30	
Anthracene	1173	13	1302	4.548	89.8	55-105	1077	8.59	30	
Benzo(a)anthracene	1214	13	1302	0	93.2	50-110	1115	8.46	30	
Benzo(a)pyrene	1278	13	1302	0	98.2	50-110	1185	7.55	30	
Benzo(b)fluoranthene	1298	13	1302	0	99.7	45-115	1191	8.53	30	
Benzo(g,h,i)perylene	1165	13	1302	0	89.5	40-125	1088	6.87	30	
Benzo(k)fluoranthene	1307	13	1302	0	100	45-115	1191	9.33	30	
Chrysene	1132	13	1302	0	87	55-110	1047	7.82	30	
Dibenzo(a,h)anthracene	1317	13	1302	0	101	40-125	1212	8.31	30	
Fluoranthene	1258	13	1302	0	96.6	55-115	1130	10.7	30	
Fluorene	1098	13	1302	10.4	83.5	50-110	1025	6.89	30	
Indeno(1,2,3-cd)pyrene	1248	13	1302	0	95.9	40-120	1152	7.98	30	
Naphthalene	966.4	13	1302	38.01	71.3	40-105	1034	6.79	30	
Pyrene	1044	13	1302	0	80.2	45-125	987.4	5.55	30	
Surr: 2-Fluorobiphenyl	2542	0	3254	0	78.1	12-100	2294	10.3	40	
Surr: 4-Terphenyl-d14	2881	0	3254	0	88.6	25-137	2766	4.09	40	
Surr: Nitrobenzene-d5	2332	0	3254	0	71.7	37-107	2042	13.3	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60906** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

14071140-01B

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

Client: HRL Compliance Solutions, Inc
 Work Order: 14071140
 Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60917** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-60917-60917				Units: µg/Kg			Analysis Date: 7/24/2014 05:02 PM		
Client ID:			Run ID: VMS5_140724A				SeqNo:2862515			Prep Date: 7/24/2014		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	1012	0	1000	0	101	70-130		0					
Surr: 4-Bromofluorobenzene	991.5	0	1000	0	99.2	70-130		0					
Surr: Dibromofluoromethane	1012	0	1000	0	101	70-130		0					
Surr: Toluene-d8	975	0	1000	0	97.5	70-130		0					

LCS				Sample ID: LCS-60917-60917			Units: µg/Kg		Analysis Date: 7/24/2014 03:18 PM		
Client ID:		Run ID: VMS5_140724A			SeqNo:2862514		Prep Date: 7/24/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	950.5	30	1000	0	95	75-125	0				
Ethylbenzene	1005	30	1000	0	100	75-125	0				
m,p-Xylene	2024	60	2000	0	101	80-125	0				
o-Xylene	998	30	1000	0	99.8	75-125	0				
Toluene	953	30	1000	0	95.3	70-125	0				
Xylenes, Total	3022	90	3000	0	101	75-125	0				
Surr: 1,2-Dichloroethane-d4	984	0	1000	0	98.4	70-130	0				
Surr: 4-Bromofluorobenzene	1030	0	1000	0	103	70-130	0				
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0				
Surr: Toluene-d8	998	0	1000	0	99.8	70-130	0				

MS					Sample ID: 14071150-01A MS		Units: µg/Kg		Analysis Date: 7/26/2014 12:28 PM		
Client ID:			Run ID: VMS5_140725A			SeqNo:2864776		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	905.5	30	1000	0	90.6	75-125	0				
Ethylbenzene	915.5	30	1000	335	58	75-125	0			S	
m,p-Xylene	1910	60	2000	21260	-967	80-125	0			SO	
o-Xylene	911	30	1000	23.5	88.8	75-125	0				
Toluene	885	30	1000	8.5	87.6	70-125	0				
Xylenes, Total	2820	90	3000	21280	-615	75-125	0			SO	
Surr: 1,2-Dichloroethane-d4	928	0	1000	0	92.8	70-130	0				
Surr: 4-Bromofluorobenzene	1015	0	1000	0	102	70-130	0				
Surr: Dibromofluoromethane	975	0	1000	0	97.5	70-130	0				
Surr: Toluene-d8	978	0	1000	0	97.8	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60917** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 14071150-01A MSD			Units: µg/Kg		Analysis Date: 7/26/2014 12:53 PM		
Client ID:			Run ID: VMS5_140725A			SeqNo:2864777		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	852	30	1000	0	85.2	75-125	905.5	6.09	30		
Ethylbenzene	897.5	30	1000	335	56.2	75-125	915.5	1.99	30	S	
m,p-Xylene	1829	60	2000	21260	-971	80-125	1910	4.31	30	SO	
o-Xylene	881	30	1000	23.5	85.8	75-125	911	3.35	30		
Toluene	841.5	30	1000	8.5	83.3	70-125	885	5.04	30		
Xylenes, Total	2710	90	3000	21280	-619	75-125	2820	4	30	SO	
Surr: 1,2-Dichloroethane-d4	919.5	0	1000	0	92	70-130	928	0.92	30		
Surr: 4-Bromofluorobenzene	1015	0	1000	0	102	70-130	1015	0	30		
Surr: Dibromofluoromethane	959	0	1000	0	95.9	70-130	975	1.65	30		
Surr: Toluene-d8	987.5	0	1000	0	98.8	70-130	978	0.967	30		

The following samples were analyzed in this batch: 14071140-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60811** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14071143-03B DUP				Units: mmhos/cm @25°C		Analysis Date: 7/25/2014 11:15 AM		
Client ID:		Run ID: WETCHEM_140725A				SeqNo: 2862823		Prep Date: 7/25/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.917	0.050	0	0	0		0.883	3.78	50	

The following samples were analyzed in this batch:

14071140-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60904** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-60904-60904					Units:s.u.			Analysis Date: 7/23/2014 10:30 AM				
Client ID:					Run ID: WETCHEM_140723P					SeqNo:2863554			Prep Date: 7/23/2014			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH					3.97		0	4	0	99.2		90-110	0				

DUP		Sample ID: 14071142-01B DUP				Units: s.u.		Analysis Date: 7/23/2014 10:30 AM		
Client ID:		Run ID: WETCHEM_140723P				SeqNo: 2863557		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.06	0	0	0	0	0-0	7.95	1.37	20	

The following samples were analyzed in this batch:

14071140-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **61002** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-61002-61002				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J				SeqNo: 2863320		Prep Date: 7/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-61002-61002				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J				SeqNo: 2863321		Prep Date: 7/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.72 0.50 2 0 86 80-120 0

MS		Sample ID: 14071140-01B MS				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID: PA 23-33 Batch 2		Run ID: WETCHEM_140725J				SeqNo: 2863323		Prep Date: 7/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.8024 0.49 1.976 0.255 27.7 75-125 0 S

MS		Sample ID: 14071140-01B MS High				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID: PA 23-33 Batch 2		Run ID: WETCHEM_140725J				SeqNo: 2863324		Prep Date: 7/25/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 32.15 2.5 39.53 0.255 80.7 75-125 0

MS		Sample ID: 14071140-01B MSI				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID: PA 23-33 Batch 2		Run ID: WETCHEM_140725J				SeqNo: 2863326		Prep Date: 7/25/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 695.6 50 862 0.255 80.7 75-125 0

MSD		Sample ID: 14071140-01B MSD				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID: PA 23-33 Batch 2		Run ID: WETCHEM_140725J				SeqNo: 2863325		Prep Date: 7/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.8366 0.49 1.946 0.255 29.9 75-125 0.8024 4.17 20 S

The following samples were analyzed in this batch:

14071140-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14071140
Project: WPX PA23-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **R145037** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R145037				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861235			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-R145037				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861234		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: 14071140-01B DUP				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID: PA 23-33 Batch 2				Run ID: MOIST_140723D				SeqNo: 2861213			Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Moisture 8.37 0.050 0 0 0 0-0 7.9 5.78 20

DUP				Sample ID: 14071142-01B DUP				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861215		Prep Date:		DF: 1		
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.87 0.050 0 0 0 0-0 11.01 1.28 20

The following samples were analyzed in this batch:

14071140-01B

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



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER #

14071140

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

WPX PA23-33 Landfill

SAMPLER

Reed Wold

DATE

7/21/14

SITE ID

PA 23-33

TURNAROUND

3 Day

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

HRL Compliance

BILL TO COMPANY

WPX

SEND REPORT TO

Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS

2385 F 1/2 Rd

ADDRESS

1058 Co Rd 215

CITY / STATE / ZIP

Grand Junction, CO 81506

CITY / STATE / ZIP

Parachute CO 81635

PHONE

970-243-3271

PHONE

970-683-2295

FAX

970-243-3280

FAX

E-MAIL

mmumby@hrlcomp.com
rwold@hrlcomp.com

E-MAIL

Karolina.blaney@wpenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

PA 23-33
Back 2

SO

7/16/14

12:30

3

8

X X V

*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:	<p>28-3.4°</p>	QC PACKAGE (check below)		RELINQUISHED BY		PRINTED NAME	<p>Reed Wold</p>	DATE	TIME					
		X	LEVEL II (Standard QC)							RECEIVED BY		<p>N.M.</p>	<p>7-21-14</p>	<p>2:00</p>
			LEVEL III (Std QC + forms)											
			LEVEL IV (Std QC + forms + raw data)											
				RELINQUISHED BY		<p>K. J. WIERENCA</p>	<p>7/27/14</p>	<p>1000</p>						
				RECEIVED BY										

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 23-Jul-14 10:00

Work Order: 14071140

Received by: KRW

Checklist completed by Keith Wurenga
eSignature

23-Jul-14
Date

Reviewed by: Ann Preston
eSignature

24-Jul-14
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>2.8-3.4 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>7/23/2014 12:37:28 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

From: (978) 295-5783
 Neil Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RLA

FedEx
Express

Ship Date: 22 JUL 14
 ActWgt: 55.9 LB
 CAD: 22646404NET3550

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



Rat # 67214-1
 Issue #
 PO # Parachute
 Dept #

REF TO: (914) 389-9070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL BENDER

HOLLAND, MI 49424

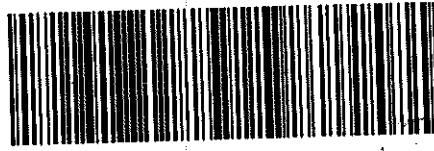
WED - 23 JUL 10:30A
 PRIORITY OVERNIGHT

1 of 2

TRK# 7706 6437 1585
 LEB#
 # MASTER #

49424
 MI-LB
 GRR

XX GRRRA



22000004 0000

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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ALS Parachute Custody Seal
 DATE 7-21-14 Time 1740
 Name *W. Martinez*

ALS Parachute Custody Seal
 DATE 7-21-14 Time 1750
 Name *W. Martinez*

ALS Parachute Custody Seal
 DATE 7-21-14 Time 1700
 Name *W. Martinez*

ALS Parachute Custody Seal
 DATE 7-21-14 Time 1730
 Name *W. Martinez*

ALS Parachute Custody Seal
 DATE 7-21-14 Time 1750
 Name *W. Martinez*

ALS Parachute Custody Seal
 DATE 7-21-14 Time 1730
 Name *W. Martinez*



24-Sep-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Batch 3 9.18.14**

Work Order: **1409946**

Dear Mark,

ALS Environmental received 1 sample on 19-Sep-2014 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 3 9.18.14
Work Order: 1409946

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>
1409946-01	Batch 3	Soil		9/18/2014 13:40	9/19/2014 09:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 3 9.18.14
Work Order: 1409946

Case Narrative

Batch 62960 MS/MSD data for PAHs is not related to this project's samples. No data requires qualification.

Batch 62961 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch 62981 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 63060 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

<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

<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-Sep-14

Client: HRL Compliance Solutions, Inc

Project: WPX PA 23-33 Batch 3 9.18.14

Sample ID: Batch 3

Collection Date: 9/18/2014 01:40 PM

Work Order: 1409946

Lab ID: 1409946-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	92		SW8015M		Prep: SW3541 / 9/19/14	Analyst: IT
			4.8	mg/Kg-dry	1	9/22/2014 02:49 PM
Surr: 4-Terphenyl-d14	79.1		39-133	%REC	1	9/22/2014 02:49 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	230		SW8015		Prep: SW5035 / 9/19/14	Analyst: IT
			2.9	mg/Kg-dry	1	9/20/2014 04:26 PM
Surr: Toluene-d8	100		50-150	%REC	1	9/20/2014 04:26 PM
MERCURY BY CVAA						
Mercury	0.037		SW7471		Prep: SW7471 / 9/22/14	Analyst: LR
			0.017	mg/Kg-dry	1	9/22/2014 07:54 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 9/23/14	Analyst: JEC
Calcium	140		5.0	mg/L	10	9/23/2014 12:38 PM
Magnesium	65		2.0	mg/L	10	9/23/2014 12:38 PM
Sodium	260		2.0	mg/L	10	9/23/2014 12:38 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 9/19/14	Analyst: ML
Arsenic	13		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Barium	440		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Cadmium	ND		0.77	mg/Kg-dry	5	9/20/2014 05:29 AM
Chromium	15		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Copper	13		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Lead	15		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Nickel	16		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Selenium	2.4		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Silver	ND		1.9	mg/Kg-dry	5	9/20/2014 05:29 AM
Zinc	56		3.9	mg/Kg-dry	5	9/20/2014 05:29 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 9/23/14	Analyst: JEC
Sodium Adsorption Ratio	4.5		0.010	none	1	9/23/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 9/19/14	Analyst: RM
Acenaphthene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Acenaphthylene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Anthracene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Chrysene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM

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

ALS Group USA, Corp

Date: 24-Sep-14

Client: HRL Compliance Solutions, Inc

Project: WPX PA 23-33 Batch 3 9.18.14

Sample ID: Batch 3

Collection Date: 9/18/2014 01:40 PM

Work Order: 1409946

Lab ID: 1409946-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Fluoranthene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Fluorene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Naphthalene	11		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Pyrene	ND		7.7	µg/Kg-dry	1	9/20/2014 10:07 PM
Surr: 2-Fluorobiphenyl	74.9		12-100	%REC	1	9/20/2014 10:07 PM
Surr: 4-Terphenyl-d14	97.6		25-137	%REC	1	9/20/2014 10:07 PM
Surr: Nitrobenzene-d5	77.9		37-107	%REC	1	9/20/2014 10:07 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 9/19/14		Analyst: AK
Benzene	ND		35	µg/Kg-dry	1	9/22/2014 09:55 AM
Ethylbenzene	ND		35	µg/Kg-dry	1	9/22/2014 09:55 AM
m,p-Xylene	580		71	µg/Kg-dry	1	9/22/2014 09:55 AM
o-Xylene	190		35	µg/Kg-dry	1	9/22/2014 09:55 AM
Toluene	ND		35	µg/Kg-dry	1	9/22/2014 09:55 AM
Xylenes, Total	760		110	µg/Kg-dry	1	9/22/2014 09:55 AM
Surr: 1,2-Dichloroethane-d4	89.3		70-130	%REC	1	9/22/2014 09:55 AM
Surr: 4-Bromofluorobenzene	95.5		70-130	%REC	1	9/22/2014 09:55 AM
Surr: Dibromofluoromethane	98.2		70-130	%REC	1	9/22/2014 09:55 AM
Surr: Toluene-d8	93.4		70-130	%REC	1	9/22/2014 09:55 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 9/23/14		Analyst: JB
Electrical Conductivity @ Saturation	2.7		0.050	mmhos/cm @25	10	9/23/2014 03:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	15		0.59	mg/Kg-dry	1	9/23/2014 04:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 9/19/14		Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	9/22/2014 03:30 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	15		0.050	% of sample	1	9/19/2014 05:58 PM
PH			SW9045D	Prep: EXTRACT / 9/22/14		Analyst: JB
pH	8.2			s.u.	1	9/23/2014 08:45 AM

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

ALS Group USA, Corp

Date: 24-Sep-14

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62961** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-62961-62961				Units: mg/Kg		Analysis Date: 9/19/2014 05:19 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946281		Prep Date: 9/19/2014		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	1.647	0	2	0	82.4	39-133		0		

LCS		Sample ID: DLCSS1-62961-62961				Units: mg/Kg		Analysis Date: 9/19/2014 05:46 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946284		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	177.4	5.0	200	0	88.7	61-109		0		
Surr: 4-Terphenyl-d14	1.541	0	2	0	77.1	39-133		0		

MS		Sample ID: 1409892-01A MS				Units: mg/Kg		Analysis Date: 9/19/2014 06:14 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946286		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	612	8.3	331.3	72.35	163	48-110		0		S
Surr: 4-Terphenyl-d14	2.654	0	3.313	0	80.1	39-133		0		

MSD		Sample ID: 1409892-01A MSD				Units: mg/Kg		Analysis Date: 9/19/2014 06:41 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946288		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	336	8.1	325.3	72.35	81	48-110	612	58.2	30	R
Surr: 4-Terphenyl-d14	2.433	0	3.253	0	74.8	39-133	2.654	8.68	30	

The following samples were analyzed in this batch: 1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62991** Instrument ID **GC9** Method: **SW8015C**

MBLK		Sample ID: MBLK-62991-62991				Units: µg/Kg		Analysis Date: 9/20/2014 02:00 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945644		Prep Date: 9/19/2014		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>	<i>4800</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>96</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: LCS-62991-62991				Units: µg/Kg		Analysis Date: 9/20/2014 01:34 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945643		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	548800	2,500	500000	0	110	70-130	0			
<i>Surr: Toluene-d8</i>	<i>4410</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>88.2</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 1409920-01A MS				Units: µg/Kg		Analysis Date: 9/20/2014 03:16 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945646		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	552100	2,500	500000	0	110	70-130	0			
<i>Surr: Toluene-d8</i>	<i>6310</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>126</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1409920-01A MSD				Units: µg/Kg		Analysis Date: 9/20/2014 03:41 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945647		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	531300	2,500	500000	0	106	70-130	552100	3.85	30	
<i>Surr: Toluene-d8</i>	<i>6062</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>121</i>	<i>50-150</i>	<i>6310</i>	<i>4.02</i>	<i>30</i>	

The following samples were analyzed in this batch:

1409946-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63044** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-63044-63044				Units: mg/Kg		Analysis Date: 9/22/2014 06:09 PM		
Client ID:		Run ID: HG1_140922A				SeqNo: 2947030		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.003167	0.020								J

LCS		Sample ID: LCS-63044-63044				Units: mg/Kg		Analysis Date: 9/22/2014 06:11 PM		
Client ID:		Run ID: HG1_140922A				SeqNo: 2947031		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1798	0.020	0.1665	0	108	80-120	0			

MS		Sample ID: 1409942-01BMS				Units: mg/Kg		Analysis Date: 9/22/2014 06:16 PM		
Client ID:		Run ID: HG1_140922A				SeqNo: 2947033		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.144	0.013	0.1066	0.0239	113	75-125	0			

MSD		Sample ID: 1409942-01BMSD				Units: mg/Kg		Analysis Date: 9/22/2014 06:18 PM		
Client ID:		Run ID: HG1_140922A				SeqNo: 2947034		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1475	0.013	0.1049	0.0239	118	75-125	0.144	2.37	35	

The following samples were analyzed in this batch:

1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62992** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1409967-02B DUP				Units: mg/L		Analysis Date: 9/23/2014 01:23 PM		
Client ID:		Run ID: ICP2_140923A				SeqNo: 2948639		Prep Date: 9/23/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	1063	5.0	0	0	0	0-0	0			
Magnesium	186.8	2.0	0	0	0	0-0	0			

DUP		Sample ID: 1409967-02B DUP				Units: mg/L		Analysis Date: 9/23/2014 02:17 PM		
Client ID:		Run ID: ICP2_140923A				SeqNo: 2948647		Prep Date: 9/23/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	8911	20	0	0	0	0-0	0			

The following samples were analyzed in this batch:

1409946-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62981** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK				Sample ID: MBLK-62981-62981				Units:mg/Kg		Analysis Date: 9/20/2014 01:48 AM	
Client ID:			Run ID: ICPMS1_140919A			SeqNo:2945336		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.25									
Barium	0.008235	0.25								J	
Cadmium	ND	0.10									
Chromium	ND	0.25									
Copper	ND	0.25									
Lead	ND	0.25									
Nickel	ND	0.25									
Selenium	0.03875	0.25								J	
Silver	ND	0.25									
Zinc	0.1595	0.50								J	

LCS				Sample ID: LCS-62981-62981				Units:mg/Kg			Analysis Date: 9/20/2014 02:37 AM			
Client ID:				Run ID: ICPMS1_140919A				SeqNo:2945349			Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Arsenic	4.591	0.25	5	0	91.8	80-120	0							
Barium	4.777	0.25	5	0	95.5	80-120	0							
Cadmium	4.825	0.10	5	0	96.5	80-120	0							
Chromium	4.854	0.25	5	0	97.1	80-120	0							
Copper	4.638	0.25	5	0	92.8	80-120	0							
Lead	4.714	0.25	5	0	94.3	80-120	0							
Nickel	4.78	0.25	5	0	95.6	80-120	0							
Selenium	4.539	0.25	5	0	90.8	80-120	0							
Silver	4.696	0.25	5	0	93.9	80-120	0							
Zinc	4.86	0.50	5	0	97.2	80-120	0							

MS					Sample ID: 1409900-09BMS		Units:mg/Kg		Analysis Date: 9/22/2014 03:58 PM		
Client ID:			Run ID: ICPMS1_140922A			SeqNo:2946886		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	6.702	0.33	6.596	0.896	88	75-125		0			
Barium	30.48	0.33	6.596	17.81	192	75-125		0		S	
Cadmium	6.241	0.13	6.596	0.05485	93.8	75-125		0			
Chromium	11.41	0.33	6.596	4.301	108	75-125		0			
Copper	7.942	0.33	6.596	1.676	95	75-125		0			
Lead	9.096	0.33	6.596	2.559	99.1	75-125		0			
Nickel	9.96	0.33	6.596	3.197	103	75-125		0			
Selenium	6.379	0.33	6.596	0.6284	87.2	75-125		0			
Silver	5.805	0.33	6.596	0.006848	87.9	75-125		0			
Zinc	20.17	0.66	6.596	11.56	131	75-125		0		S	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62981** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 1409900-09BMSD				Units: mg/Kg		Analysis Date: 9/22/2014 04:04 PM		
Client ID:		Run ID: ICPMS1_140922A				SeqNo: 2946887		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.718	0.33	6.684	0.896	87.1	75-125	6.702	0.239	25	
Barium	25.98	0.33	6.684	17.81	122	75-125	30.48	15.9	25	
Cadmium	6.282	0.13	6.684	0.05485	93.2	75-125	6.241	0.649	25	
Chromium	13.44	0.33	6.684	4.301	137	75-125	11.41	16.3	25	S
Copper	8.175	0.33	6.684	1.676	97.2	75-125	7.942	2.89	25	
Lead	9.452	0.33	6.684	2.559	103	75-125	9.096	3.83	25	
Nickel	10.83	0.33	6.684	3.197	114	75-125	9.96	8.35	25	
Selenium	6.656	0.33	6.684	0.6284	90.2	75-125	6.379	4.24	25	
Silver	5.912	0.33	6.684	0.006848	88.3	75-125	5.805	1.83	25	
Zinc	21.65	0.67	6.684	11.56	151	75-125	20.17	7.08	25	S

The following samples were analyzed in this batch: 1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-62960-62960				Units: µg/Kg		Analysis Date: 9/20/2014 01:45 PM		
Client ID:		Run ID: SVMS5_140920A				SeqNo: 2946208		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1408	0	1667	0	84.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	2048	0	1667	0	123	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1352	0	1667	0	81.1	37-107	0			

LCS		Sample ID: SLCSS1-62960-62960				Units: µg/Kg		Analysis Date: 9/20/2014 02:07 PM		
Client ID:		Run ID: SVMS5_140920A				SeqNo: 2946211		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	674.3	6.7	666.7	0	101	45-110	0			
Acenaphthylene	666	6.7	666.7	0	99.9	45-105	0			
Anthracene	676.7	6.7	666.7	0	101	55-105	0			
Benzo(a)anthracene	718	6.7	666.7	0	108	50-110	0			
Benzo(a)pyrene	731.7	6.7	666.7	0	110	50-110	0			
Benzo(b)fluoranthene	727	6.7	666.7	0	109	45-115	0			
Benzo(g,h,i)perylene	746.3	6.7	666.7	0	112	40-125	0			
Benzo(k)fluoranthene	731	6.7	666.7	0	110	45-115	0			
Chrysene	732.7	6.7	666.7	0	110	55-110	0			
Dibenzo(a,h)anthracene	621	6.7	666.7	0	93.1	40-125	0			
Fluoranthene	732.7	6.7	666.7	0	110	55-115	0			
Fluorene	694.7	6.7	666.7	0	104	50-110	0			
Indeno(1,2,3-cd)pyrene	639	6.7	666.7	0	95.8	40-120	0			
Naphthalene	665.3	6.7	666.7	0	99.8	40-105	0			
Pyrene	779.3	6.7	666.7	0	117	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1368	0	1667	0	82.1	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1823	0	1667	0	109	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1373	0	1667	0	82.4	37-107	0			

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

Client: HRL Compliance Solutions, Inc
 Work Order: 1409946
 Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: 62960 Instrument ID SVMS5 Method: SW846 8270D

MS				Sample ID: 1409698-03B MS			Units: µg/Kg		Analysis Date: 9/20/2014 07:02 PM		
Client ID:		Run ID: SVMS5_140920A			SeqNo:2946213		Prep Date: 9/19/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1185	13	1291	0	91.8	45-110	0				
Acenaphthylene	1328	13	1291	0	103	45-105	0				
Anthracene	1464	13	1291	0	113	55-105	0			S	
Benzo(a)anthracene	1731	13	1291	221.2	117	50-110	0			S	
Benzo(a)pyrene	1633	13	1291	0	126	50-110	0			S	
Benzo(b)fluoranthene	1767	13	1291	0	137	45-115	0			S	
Benzo(g,h,i)perylene	1723	13	1291	0	133	40-125	0			S	
Benzo(k)fluoranthene	1757	13	1291	0	136	45-115	0			S	
Chrysene	1790	13	1291	0	139	55-110	0			S	
Dibenzo(a,h)anthracene	1375	13	1291	40.28	103	40-125	0				
Fluoranthene	1784	13	1291	0	138	55-115	0			S	
Fluorene	1355	13	1291	0	105	50-110	0				
Indeno(1,2,3-cd)pyrene	1468	13	1291	166.6	101	40-120	0				
Naphthalene	1105	13	1291	0	85.6	40-105	0				
Pyrene	2137	13	1291	0	166	45-125	0			S	
Surr: 2-Fluorobiphenyl	2327	0	3227	0	72.1	12-100	0				
Surr: 4-Terphenyl-d14	3762	0	3227	0	117	25-137	0				
Surr: Nitrobenzene-d5	2339	0	3227	0	72.5	37-107	0				

MSD				Sample ID: 1409698-03B MSD			Units: µg/Kg		Analysis Date: 9/20/2014 07:23 PM		
Client ID:			Run ID: SVMS5_140920A			SeqNo:2946216		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1323	13	1299	0	102	45-110	1185	11	30		
Acenaphthylene	1448	13	1299	0	111	45-105	1328	8.6	30	S	
Anthracene	1568	13	1299	0	121	55-105	1464	6.9	30	S	
Benzo(a)anthracene	1820	13	1299	221.2	123	50-110	1731	5.04	30	S	
Benzo(a)pyrene	1720	13	1299	0	132	50-110	1633	5.22	30	S	
Benzo(b)fluoranthene	1881	13	1299	0	145	45-115	1767	6.28	30	S	
Benzo(g,h,i)perylene	1728	13	1299	0	133	40-125	1723	0.254	30	S	
Benzo(k)fluoranthene	1794	13	1299	0	138	45-115	1757	2.05	30	S	
Chrysene	1875	13	1299	0	144	55-110	1790	4.66	30	S	
Dibenzo(a,h)anthracene	1448	13	1299	40.28	108	40-125	1375	5.12	30		
Fluoranthene	1904	13	1299	0	146	55-115	1784	6.46	30	S	
Fluorene	1462	13	1299	0	112	50-110	1355	7.61	30	S	
Indeno(1,2,3-cd)pyrene	1582	13	1299	166.6	109	40-120	1468	7.46	30		
Naphthalene	1277	13	1299	0	98.2	40-105	1105	14.4	30		
Pyrene	2116	13	1299	0	163	45-125	2137	0.977	30	S	
Surr: 2-Fluorobiphenyl	2659	0	3249	0	81.8	12-100	2327	13.3	40		
Surr: 4-Terphenyl-d14	3825	0	3249	0	118	25-137	3762	1.66	40		
Surr: Nitrobenzene-d5	2706	0	3249	0	83.3	37-107	2339	14.6	40		

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

The following samples were analyzed in this batch:

1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62983** Instrument ID **VMS7** Method: **SW8260B**

MBLK				Sample ID: MBLK-62983-62983				Units: µg/Kg			Analysis Date: 9/20/2014 02:07 AM		
Client ID:			Run ID: VMS7_140919A				SeqNo:2944776			Prep Date: 9/19/2014		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	985.5	0	1000	0	98.6	70-130		0					
Surr: 4-Bromofluorobenzene	1004	0	1000	0	100	70-130		0					
Surr: Dibromofluoromethane	968.5	0	1000	0	96.8	70-130		0					
Surr: Toluene-d8	994	0	1000	0	99.4	70-130		0					

LCS				Sample ID: LCS-62983-62983			Units: µg/Kg		Analysis Date: 9/19/2014 10:48 PM		
Client ID:			Run ID: VMS7_140919A			SeqNo:2944775		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	982	30	1000	0	98.2	75-125	0				
Ethylbenzene	1018	30	1000	0	102	75-125	0				
m,p-Xylene	2020	60	2000	0	101	80-125	0				
o-Xylene	993.5	30	1000	0	99.4	75-125	0				
Toluene	980	30	1000	0	98	70-125	0				
Xylenes, Total	3014	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	992.5	0	1000	0	99.2	70-130	0				
Surr: 4-Bromofluorobenzene	981	0	1000	0	98.1	70-130	0				
Surr: Dibromofluoromethane	1004	0	1000	0	100	70-130	0				
Surr: Toluene-d8	999.5	0	1000	0	100	70-130	0				

MS				Sample ID: 1409903-13A MS				Units: µg/Kg		Analysis Date: 9/20/2014 07:57 AM	
Client ID:			Run ID: VMS7_140919A			SeqNo:2944778		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	960.5	30	1000	0	96	75-125	0				
Ethylbenzene	977	30	1000	0	97.7	75-125	0				
m,p-Xylene	1934	60	2000	0	96.7	80-125	0				
o-Xylene	977	30	1000	0	97.7	75-125	0				
Toluene	948.5	30	1000	0	94.8	70-125	0				
Xylenes, Total	2910	90	3000	0	97	75-125	0				
Surr: 1,2-Dichloroethane-d4	991	0	1000	0	99.1	70-130	0				
Surr: 4-Bromofluorobenzene	985.5	0	1000	0	98.6	70-130	0				
Surr: Dibromofluoromethane	987	0	1000	0	98.7	70-130	0				
Surr: Toluene-d8	978	0	1000	0	97.8	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62983** Instrument ID **VMS7** Method: **SW8260B**

MSD				Sample ID: 1409903-13A MSD				Units: µg/Kg			Analysis Date: 9/20/2014 08:22 AM		
Client ID:			Run ID: VMS7_140919A			SeqNo: 2944779			Prep Date: 9/19/2014			DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzene	954.5	30	1000	0	95.4	75-125	960.5	0.627	30				
Ethylbenzene	977	30	1000	0	97.7	75-125	977	0	30				
m,p-Xylene	1950	60	2000	0	97.5	80-125	1934	0.824	30				
o-Xylene	970	30	1000	0	97	75-125	977	0.719	30				
Toluene	944	30	1000	0	94.4	70-125	948.5	0.476	30				
Xylenes, Total	2920	90	3000	0	97.3	75-125	2910	0.309	30				
Surr: 1,2-Dichloroethane-d4	989	0	1000	0	98.9	70-130	991	0.202	30				
Surr: 4-Bromofluorobenzene	987	0	1000	0	98.7	70-130	985.5	0.152	30				
Surr: Dibromofluoromethane	982.5	0	1000	0	98.2	70-130	987	0.457	30				
Surr: Toluene-d8	986.5	0	1000	0	98.6	70-130	978	0.865	30				

The following samples were analyzed in this batch: 1409946-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62992** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1409967-02B DUP				Units: mmhos/cm @25°C		Analysis Date: 9/23/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140923J				SeqNo: 2948682		Prep Date: 9/23/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	60.9	0.050	0	0	0		60.8	0.164	50	

The following samples were analyzed in this batch:

1409946-01C

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

Client: HRL Compliance Solutions, Inc
 Work Order: 1409946
 Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63060** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-63060-63060				Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140922Q				SeqNo: 2946917		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-63060-63060				Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140922Q				SeqNo: 2946916		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.924 0.50 2 0 96.2 80-120 0

MS		Sample ID: 1409966-02A MS				Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140922Q				SeqNo: 2946898		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.1633 0.50 1.992 0.3651 -10.1 75-125 0 JS

MS		Sample ID: 1409966-02A MSI				Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140922Q				SeqNo: 2946900		Prep Date: 9/19/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1321 50 1352 0.3651 97.7 75-125 0

MSD		Sample ID: 1409966-02A MSD				Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140922Q				SeqNo: 2946899		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.2609 0.49 1.976 0.3651 -5.27 75-125 0.1633 0 20 JS

The following samples were analyzed in this batch:

1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63074** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-63074-63074					Units:s.u.			Analysis Date: 9/23/2014 08:45 AM			
Client ID:					Run ID: WETCHEM_140923A					SeqNo:2947366			Prep Date: 9/22/2014		DF: 1	
Analyte					Result	PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH					4.01	0	4	0	100		90-110	0				

DUP					Sample ID: 14091025-01B DUP					Units:s.u.			Analysis Date: 9/23/2014 08:45 AM		
Client ID:				Run ID: WETCHEM_140923A				SeqNo:2947368			Prep Date: 9/22/2014			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		9	0	0	0	0	0-0	9.02	0.222	20					

Sample ID: 1409946-01B DUP					Units: s.u.		Analysis Date: 9/23/2014 08:45 AM				
Client ID: Batch 3			Run ID: WETCHEM_140923A			SeqNo: 2947378		Prep Date: 9/22/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8.23	0	0	0	0	0-0	8.24	0.121	20		

The following samples were analyzed in this batch:

1409946-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409946
Project: WPX PA 23-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **R148652** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R148652				Units: % of sample		Analysis Date: 9/19/2014 05:58 PM		
Client ID:		Run ID: MOIST_140919B				SeqNo: 2946442		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-R148652				Units: % of sample		Analysis Date: 9/19/2014 05:58 PM		
Client ID:		Run ID: MOIST_140919B				SeqNo: 2946441		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: 1409900-09B DUP				Units: % of sample		Analysis Date: 9/19/2014 05:58 PM		
Client ID:		Run ID: MOIST_140919B				SeqNo: 2946422		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.69 0.050 0 0 0 0-0 10.51 1.7 20

DUP		Sample ID: 1409903-13B DUP				Units: % of sample		Analysis Date: 9/19/2014 05:58 PM		
Client ID:		Run ID: MOIST_140919B				SeqNo: 2946427		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 7.57 0.050 0 0 0 0-0 8.21 8.11 20

The following samples were analyzed in this batch:

1409946-01B

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



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TEL: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202/8

WORKORDER #

1409946

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME WPX PA 23-33

SAMPLER Reed Wold

DATE

9/18/14

SITE ID

PA23-33

TURNAROUND

3 Day

PROJECT No.

Batch 3

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

HRL Compliance

BILL TO COMPANY

WPX

SEND REPORT TO

Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS

2385 F 1/2 Rd

ADDRESS

1058 Co Rd 215

CITY / STATE / ZIP

Grand Junction, CO 81506

CITY / STATE / ZIP

Parachute CO 81635

PHONE

970-243-3271

PHONE

970-683-2285

FAX

970-243-3280

FAX

E-MAIL

mmumby@hrlcomp.com
rwold@hrlcomp.com

E-MAIL

Karolina.blaney@wpxenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

01

Batch 3

SO

9/18/14

1:40

3

8

2 x x

*Time Zone (Circle): EST CST MST PST Matrix: D = dirt 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)

X

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

Reed Wold

Reed Wold

9/18/14

3:00

RECEIVED BY

MM

MM

9/18/14

3:00

RELINQUISHED BY

MM

MM

9/18/14

3:00

RECEIVED BY

T.S. 3

T.S. 3

09/19/14

0900

RELINQUISHED BY

MM

MM

09/19/14

0900

RECEIVED BY

MM

MM

09/19/14

0900

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **19-Sep-14 09:00**

Work Order: **1409946**

Received by: **TBB**

Checklist completed by <u>Joseph Ribar</u>	19-Sep-14	Reviewed by: <u>Ann Preston</u>	19-Sep-14
eSignature	Date	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>3.8 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>9/19/2014 11:34:54 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:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (816) 399-6070
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RLA



Ship Date: 18SEP14
 Address: 68.8 LB
 CAD: 22644040NET3550

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



SHIP TO: (816) 399-6070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL NUMBER

Ref # 001814-1
 Invoice #
 PO # Parachute
 Dept #

HOLLAND, MI 49424

2 of 2

FRI - 19 SEP 10:30A
 PRIORITY OVERNIGHT

Mtr# 7712 0858 2206

Mtr# 7712 0858 2103

5291

49424
 MI-US
 GRR

XX HLMA



5291 UCC04080000

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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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.

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 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel: +1 616 399 6070 Fax: +1 616 399 6185	CUSTODY SEAL		Seal Break
	Date: <u>9/18/14</u>	Time: <u>1:20 PM</u>	Date:
	Name: <u>[Signature]</u>		
	Company: <u>ALS</u>		





30-Oct-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Batch 4 10.23.14**

Work Order: **14101451**

Dear Mark,

ALS Environmental received 1 sample on 24-Oct-2014 09:30 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 10.23.14
Work Order: 14101451

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>
14101451-01	Batch 4 PA 23-33	Soil		10/23/2014 13:10	10/24/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 10.23.14
Work Order: 14101451

Case Narrative

Batch 64301 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 64349 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 64351 sample 14101451-01 one BTEX surrogate recovery was high due to matrix interference. The result for Toluene may be biased high.

Batch 64353 sample 14101451-01 GRO surrogate recovery was high due to matrix interference. No data requires qualification.

<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

<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: 30-Oct-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 10.23.14
Sample ID: Batch 4 PA 23-33
Collection Date: 10/23/2014 01:10 PM

Work Order: 14101451
Lab ID: 14101451-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 10/26/14	Analyst: IT
DRO (C10-C28)	520		4.6	mg/Kg-dry	1	10/28/2014 12:00 PM
Surr: 4-Terphenyl-d14	62.1		39-133	%REC	1	10/28/2014 12:00 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 10/27/14	Analyst: IT
GRO (C6-C10)	2,500		2.8	mg/Kg-dry	1	10/27/2014 04:40 PM
Surr: Toluene-d8	200	S	50-150	%REC	1	10/27/2014 04:40 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 10/24/14	Analyst: LR
Mercury	0.022		0.015	mg/Kg-dry	1	10/27/2014 01:45 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 10/24/14	Analyst: JEC
Arsenic	14		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Barium	380		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Cadmium	ND		0.28	mg/Kg-dry	1	10/24/2014 07:30 PM
Chromium	12		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Copper	14		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Lead	20		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Nickel	13		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Selenium	ND		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Silver	ND		0.35	mg/Kg-dry	1	10/24/2014 07:30 PM
Zinc	62		0.70	mg/Kg-dry	1	10/24/2014 07:30 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 10/27/14	Analyst: JEC
Calcium	64		5.0	mg/L	10	10/27/2014 02:09 PM
Magnesium	43		2.0	mg/L	10	10/27/2014 02:09 PM
Sodium	240		2.0	mg/L	10	10/27/2014 02:09 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 10/27/14	Analyst: JEC
Sodium Adsorption Ratio	5.6		0.010	none	1	10/27/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 10/27/14	Analyst: RM
Acenaphthene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Anthracene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Chrysene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM

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

ALS Group USA, Corp

Date: 30-Oct-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 10.23.14
Sample ID: Batch 4 PA 23-33
Collection Date: 10/23/2014 01:10 PM

Work Order: 14101451
Lab ID: 14101451-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Fluorene	29		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Naphthalene	490		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Pyrene	ND		7.4	µg/Kg-dry	1	10/27/2014 11:22 PM
Surr: 2-Fluorobiphenyl	71.4		12-100	%REC	1	10/27/2014 11:22 PM
Surr: 4-Terphenyl-d14	78.9		25-137	%REC	1	10/27/2014 11:22 PM
Surr: Nitrobenzene-d5	85.8		37-107	%REC	1	10/27/2014 11:22 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 10/27/14		Analyst: RS
Benzene	ND		33	µg/Kg-dry	1	10/28/2014 11:21 AM
Ethylbenzene	450		33	µg/Kg-dry	1	10/28/2014 11:21 AM
m,p-Xylene	17,000		270	µg/Kg-dry	4	10/30/2014 01:48 AM
o-Xylene	3,000		33	µg/Kg-dry	1	10/28/2014 11:21 AM
Toluene	560		33	µg/Kg-dry	1	10/28/2014 11:21 AM
Xylenes, Total	19,000		400	µg/Kg-dry	4	10/30/2014 01:48 AM
Surr: 1,2-Dichloroethane-d4	88.8		70-130	%REC	1	10/28/2014 11:21 AM
Surr: 1,2-Dichloroethane-d4	97.8		70-130	%REC	4	10/30/2014 01:48 AM
Surr: 4-Bromofluorobenzene	93.2		70-130	%REC	1	10/28/2014 11:21 AM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	4	10/30/2014 01:48 AM
Surr: Dibromofluoromethane	101		70-130	%REC	4	10/30/2014 01:48 AM
Surr: Dibromofluoromethane	92.2		70-130	%REC	1	10/28/2014 11:21 AM
Surr: Toluene-d8	136	S	70-130	%REC	4	10/30/2014 01:48 AM
Surr: Toluene-d8	208	S	70-130	%REC	1	10/28/2014 11:21 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 10/27/14		Analyst: JB
Electrical Conductivity @ Saturation	1.8		0.050	mmhos/cm @25	10	10/27/2014 05:00 PM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	12		0.56	mg/Kg-dry	1	10/28/2014 08:20 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 10/24/14		Analyst: MB
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	10/27/2014 03:00 PM
MOISTURE			A2540 G	Analyst: RLM		
Moisture	10		0.050	% of sample	1	10/24/2014 03:00 PM
PH			SW9045D	Prep: EXTRACT / 10/24/14		Analyst: STP
pH	8.3			s.u.	1	10/24/2014 02:00 PM

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

ALS Group USA, Corp

Date: 30-Oct-14

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64331** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-64331-64331				Units: mg/Kg		Analysis Date: 10/27/2014 08:17 PM		
Client ID:		Run ID: GC8_141027B				SeqNo: 3003455		Prep Date: 10/26/2014		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								
<i>Surr: 4-Terphenyl-d14</i>	<i>1.601</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>80</i>	<i>39-133</i>	<i>0</i>			

LCS		Sample ID: DLCSS1-64331-64331				Units: mg/Kg		Analysis Date: 10/27/2014 08:45 PM		
Client ID:		Run ID: GC8_141027B				SeqNo: 3003457		Prep Date: 10/26/2014		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			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.188</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>59.4</i>	<i>39-133</i>	<i>0</i>			

MS		Sample ID: 14101448-01A MS				Units: mg/Kg		Analysis Date: 10/27/2014 10:36 PM		
Client ID:		Run ID: GC8_141027B				SeqNo: 3003526		Prep Date: 10/26/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	613.5	8.3	332.1	287.7	98.1	48-110	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>2.088</i>	<i>0</i>	<i>3.321</i>	<i>0</i>	<i>62.9</i>	<i>39-133</i>	<i>0</i>			

MSD		Sample ID: 14101448-01A MSD				Units: mg/Kg		Analysis Date: 10/27/2014 11:04 PM		
Client ID:		Run ID: GC8_141027B				SeqNo: 3003463		Prep Date: 10/26/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	547.9	8.3	330.4	287.7	78.8	48-110	613.5	11.3	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>2.077</i>	<i>0</i>	<i>3.304</i>	<i>0</i>	<i>62.9</i>	<i>39-133</i>	<i>2.088</i>	<i>0.562</i>	<i>30</i>	

The following samples were analyzed in this batch: | 14101451-01B |

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64353** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-64353-64353				Units: µg/Kg		Analysis Date: 10/27/2014 02:59 PM		
Client ID:		Run ID: GC9_141027A				SeqNo: 3004158		Prep Date: 10/27/2014		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>	<i>5772</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>115</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: LCS-64353-64353				Units: µg/Kg		Analysis Date: 10/27/2014 02:34 PM		
Client ID:		Run ID: GC9_141027A				SeqNo: 3004157		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	471300	2,500	500000	0	94.3	70-130	0			
<i>Surr: Toluene-d8</i>	<i>4648</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>93</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 14101450-01A MS				Units: µg/Kg		Analysis Date: 10/27/2014 09:19 PM		
Client ID:		Run ID: GC9_141027A				SeqNo: 3004175		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1216000	2,500	500000	580500	127	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5399</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>108</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 14101450-01A MSD				Units: µg/Kg		Analysis Date: 10/27/2014 09:44 PM		
Client ID:		Run ID: GC9_141027A				SeqNo: 3004176		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1196000	2,500	500000	580500	123	70-130	1216000	1.74	30	
<i>Surr: Toluene-d8</i>	<i>5444</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>109</i>	<i>50-150</i>	<i>5399</i>	<i>0.83</i>	<i>30</i>	

The following samples were analyzed in this batch: 14101451-01A

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64310** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-64310-64310				Units: mg/Kg		Analysis Date: 10/27/2014 01:33 PM		
Client ID:		Run ID: HG1_141027A				SeqNo: 3002231		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-64310-64310				Units: mg/Kg		Analysis Date: 10/27/2014 01:36 PM		
Client ID:		Run ID: HG1_141027A				SeqNo: 3002233		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1722 0.020 0.1665 0 103 80-120 0

MS		Sample ID: 14101370-06BMS				Units: mg/Kg		Analysis Date: 10/27/2014 01:59 PM		
Client ID:		Run ID: HG1_141027A				SeqNo: 3002246		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1257 0.014 0.113 0.000167 111 75-125 0

MSD		Sample ID: 14101370-06BMSD				Units: mg/Kg		Analysis Date: 10/27/2014 02:01 PM		
Client ID:		Run ID: HG1_141027A				SeqNo: 3002247		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1263 0.013 0.1108 0.000167 114 75-125 0.1257 0.428 35

The following samples were analyzed in this batch:

14101451-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64301** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-64301-64301				Units: mg/Kg		Analysis Date: 10/24/2014 06:38 PM		
Client ID:		Run ID: ICP2_141024B				SeqNo: 3000582		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	ND	0.25								
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.1167	0.50								J

LCS		Sample ID: LCS-64301-64301				Units: mg/Kg		Analysis Date: 10/24/2014 06:44 PM		
Client ID:		Run ID: ICP2_141024B				SeqNo: 3000583		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.775	0.25	5	0	95.5	80-120	0			
Barium	4.627	0.25	5	0	92.5	80-120	0			
Cadmium	4.545	0.50	5	0	90.9	80-120	0			
Chromium	4.782	0.25	5	0	95.6	80-120	0			
Copper	4.85	0.50	5	0	97	80-120	0			
Lead	4.822	0.25	5	0	96.4	80-120	0			
Nickel	4.784	0.25	5	0	95.7	80-120	0			
Selenium	4.687	0.50	5	0	93.7	80-120	0			
Silver	5.164	0.25	5	0	103	80-120	0			
Zinc	5.046	0.50	5	0	101	80-120	0			

MS		Sample ID: 14101431-01BMS				Units: mg/Kg		Analysis Date: 10/24/2014 06:55 PM		
Client ID:		Run ID: ICP2_141024B				SeqNo: 3000586		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.72	0.33	6.64	3.648	106	75-125	0			
Barium	3157	0.33	6.64	3834	-10200	75-125	0			SEO
Cadmium	6.332	0.66	6.64	0.07307	94.3	75-125	0			
Chromium	17.3	0.33	6.64	9.182	122	75-125	0			
Copper	18.92	0.66	6.64	12.19	101	75-125	0			
Lead	22.16	0.33	6.64	15.44	101	75-125	0			
Nickel	18.3	0.33	6.64	10.06	124	75-125	0			
Selenium	6.268	0.66	6.64	0.4874	87.1	75-125	0			
Silver	7.507	0.33	6.64	-0.04836	114	75-125	0			
Zinc	61.16	0.66	6.64	44.66	248	75-125	0			SO

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64301** Instrument ID **ICP2** Method: **SW846 6010C**

MS		Sample ID: 14101431-01BMS				Units: mg/Kg		Analysis Date: 10/27/2014 12:50 PM		
Client ID:		Run ID: ICP2_141027A				SeqNo: 3002143		Prep Date: 10/24/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	3587	3.3	6.64	3766	-2690	75-125	0			SO

MSD		Sample ID: 14101431-01BMSD				Units: mg/Kg		Analysis Date: 10/24/2014 07:01 PM		
Client ID:		Run ID: ICP2_141024B				SeqNo: 3000587		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.09	0.33	6.649	3.648	112	75-125	10.72	3.45	20	
Barium	1737	0.33	6.649	3834	-31500	75-125	3157	58	20	SRO
Cadmium	6.179	0.66	6.649	0.07307	91.8	75-125	6.332	2.45	20	
Chromium	17.23	0.33	6.649	9.182	121	75-125	17.3	0.373	20	
Copper	17.37	0.66	6.649	12.19	78	75-125	18.92	8.56	20	
Lead	22.6	0.33	6.649	15.44	108	75-125	22.16	1.94	20	
Nickel	18.62	0.33	6.649	10.06	129	75-125	18.3	1.72	20	S
Selenium	6.177	0.66	6.649	0.4874	85.6	75-125	6.268	1.47	20	
Silver	7.346	0.33	6.649	-0.04836	111	75-125	7.507	2.18	20	
Zinc	63.8	0.66	6.649	44.66	288	75-125	61.16	4.24	20	SO

MSD		Sample ID: 14101431-01BMSD				Units: mg/Kg		Analysis Date: 10/27/2014 12:55 PM		
Client ID:		Run ID: ICP2_141027A				SeqNo: 3002145		Prep Date: 10/24/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	1969	3.3	6.649	3766	-27000	75-125	3587	58.2	20	SRO

The following samples were analyzed in this batch: | 14101451-01B |

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64304** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 14101449-01CDUP				Units: mg/L		Analysis Date: 10/27/2014 02:03 PM		
Client ID:		Run ID: ICP2_141027A				SeqNo: 3002338		Prep Date: 10/27/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	210.3	5.0	0	0	0	0-0	263.3	22.4		
Magnesium	208.6	2.0	0	0	0	0-0	262	22.7		
Sodium	665.8	2.0	0	0	0	0-0	799.4	18.2		

DUP		Sample ID: 14101449-01CDUP				Units: none		Analysis Date: 10/27/2014		
Client ID:		Run ID: SAR_141027A				SeqNo: 3002349		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	7.788	0.010	0	0	0		8.347	6.93	50	

The following samples were analyzed in this batch:

14101451-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64335** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-64335-64335				Units: µg/Kg		Analysis Date: 10/27/2014 06:53 PM		
Client ID:		Run ID: SVMS5_141027A				SeqNo: 3006727		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1287	0	1667	0	77.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1760	0	1667	0	106	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1262	0	1667	0	75.7	37-107	0			

LCS		Sample ID: SLCSS1-64335-64335				Units: µg/Kg		Analysis Date: 10/27/2014 07:16 PM		
Client ID:		Run ID: SVMS5_141027A				SeqNo: 3006728		Prep Date: 10/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	515.3	6.7	666.7	0	77.3	45-110	0			
Acenaphthylene	542.7	6.7	666.7	0	81.4	45-105	0			
Anthracene	609	6.7	666.7	0	91.3	55-105	0			
Benzo(a)anthracene	607.3	6.7	666.7	0	91.1	50-110	0			
Benzo(a)pyrene	658.3	6.7	666.7	0	98.7	50-110	0			
Benzo(b)fluoranthene	676	6.7	666.7	0	101	45-115	0			
Benzo(g,h,i)perylene	580.3	6.7	666.7	0	87	40-125	0			
Benzo(k)fluoranthene	644.3	6.7	666.7	0	96.6	45-115	0			
Chrysene	626.3	6.7	666.7	0	93.9	55-110	0			
Dibenzo(a,h)anthracene	596.7	6.7	666.7	0	89.5	40-125	0			
Fluoranthene	608.7	6.7	666.7	0	91.3	55-115	0			
Fluorene	565	6.7	666.7	0	84.7	50-110	0			
Indeno(1,2,3-cd)pyrene	605	6.7	666.7	0	90.7	40-120	0			
Naphthalene	482	6.7	666.7	0	72.3	40-105	0			
Pyrene	650	6.7	666.7	0	97.5	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1155	0	1667	0	69.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1655	0	1667	0	99.3	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1142	0	1667	0	68.5	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64335** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 14101345-01B MS			Units: µg/Kg		Analysis Date: 10/27/2014 07:38 PM	
Client ID:		Run ID: SVMS5_141027A			SeqNo: 3006729		Prep Date: 10/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1654	19	1938	0	85.3	45-110	0			
Acenaphthylene	1739	19	1938	0	89.7	45-105	0			
Anthracene	1889	19	1938	7.47	97.1	55-105	0			
Benzo(a)anthracene	1820	19	1938	14.94	93.2	50-110	0			
Benzo(a)pyrene	1988	19	1938	24.28	101	50-110	0			
Benzo(b)fluoranthene	2077	19	1938	41.08	105	45-115	0			
Benzo(g,h,i)perylene	1781	19	1938	22.41	90.8	40-125	0			
Benzo(k)fluoranthene	1997	19	1938	16.81	102	45-115	0			
Chrysene	1870	19	1938	28.94	95	55-110	0			
Dibenzo(a,h)anthracene	1826	19	1938	0	94.2	40-125	0			
Fluoranthene	1834	19	1938	62.56	91.4	55-115	0			
Fluorene	1748	19	1938	0	90.2	50-110	0			
Indeno(1,2,3-cd)pyrene	1891	19	1938	23.34	96.4	40-120	0			
Naphthalene	1550	19	1938	0	80	40-105	0			
Pyrene	1963	19	1938	63.49	98	45-125	0			
Surr: 2-Fluorobiphenyl	3663	0	4844	0	75.6	12-100	0			
Surr: 4-Terphenyl-d14	4898	0	4844	0	101	25-137	0			
Surr: Nitrobenzene-d5	3645	0	4844	0	75.3	37-107	0			

MSD				Sample ID: 14101345-01B MSD			Units: µg/Kg		Analysis Date: 10/27/2014 08:00 PM	
Client ID:		Run ID: SVMS5_141027A			SeqNo: 3006730		Prep Date: 10/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1539	18	1828	0	84.2	45-110	1654	7.16	30	
Acenaphthylene	1627	18	1828	0	89	45-105	1739	6.64	30	
Anthracene	1836	18	1828	7.47	100	55-105	1889	2.82	30	
Benzo(a)anthracene	1799	18	1828	14.94	97.6	50-110	1820	1.18	30	
Benzo(a)pyrene	1939	18	1828	24.28	105	50-110	1988	2.5	30	
Benzo(b)fluoranthene	1980	18	1828	41.08	106	45-115	2077	4.78	30	
Benzo(g,h,i)perylene	1767	18	1828	22.41	95.4	40-125	1781	0.82	30	
Benzo(k)fluoranthene	1969	18	1828	16.81	107	45-115	1997	1.39	30	
Chrysene	1858	18	1828	28.94	100	55-110	1870	0.606	30	
Dibenzo(a,h)anthracene	1800	18	1828	0	98.4	40-125	1826	1.45	30	
Fluoranthene	1782	18	1828	62.56	94	55-115	1834	2.89	30	
Fluorene	1670	18	1828	0	91.3	50-110	1748	4.54	30	
Indeno(1,2,3-cd)pyrene	1874	18	1828	23.34	101	40-120	1891	0.907	30	
Naphthalene	1527	18	1828	0	83.5	40-105	1550	1.46	30	
Pyrene	1923	18	1828	63.49	102	45-125	1963	2.03	30	
Surr: 2-Fluorobiphenyl	3500	0	4570	0	76.6	12-100	3663	4.54	40	
Surr: 4-Terphenyl-d14	4752	0	4570	0	104	25-137	4898	3.02	40	
Surr: Nitrobenzene-d5	3524	0	4570	0	77.1	37-107	3645	3.39	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64335** Instrument ID **SVMS5** Method: **SW846 8270D**

The following samples were analyzed in this batch:

14101451-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64351** Instrument ID **VMS8** Method: **SW8260B**

MBLK				Sample ID: MBLK-64351-64351				Units: µg/Kg			Analysis Date: 10/27/2014 05:19 PM			
Client ID:				Run ID: VMS8_141027A				SeqNo:3003610			Prep Date: 10/27/2014		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	1024	0	1000	0	102	70-130	0							
Surr: 4-Bromofluorobenzene	1090	0	1000	0	109	70-130	0							
Surr: Dibromofluoromethane	958	0	1000	0	95.8	70-130	0							
Surr: Toluene-d8	1034	0	1000	0	103	70-130	0							

LCS				Sample ID: LCS-64351-64351				Units: µg/Kg			Analysis Date: 10/27/2014 02:51 PM			
Client ID:				Run ID: VMS8_141027A				SeqNo:3003607			Prep Date: 10/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	1052	30	1000	0	105	75-125	0							
Ethylbenzene	1052	30	1000	0	105	75-125	0							
m,p-Xylene	2114	60	2000	0	106	80-125	0							
o-Xylene	1054	30	1000	0	105	75-125	0							
Toluene	1052	30	1000	0	105	70-125	0							
Xylenes, Total	3168	90	3000	0	106	75-125	0							
Surr: 1,2-Dichloroethane-d4	1012	0	1000	0	101	70-130	0							
Surr: 4-Bromofluorobenzene	1079	0	1000	0	108	70-130	0							
Surr: Dibromofluoromethane	956.5	0	1000	0	95.6	70-130	0							
Surr: Toluene-d8	1062	0	1000	0	106	70-130	0							

MS					Sample ID: 14101485-10A MS			Units: µg/Kg		Analysis Date: 10/28/2014 08:39 AM	
Client ID:			Run ID: VMS7_141027B			SeqNo:3004013		Prep Date: 10/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	978.5	30	1000	0	97.8	75-125	0				
Ethylbenzene	996	30	1000	0	99.6	75-125	0				
m,p-Xylene	1976	60	2000	0	98.8	80-125	0				
o-Xylene	982.5	30	1000	0	98.2	75-125	0				
Toluene	981	30	1000	0	98.1	70-125	0				
Xylenes, Total	2958	90	3000	0	98.6	75-125	0				
Surr: 1,2-Dichloroethane-d4	983	0	1000	0	98.3	70-130	0				
Surr: 4-Bromofluorobenzene	1012	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	974.5	0	1000	0	97.4	70-130	0				
Surr: Toluene-d8	979	0	1000	0	97.9	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64351** Instrument ID **VMS8** Method: **SW8260B**

MSD				Sample ID: 14101485-10A MSD				Units: µg/Kg		Analysis Date: 10/28/2014 09:04 AM	
Client ID:			Run ID: VMS7_141027B			SeqNo: 3004023		Prep Date: 10/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	970.5	30	1000	0	97	75-125	978.5	0.821	30		
Ethylbenzene	993.5	30	1000	0	99.4	75-125	996	0.251	30		
m,p-Xylene	1990	60	2000	0	99.5	80-125	1976	0.706	30		
o-Xylene	980	30	1000	0	98	75-125	982.5	0.255	30		
Toluene	975.5	30	1000	0	97.6	70-125	981	0.562	30		
Xylenes, Total	2970	90	3000	0	99	75-125	2958	0.388	30		
Surr: 1,2-Dichloroethane-d4	992	0	1000	0	99.2	70-130	983	0.911	30		
Surr: 4-Bromofluorobenzene	1009	0	1000	0	101	70-130	1012	0.297	30		
Surr: Dibromofluoromethane	959.5	0	1000	0	96	70-130	974.5	1.55	30		
Surr: Toluene-d8	992.5	0	1000	0	99.2	70-130	979	1.37	30		

The following samples were analyzed in this batch: 14101451-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64288** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-64288-64288				Units: s.u.			Analysis Date: 10/24/2014 02:00 PM			
Client ID:				Run ID: WETCHEM_141024H				SeqNo:2998951			Prep Date: 10/24/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		3.99	0	4	0	99.8	90-110	0						

DUP				Sample ID: 14101404-01A DUP				Units: s.u.			Analysis Date: 10/24/2014 02:00 PM			
Client ID:				Run ID: WETCHEM_141024H				SeqNo: 2998955			Prep Date: 10/24/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		7.77	0	0	0	0	0-0	7.84	0.897	20				

DUP				Sample ID: 14101431-01B DUP				Units: s.u.			Analysis Date: 10/24/2014 02:00 PM		
Client ID:				Run ID: WETCHEM_141024H				SeqNo: 2998960		Prep Date: 10/24/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
pH		8.37	0	0	0	0	0-0	8.43	0.714	20			

The following samples were analyzed in this batch:

14101451-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64304** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14101449-01C DUP				Units: mmhos/cm @25°C		Analysis Date: 10/27/2014 05:00 PM		
Client ID:		Run ID: WETCHEM_141027P				SeqNo: 3002615		Prep Date: 10/27/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	6.84	0.050	0	0	0		6.97	1.88	50	

The following samples were analyzed in this batch:

14101451-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **64349** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-64349-64349				Units: mg/Kg		Analysis Date: 10/27/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_141027J				SeqNo: 3002457		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-64349-64349				Units: mg/Kg		Analysis Date: 10/27/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_141027J				SeqNo: 3002456		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.82 0.50 2 0 91 80-120 0

MS		Sample ID: 14101431-01B MS				Units: mg/Kg		Analysis Date: 10/27/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_141027J				SeqNo: 3002449		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.49 1.961 0.06275 -3.2 75-125 0 S

MS		Sample ID: 14101431-01B MSI				Units: mg/Kg		Analysis Date: 10/27/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_141027J				SeqNo: 3002451		Prep Date: 10/24/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 594 50 664 0.06275 89.5 75-125 0

MSD		Sample ID: 14101431-01B MSD				Units: mg/Kg		Analysis Date: 10/27/2014 03:00 PM		
Client ID:		Run ID: WETCHEM_141027J				SeqNo: 3002450		Prep Date: 10/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.49 1.961 0.06275 -3.2 75-125 0.1137 0 20 S

The following samples were analyzed in this batch:

14101451-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101451
Project: WPX PA 23-33 Batch 4 10.23.14

QC BATCH REPORT

Batch ID: **R151112** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R151112				Units: % of sample			Analysis Date: 10/24/2014 03:00 PM			
Client ID:				Run ID: MOIST_141024C				SeqNo: 3000400			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-R151112				Units: % of sample		Analysis Date: 10/24/2014 03:00 PM		
Client ID:		Run ID: MOIST_141024C				SeqNo: 3000399		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: 14101329-07B DUP				Units: % of sample			Analysis Date: 10/24/2014 03:00 PM			
Client ID:				Run ID: MOIST_141024C				SeqNo: 3000384			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 58 0.050 0 0 0 0-0 58.34 0.584 20

DUP				Sample ID: 14101344-01A DUP				Units: % of sample		Analysis Date: 10/24/2014 03:00 PM			
Client ID:				Run ID: MOIST_141024C				SeqNo: 3000388		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Moisture 69.57 0.050 0 0 0 0-0 71.27 2.41 20

The following samples were analyzed in this batch:

14101451-01B

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



WORKORDER
1410451

PROJECT NAME		SAMPLER		DATE		PAGE	
PROJECT No.		SITE ID		TURNAROUND		DISPOSAL	
COMPANY NAME		BILL TO COMPANY		INVOICE ATTN TO		By Lab or Return to Client	
SEND REPORT TO		ADDRESS		CITY / STATE / ZIP		PHONE	
FAX		E-MAIL		Matrix		Sample Date	
Lab ID		Field ID		Sample Time		# Bottles	
Pres.		QC					
PA23-33 Batch 4		Mike Lobato		10/23/14		3 Day	
PA23-33		PA23-33		3 Day		3 Day	
HRL Compliance Solutions, Inc.		WPX Energy		Karolina Blaney		Karolina Blaney	
Mark Mumby		1058 Co. Rd. 215		Parachute, CO 81635		970-683-2295	
2385 F 1/2 Road		1058 Co. Rd. 215		Parachute, CO 81635		970-683-2295	
Grand Junction, CO 81505		Parachute, CO 81635		970-683-2295		970-683-2295	
970-243-3271		970-683-2295		970-683-2295		970-683-2295	
970-243-3280		Karolina.blaney@wpxenergy.com		Karolina.blaney@wpxenergy.com		Karolina.blaney@wpxenergy.com	
mmumby@hrlcomp.com; mlobato@hrlcomp.com		Karolina.blaney@wpxenergy.com		Karolina.blaney@wpxenergy.com		Karolina.blaney@wpxenergy.com	
1		Batch 3 PA23-33		Soil		10/23/14 1310 3 8 X	

*Time Zone (Circle): EST CST **MS** 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: <i>Complete COGCE 9/10-1</i> <i>(Organics + Inorganics)</i> <i>3.2L</i>	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"/>	

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>Mike Lobato</i>	Mike Lobato	10/23/14	1310
RECEIVED BY	<i>Diane F. Shen</i>	Diane F. Shen	10/23/14	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **24-Oct-14 09:30**

Work Order: **14101451**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	24-Oct-14	Reviewed by: <u>Ann Preston</u>	24-Oct-14
eSignature	Date	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 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>10/24/2014 12:30:40 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



09-Dec-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Batch 4 12.3.14**

Work Order: **1412198**

Dear Mark,

ALS Environmental received 1 sample on 04-Dec-2014 09:30 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 10.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 12.3.14
Work Order: 1412198

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>
1412198-01	PA 23-33 Batch 4	Soil		12/3/2014 11:27	12/4/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 12.3.14
WorkOrder: 1412198

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

<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

ALS Group USA, Corp

Date: 09-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 4 12.3.14
Sample ID: PA 23-33 Batch 4
Collection Date: 12/3/2014 11:27 AM

Work Order: 1412198
Lab ID: 1412198-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	290		SW8015M		Prep: SW3541 / 12/5/14	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	<i>101</i>		23	mg/Kg-dry	5	12/5/2014 11:22 PM
			39-133	%REC	5	12/5/2014 11:22 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	28		SW8015		Prep: SW5035 / 12/4/14	Analyst: IT
<i>Surr: Toluene-d8</i>	<i>109</i>		2.7	mg/Kg-dry	1	12/5/2014 10:06 PM
			50-150	%REC	1	12/5/2014 10:06 PM
MOISTURE						
Moisture	8.7		A2540 G			Analyst: EVB
			0.050	% of sample	1	12/5/2014 04:00 PM

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

ALS Group USA, Corp

Date: 09-Dec-14

Client: HRL Compliance Solutions, Inc
Work Order: 1412198
Project: WPX PA 23-33 Batch 4 12.3.14

QC BATCH REPORT

Batch ID: **65665** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-65665-65665				Units: mg/Kg		Analysis Date: 12/5/2014 08:23 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064025		Prep Date: 12/5/2014		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								
<i>Surr: 4-Terphenyl-d14</i>	1.832	0	2	0	91.6	39-133	0			

LCS		Sample ID: DLCSS1-65665-65665				Units: mg/Kg		Analysis Date: 12/5/2014 08:48 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064026		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	165.8	5.0	200	0	82.9	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	1.49	0	2	0	74.5	39-133	0			

MS		Sample ID: 1412197-01A MS				Units: mg/Kg		Analysis Date: 12/5/2014 09:14 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064027		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	368	8.2	327.5	95.64	83.2	48-110	0			
<i>Surr: 4-Terphenyl-d14</i>	2.419	0	3.275	0	73.9	39-133	0			

MSD		Sample ID: 1412197-01A MSD				Units: mg/Kg		Analysis Date: 12/5/2014 09:39 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064028		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	351.8	8.1	322.2	95.64	79.5	48-110	368	4.52	30	
<i>Surr: 4-Terphenyl-d14</i>	2.496	0	3.222	0	77.5	39-133	2.419	3.14	30	

The following samples were analyzed in this batch: | 1412198-01A |

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412198
Project: WPX PA 23-33 Batch 4 12.3.14

QC BATCH REPORT

Batch ID: **65645** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: MBLK-65645-65645				Units: µg/Kg		Analysis Date: 12/5/2014 03:55 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3063991		Prep Date: 12/4/2014		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>	5464	0	5000	0	109	50-150	0			

LCS		Sample ID: LCS-65645-65645				Units: µg/Kg		Analysis Date: 12/5/2014 03:31 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3063990		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	554100	2,500	500000	0	111	70-130	0			
<i>Surr: Toluene-d8</i>	5173	0	5000	0	103	50-150	0			

MS		Sample ID: 1412177-01A MS				Units: µg/Kg		Analysis Date: 12/5/2014 11:21 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3064010		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	540800	2,500	500000	0	108	70-130	0			
<i>Surr: Toluene-d8</i>	5242	0	5000	0	105	50-150	0			

MSD		Sample ID: 1412177-01A MSD				Units: µg/Kg		Analysis Date: 12/5/2014 11:45 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3064011		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	505500	2,500	500000	0	101	70-130	540800	6.75	30	
<i>Surr: Toluene-d8</i>	5049	0	5000	0	101	50-150	5242	3.74	30	

The following samples were analyzed in this batch:

1412198-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1412198
Project: WPX PA 23-33 Batch 4 12.3.14

QC BATCH REPORT

Batch ID: **R153789** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R153789				Units: % of sample			Analysis Date: 12/5/2014 04:00 PM			
Client ID:				Run ID: MOIST_141205C				SeqNo: 3065063			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-R153789				Units: % of sample			Analysis Date: 12/5/2014 04:00 PM			
Client ID:				Run ID: MOIST_141205C				SeqNo: 3065061		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: 1412194-01A DUP				Units: % of sample			Analysis Date: 12/5/2014 04:00 PM			
Client ID:				Run ID: MOIST_141205C				SeqNo: 3065009			Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Moisture 8.39 0.050 0 0 0 0-0 8.69 3.51 20

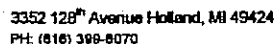
DUP				Sample ID: 1412253-01A DUP				Units: % of sample			Analysis Date: 12/5/2014 04:00 PM					
Client ID:				Run ID: MOIST_141205C				SeqNo: 3065041			Prep Date:		DF: 1			
Analyte				Result		PQL		SPK Val		SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.11 0.050 0 0 0 0-0 10.03 0.794 20

The following samples were analyzed in this batch:

1412198-01A

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



1412198

Form 2021-1

PAGE

Left

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>[Signature]</i>	Matt Fought	12/3/14	1:30
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	12-3-14	1:30
RELINQUISHED BY	<i>[Signature]</i>	<i>[Signature]</i>	12-3-14	1:40
RECEIVED BY	<i>[Signature]</i>	Diane F. Shaw	12/4/14	0930
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **04-Dec-14 09:30**

Work Order: **1412198**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	04-Dec-14	Reviewed by: <u>Ann Preston</u>	04-Dec-14
eSignature	Date	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>4.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/4/2014 1:12:54 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

From: (816) 399-6070
 Nick Martinez
 ALS Environmental
 127 E. 1st Street

Origin ID: RILA



PARACHUTE, CO 81635

Ship Date: 03DEC14
 ActWgt: 88.0 LB
 CAD: 2264840/NET3550

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 120314-1
 Invoice #
 PO # Parachute
 Dept #

SHIP TO: (816) 399-6070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL SENDER

HOLLAND, MI 49424

1 of 2

THU - 04 DEC 10:30A
 PRIORITY OVERNIGHT

TRK# 7720 8412 1035

8281

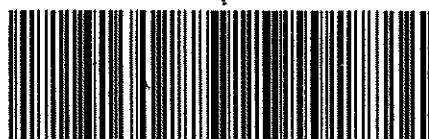
MASTER

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ALS Parachute Custody Seal

DATE 12-3-14

Time 17:00

Name MAN



07-Jul-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Batch 1 6.27.14**

Work Order: **14061532**

Dear Mark,

ALS Environmental received 1 sample on 28-Jun-2014 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Joseph Ribar

Ann Preston
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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Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 1 6.27.14
Work Order: 14061532

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>
14061532-01	PA 323-33 Batch 1	Soil		6/27/2014 12:20	6/28/2014 10:00	<input type="checkbox"/>

ALS Group USA, Corp

Date: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 1 6.27.14
Sample ID: PA 323-33 Batch 1
Collection Date: 6/27/2014 12:20 PM

Work Order: 14061532
Lab ID: 14061532-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 6/30/14	Analyst: IT
DRO (C10-C28)	110		4.6	mg/Kg-dry	1	6/30/2014 08:18 PM
Surr: 4-Terphenyl-d14	74.0		39-133	%REC	1	6/30/2014 08:18 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 6/30/14	Analyst: IT
GRO (C6-C10)	160		2.8	mg/Kg-dry	1	7/1/2014 07:02 AM
Surr: Toluene-d8	88.7		50-150	%REC	1	7/1/2014 07:02 AM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 6/30/14	Analyst: LR
Mercury	0.028		0.014	mg/Kg-dry	1	7/1/2014 04:43 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 6/30/14	Analyst: ML
Arsenic	9.4		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Barium	250		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Cadmium	ND		0.74	mg/Kg-dry	5	7/1/2014 03:37 AM
Chromium	12		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Copper	8.9		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Lead	14		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Nickel	16		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Selenium	ND		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Silver	ND		1.9	mg/Kg-dry	5	7/1/2014 03:37 AM
Zinc	53		3.7	mg/Kg-dry	5	7/1/2014 03:37 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Calcium	510		10	mg/L	20	7/2/2014 06:52 PM
Magnesium	240		4.0	mg/L	20	7/2/2014 06:52 PM
Sodium	390		4.0	mg/L	20	7/2/2014 06:52 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 7/2/14	Analyst: ML
Sodium Adsorption Ratio	3.6		0.010	none	1	7/2/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW8270		Prep: SW3541 / 7/1/14	Analyst: RM
Acenaphthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Chrysene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM

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

ALS Group USA, Corp

Date: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 1 6.27.14
Sample ID: PA 323-33 Batch 1
Collection Date: 6/27/2014 12:20 PM

Work Order: 14061532
Lab ID: 14061532-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Fluorene	24		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Naphthalene	150		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Pyrene	ND		7.4	µg/Kg-dry	1	7/1/2014 10:27 PM
Surr: 2-Fluorobiphenyl	60.4		12-100	%REC	1	7/1/2014 10:27 PM
Surr: 4-Terphenyl-d14	104		25-137	%REC	1	7/1/2014 10:27 PM
Surr: Nitrobenzene-d5	54.3		37-107	%REC	1	7/1/2014 10:27 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 6/30/14		Analyst: RS
Benzene	ND		34	µg/Kg-dry	1	6/30/2014 06:54 PM
Ethylbenzene	390		34	µg/Kg-dry	1	6/30/2014 06:54 PM
m,p-Xylene	2,800		67	µg/Kg-dry	1	6/30/2014 06:54 PM
o-Xylene	610		34	µg/Kg-dry	1	6/30/2014 06:54 PM
Toluene	ND		34	µg/Kg-dry	1	6/30/2014 06:54 PM
Xylenes, Total	3,400		100	µg/Kg-dry	1	6/30/2014 06:54 PM
Surr: 1,2-Dichloroethane-d4	99.5		70-130	%REC	1	6/30/2014 06:54 PM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	1	6/30/2014 06:54 PM
Surr: Dibromofluoromethane	95.4		70-130	%REC	1	6/30/2014 06:54 PM
Surr: Toluene-d8	102		70-130	%REC	1	6/30/2014 06:54 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 7/2/14		Analyst: JB
Electrical Conductivity @ Saturation	6.8		0.050	mmhos/cm @25	10	7/2/2014 05:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	12		0.56	mg/Kg-dry	1	7/2/2014 04:15 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 7/1/14		Analyst: JI
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	7/1/2014 03:30 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	11		0.050	% of sample	1	6/30/2014 02:35 PM
PH			SW9045D	Prep: EXTRACT / 6/30/14		Analyst: AT
pH	7.8			s.u.	1	7/1/2014 02:08 PM

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

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 1 6.27.14
WorkOrder: 14061532

**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

<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: 07-Jul-14

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60160** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-60160-60160				Units: mg/Kg		Analysis Date: 6/30/2014 06:18 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830660		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.563	0	1.667	0	93.8	39-133	0			

LCS		Sample ID: DLCSS1-60160-60160				Units: mg/Kg		Analysis Date: 6/30/2014 06:48 PM		
Client ID:		Run ID: GC8_140630A				SeqNo: 2830662		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	123.7	4.2	166.7	0	74.2	61-109	0			
Surr: 4-Terphenyl-d14	1.134	0	1.667	0	68	39-133	0			

MS		Sample ID: 14061532-01B MS				Units: mg/Kg		Analysis Date: 6/30/2014 07:18 PM		
Client ID: PA 323-33 Batch 1		Run ID: GC8_140630A				SeqNo: 2830664		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	298.1	8.0	319.1	96.45	63.2	48-110	0			
Surr: 4-Terphenyl-d14	1.934	0	3.191	0	60.6	39-133	0			

MSD		Sample ID: 14061532-01B MSD				Units: mg/Kg		Analysis Date: 6/30/2014 07:48 PM		
Client ID: PA 323-33 Batch 1		Run ID: GC8_140630A				SeqNo: 2830666		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	325	8.0	319.2	96.45	71.6	48-110	298.1	8.64	30	
Surr: 4-Terphenyl-d14	2.178	0	3.192	0	68.2	39-133	1.934	11.9	30	

The following samples were analyzed in this batch:

14061532-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60154** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-60154-60154				Units: µg/Kg		Analysis Date: 7/1/2014 02:21 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831010		Prep Date: 6/30/2014		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>	4768	0	5000	0	95.4	50-150	0			

LCS		Sample ID: LCS-60154-60154				Units: µg/Kg		Analysis Date: 7/1/2014 01:55 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831009		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	452200	2,500	500000	0	90.4	70-130	0			
<i>Surr: Toluene-d8</i>	5792	0	5000	0	116	50-150	0			

MS		Sample ID: 14061495-01A MS				Units: µg/Kg		Analysis Date: 7/1/2014 03:12 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831012		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1015000	2,500	500000	305100	142	70-130	0			S
<i>Surr: Toluene-d8</i>	6626	0	5000	0	133	50-150	0			

MSD		Sample ID: 14061495-01A MSD				Units: µg/Kg		Analysis Date: 7/1/2014 03:38 AM		
Client ID:		Run ID: GC9_140630A				SeqNo: 2831013		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1050000	2,500	500000	305100	149	70-130	1015000	3.41	30	S
<i>Surr: Toluene-d8</i>	7222	0	5000	0	144	50-150	6626	8.61	30	

The following samples were analyzed in this batch:

14061532-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60152** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-60152-60152					Units: mg/Kg		Analysis Date: 7/1/2014 01:32 PM		
Client ID:			Run ID: HG1_140701A				SeqNo: 2831625		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury ND 0.020

LCS		Sample ID: LCS-60152-60152				Units: mg/Kg		Analysis Date: 7/1/2014 01:35 PM		
Client ID:		Run ID: HG1_140701A				SeqNo: 2831626		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1727 0.020 0.1665 0 104 80-120 0

MS		Sample ID: 14061448-08AMS					Units: mg/Kg		Analysis Date: 7/1/2014 01:39 PM		
Client ID:			Run ID: HG1_140701A			SeqNo: 2831628		Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.135 0.013 0.1116 0.01755 105 75-125 0

MSD		Sample ID: 14061448-08AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 01:41 PM		
Client ID:			Run ID: HG1_140701A			SeqNo: 2831629		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1334 0.014 0.1125 0.01755 103 75-125 0.135 1.22 35

The following samples were analyzed in this batch:

14061532-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60166** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60166-60166				Units: mg/Kg		Analysis Date: 6/30/2014 10:52 PM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830427		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	0.003018	0.25								J
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.04484	0.50								J

LCS		Sample ID: LCS-60166-60166				Units: mg/Kg		Analysis Date: 6/30/2014 10:58 PM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830428		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.678	0.25	5	0	93.6	80-120	0			
Barium	4.859	0.25	5	0	97.2	80-120	0			
Cadmium	4.724	0.10	5	0	94.5	80-120	0			
Chromium	4.852	0.25	5	0	97	80-120	0			
Copper	4.722	0.25	5	0	94.4	80-120	0			
Lead	4.869	0.25	5	0	97.4	80-120	0			
Nickel	4.82	0.25	5	0	96.4	80-120	0			
Selenium	4.583	0.25	5	0	91.7	80-120	0			
Zinc	4.712	0.50	5	0	94.2	80-120	0			

MS		Sample ID: 14061516-01AMS				Units: mg/Kg		Analysis Date: 7/1/2014 03:07 AM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830468		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.701	0.38	7.587	0.6424	93	75-125	0			
Barium	14.31	0.38	7.587	5.608	115	75-125	0			
Cadmium	7.261	0.15	7.587	0.0284	95.3	75-125	0			
Chromium	10.42	0.38	7.587	2.247	108	75-125	0			
Copper	8.278	0.38	7.587	1.118	94.4	75-125	0			
Lead	9.537	0.38	7.587	1.204	110	75-125	0			
Nickel	9.393	0.38	7.587	1.901	98.7	75-125	0			
Selenium	6.832	0.38	7.587	0.3487	85.4	75-125	0			
Silver	7.091	0.38	7.587	0.002946	93.4	75-125	0			
Zinc	14.35	0.76	7.587	5.144	121	75-125	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60166** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 14061516-01AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 03:13 AM		
Client ID:		Run ID: ICPMS1_140630A				SeqNo: 2830469		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.523	0.38	7.508	0.6424	91.6	75-125	7.701	2.35	25	
Barium	14.46	0.38	7.508	5.608	118	75-125	14.31	1.04	25	
Cadmium	7.233	0.15	7.508	0.0284	96	75-125	7.261	0.39	25	
Chromium	10.4	0.38	7.508	2.247	109	75-125	10.42	0.186	25	
Copper	8.138	0.38	7.508	1.118	93.5	75-125	8.278	1.7	25	
Lead	8.461	0.38	7.508	1.204	96.7	75-125	9.537	12	25	
Nickel	9.542	0.38	7.508	1.901	102	75-125	9.393	1.57	25	
Selenium	7.161	0.38	7.508	0.3487	90.7	75-125	6.832	4.7	25	
Silver	7.121	0.38	7.508	0.002946	94.8	75-125	7.091	0.42	25	
Zinc	12.66	0.75	7.508	5.144	100	75-125	14.35	12.5	25	

The following samples were analyzed in this batch:

14061532-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60187** Instrument ID **ICPMS1** Method: **SW6020A**

DUP		Sample ID: 14061529-01CDUP				Units: mg/L		Analysis Date: 7/2/2014 06:46 PM		
Client ID:		Run ID: ICPMS1_140702A				SeqNo: 2834621		Prep Date: 7/2/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	222.6	10	0	0	0	0-0	253.8	13.1		
Magnesium	97.06	4.0	0	0	0	0-0	111.2	13.6		
Sodium	333.2	4.0	0	0	0	0-0	377.8	12.5		

DUP		Sample ID: 14061529-01CDUP				Units: none		Analysis Date: 7/2/2014		
Client ID:		Run ID: SAR_140702A				SeqNo: 2837120		Prep Date: 7/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	4.691	0.010	0	0	0		4.976	5.9	50	

The following samples were analyzed in this batch:

14061532-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

MBLK		Sample ID: SBLKS1-60200-60200				Units: µg/Kg		Analysis Date: 7/1/2014 10:59 PM		
Client ID:		Run ID: SVMS8_140701A				SeqNo: 2833652		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1158	0	1667	0	69.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1651	0	1667	0	99.1	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1196	0	1667	0	71.7	37-107	0			

LCS		Sample ID: SLCSS1-60200-60200				Units: µg/Kg		Analysis Date: 7/1/2014 11:19 PM		
Client ID:		Run ID: SVMS8_140701A				SeqNo: 2833654		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	488	6.7	666.7	0	73.2	45-110	0			
Acenaphthylene	550.7	6.7	666.7	0	82.6	45-105	0			
Anthracene	623	6.7	666.7	0	93.4	55-105	0			
Benzo(a)anthracene	653	6.7	666.7	0	97.9	50-110	0			
Benzo(a)pyrene	709	6.7	666.7	0	106	50-110	0			
Benzo(b)fluoranthene	675.3	6.7	666.7	0	101	45-115	0			
Benzo(g,h,i)perylene	616	6.7	666.7	0	92.4	40-125	0			
Benzo(k)fluoranthene	611.3	6.7	666.7	0	91.7	45-115	0			
Chrysene	620	6.7	666.7	0	93	55-110	0			
Dibenzo(a,h)anthracene	711.3	6.7	666.7	0	107	40-125	0			
Fluoranthene	656.3	6.7	666.7	0	98.4	55-115	0			
Fluorene	547.7	6.7	666.7	0	82.1	50-110	0			
Indeno(1,2,3-cd)pyrene	764.3	6.7	666.7	0	115	40-120	0			
Naphthalene	465	6.7	666.7	0	69.7	40-105	0			
Pyrene	619	6.7	666.7	0	92.8	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1214	0	1667	0	72.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1709	0	1667	0	103	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1290	0	1667	0	77.4	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

MS				Sample ID: 14061475-02A MS			Units: µg/Kg		Analysis Date: 7/2/2014 12:20 AM		
Client ID:		Run ID: SVMS8_140701A			SeqNo: 2833660		Prep Date: 7/1/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	873.8	13	1294	7.288	67	45-110		0			
Acenaphthylene	1105	13	1294	129.9	75.4	45-105		0			
Anthracene	1139	13	1294	101.7	80.2	55-105		0			
Benzo(a)anthracene	1474	13	1294	340.5	87.6	50-110		0			
Benzo(a)pyrene	1561	13	1294	349.1	93.7	50-110		0			
Benzo(b)fluoranthene	1821	13	1294	637.7	91.4	45-115		0			
Benzo(g,h,i)perylene	1261	13	1294	271.3	76.5	40-125		0			
Benzo(k)fluoranthene	1311	13	1294	195.1	86.3	45-115		0			
Chrysene	1510	13	1294	373.3	87.9	55-110		0			
Dibenzo(a,h)anthracene	1297	13	1294	107.3	92	40-125		0			
Fluoranthene	1797	13	1294	556.2	95.9	55-115		0			
Fluorene	996.6	13	1294	14.24	75.9	50-110		0			
Indeno(1,2,3-cd)pyrene	1582	13	1294	334.9	96.4	40-120		0			
Naphthalene	818.8	13	1294	84.14	56.8	40-105		0			
Pyrene	1565	13	1294	564.1	77.4	45-125		0			
Surr: 2-Fluorobiphenyl	2061	0	3234	0	63.7	12-100		0			
Surr: 4-Terphenyl-d14	2721	0	3234	0	84.1	25-137		0			
Surr: Nitrobenzene-d5	2048	0	3234	0	63.3	37-107		0			

MSD				Sample ID: 14061475-02A MSD			Units: µg/Kg		Analysis Date: 7/2/2014 12:40 AM		
Client ID:			Run ID: SVMS8_140701A			SeqNo: 2833662		Prep Date: 7/1/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	909.4	13	1290	7.288	69.9	45-110	873.8	4	30		
Acenaphthylene	1131	13	1290	129.9	77.6	45-105	1105	2.33	30		
Anthracene	1224	13	1290	101.7	87	55-105	1139	7.16	30		
Benzo(a)anthracene	1495	13	1290	340.5	89.5	50-110	1474	1.43	30		
Benzo(a)pyrene	1614	13	1290	349.1	98.1	50-110	1561	3.39	30		
Benzo(b)fluoranthene	1828	13	1290	637.7	92.3	45-115	1821	0.401	30		
Benzo(g,h,i)perylene	1357	13	1290	271.3	84.2	40-125	1261	7.33	30		
Benzo(k)fluoranthene	1325	13	1290	195.1	87.6	45-115	1311	1.05	30		
Chrysene	1467	13	1290	373.3	84.8	55-110	1510	2.92	30		
Dibenzo(a,h)anthracene	1327	13	1290	107.3	94.6	40-125	1297	2.29	30		
Fluoranthene	1671	13	1290	556.2	86.4	55-115	1797	7.31	30		
Fluorene	1035	13	1290	14.24	79.1	50-110	996.6	3.8	30		
Indeno(1,2,3-cd)pyrene	1704	13	1290	334.9	106	40-120	1582	7.43	30		
Naphthalene	895.9	13	1290	84.14	62.9	40-105	818.8	8.99	30		
Pyrene	1568	13	1290	564.1	77.8	45-125	1565	0.182	30		
Surr: 2-Fluorobiphenyl	2153	0	3225	0	66.8	12-100	2061	4.39	40		
Surr: 4-Terphenyl-d14	3099	0	3225	0	96.1	25-137	2721	13	40		
Surr: Nitrobenzene-d5	2166	0	3225	0	67.2	37-107	2048	5.58	40		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60200** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

14061532- 01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60099** Instrument ID **VMS6** Method: **SW8260B**

MBLK				Sample ID: MBLK-60099-60099				Units: µg/Kg			Analysis Date: 7/1/2014 04:36 PM		
Client ID:			Run ID: VMS6_140701A				SeqNo: 2832873			Prep Date: 6/30/2014		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	930.5	0	1000	0	93	70-130		0					
Surr: 4-Bromofluorobenzene	937.5	0	1000	0	93.8	70-130		0					
Surr: Dibromofluoromethane	944	0	1000	0	94.4	70-130		0					
Surr: Toluene-d8	1004	0	1000	0	100	70-130		0					

LCS				Sample ID: LCS-60099-60099			Units: µg/Kg		Analysis Date: 6/30/2014 01:10 PM		
Client ID:		Run ID: VMS6_140630A			SeqNo: 2830864		Prep Date: 6/30/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	907.5	30	1000	0	90.8	75-125	0				
Ethylbenzene	910	30	1000	0	91	75-125	0				
m,p-Xylene	1838	60	2000	0	91.9	80-125	0				
o-Xylene	944.5	30	1000	0	94.4	75-125	0				
Toluene	879.5	30	1000	0	88	70-125	0				
Xylenes, Total	2782	90	3000	0	92.7	75-125	0				
Surr: 1,2-Dichloroethane-d4	928.5	0	1000	0	92.8	70-130	0				
Surr: 4-Bromofluorobenzene	1051	0	1000	0	105	70-130	0				
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0				
Surr: Toluene-d8	997.5	0	1000	0	99.8	70-130	0				

MS				Sample ID: 14061516-04B MS				Units: µg/Kg		Analysis Date: 7/2/2014 01:52 PM	
Client ID:			Run ID: VMS6_140701B			SeqNo: 2833686		Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	974.5	30	1000	0	97.4	75-125	0				
Ethylbenzene	932	30	1000	0	93.2	75-125	0				
m,p-Xylene	1875	60	2000	0	93.8	80-125	0				
o-Xylene	922.5	30	1000	0	92.2	75-125	0				
Toluene	932	30	1000	58.5	87.4	70-125	0				
Xylenes, Total	2798	90	3000	0	93.2	75-125	0				
Surr: 1,2-Dichloroethane-d4	907	0	1000	0	90.7	70-130	0				
Surr: 4-Bromofluorobenzene	1010	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	974	0	1000	0	97.4	70-130	0				
Surr: Toluene-d8	962	0	1000	0	96.2	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60099** Instrument ID **VMS6** Method: **SW8260B**

MSD				Sample ID: 14061516-04B MSD			Units: µg/Kg		Analysis Date: 7/2/2014 02:18 PM	
Client ID:				Run ID: VMS6_140701B			SeqNo: 2833687		Prep Date: 6/30/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	934.5	30	1000	0	93.4	75-125	974.5	4.19	30	
Ethylbenzene	906	30	1000	0	90.6	75-125	932	2.83	30	
m,p-Xylene	1822	60	2000	0	91.1	80-125	1875	2.89	30	
o-Xylene	899	30	1000	0	89.9	75-125	922.5	2.58	30	
Toluene	908	30	1000	58.5	85	70-125	932	2.61	30	
Xylenes, Total	2720	90	3000	0	90.7	75-125	2798	2.79	30	
Surr: 1,2-Dichloroethane-d4	891.5	0	1000	0	89.2	70-130	907	1.72	30	
Surr: 4-Bromofluorobenzene	1016	0	1000	0	102	70-130	1010	0.642	30	
Surr: Dibromofluoromethane	963	0	1000	0	96.3	70-130	974	1.14	30	
Surr: Toluene-d8	961.5	0	1000	0	96.2	70-130	962	0.052	30	

The following samples were analyzed in this batch:

14061532-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60176** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-60176-60176					Units: s.u.		Analysis Date: 7/1/2014 02:08 PM		
Client ID:			Run ID: WETCHEM_140701F			SeqNo: 2831636		Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 3.98 0 4 0 99.5 90-110 0

DUP		Sample ID: 14061442-01B DUP				Units: s.u.		Analysis Date: 7/1/2014 02:08 PM		
Client ID:		Run ID: WETCHEM_140701F				SeqNo: 2831639		Prep Date: 6/30/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 10.14 0 0 0 0 0-0 10.22 0.786 20

DUP		Sample ID: 14061448-10A DUP					Units: s.u.		Analysis Date: 7/1/2014 02:08 PM		
Client ID:			Run ID: WETCHEM_140701F			SeqNo: 2831647		Prep Date: 6/30/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 8.8 0 0 0 0 0-0 8.73 0.799 20

The following samples were analyzed in this batch:

14061532-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60187** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14061529-01C DUP				Units: mmhos/cm @25°		Analysis Date: 7/2/2014 05:00 PM		
Client ID:		Run ID: WETCHEM_140702T				SeqNo: 2834078		Prep Date: 7/2/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4	0.050	0	0	0		4.39	9.3	50	

The following samples were analyzed in this batch:

14061532-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **60209** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-60209-60209				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831993		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.49

LCS		Sample ID: LCS-60209-60209				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831994		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.984 0.49 1.961 0 101 80-120 0

MS		Sample ID: 14061374-01AMS				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831996		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.256 0.49 1.969 1.407 -7.68 75-125 0 S

MS		Sample ID: 14061374-01AMSI				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831998		Prep Date: 7/1/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 632.3 50 1603 1.407 39.4 75-125 0 S

MSD		Sample ID: 14061374-01AMSD				Units: mg/Kg		Analysis Date: 7/1/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140701L				SeqNo: 2831997		Prep Date: 7/1/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.524 0.50 2 1.407 5.84 75-125 1.256 19.3 20 S

The following samples were analyzed in this batch:

14061532-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14061532
Project: WPX PA 23-33 Batch 1 6.27.14

QC BATCH REPORT

Batch ID: **R143660** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R143660				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831312		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-R143660				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831311		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: 14061442-01B DUP				Units: % of sample		Analysis Date: 6/30/2014 02:35 PM		
Client ID:		Run ID: MOIST_140630D				SeqNo: 2831301		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 11.67 0.050 0 0 0 0-0 11.51 1.38 20

The following samples were analyzed in this batch:

14061532-01B

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

Chain-of-Custody

Form 202-6

WORKORDER

14061532

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:

QC PACKAGE (check below)

X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + new data)

File Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>[Signature]</i>	<i>[Signature]</i>	6/27/14	12:50
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	6-27-14	1255
RELINQUISHED BY	<i>[Signature]</i>	<i>[Signature]</i>	6-27	1400
RECEIVED BY	D. F. Shaw	Diane F. Shaw	6/28/14	1000
RELINQUISHED BY				
RECEIVED BY				

From: (970) 265-5783 Niki Martinez ALS Environmental 127 E. 1st Street PARACHUTE, CO 81635		Origin ID: RMLA		FedEx Express		Ship Date: 27 JUN 14 Actual Ship Date: 27 JUN 14 CAZ: Z26440NET3400		Dim: 24 X 15 X 15 IN	
SHIP TO: (616) 359-8970 sample receiving ALS Laboratory Group 3352 128TH AVE HOLLAND, MI 49424		BILL RENDER J1401420202020						Delivery Address Bar Code	
				Ref # 082714-1 Invoice # PO # Dept #					
				TRK# 7704 5169 6272 [E291]				SATURDAY 12:00P PRIORITY OVERNIGHT	
				X0 GRRA				49424 PLUS GRR	
									

5210298C-MF 230

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.

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Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 28-Jun-14 10:00

Work Order: 14061532

Received by: DS

Checklist completed by Diane Shaw 30-Jun-14
eSignature Date

Reviewed by: Ann Preston 01-Jul-14
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>4.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/30/2014 8:22:19 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



07-Aug-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 323-33 Landfarm 7.16.14**

Work Order: **14071142**

Dear Mark,

Revision: **1**

ALS Environmental received 1 sample on 23-Jul-2014 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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 The ALS logo, a stylized 'A' with a flame-like shape inside.

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Landfarm 7.16.14
Work Order: 14071142

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>
14071142-01	PA 323-33 Batch 2	Soil		7/16/2014 13:00	7/23/2014 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Landfarm 7.16.14
Work Order: 14071142

Case Narrative

Batch 60893 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 60917 MS/MSD data for BTE is not related to this project's samples. No data requires qualification.

Batch 61002 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

The projecct name and sample ID were corrected in this revised report sent 8/7/14.

<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

<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: 07-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Landfarm 7.16.14
Sample ID: PA 323-33 Batch 2
Collection Date: 7/16/2014 01:00 PM

Work Order: 14071142
Lab ID: 14071142-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 7/24/14	Analyst: IT
DRO (C10-C28)	190		4.5	mg/Kg-dry	1	7/24/2014 06:10 PM
Surr: 4-Terphenyl-d14	74.7		39-133	%REC	1	7/24/2014 06:10 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 7/24/14	Analyst: IT
GRO (C6-C10)	370		2.8	mg/Kg-dry	1	7/24/2014 06:45 PM
Surr: Toluene-d8	102		50-150	%REC	1	7/24/2014 06:45 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 7/24/14	Analyst: LR
Mercury	0.027		0.015	mg/Kg-dry	1	7/24/2014 03:56 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 7/23/14	Analyst: ML
Arsenic	13		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Barium	390		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Cadmium	0.80		0.71	mg/Kg-dry	5	7/24/2014 12:46 AM
Chromium	13		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Copper	13		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Lead	17		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Nickel	17		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Selenium	2.4		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Silver	ND		1.8	mg/Kg-dry	5	7/24/2014 12:46 AM
Zinc	58		3.6	mg/Kg-dry	5	7/24/2014 12:46 AM
SOLUBLE CATIONS FOR SAR						
			SW6020A		Prep: USDA Method 20B / 7/25/14	Analyst: ML
Calcium	580		10	mg/L	20	7/25/2014 01:24 PM
Magnesium	230		4.0	mg/L	20	7/25/2014 01:24 PM
Sodium	430		4.0	mg/L	20	7/25/2014 01:24 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 7/25/14	Analyst: RH
Sodium Adsorption Ratio	3.8		0.010	none	1	7/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 7/24/14	Analyst: RM
Acenaphthene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Acenaphthylene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Anthracene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Benzo(a)anthracene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Benzo(a)pyrene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Benzo(b)fluoranthene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Benzo(g,h,i)perylene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Benzo(k)fluoranthene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Chrysene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM

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

Revision: 1

ALS Group USA, Corp

Date: 07-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Landfarm 7.16.14
Sample ID: PA 323-33 Batch 2
Collection Date: 7/16/2014 01:00 PM

Work Order: 14071142
Lab ID: 14071142-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Fluoranthene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Fluorene	13		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Indeno(1,2,3-cd)pyrene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Naphthalene	8.0		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Pyrene	ND		7.3	µg/Kg-dry	1	7/25/2014 04:20 PM
Surr: 2-Fluorobiphenyl	74.8		12-100	%REC	1	7/25/2014 04:20 PM
Surr: 4-Terphenyl-d14	87.6		25-137	%REC	1	7/25/2014 04:20 PM
Surr: Nitrobenzene-d5	71.8		37-107	%REC	1	7/25/2014 04:20 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 7/24/14		Analyst: AK
Benzene	ND		34	µg/Kg-dry	1	7/24/2014 06:13 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	7/24/2014 06:13 PM
m,p-Xylene	130		68	µg/Kg-dry	1	7/24/2014 06:13 PM
o-Xylene	55		34	µg/Kg-dry	1	7/24/2014 06:13 PM
Toluene	ND		34	µg/Kg-dry	1	7/24/2014 06:13 PM
Xylenes, Total	190		100	µg/Kg-dry	1	7/24/2014 06:13 PM
Surr: 1,2-Dichloroethane-d4	92.0		70-130	%REC	1	7/24/2014 06:13 PM
Surr: 4-Bromofluorobenzene	99.6		70-130	%REC	1	7/24/2014 06:13 PM
Surr: Dibromofluoromethane	90.6		70-130	%REC	1	7/24/2014 06:13 PM
Surr: Toluene-d8	108		70-130	%REC	1	7/24/2014 06:13 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 7/25/14		Analyst: JB
Electrical Conductivity @ Saturation	7.1		0.050	mmhos/cm @25	10	7/25/2014 11:15 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	13		0.56	mg/Kg-dry	1	7/25/2014 04:43 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 7/25/14		Analyst: EE
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	7/25/2014 02:30 PM
MOISTURE			A2540 G			Analyst: TM
Moisture	11		0.050	% of sample	1	7/23/2014 04:36 PM
PH			SW9045D	Prep: EXTRACT / 7/23/14		Analyst: AT
pH	8.0			s.u.	1	7/23/2014 10:30 AM

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

Revision: 1

ALS Group USA, Corp

Date: 07-Aug-14

Client: HRL Compliance Solutions, Inc

Work Order: 14071142

Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60907**

Instrument ID **GC8**

Method: **SW8015M**

MBLK		Sample ID: DBLKS1-60907-60907				Units: mg/Kg		Analysis Date: 7/24/2014 03:10 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862339		Prep Date: 7/24/2014		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								
<i>Surr: 4-Terphenyl-d14</i>	<i>1.488</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>74.4</i>	<i>39-133</i>	<i>0</i>			

LCS		Sample ID: DLCSS1-60907-60907				Units: mg/Kg		Analysis Date: 7/24/2014 03:40 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862340		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	153.6	5.0	200	0	76.8	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.44</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>72</i>	<i>39-133</i>	<i>0</i>			

MS		Sample ID: 14071150-12A MS				Units: mg/Kg		Analysis Date: 7/24/2014 04:10 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862341		Prep Date: 7/24/2014		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	582.5	16	317.1	379.9	63.9	48-110	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>2.944</i>	<i>0</i>	<i>3.171</i>	<i>0</i>	<i>92.8</i>	<i>39-133</i>	<i>0</i>			

MSD		Sample ID: 14071150-12A MSD				Units: mg/Kg		Analysis Date: 7/24/2014 04:40 PM		
Client ID:		Run ID: GC8_140724A				SeqNo: 2862342		Prep Date: 7/24/2014		DF: 2
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	563.6	16	326.7	379.9	56.2	48-110	582.5	3.3	30	
<i>Surr: 4-Terphenyl-d14</i>	<i>3.446</i>	<i>0</i>	<i>3.267</i>	<i>0</i>	<i>105</i>	<i>39-133</i>	<i>2.944</i>	<i>15.7</i>	<i>30</i>	

The following samples were analyzed in this batch: | 14071142-01B |

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

Revision: 1

QC Page: 1 of 15

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60919** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-60919-60919				Units: µg/Kg		Analysis Date: 7/24/2014 12:37 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2861752		Prep Date: 7/24/2014		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>	5364	0	5000	0	107	50-150	0			

LCS		Sample ID: LCS-60919-60919				Units: µg/Kg		Analysis Date: 7/24/2014 12:12 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2861751		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	536300	2,500	500000	0	107	70-130	0			
<i>Surr: Toluene-d8</i>	4578	0	5000	0	91.6	50-150	0			

MS		Sample ID: 14071147-01A MS				Units: µg/Kg		Analysis Date: 7/24/2014 05:28 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2862638		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	485800	2,500	500000	0	97.2	70-130	0			
<i>Surr: Toluene-d8</i>	4562	0	5000	0	91.2	50-150	0			

MSD		Sample ID: 14071147-01A MSD				Units: µg/Kg		Analysis Date: 7/24/2014 05:54 PM		
Client ID:		Run ID: GC9_140724A				SeqNo: 2862639		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	469600	2,500	500000	0	93.9	70-130	485800	3.38	30	
<i>Surr: Toluene-d8</i>	4513	0	5000	0	90.3	50-150	4562	1.07	30	

The following samples were analyzed in this batch: 14071142-01A

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60823** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-60823-60823				Units: mg/Kg		Analysis Date: 7/24/2014 03:26 PM		
Client ID:		Run ID: HG1_140724A				SeqNo: 2861734		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-60823-60823				Units: mg/Kg		Analysis Date: 7/24/2014 03:36 PM		
Client ID:		Run ID: HG1_140724A				SeqNo: 2861738		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1701 0.020 0.1665 0 102 80-120 0

MS		Sample ID: 14071148-01BMS				Units: mg/Kg		Analysis Date: 7/24/2014 03:50 PM		
Client ID:		Run ID: HG1_140724A				SeqNo: 2861744		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.146 0.013 0.1106 0.03853 97.1 75-125 0

MSD		Sample ID: 14071148-01BMSD				Units: mg/Kg		Analysis Date: 7/24/2014 03:52 PM		
Client ID:		Run ID: HG1_140724A				SeqNo: 2861745		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.141 0.013 0.1112 0.03853 92.1 75-125 0.146 3.47 35

The following samples were analyzed in this batch:

14071142-01B

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60811** Instrument ID **ICPMS1** Method: **SW6020A**

DUP		Sample ID: 14071143-03BDUP				Units: mg/L		Analysis Date: 7/25/2014 01:36 PM		
Client ID:		Run ID: ICPMS1_140725A				SeqNo: 2863204		Prep Date: 7/25/2014		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	128.5	10	0	0	0	0-0	119.5	7.27		
Magnesium	18.8	4.0	0	0	0	0-0	18.15	3.54		
Sodium	7.21	4.0	0	0	0	0-0	8.564	17.2		

DUP		Sample ID: 14071143-03BDUP				Units: none		Analysis Date: 7/25/2014		
Client ID:		Run ID: SAR_140725A				SeqNo: 2863260		Prep Date: 7/25/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.1572	0.010	0	0	0		0.1929	20.4	50	

The following samples were analyzed in this batch:

14071142-01C

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60893** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-60893-60893				Units: mg/Kg		Analysis Date: 7/23/2014 11:56 PM		
Client ID:		Run ID: ICPMS1_140723A				SeqNo: 2860669		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.001325	0.10								J
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.0568	0.50								J

LCS		Sample ID: LCS-60893-60893				Units: mg/Kg		Analysis Date: 7/24/2014 12:02 AM		
Client ID:		Run ID: ICPMS1_140723A				SeqNo: 2860671		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.254	0.25	5	0	85.1	80-120	0			
Cadmium	4.198	0.10	5	0	84	80-120	0			
Chromium	4.556	0.25	5	0	91.1	80-120	0			
Copper	4.392	0.25	5	0	87.8	80-120	0			
Lead	4.222	0.25	5	0	84.4	80-120	0			
Nickel	4.524	0.25	5	0	90.5	80-120	0			
Selenium	4.144	0.25	5	0	82.9	80-120	0			
Silver	4.398	0.25	5	0	88	80-120	0			
Zinc	4.501	0.50	5	0	90	80-120	0			

LCS		Sample ID: LCS-60893-60893				Units: mg/Kg		Analysis Date: 7/24/2014 01:34 PM		
Client ID:		Run ID: ICPMS1_140724A				SeqNo: 2862378		Prep Date: 7/23/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.106	0.25	5	0	82.1	80-120	0			

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

Revision: 1

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60893** Instrument ID **ICPMS1** Method: **SW6020A**

MS				Sample ID: 14071143-02AMS			Units:mg/Kg		Analysis Date: 7/24/2014 01:24 AM		
Client ID:			Run ID: ICPMS1_140723A			SeqNo:2860688		Prep Date: 7/23/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	16.28	2.0	7.8	8.558	99	75-125	0				
Barium	194.5	2.0	7.8	190.2	55.7	75-125	0			SO	
Cadmium	8.522	0.78	7.8	0.7783	99.3	75-125	0				
Chromium	30.3	2.0	7.8	19.06	144	75-125	0			S	
Copper	26.24	2.0	7.8	19.01	92.7	75-125	0				
Lead	24.48	2.0	7.8	16.43	103	75-125	0				
Nickel	31.2	2.0	7.8	22.16	116	75-125	0				
Selenium	9.224	2.0	7.8	2.48	86.5	75-125	0				
Silver	7.083	2.0	7.8	0.0964	89.6	75-125	0				
Zinc	84.17	3.9	7.8	73.45	137	75-125	0			SO	

MSD				Sample ID: 14071143-02AMSD			Units:mg/Kg		Analysis Date: 7/24/2014 01:31 AM		
Client ID:			Run ID: ICPMS1_140723A			SeqNo:2860689		Prep Date: 7/23/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	17.38	2.0	7.837	8.558	113	75-125	16.28	6.53	25		
Barium	203.9	2.0	7.837	190.2	175	75-125	194.5	4.71	25	SO	
Cadmium	8.531	0.78	7.837	0.7783	98.9	75-125	8.522	0.102	25		
Chromium	30.62	2.0	7.837	19.06	148	75-125	30.3	1.07	25	S	
Copper	26.4	2.0	7.837	19.01	94.4	75-125	26.24	0.618	25		
Lead	24.53	2.0	7.837	16.43	103	75-125	24.48	0.182	25		
Nickel	31.1	2.0	7.837	22.16	114	75-125	31.2	0.334	25		
Selenium	9.334	2.0	7.837	2.48	87.5	75-125	9.224	1.19	25		
Silver	7.226	2.0	7.837	0.0964	91	75-125	7.083	2	25		
Zinc	85.42	3.9	7.837	73.45	153	75-125	84.17	1.48	25	SO	

The following samples were analyzed in this batch:

14071142-01B

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

Revision: 1

QC Page: 6 of 15

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60906** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-60906-60906				Units: µg/Kg		Analysis Date: 7/25/2014 09:24 AM		
Client ID:		Run ID: SVMS8_140725A				SeqNo: 2865522		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1114	0	1667	0	66.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1694	0	1667	0	102	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1222	0	1667	0	73.3	37-107	0			

LCS		Sample ID: SLCSS1-60906-60906				Units: µg/Kg		Analysis Date: 7/25/2014 09:44 AM		
Client ID:		Run ID: SVMS8_140725A				SeqNo: 2865535		Prep Date: 7/24/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	444.3	6.7	666.7	0	66.6	45-110	0			
Acenaphthylene	457.3	6.7	666.7	0	68.6	45-105	0			
Anthracene	537.3	6.7	666.7	0	80.6	55-105	0			
Benzo(a)anthracene	579.3	6.7	666.7	0	86.9	50-110	0			
Benzo(a)pyrene	623.3	6.7	666.7	0	93.5	50-110	0			
Benzo(b)fluoranthene	637	6.7	666.7	0	95.5	45-115	0			
Benzo(g,h,i)perylene	539	6.7	666.7	0	80.8	40-125	0			
Benzo(k)fluoranthene	653.3	6.7	666.7	0	98	45-115	0			
Chrysene	538.3	6.7	666.7	0	80.7	55-110	0			
Dibenzo(a,h)anthracene	603.7	6.7	666.7	0	90.5	40-125	0			
Fluoranthene	589	6.7	666.7	0	88.3	55-115	0			
Fluorene	480.7	6.7	666.7	0	72.1	50-110	0			
Indeno(1,2,3-cd)pyrene	576.3	6.7	666.7	0	86.4	40-120	0			
Naphthalene	418	6.7	666.7	0	62.7	40-105	0			
Pyrene	572.3	6.7	666.7	0	85.8	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1029	0	1667	0	61.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1593	0	1667	0	95.6	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1175	0	1667	0	70.5	37-107	0			

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

Revision: 1

Client: HRL Compliance Solutions, Inc
 Work Order: 14071142
 Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: 60906 Instrument ID SVMS8 Method: SW846 8270D

MS				Sample ID: 14071150-12A MS				Units: µg/Kg		Analysis Date: 7/25/2014 12:12 PM	
Client ID:		Run ID: SVMS8_140725A			SeqNo:2865537		Prep Date: 7/24/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	926.5	13	1283	0	72.2	45-110	0				
Acenaphthylene	988.1	13	1283	0	77	45-105	0				
Anthracene	1077	13	1283	4.548	83.5	55-105	0				
Benzo(a)anthracene	1115	13	1283	0	86.9	50-110	0				
Benzo(a)pyrene	1185	13	1283	0	92.3	50-110	0				
Benzo(b)fluoranthene	1191	13	1283	0	92.8	45-115	0				
Benzo(g,h,i)perylene	1088	13	1283	0	84.7	40-125	0				
Benzo(k)fluoranthene	1191	13	1283	0	92.8	45-115	0				
Chrysene	1047	13	1283	0	81.6	55-110	0				
Dibenzo(a,h)anthracene	1212	13	1283	0	94.4	40-125	0				
Fluoranthene	1130	13	1283	0	88	55-115	0				
Fluorene	1025	13	1283	10.4	79	50-110	0				
Indeno(1,2,3-cd)pyrene	1152	13	1283	0	89.8	40-120	0				
Naphthalene	1034	13	1283	38.01	77.6	40-105	0				
Pyrene	987.4	13	1283	0	76.9	45-125	0				
Surr: 2-Fluorobiphenyl	2294	0	3208	0	71.5	12-100	0				
Surr: 4-Terphenyl-d14	2766	0	3208	0	86.2	25-137	0				
Surr: Nitrobenzene-d5	2042	0	3208	0	63.6	37-107	0				

MSD				Sample ID: 14071150-12A MSD				Units: µg/Kg		Analysis Date: 7/25/2014 12:32 PM	
Client ID:		Run ID: SVMS8_140725A			SeqNo:2865540		Prep Date: 7/24/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1015	13	1302	0	78	45-110	926.5	9.14	30		
Acenaphthylene	1076	13	1302	0	82.7	45-105	988.1	8.55	30		
Anthracene	1173	13	1302	4.548	89.8	55-105	1077	8.59	30		
Benzo(a)anthracene	1214	13	1302	0	93.2	50-110	1115	8.46	30		
Benzo(a)pyrene	1278	13	1302	0	98.2	50-110	1185	7.55	30		
Benzo(b)fluoranthene	1298	13	1302	0	99.7	45-115	1191	8.53	30		
Benzo(g,h,i)perylene	1165	13	1302	0	89.5	40-125	1088	6.87	30		
Benzo(k)fluoranthene	1307	13	1302	0	100	45-115	1191	9.33	30		
Chrysene	1132	13	1302	0	87	55-110	1047	7.82	30		
Dibenzo(a,h)anthracene	1317	13	1302	0	101	40-125	1212	8.31	30		
Fluoranthene	1258	13	1302	0	96.6	55-115	1130	10.7	30		
Fluorene	1098	13	1302	10.4	83.5	50-110	1025	6.89	30		
Indeno(1,2,3-cd)pyrene	1248	13	1302	0	95.9	40-120	1152	7.98	30		
Naphthalene	966.4	13	1302	38.01	71.3	40-105	1034	6.79	30		
Pyrene	1044	13	1302	0	80.2	45-125	987.4	5.55	30		
Surr: 2-Fluorobiphenyl	2542	0	3254	0	78.1	12-100	2294	10.3	40		
Surr: 4-Terphenyl-d14	2881	0	3254	0	88.6	25-137	2766	4.09	40		
Surr: Nitrobenzene-d5	2332	0	3254	0	71.7	37-107	2042	13.3	40		

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

Revision: 1

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60906** Instrument ID **SVMS8** Method: **SW846 8270D**

The following samples were analyzed in this batch:

14071142-01B

Client: HRL Compliance Solutions, Inc
 Work Order: 14071142
 Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60917** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-60917-60917				Units: µg/Kg			Analysis Date: 7/24/2014 05:02 PM		
Client ID:			Run ID: VMS5_140724A				SeqNo:2862515			Prep Date: 7/24/2014		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	1012	0	1000	0	101	70-130		0					
Surr: 4-Bromofluorobenzene	991.5	0	1000	0	99.2	70-130		0					
Surr: Dibromofluoromethane	1012	0	1000	0	101	70-130		0					
Surr: Toluene-d8	975	0	1000	0	97.5	70-130		0					

LCS				Sample ID: LCS-60917-60917			Units: µg/Kg		Analysis Date: 7/24/2014 03:18 PM		
Client ID:		Run ID: VMS5_140724A			SeqNo:2862514		Prep Date: 7/24/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	950.5	30	1000	0	95	75-125	0				
Ethylbenzene	1005	30	1000	0	100	75-125	0				
m,p-Xylene	2024	60	2000	0	101	80-125	0				
o-Xylene	998	30	1000	0	99.8	75-125	0				
Toluene	953	30	1000	0	95.3	70-125	0				
Xylenes, Total	3022	90	3000	0	101	75-125	0				
Surr: 1,2-Dichloroethane-d4	984	0	1000	0	98.4	70-130	0				
Surr: 4-Bromofluorobenzene	1030	0	1000	0	103	70-130	0				
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0				
Surr: Toluene-d8	998	0	1000	0	99.8	70-130	0				

MS					Sample ID: 14071150-01A MS		Units: µg/Kg		Analysis Date: 7/26/2014 12:28 PM		
Client ID:			Run ID: VMS5_140725A			SeqNo:2864776		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	905.5	30	1000	0	90.6	75-125	0				
Ethylbenzene	915.5	30	1000	0	91.6	75-125	0				
m,p-Xylene	1910	60	2000	0	95.5	80-125	0				
o-Xylene	911	30	1000	0	91.1	75-125	0				
Toluene	885	30	1000	0	88.5	70-125	0				
Xylenes, Total	2820	90	3000	0	94	75-125	0				
Surr: 1,2-Dichloroethane-d4	928	0	1000	0	92.8	70-130	0				
Surr: 4-Bromofluorobenzene	1015	0	1000	0	102	70-130	0				
Surr: Dibromofluoromethane	975	0	1000	0	97.5	70-130	0				
Surr: Toluene-d8	978	0	1000	0	97.8	70-130	0				

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

Revision: 1

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60917** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 14071150-01A MSD				Units: µg/Kg		Analysis Date: 7/26/2014 12:53 PM	
Client ID:			Run ID: VMS5_140725A			SeqNo: 2864777		Prep Date: 7/24/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	852	30	1000	0	85.2	75-125	905.5	6.09	30		
Ethylbenzene	897.5	30	1000	0	89.8	75-125	915.5	1.99	30		
m,p-Xylene	1829	60	2000	0	91.4	80-125	1910	4.31	30		
o-Xylene	881	30	1000	0	88.1	75-125	911	3.35	30		
Toluene	841.5	30	1000	0	84.2	70-125	885	5.04	30		
Xylenes, Total	2710	90	3000	0	90.3	75-125	2820	4	30		
Surr: 1,2-Dichloroethane-d4	919.5	0	1000	0	92	70-130	928	0.92	30		
Surr: 4-Bromofluorobenzene	1015	0	1000	0	102	70-130	1015	0	30		
Surr: Dibromofluoromethane	959	0	1000	0	95.9	70-130	975	1.65	30		
Surr: Toluene-d8	987.5	0	1000	0	98.8	70-130	978	0.967	30		

The following samples were analyzed in this batch: 14071142-01A

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

Revision: 1

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60811** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 14071143-03B DUP				Units: mmhos/cm @25°C		Analysis Date: 7/25/2014 11:15 AM		
Client ID:		Run ID: WETCHEM_140725A				SeqNo: 2862823		Prep Date: 7/25/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.917	0.050	0	0	0		0.883	3.78	50	

The following samples were analyzed in this batch:

14071142-01C

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

Revision: 1

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **60904** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-60904-60904					Units:s.u.			Analysis Date: 7/23/2014 10:30 AM				
Client ID:					Run ID: WETCHEM_140723P					SeqNo:2863554			Prep Date: 7/23/2014			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH					3.97		0	4	0	99.2		90-110	0				

DUP					Sample ID: 14071142-01B DUP					Units: s.u.			Analysis Date: 7/23/2014 10:30 AM				
Client ID: PA 323-33 Batch 2					Run ID: WETCHEM_140723P					SeqNo: 2863557			Prep Date: 7/23/2014			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual						
pH		8.06	0	0	0	0	0-0	7.95	1.37	20							

The following samples were analyzed in this batch:

14071142-01B

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **61002** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-61002-61002				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863320		Prep Date: 7/25/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS		Sample ID: LCS-61002-61002				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863321		Prep Date: 7/25/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.72 0.50 2 0 86 80-120 0

MS		Sample ID: 14071140-01B MS				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863323		Prep Date: 7/25/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.8024 0.49 1.976 0.255 27.7 75-125 0 S

MS		Sample ID: 14071140-01B MS High				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863324		Prep Date: 7/25/2014		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 32.15 2.5 39.53 0.255 80.7 75-125 0

MS		Sample ID: 14071140-01B MSI				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863326		Prep Date: 7/25/2014		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 695.6 50 862 0.255 80.7 75-125 0

MSD		Sample ID: 14071140-01B MSD				Units: mg/Kg		Analysis Date: 7/25/2014 02:30 PM		
Client ID:		Run ID: WETCHEM_140725J		SeqNo: 2863325		Prep Date: 7/25/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.8366 0.49 1.946 0.255 29.9 75-125 0.8024 4.17 20 S

The following samples were analyzed in this batch:

14071142-01B

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

Revision: 1

QC Page: 14 of 15

Client: HRL Compliance Solutions, Inc
Work Order: 14071142
Project: WPX PA 323-33 Landfarm 7.16.14

QC BATCH REPORT

Batch ID: **R145037** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R145037				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861235			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-R145037				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM			
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861234		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: 14071140-01B DUP				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM												
Client ID:				Run ID: MOIST_140723D				SeqNo: 2861213			Prep Date:		DF: 1										
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Moisture 8.37 0.050 0 0 0 0-0 7.9 5.78 20

DUP				Sample ID: 14071142-01B DUP				Units: % of sample			Analysis Date: 7/23/2014 04:36 PM												
Client ID: PA 323-33 Batch 2				Run ID: MOIST_140723D				SeqNo: 2861215			Prep Date:		DF: 1										
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Moisture 10.87 0.050 0 0 0 0-0 11.01 1.28 20

The following samples were analyzed in this batch:

14071142-01B



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER #

14071142

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

WPX

PA 323-33 Hand from

SAMPLER

Reed Wold

DATE

7/21/14

SITE ID

PA 323-33

TURNAROUND

3 Day

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

HRL Compliance

BILL TO COMPANY

WPX

SEND REPORT TO

Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS

2385 F 1/2 Rd

ADDRESS

1058 Co Rd 215

CITY / STATE / ZIP

Grand Junction, CO 81506

CITY / STATE / ZIP

Parachure CO 81635

PHONE

970-243-3271

PHONE

970-683-2295

FAX

970-243-3280

FAX

E-MAIL

mmumby@hrlcomp.com

E-MAIL

Karolina.blaney@wpxenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

PA 323-33
Batch 2

SO

7/16/14 1:00

3

8

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:

28-3.4°C
[Signature]

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-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

[Signature]

[Signature]

7/21/14

3:00

RECEIVED BY

[Signature]

[Signature]

7-21-14

3:00

RELINQUISHED BY

[Signature]

[Signature]

7-21

3:50

RECEIVED BY

[Signature]

KEITH W. LERSEN

7/23/14

1000

RELINQUISHED BY

[Signature]

[Signature]

RECEIVED BY

[Signature]

[Signature]

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **23-Jul-14 10:00**

Work Order: **14071142**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

23-Jul-14
Date

Reviewed by: Ann Preston
eSignature

24-Jul-14
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>2.8-3.4 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>7/23/2014 12:40:20 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

Revision: 1

FedEx (978) 283-5783
 Nick Marlowe
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81835

Origin ID: RLA



Ship Date: 22 JUL 14
 Act/Vol: 55.0 LB
 CAD: 2284640/NET3550

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 072214-1
 Invoice #
 PO # Parachute
 Dept #

SHIP TO: (916) 299-8870
 sample receiving
 ALS Laboratory Group
 3382 128TH AVE

BILL NUMBER

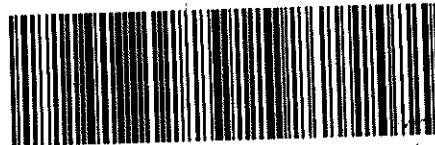
HOLLAND, MI 49424

1 of 2

WED - 23 JUL 10:30A
 PRIORITY OVERNIGHT

TRK# 7706 6437 1585
 # MASTER #

49424
 MLUR
 GRR

XX GRRRA

10200000000000

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.

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ALS Parachute Custody Seal
 DATE 7-23-14 Time 1740
 Name W. Marlowe

ALS Parachute Custody Seal
 DATE 7-23-14 Time 1740
 Name W. Marlowe

ALS Parachute Custody Seal
 DATE 7-23-14 Time 1730
 Name W. Marlowe

ALS Parachute Custody Seal
 DATE 7-23-14 Time 1750
 Name W. Marlowe

ALS Parachute Custody Seal
 DATE 7-23-14 Time 1730
 Name W. Marlowe



29-Aug-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 -PA 323-33 Batch 2 8.25.14**

Work Order: **14081346**

Dear Mark,

ALS Environmental received 1 sample on 27-Aug-2014 09:30 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 10.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14
Work Order: 14081346

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>
14081346-01	Batch 2	Soil		8/25/2014 11:00	8/27/2014 09:30	<input type="checkbox"/>

ALS Group USA, Corp

Date: 29-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14
Work Order: 14081346

Case Narrative

Batch 62157 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14
WorkOrder: 14081346

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

<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

ALS Group USA, Corp

Date: 29-Aug-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14
Sample ID: Batch 2
Collection Date: 8/25/2014 11:00 AM

Work Order: 14081346
Lab ID: 14081346-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	44		SW8015M		Prep: SW3541 / 8/28/14	Analyst: IT
			4.8	mg/Kg-dry	1	8/29/2014 01:59 AM
Surr: 4-Terphenyl-d14	62.4		39-133	%REC	1	8/29/2014 01:59 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	30		SW8015		Prep: SW5035 / 8/27/14	Analyst: IT
			3.0	mg/Kg-dry	1	8/28/2014 05:44 AM
Surr: Toluene-d8	123		50-150	%REC	1	8/28/2014 05:44 AM
MOISTURE						
Moisture	15		A2540 G			Analyst: RDM
			0.050	% of sample	1	8/27/2014 07:04 PM

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

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 14081346

Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14

Batch ID: 62157 Instrument ID GC8 Method: SW8015M

MBLK		Sample ID: DBLKS1-62157-62157				Units:mg/Kg		Analysis Date: 8/28/2014 06:55 PM		
Client ID:		Run ID: GC8_140828A			SeqNo:2910006		Prep Date: 8/28/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	1.114	0	1.667	0	66.8	39-133	0			

LCS		Sample ID: DLCSS1-62157-62157				Units: mg/Kg		Analysis Date: 8/28/2014 07:25 PM		
Client ID:		Run ID: GC8_140828A			SeqNo: 2910010		Prep Date: 8/28/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	146.1	4.2	166.7	0	87.7	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	<i>1.118</i>	0	1.667	0	67.1	39-133	0			

MS				Sample ID: 14081222-01A MS				Units:mg/Kg			Analysis Date: 8/28/2014 07:55 PM			
Client ID:				Run ID: GC8_140828A				SeqNo:2910013			Prep Date: 8/28/2014		DF: 5	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
DRO (C10-C28)		2647	160	325.1	2053	183	48-110		0		SO			
Surr: 4-Terphenyl-d14		1.846	0	3.251	0	56.8	39-133		0					

MSD				Sample ID: 14081222-01A MSD				Units: mg/Kg			Analysis Date: 8/28/2014 08:25 PM			
Client ID:				Run ID: GC8_140828A				SeqNo: 2910017			Prep Date: 8/28/2014		DF: 5	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
DRO (C10-C28)		2256	160	314.7	2053	64.5	48-110	2647	16	30	O			
Surr: 4-Terphenyl-d14		1.662	0	3.147	0	52.8	39-133	1.846	10.5	30				

The following samples were analyzed in this batch: 14081346-01A

Client: HRL Compliance Solutions, Inc
Work Order: 14081346
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14

QC BATCH REPORT

Batch ID: **62132** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-62132-62132					Units: µg/Kg		Analysis Date: 8/27/2014 09:46 PM		
Client ID:			Run ID: GC9_140827B			SeqNo:2907814		Prep Date: 8/27/2014		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	5028	0	5000	0	101	50-150	0				

LCS				Sample ID: LCS-62132-62132				Units: µg/Kg			Analysis Date: 8/27/2014 09:21 PM			
Client ID:				Run ID: GC9_140827B				SeqNo:2907813			Prep Date: 8/27/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
GRO (C6-C10)		518300	2,500	500000	0	104	70-130	0						
Surr: Toluene-d8		5566	0	5000	0	111	50-150	0						

MS		Sample ID: 14081391-05A MS				Units: µg/Kg		Analysis Date: 8/28/2014 02:48 AM		
Client ID:		Run ID: GC9_140827B			SeqNo:2907823		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	478100	2,500	500000	0	95.6	70-130	0			
Surr: Toluene-d8	5614	0	5000	0	112	50-150	0			

MSD		Sample ID: 14081391-05A MSD				Units: µg/Kg		Analysis Date: 8/28/2014 03:13 AM		
Client ID:		Run ID: GC9_140827B			SeqNo:2907824		Prep Date: 8/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	478400	2,500	500000	0	95.7	70-130	478100	0.0757	30	
Surr: Toluene-d8	5811	0	5000	0	116	50-150	5614	3.46	30	

The following samples were analyzed in this batch:

14081346-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14081346
Project: WPX PA 23-33 -PA 323-33 Batch 2 8.25.14

QC BATCH REPORT

Batch ID: **R147159** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R147159				Units: % of sample		Analysis Date: 8/27/2014 07:04 PM		
Client ID:		Run ID: MOIST_140827D				SeqNo: 2908352		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-R147159				Units: % of sample		Analysis Date: 8/27/2014 07:04 PM		
Client ID:		Run ID: MOIST_140827D				SeqNo: 2908351		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: 14081270-07A DUP				Units: % of sample		Analysis Date: 8/27/2014 07:04 PM		
Client ID:		Run ID: MOIST_140827D				SeqNo: 2908336		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 80.35 0.050 0 0 0 0-0 78.31 2.57 20

DUP		Sample ID: 14081391-01A DUP				Units: % of sample		Analysis Date: 8/27/2014 07:04 PM		
Client ID:		Run ID: MOIST_140827D				SeqNo: 2908343		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 21.35 0.050 0 0 0 0-0 21.2 0.705 20

The following samples were analyzed in this batch:

14081346-01A

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










14081346

Form 202-r3

*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			8/25/14	3:50
RECEIVED BY			8-25-14	4:16
RELINQUISHED BY			8-25-14	4:18
RECEIVED BY		Diane F. Shaw	8/27/14	0930
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **27-Aug-14 09:30**

Work Order: **14081346**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	27-Aug-14	Reviewed by: <u>Ann Preston</u>	27-Aug-14
eSignature	Date	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 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 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>8/27/2014 11:10:20 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



24-Sep-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 323-33 Batch 3 9.18.14**

Work Order: **1409945**

Dear Mark,

ALS Environmental received 1 sample on 19-Sep-2014 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 24.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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 The ALS logo, a small blue triangle with a yellow flame.

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Batch 3 9.18.14
Work Order: 1409945

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>
1409945-01	Batch 3	Soil		9/18/2014 14:00	9/19/2014 09:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Batch 3 9.18.14
Work Order: 1409945

Case Narrative

Batch 62960 MS/MSD data for PAHs is not related to this project's samples. No data requires qualification.

Batch 62961 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch 62981 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 63060 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 62983 sample 1409945-01 ran at a dilution for BTEX due to high analyte concentrations. No data requires qualification.

Batch 62991 sample 1409945-01 GRO surrogate recovery was high due to matrix interference. No data requires qualification.

<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

<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-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Batch 3 9.18.14
Sample ID: Batch 3
Collection Date: 9/18/2014 02:00 PM

Work Order: 1409945
Lab ID: 1409945-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	170		SW8015M		Prep: SW3541 / 9/19/14	Analyst: IT
Surr: 4-Terphenyl-d14	74.5		4.9	mg/Kg-dry	1	9/22/2014 02:21 PM
			39-133	%REC	1	9/22/2014 02:21 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	1,900		SW8015		Prep: SW5035 / 9/19/14	Analyst: IT
Surr: Toluene-d8	242	S	3.0	mg/Kg-dry	1	9/20/2014 04:00 PM
			50-150	%REC	1	9/20/2014 04:00 PM
MERCURY BY CVAA						
Mercury	0.024		SW7471		Prep: SW7471 / 9/22/14	Analyst: LR
			0.018	mg/Kg-dry	1	9/22/2014 07:42 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 9/23/14	Analyst: JEC
Calcium	78		5.0	mg/L	10	9/23/2014 12:33 PM
Magnesium	42		2.0	mg/L	10	9/23/2014 12:33 PM
Sodium	390		2.0	mg/L	10	9/23/2014 12:33 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 9/19/14	Analyst: ML
Arsenic	10		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Barium	360		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Cadmium	ND		0.81	mg/Kg-dry	5	9/20/2014 05:23 AM
Chromium	14		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Copper	12		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Lead	15		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Nickel	16		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Selenium	2.5		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Silver	ND		2.0	mg/Kg-dry	5	9/20/2014 05:23 AM
Zinc	54		4.0	mg/Kg-dry	5	9/20/2014 05:23 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 9/23/14	Analyst: JEC
Sodium Adsorption Ratio	8.8		0.010	none	1	9/23/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 9/19/14	Analyst: RM
Acenaphthene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Anthracene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Chrysene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM

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

ALS Group USA, Corp

Date: 24-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 323-33 Batch 3 9.18.14
Sample ID: Batch 3
Collection Date: 9/18/2014 02:00 PM

Work Order: 1409945
Lab ID: 1409945-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Fluoranthene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Fluorene	11		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Naphthalene	120		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Pyrene	ND		7.8	µg/Kg-dry	1	9/20/2014 09:46 PM
Surr: 2-Fluorobiphenyl	72.9		12-100	%REC	1	9/20/2014 09:46 PM
Surr: 4-Terphenyl-d14	89.0		25-137	%REC	1	9/20/2014 09:46 PM
Surr: Nitrobenzene-d5	73.2		37-107	%REC	1	9/20/2014 09:46 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 9/19/14		Analyst: BG
Benzene	1,300		710	µg/Kg-dry	20	9/22/2014 06:09 PM
Ethylbenzene	3,600		710	µg/Kg-dry	20	9/22/2014 06:09 PM
m,p-Xylene	77,000		7,100	µg/Kg-dry	100	9/22/2014 09:30 AM
o-Xylene	34,000		710	µg/Kg-dry	20	9/22/2014 06:09 PM
Toluene	23,000		710	µg/Kg-dry	20	9/22/2014 06:09 PM
Xylenes, Total	89,000		11,000	µg/Kg-dry	100	9/22/2014 09:30 AM
Surr: 1,2-Dichloroethane-d4	90.7		70-130	%REC	100	9/22/2014 09:30 AM
Surr: 1,2-Dichloroethane-d4	84.4		70-130	%REC	20	9/22/2014 06:09 PM
Surr: 4-Bromofluorobenzene	91.0		70-130	%REC	100	9/22/2014 09:30 AM
Surr: 4-Bromofluorobenzene	96.2		70-130	%REC	20	9/22/2014 06:09 PM
Surr: Dibromofluoromethane	94.2		70-130	%REC	20	9/22/2014 06:09 PM
Surr: Dibromofluoromethane	102		70-130	%REC	100	9/22/2014 09:30 AM
Surr: Toluene-d8	123		70-130	%REC	20	9/22/2014 06:09 PM
Surr: Toluene-d8	88.9		70-130	%REC	100	9/22/2014 09:30 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 9/23/14		Analyst: JB
Electrical Conductivity @ Saturation	2.9		0.050	mmhos/cm @25	10	9/23/2014 03:30 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	14		0.59	mg/Kg-dry	1	9/23/2014 04:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 9/19/14		Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	9/22/2014 03:30 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	15		0.050	% of sample	1	9/19/2014 04:40 PM
PH			SW9045D	Prep: EXTRACT / 9/22/14		Analyst: JB
pH	8.7			s.u.	1	9/23/2014 08:45 AM

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62961** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-62961-62961				Units: mg/Kg		Analysis Date: 9/19/2014 05:19 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946281		Prep Date: 9/19/2014		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	1.647	0	2	0	82.4	39-133		0		

LCS		Sample ID: DLCSS1-62961-62961				Units: mg/Kg		Analysis Date: 9/19/2014 05:46 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946284		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	177.4	5.0	200	0	88.7	61-109		0		
Surr: 4-Terphenyl-d14	1.541	0	2	0	77.1	39-133		0		

MS		Sample ID: 1409892-01A MS				Units: mg/Kg		Analysis Date: 9/19/2014 06:14 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946286		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	612	8.3	331.3	72.35	163	48-110		0		S
Surr: 4-Terphenyl-d14	2.654	0	3.313	0	80.1	39-133		0		

MSD		Sample ID: 1409892-01A MSD				Units: mg/Kg		Analysis Date: 9/19/2014 06:41 PM		
Client ID:		Run ID: GC8_140919B				SeqNo: 2946288		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	336	8.1	325.3	72.35	81	48-110	612	58.2	30	R
Surr: 4-Terphenyl-d14	2.433	0	3.253	0	74.8	39-133	2.654	8.68	30	

The following samples were analyzed in this batch: | 1409945-01B |

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62991** Instrument ID **GC9** Method: **SW8015C**

MBLK		Sample ID: MBLK-62991-62991				Units: µg/Kg		Analysis Date: 9/20/2014 02:00 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945644		Prep Date: 9/19/2014		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>	<i>4800</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>96</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: LCS-62991-62991				Units: µg/Kg		Analysis Date: 9/20/2014 01:34 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945643		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	548800	2,500	500000	0	110	70-130	0			
<i>Surr: Toluene-d8</i>	<i>4410</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>88.2</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 1409920-01A MS				Units: µg/Kg		Analysis Date: 9/20/2014 03:16 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945646		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	552100	2,500	500000	0	110	70-130	0			
<i>Surr: Toluene-d8</i>	<i>6310</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>126</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1409920-01A MSD				Units: µg/Kg		Analysis Date: 9/20/2014 03:41 AM		
Client ID:		Run ID: GC9_140919A				SeqNo: 2945647		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	531300	2,500	500000	0	106	70-130	552100	3.85	30	
<i>Surr: Toluene-d8</i>	<i>6062</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>121</i>	<i>50-150</i>	<i>6310</i>	<i>4.02</i>	<i>30</i>	

The following samples were analyzed in this batch:

1409945-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63044** Instrument ID **HG1** Method: **SW7471**

Sample ID: MBLK-63044-63044				Units: mg/Kg			Analysis Date: 9/22/2014 06:09 PM				
Client ID:			Run ID: HG1_140922A			SeqNo: 2947030		Prep Date: 9/22/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	0.003167	0.020								J	

LCS		Sample ID: LCS-63044-63044				Units:mg/Kg		Analysis Date: 9/22/2014 06:11 PM		
Client ID:		Run ID: HG1_140922A			SeqNo:2947031		Prep Date: 9/22/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1798	0.020	0.1665	0	108	80-120	0			

MS	Sample ID: 1409942-01BMS					Units:mg/Kg		Analysis Date: 9/22/2014 06:16 PM		
	Client ID:		Run ID: HG1_140922A			SeqNo:2947033		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.144	0.013	0.1066	0.0239	113	75-125	0			

MSD	Sample ID: 1409942-01BMSD					Units:mg/Kg		Analysis Date: 9/22/2014 06:18 PM		
	Client ID:		Run ID: HG1_140922A			SeqNo:2947034		Prep Date: 9/22/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1475	0.013	0.1049	0.0239	118	75-125	0.144	2.37	35	

The following samples were analyzed in this batch:

1409945-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62992** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1409967-02B DUP				Units: mg/L		Analysis Date: 9/23/2014 01:23 PM		
Client ID:		Run ID: ICP2_140923A				SeqNo: 2948639		Prep Date: 9/23/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	1063	5.0	0	0	0	0-0	0			
Magnesium	186.8	2.0	0	0	0	0-0	0			

DUP		Sample ID: 1409967-02B DUP				Units: mg/L		Analysis Date: 9/23/2014 02:17 PM		
Client ID:		Run ID: ICP2_140923A				SeqNo: 2948647		Prep Date: 9/23/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	8911	20	0	0	0	0-0	0			

The following samples were analyzed in this batch:

1409945-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62981** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK				Sample ID: MBLK-62981-62981				Units:mg/Kg		Analysis Date: 9/20/2014 01:48 AM	
Client ID:			Run ID: ICPMS1_140919A			SeqNo:2945336		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.25									
Barium	0.008235	0.25								J	
Cadmium	ND	0.10									
Chromium	ND	0.25									
Copper	ND	0.25									
Lead	ND	0.25									
Nickel	ND	0.25									
Selenium	0.03875	0.25								J	
Silver	ND	0.25									
Zinc	0.1595	0.50								J	

LCS				Sample ID: LCS-62981-62981				Units:mg/Kg			Analysis Date: 9/20/2014 02:37 AM			
Client ID:				Run ID: ICPMS1_140919A				SeqNo:2945349			Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Arsenic	4.591	0.25	5	0	91.8	80-120	0							
Barium	4.777	0.25	5	0	95.5	80-120	0							
Cadmium	4.825	0.10	5	0	96.5	80-120	0							
Chromium	4.854	0.25	5	0	97.1	80-120	0							
Copper	4.638	0.25	5	0	92.8	80-120	0							
Lead	4.714	0.25	5	0	94.3	80-120	0							
Nickel	4.78	0.25	5	0	95.6	80-120	0							
Selenium	4.539	0.25	5	0	90.8	80-120	0							
Silver	4.696	0.25	5	0	93.9	80-120	0							
Zinc	4.86	0.50	5	0	97.2	80-120	0							

MS					Sample ID: 1409900-09BMS		Units:mg/Kg		Analysis Date: 9/22/2014 03:58 PM		
Client ID:			Run ID: ICPMS1_140922A			SeqNo:2946886		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	6.702	0.33	6.596	0.896	88	75-125	0				
Barium	30.48	0.33	6.596	17.81	192	75-125	0			S	
Cadmium	6.241	0.13	6.596	0.05485	93.8	75-125	0				
Chromium	11.41	0.33	6.596	4.301	108	75-125	0				
Copper	7.942	0.33	6.596	1.676	95	75-125	0				
Lead	9.096	0.33	6.596	2.559	99.1	75-125	0				
Nickel	9.96	0.33	6.596	3.197	103	75-125	0				
Selenium	6.379	0.33	6.596	0.6284	87.2	75-125	0				
Silver	5.805	0.33	6.596	0.006848	87.9	75-125	0				
Zinc	20.17	0.66	6.596	11.56	131	75-125	0			S	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62981** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 1409900-09BMSD				Units: mg/Kg		Analysis Date: 9/22/2014 04:04 PM		
Client ID:		Run ID: ICPMS1_140922A				SeqNo: 2946887		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.718	0.33	6.684	0.896	87.1	75-125	6.702	0.239	25	
Barium	25.98	0.33	6.684	17.81	122	75-125	30.48	15.9	25	
Cadmium	6.282	0.13	6.684	0.05485	93.2	75-125	6.241	0.649	25	
Chromium	13.44	0.33	6.684	4.301	137	75-125	11.41	16.3	25	S
Copper	8.175	0.33	6.684	1.676	97.2	75-125	7.942	2.89	25	
Lead	9.452	0.33	6.684	2.559	103	75-125	9.096	3.83	25	
Nickel	10.83	0.33	6.684	3.197	114	75-125	9.96	8.35	25	
Selenium	6.656	0.33	6.684	0.6284	90.2	75-125	6.379	4.24	25	
Silver	5.912	0.33	6.684	0.006848	88.3	75-125	5.805	1.83	25	
Zinc	21.65	0.67	6.684	11.56	151	75-125	20.17	7.08	25	S

The following samples were analyzed in this batch: 1409945-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-62960-62960				Units: µg/Kg		Analysis Date: 9/20/2014 01:45 PM		
Client ID:		Run ID: SVMS5_140920A				SeqNo: 2946208		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	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>	1408	0	1667	0	84.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	2048	0	1667	0	123	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1352	0	1667	0	81.1	37-107	0			

LCS		Sample ID: SLCSS1-62960-62960				Units: µg/Kg		Analysis Date: 9/20/2014 02:07 PM		
Client ID:		Run ID: SVMS5_140920A				SeqNo: 2946211		Prep Date: 9/19/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	674.3	6.7	666.7	0	101	45-110	0			
Acenaphthylene	666	6.7	666.7	0	99.9	45-105	0			
Anthracene	676.7	6.7	666.7	0	101	55-105	0			
Benzo(a)anthracene	718	6.7	666.7	0	108	50-110	0			
Benzo(a)pyrene	731.7	6.7	666.7	0	110	50-110	0			
Benzo(b)fluoranthene	727	6.7	666.7	0	109	45-115	0			
Benzo(g,h,i)perylene	746.3	6.7	666.7	0	112	40-125	0			
Benzo(k)fluoranthene	731	6.7	666.7	0	110	45-115	0			
Chrysene	732.7	6.7	666.7	0	110	55-110	0			
Dibenzo(a,h)anthracene	621	6.7	666.7	0	93.1	40-125	0			
Fluoranthene	732.7	6.7	666.7	0	110	55-115	0			
Fluorene	694.7	6.7	666.7	0	104	50-110	0			
Indeno(1,2,3-cd)pyrene	639	6.7	666.7	0	95.8	40-120	0			
Naphthalene	665.3	6.7	666.7	0	99.8	40-105	0			
Pyrene	779.3	6.7	666.7	0	117	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1368	0	1667	0	82.1	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1823	0	1667	0	109	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1373	0	1667	0	82.4	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1409698-03B MS			Units: µg/Kg		Analysis Date: 9/20/2014 07:02 PM	
Client ID:		Run ID: SVMS5_140920A			SeqNo: 2946213		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1185	13	1291	0	91.8	45-110	0			
Acenaphthylene	1328	13	1291	0	103	45-105	0			
Anthracene	1464	13	1291	0	113	55-105	0			S
Benzo(a)anthracene	1731	13	1291	221.2	117	50-110	0			S
Benzo(a)pyrene	1633	13	1291	0	126	50-110	0			S
Benzo(b)fluoranthene	1767	13	1291	0	137	45-115	0			S
Benzo(g,h,i)perylene	1723	13	1291	0	133	40-125	0			S
Benzo(k)fluoranthene	1757	13	1291	0	136	45-115	0			S
Chrysene	1790	13	1291	0	139	55-110	0			S
Dibenzo(a,h)anthracene	1375	13	1291	40.28	103	40-125	0			
Fluoranthene	1784	13	1291	0	138	55-115	0			S
Fluorene	1355	13	1291	0	105	50-110	0			
Indeno(1,2,3-cd)pyrene	1468	13	1291	166.6	101	40-120	0			
Naphthalene	1105	13	1291	0	85.6	40-105	0			
Pyrene	2137	13	1291	0	166	45-125	0			S
Surr: 2-Fluorobiphenyl	2327	0	3227	0	72.1	12-100	0			
Surr: 4-Terphenyl-d14	3762	0	3227	0	117	25-137	0			
Surr: Nitrobenzene-d5	2339	0	3227	0	72.5	37-107	0			

MSD				Sample ID: 1409698-03B MSD			Units: µg/Kg		Analysis Date: 9/20/2014 07:23 PM	
Client ID:		Run ID: SVMS5_140920A			SeqNo: 2946216		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1323	13	1299	0	102	45-110	1185	11	30	
Acenaphthylene	1448	13	1299	0	111	45-105	1328	8.6	30	S
Anthracene	1568	13	1299	0	121	55-105	1464	6.9	30	S
Benzo(a)anthracene	1820	13	1299	221.2	123	50-110	1731	5.04	30	S
Benzo(a)pyrene	1720	13	1299	0	132	50-110	1633	5.22	30	S
Benzo(b)fluoranthene	1881	13	1299	0	145	45-115	1767	6.28	30	S
Benzo(g,h,i)perylene	1728	13	1299	0	133	40-125	1723	0.254	30	S
Benzo(k)fluoranthene	1794	13	1299	0	138	45-115	1757	2.05	30	S
Chrysene	1875	13	1299	0	144	55-110	1790	4.66	30	S
Dibenzo(a,h)anthracene	1448	13	1299	40.28	108	40-125	1375	5.12	30	
Fluoranthene	1904	13	1299	0	146	55-115	1784	6.46	30	S
Fluorene	1462	13	1299	0	112	50-110	1355	7.61	30	S
Indeno(1,2,3-cd)pyrene	1582	13	1299	166.6	109	40-120	1468	7.46	30	
Naphthalene	1277	13	1299	0	98.2	40-105	1105	14.4	30	
Pyrene	2116	13	1299	0	163	45-125	2137	0.977	30	S
Surr: 2-Fluorobiphenyl	2659	0	3249	0	81.8	12-100	2327	13.3	40	
Surr: 4-Terphenyl-d14	3825	0	3249	0	118	25-137	3762	1.66	40	
Surr: Nitrobenzene-d5	2706	0	3249	0	83.3	37-107	2339	14.6	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

The following samples were analyzed in this batch:

1409945-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62983** Instrument ID **VMS7** Method: **SW8260B**

MBLK				Sample ID: MBLK-62983-62983				Units: µg/Kg			Analysis Date: 9/20/2014 02:07 AM			
Client ID:				Run ID: VMS7_140919A				SeqNo:2944776			Prep Date: 9/19/2014		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	985.5	0	1000	0	98.6	70-130		0						
Surr: 4-Bromofluorobenzene	1004	0	1000	0	100	70-130		0						
Surr: Dibromofluoromethane	968.5	0	1000	0	96.8	70-130		0						
Surr: Toluene-d8	994	0	1000	0	99.4	70-130		0						

LCS				Sample ID: LCS-62983-62983			Units: µg/Kg		Analysis Date: 9/19/2014 10:48 PM		
Client ID:			Run ID: VMS7_140919A			SeqNo:2944775		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	982	30	1000	0	98.2	75-125	0				
Ethylbenzene	1018	30	1000	0	102	75-125	0				
m,p-Xylene	2020	60	2000	0	101	80-125	0				
o-Xylene	993.5	30	1000	0	99.4	75-125	0				
Toluene	980	30	1000	0	98	70-125	0				
Xylenes, Total	3014	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	992.5	0	1000	0	99.2	70-130	0				
Surr: 4-Bromofluorobenzene	981	0	1000	0	98.1	70-130	0				
Surr: Dibromofluoromethane	1004	0	1000	0	100	70-130	0				
Surr: Toluene-d8	999.5	0	1000	0	100	70-130	0				

MS				Sample ID: 1409903-13A MS				Units: µg/Kg		Analysis Date: 9/20/2014 07:57 AM	
Client ID:			Run ID: VMS7_140919A			SeqNo:2944778		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	960.5	30	1000	0	96	75-125	0				
Ethylbenzene	977	30	1000	0	97.7	75-125	0				
m,p-Xylene	1934	60	2000	0	96.7	80-125	0				
o-Xylene	977	30	1000	0	97.7	75-125	0				
Toluene	948.5	30	1000	0	94.8	70-125	0				
Xylenes, Total	2910	90	3000	0	97	75-125	0				
Surr: 1,2-Dichloroethane-d4	991	0	1000	0	99.1	70-130	0				
Surr: 4-Bromofluorobenzene	985.5	0	1000	0	98.6	70-130	0				
Surr: Dibromofluoromethane	987	0	1000	0	98.7	70-130	0				
Surr: Toluene-d8	978	0	1000	0	97.8	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62983** Instrument ID **VMS7** Method: **SW8260B**

MSD				Sample ID: 1409903-13A MSD			Units: µg/Kg		Analysis Date: 9/20/2014 08:22 AM	
Client ID:				Run ID: VMS7_140919A			SeqNo: 2944779		Prep Date: 9/19/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	954.5	30	1000	0	95.4	75-125	960.5	0.627	30	
Ethylbenzene	977	30	1000	0	97.7	75-125	977	0	30	
m,p-Xylene	1950	60	2000	0	97.5	80-125	1934	0.824	30	
o-Xylene	970	30	1000	0	97	75-125	977	0.719	30	
Toluene	944	30	1000	0	94.4	70-125	948.5	0.476	30	
Xylenes, Total	2920	90	3000	0	97.3	75-125	2910	0.309	30	
Surr: 1,2-Dichloroethane-d4	989	0	1000	0	98.9	70-130	991	0.202	30	
Surr: 4-Bromofluorobenzene	987	0	1000	0	98.7	70-130	985.5	0.152	30	
Surr: Dibromofluoromethane	982.5	0	1000	0	98.2	70-130	987	0.457	30	
Surr: Toluene-d8	986.5	0	1000	0	98.6	70-130	978	0.865	30	

The following samples were analyzed in this batch: 1409945-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **62992** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1409967-02B DUP				Units: mmhos/cm @25°C		Analysis Date: 9/23/2014 03:30 PM		
Client ID:		Run ID: WETCHEM_140923J				SeqNo: 2948682		Prep Date: 9/23/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	60.9	0.050	0	0	0		60.8	0.164	50	

The following samples were analyzed in this batch:

1409945-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63060** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK	Sample ID: MBLK-63060-63060					Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:	Run ID: WETCHEM_140922Q				SeqNo: 2946917		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 0.50

LCS	Sample ID: LCS-63060-63060					Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:	Run ID: WETCHEM_140922Q				SeqNo: 2946916		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.924 0.50 2 0 96.2 80-120 0

MS	Sample ID: 1409966-02A MS					Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:	Run ID: WETCHEM_140922Q				SeqNo: 2946898		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.1633 0.50 1.992 0.3651 -10.1 75-125 0 JS

MS	Sample ID: 1409966-02A MSI					Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:	Run ID: WETCHEM_140922Q				SeqNo: 2946900		Prep Date: 9/19/2014		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1321 50 1352 0.3651 97.7 75-125 0

MSD	Sample ID: 1409966-02A MSD					Units: mg/Kg		Analysis Date: 9/22/2014 03:30 PM		
Client ID:	Run ID: WETCHEM_140922Q				SeqNo: 2946899		Prep Date: 9/19/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.2609 0.49 1.976 0.3651 -5.27 75-125 0.1633 0 20 JS

The following samples were analyzed in this batch:

1409945-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **63074** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-63074-63074				Units:s.u.		Analysis Date: 9/23/2014 08:45 AM													
Client ID:				Run ID: WETCHEM_140923A				SeqNo:2947366		Prep Date: 9/22/2014		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

pH 4.01 0 4 0 100 90-110 0

DUP				Sample ID: 14091025-01B DUP				Units: s.u.		Analysis Date: 9/23/2014 08:45 AM			
Client ID:				Run ID: WETCHEM_140923A				SeqNo: 2947368		Prep Date: 9/22/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

pH 9 0 0 0 0 0-0 9.02 0.222 20

DUP				Sample ID: 1409946-01B DUP				Units: s.u.		Analysis Date: 9/23/2014 08:45 AM			
Client ID:				Run ID: WETCHEM_140923A				SeqNo: 2947378		Prep Date: 9/22/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

pH 8.23 0 0 0 0 0-0 8.24 0.121 20

The following samples were analyzed in this batch:

1409945-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409945
Project: WPX PA 323-33 Batch 3 9.18.14

QC BATCH REPORT

Batch ID: **R148637** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R148637				Units: % of sample		Analysis Date: 9/19/2014 04:40 PM		
Client ID:		Run ID: MOIST_140919A				SeqNo: 2946143		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-R148637				Units: % of sample		Analysis Date: 9/19/2014 04:40 PM		
Client ID:		Run ID: MOIST_140919A				SeqNo: 2946142		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: 1409891-09A DUP				Units: % of sample		Analysis Date: 9/19/2014 04:40 PM		
Client ID:		Run ID: MOIST_140919A				SeqNo: 2946133		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 11.16 0.050 0 0 0 0-0 11.14 0.179 20

DUP		Sample ID: 1409915-01A DUP				Units: % of sample		Analysis Date: 9/19/2014 04:40 PM		
Client ID:		Run ID: MOIST_140919A				SeqNo: 2946141		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 73.79 0.050 0 0 0 0-0 73.56 0.312 20

The following samples were analyzed in this batch:

1409945-01B

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



ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 - PH: (970) 490-1511 - FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER #

1409945

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME WPX PA 323-33

SAMPLER

Reed Wold

DATE

9/18/14

SITE ID

PA 323-33

TURNAROUND

3 Day

PROJECT No.

Batch 3

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

HRL Compliance

BILL TO COMPANY

WPX

SEND REPORT TO

Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS

2385 F 1/2 Rd

ADDRESS

1058 Co Rd 215

CITY / STATE / ZIP

Grand Junction, CO 81506

CITY / STATE / ZIP

Parachute CO 81635

PHONE

970-243-3271

PHONE

970-683-2295

FAX

970-243-3280

FAX

E-MAIL

mmumby@hrlcomp.com
rwold@hrlcomp.com

E-MAIL

Karolina.blaney@wpxenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

01

Batch 3

SO

9/18/14

2:00

3

8

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)

X

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

Reed Wold

Reed Wold

9/18/14

3:00

RECEIVED BY

MM

MM

9/18/14

3:00

RELINQUISHED BY

MM

MM

9/18/14

3:00

RECEIVED BY

T.B. Borden

T.B. Borden

09/19/14

0900

RELINQUISHED BY

RECEIVED BY

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **19-Sep-14 09:00**

Work Order: **1409945**

Received by: **TBB**

Checklist completed by <u>Joseph Ribar</u>	19-Sep-14	Reviewed by: <u>Ann Preston</u>	19-Sep-14
eSignature	Date	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>3.8C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>9/19/2014 11:33:04 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:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6870
 Nick Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81835

Origin ID: RLA



Ship Date: 18SEP14
 Actual: 68.9 LB
 CAD: 2254404NET3558

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 091814-1
 Invoice #
 PO # Parcelite
 Dept #

SHIP TO: (616) 399-6870
 sample receiving
 ALS Laboratory Group
 3362 128TH AVE

BILL NUMBER

HOLLAND, MI 49424

2 of 2

FRI - 19 SEP 10:30A
 PRIORITY OVERNIGHT

MP# 7712 0858 2206

Matr# 7712 0858 2103

6291

49424

MLUS
 GRR

XX HLMA

8220UC3848PC3

After printing this label:

1. Use the "Print" button on this page to print your label to your laser or inkjet printer.
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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.

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 ALS Environmental 3362 128th Avenue Holland, Michigan 49424 Tel: +1 616 399 6070 Fax: +1 616 399 6185	CUSTODY SEAL		Seal Broken
	Date: <u>9/18/14</u>	Time: <u>1:20 PM</u>	Date:
	Name: <u>Nick Martinez</u>		
	Company: <u>ALS</u>		

RT 828
 ST 14
 5
 2206
 09:19
B



09-Dec-2014

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX PA 23-33 Batch 3 12.3.14**

Work Order: **1412197**

Dear Mark,

ALS Environmental received 1 sample on 04-Dec-2014 09:30 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 10.

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

Sincerely,

A handwritten signature in cursive script that reads "Ann Preston".

Electronically approved by: Ann Preston

Ann Preston
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: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 3 12.3.14
Work Order: 1412197

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>
1412197-01	PA 23-33 Batch 3	Soil		12/3/2014 11:20	12/4/2014 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 23-33 Batch 3 12.3.14
WorkOrder: 1412197

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

<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

ALS Group USA, Corp**Date:** 09-Dec-14**Client:** HRL Compliance Solutions, Inc**Project:** WPX PA 23-33 Batch 3 12.3.14**Sample ID:** PA 23-33 Batch 3**Collection Date:** 12/3/2014 11:20 AM**Work Order:** 1412197**Lab ID:** 1412197-01**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	110		SW8015M		Prep: SW3541 / 12/5/14	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	66.2		4.5	mg/Kg-dry	1	12/5/2014 10:05 PM
			39-133	%REC	1	12/5/2014 10:05 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 12/4/14	Analyst: IT
<i>Surr: Toluene-d8</i>	103		2.8	mg/Kg-dry	1	12/5/2014 09:42 PM
			50-150	%REC	1	12/5/2014 09:42 PM
MOISTURE						
Moisture	9.3		A2540 G			Analyst: EVB
			0.050	% of sample	1	12/5/2014 04:00 PM

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

ALS Group USA, Corp

Date: 09-Dec-14

Client: HRL Compliance Solutions, Inc
Work Order: 1412197
Project: WPX PA 23-33 Batch 3 12.3.14

QC BATCH REPORT

Batch ID: **65665** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-65665-65665				Units: mg/Kg		Analysis Date: 12/5/2014 08:23 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064025		Prep Date: 12/5/2014		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	1.832	0	2	0	91.6	39-133	0			

LCS		Sample ID: DLCSS1-65665-65665				Units: mg/Kg		Analysis Date: 12/5/2014 08:48 PM		
Client ID:		Run ID: GC8_141205A				SeqNo: 3064026		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	165.8	5.0	200	0	82.9	61-109	0			
Surr: 4-Terphenyl-d14	1.49	0	2	0	74.5	39-133	0			

MS		Sample ID: 1412197-01A MS				Units: mg/Kg		Analysis Date: 12/5/2014 09:14 PM		
Client ID: PA 23-33 Batch 3		Run ID: GC8_141205A				SeqNo: 3064027		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	368	8.2	327.5	95.64	83.2	48-110	0			
Surr: 4-Terphenyl-d14	2.419	0	3.275	0	73.9	39-133	0			

MSD		Sample ID: 1412197-01A MSD				Units: mg/Kg		Analysis Date: 12/5/2014 09:39 PM		
Client ID: PA 23-33 Batch 3		Run ID: GC8_141205A				SeqNo: 3064028		Prep Date: 12/5/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	351.8	8.1	322.2	95.64	79.5	48-110	368	4.52	30	
Surr: 4-Terphenyl-d14	2.496	0	3.222	0	77.5	39-133	2.419	3.14	30	

The following samples were analyzed in this batch: 1412197-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412197
Project: WPX PA 23-33 Batch 3 12.3.14

QC BATCH REPORT

Batch ID: **65645** Instrument ID **GC10** Method: **SW8015**

MBLK		Sample ID: MBLK-65645-65645				Units: µg/Kg		Analysis Date: 12/5/2014 03:55 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3063991		Prep Date: 12/4/2014		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>	<i>5464</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>109</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: LCS-65645-65645				Units: µg/Kg		Analysis Date: 12/5/2014 03:31 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3063990		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	554100	2,500	500000	0	111	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5173</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>103</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 1412177-01A MS				Units: µg/Kg		Analysis Date: 12/5/2014 11:21 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3064010		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	540800	2,500	500000	0	108	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5242</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>105</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1412177-01A MSD				Units: µg/Kg		Analysis Date: 12/5/2014 11:45 PM		
Client ID:		Run ID: GC10_141205A				SeqNo: 3064011		Prep Date: 12/4/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	505500	2,500	500000	0	101	70-130	540800	6.75	30	
<i>Surr: Toluene-d8</i>	<i>5049</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>101</i>	<i>50-150</i>	<i>5242</i>	<i>3.74</i>	<i>30</i>	

The following samples were analyzed in this batch:

1412197-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1412197
Project: WPX PA 23-33 Batch 3 12.3.14

QC BATCH REPORT

Batch ID: **R153789** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R153789				Units: % of sample		Analysis Date: 12/5/2014 04:00 PM		
Client ID:		Run ID: MOIST_141205C				SeqNo: 3065063		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-R153789				Units: % of sample		Analysis Date: 12/5/2014 04:00 PM		
Client ID:		Run ID: MOIST_141205C				SeqNo: 3065061		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: 1412194-01A DUP				Units: % of sample		Analysis Date: 12/5/2014 04:00 PM		
Client ID:		Run ID: MOIST_141205C				SeqNo: 3065009		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 8.39 0.050 0 0 0 0-0 8.69 3.51 20

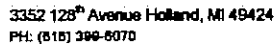
DUP		Sample ID: 1412253-01A DUP				Units: % of sample		Analysis Date: 12/5/2014 04:00 PM		
Client ID:		Run ID: MOIST_141205C				SeqNo: 3065041		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 10.11 0.050 0 0 0 0-0 10.03 0.794 20

The following samples were analyzed in this batch:

1412197-01A

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

**FOOTNOTES**

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **04-Dec-14 09:30**

Work Order: **1412197**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	04-Dec-14	Reviewed by: <u>Ann Preston</u>	04-Dec-14
eSignature	Date	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>4.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/4/2014 1:10:49 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:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6070
 Nick Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RLA



Ship Date: 03DEC14
 ActWgt: 60.0 LB
 CAD: 2284840/NET3550

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 120314-1
 Invoice #
 PO # Parachute
 Dept #

SHIP TO: (616) 399-6070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL SENDER

HOLLAND, MI 49424

1 of 2

THU - 04 DEC 10:30A
 PRIORITY OVERNIGHT

TRK# 7720 8412 1035

EZ01

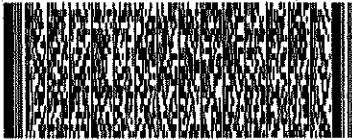
MASTER

XX HLMA

49424

MI-US

GRR



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2. Fold the printed page along the horizontal line.
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ALS Parachute Custody Seal

DATE 12-3-14 Time 17:00

Name MAN



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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Wednesday February 11, 2015

Report Number: L747147

Samples Received: 02/05/15

Client Project: PA 23-33

Description: PA 23-33

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

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FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
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SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
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REPORT OF ANALYSIS

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

February 11, 2015

Date Received : February 05, 2015
Description : PA 23-33

Sample ID : PA 323-33 BATCH 4

Collected By :
Collection Date : 02/04/15 11:30

ESC Sample # : L747147-01

Site ID : PA 23-33/PA 323-33 B 4

Project # : PA 23-33

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	02/07/15	5
Toluene	BDL	0.025	mg/kg	8021	02/07/15	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	02/07/15	5
Total Xylene	BDL	0.0075	mg/kg	8021	02/07/15	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	02/07/15	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	94.2		% Rec.	8015	02/07/15	1
a,a,a-Trifluorotoluene(PID)	94.2		% Rec.	8021	02/07/15	1
TPH (GC/FID) High Fraction	57.	4.0	mg/kg	3546/DRO	02/06/15	1
Surrogate recovery(%)						
o-Terphenyl	82.4		% Rec.	3546/DRO	02/06/15	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	02/06/15	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/06/15	1
Surrogate Recovery						
Nitrobenzene-d5	111.		% Rec.	8270C-SIM	02/06/15	1
2-Fluorobiphenyl	88.5		% Rec.	8270C-SIM	02/06/15	1
p-Terphenyl-d14	83.6		% Rec.	8270C-SIM	02/06/15	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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REPORT OF ANALYSIS

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

February 11, 2015

Date Received : February 05, 2015
 Description : PA 23-33
 Sample ID : PA 323-33 BATCH 4
 Collected By :
 Collection Date : 02/04/15 11:30

ESC Sample # : L747147-02
 Site ID : PA 23-33/PA 323-33 B 4
 Project # : PA 23-33

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/10/15	1
Chromium,Trivalent	BDL	0.50	mg/kg	Calc.	02/06/15	1
ORP	120		mV	2580 B-2011	02/07/15	1
pH	8.5	0.10	su	9045D	02/06/15	1
Sodium Adsorption Ratio	3.0			Calc.	02/08/15	1
Specific Conductance	830		umhos/cm	9050AMod	02/07/15	1
Mercury	0.029	0.020	mg/kg	7471A	02/06/15	1
Arsenic	5.6	2.0	mg/kg	6010B	02/06/15	1
Barium	270	0.50	mg/kg	6010B	02/06/15	1
Cadmium	BDL	0.50	mg/kg	6010B	02/06/15	1
Chromium	6.1	1.0	mg/kg	6010B	02/06/15	1
Copper	9.4	2.0	mg/kg	6010B	02/06/15	1
Lead	9.0	0.50	mg/kg	6010B	02/06/15	1
Nickel	7.9	2.0	mg/kg	6010B	02/06/15	1
Selenium	BDL	2.0	mg/kg	6010B	02/06/15	1
Silver	BDL	1.0	mg/kg	6010B	02/06/15	1
Zinc	30.	5.0	mg/kg	6010B	02/06/15	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)
 Note:
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 L747147-02 (PH) - 8.5@21.2c



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WPX Energy
Ms.Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

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February 11, 2015

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Arsenic	< 2	mg/kg			WG768677	02/05/15 22:54
Barium	< .5	mg/kg			WG768677	02/05/15 22:54
Cadmium	< .5	mg/kg			WG768677	02/05/15 22:54
Chromium	< 1	mg/kg			WG768677	02/05/15 22:54
Copper	< 2	mg/kg			WG768677	02/05/15 22:54
Lead	< .5	mg/kg			WG768677	02/05/15 22:54
Nickel	< 2	mg/kg			WG768677	02/05/15 22:54
Selenium	< 2	mg/kg			WG768677	02/05/15 22:54
Silver	< 1	mg/kg			WG768677	02/05/15 22:54
Zinc	< 5	mg/kg			WG768677	02/05/15 22:54
Acenaphthene	< .006	mg/kg			WG768741	02/06/15 05:48
Anthracene	< .006	mg/kg			WG768741	02/06/15 05:48
Benzo(a)anthracene	< .006	mg/kg			WG768741	02/06/15 05:48
Benzo(a)pyrene	< .006	mg/kg			WG768741	02/06/15 05:48
Benzo(b)fluoranthene	< .006	mg/kg			WG768741	02/06/15 05:48
Benzo(k)fluoranthene	< .006	mg/kg			WG768741	02/06/15 05:48
Chrysene	< .006	mg/kg			WG768741	02/06/15 05:48
Dibenz(a,h)anthracene	< .006	mg/kg			WG768741	02/06/15 05:48
Fluoranthene	< .006	mg/kg			WG768741	02/06/15 05:48
Fluorene	< .006	mg/kg			WG768741	02/06/15 05:48
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG768741	02/06/15 05:48
Naphthalene	< .02	mg/kg			WG768741	02/06/15 05:48
Pyrene	< .006	mg/kg			WG768741	02/06/15 05:48
2-Fluorobiphenyl		% Rec.	91.30	38.2-135	WG768741	02/06/15 05:48
Nitrobenzene-d5		% Rec.	101.0	28.4-151	WG768741	02/06/15 05:48
p-Terphenyl-d14		% Rec.	92.60	34.2-141	WG768741	02/06/15 05:48
Mercury	< .02	mg/kg			WG768720	02/06/15 07:50
Benzene	< .0005	mg/kg			WG768838	02/06/15 13:47
Ethylbenzene	< .0005	mg/kg			WG768838	02/06/15 13:47
Toluene	< .005	mg/kg			WG768838	02/06/15 13:47
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG768838	02/06/15 13:47
Total Xylene	< .0015	mg/kg			WG768838	02/06/15 13:47
a,a,a-Trifluorotoluene(FID)		% Rec.	95.00	59-128	WG768838	02/06/15 13:47
a,a,a-Trifluorotoluene(PID)		% Rec.	95.90	54-144	WG768838	02/06/15 13:47
TPH (GC/FID) High Fraction	< 4	mg/kg			WG768746	02/06/15 12:39
o-Terphenyl		% Rec.	83.30	50-150	WG768746	02/06/15 12:39
Specific Conductance	0.760	umhos/cm			WG768942	02/07/15 12:30
Chromium,Hexavalent	< 2	mg/kg			WG769306	02/10/15 08:29

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
pH	su	6.60	6.60		0.456	1	L747030-01	WG768775
pH	su	8.20	8.20		0.367	1	L747285-03	WG768775
ORP	mV	100.	100.		1.98	20	L747104-02	WG768938

* 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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Ms. Karolina Blaney
1058 County Road 215

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Quality Assurance Report
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February 11, 2015

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
ORP	mV	99.0	100.	1.01	20	L747285-05	WG768938
Specific Conductance	umhos/cm	1200	1200	0.0	20	L746967-02	WG768942
Specific Conductance	umhos/cm	3200	3500	7.41	20	L747206-09	WG768942
Chromium, Hexavalent	mg/kg	0.0	0.0	0.0	20	L747155-02	WG769306
Chromium, Hexavalent	mg/kg	1.30	1.40	5.88	20	L746878-01	WG769306

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	100	92.9	93.0	80-120	WG768677
Barium	mg/kg	100	93.9	94.0	80-120	WG768677
Cadmium	mg/kg	100	89.7	90.0	80-120	WG768677
Chromium	mg/kg	100	92.7	93.0	80-120	WG768677
Copper	mg/kg	100	87.3	87.0	80-120	WG768677
Lead	mg/kg	100	93.4	93.0	80-120	WG768677
Nickel	mg/kg	100	86.3	86.0	80-120	WG768677
Selenium	mg/kg	100	91.8	92.0	80-120	WG768677
Silver	mg/kg	100	90.2	90.0	80-120	WG768677
Zinc	mg/kg	100	87.9	88.0	80-120	WG768677
Acenaphthene	mg/kg	.08	0.0725	90.6	48.7-127	WG768741
Anthracene	mg/kg	.08	0.0730	91.3	51.3-136	WG768741
Benzo(a)anthracene	mg/kg	.08	0.0695	86.9	55-126	WG768741
Benzo(a)pyrene	mg/kg	.08	0.0634	79.3	51.9-127	WG768741
Benzo(b)fluoranthene	mg/kg	.08	0.0735	91.9	54-125	WG768741
Benzo(k)fluoranthene	mg/kg	.08	0.0720	90.0	53.9-132	WG768741
Chrysene	mg/kg	.08	0.0743	92.9	55.7-133	WG768741
Dibenz(a,h)anthracene	mg/kg	.08	0.0766	95.8	52.6-137	WG768741
Fluoranthene	mg/kg	.08	0.0774	96.8	54-132	WG768741
Fluorene	mg/kg	.08	0.0729	91.2	48.7-127	WG768741
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0779	97.4	53.8-138	WG768741
Naphthalene	mg/kg	.08	0.0635	79.3	42-127	WG768741
Pyrene	mg/kg	.08	0.0771	96.3	54-129	WG768741
2-Fluorobiphenyl				96.20	38.2-135	WG768741
Nitrobenzene-d5				106.0	28.4-151	WG768741
p-Terphenyl-d14				94.80	34.2-141	WG768741
Mercury	mg/kg	.458	0.458	100.	80-120	WG768720
pH	su	5.9	5.87	99.5	98.3-101.7	WG768775
Benzene	mg/kg	.05	0.0518	104.	70-130	WG768838
Ethylbenzene	mg/kg	.05	0.0525	105.	70-130	WG768838
Toluene	mg/kg	.05	0.0513	103.	70-130	WG768838
Total Xylene	mg/kg	.15	0.144	95.9	70-130	WG768838
a,a,a-Trifluorotoluene(PID)				104.0	54-144	WG768838
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.13	93.3	63.5-137	WG768838
a,a,a-Trifluorotoluene(FID)				96.80	59-128	WG768838
TPH (GC/FID) High Fraction	mg/kg	60	55.2	92.1	50-150	WG768746

* 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

L747147

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

February 11, 2015

Analyte	Units	Laboratory Control Sample			% Rec	Limit	Batch	
		Known Val		Result				
o-Terphenyl					83.30	50-150		
ORP	mV	100		109.	109.	90-110	WG768938	
Specific Conductance	umhos/cm	759		801.	106.	85-115	WG768942	
Chromium,Hexavalent	mg/kg	187		184.	98.4	80-120	WG769306	
Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Arsenic	mg/kg	92.0	92.9	92.0	80-120	1.00	20	WG768677
Barium	mg/kg	94.4	93.9	94.0	80-120	1.00	20	WG768677
Cadmium	mg/kg	90.7	89.7	91.0	80-120	1.00	20	WG768677
Chromium	mg/kg	93.3	92.7	93.0	80-120	1.00	20	WG768677
Copper	mg/kg	87.5	87.3	88.0	80-120	0.0	20	WG768677
Lead	mg/kg	92.9	93.4	93.0	80-120	0.0	20	WG768677
Nickel	mg/kg	85.8	86.3	86.0	80-120	1.00	20	WG768677
Selenium	mg/kg	92.1	91.8	92.0	80-120	0.0	20	WG768677
Silver	mg/kg	90.7	90.2	91.0	80-120	1.00	20	WG768677
Zinc	mg/kg	88.5	87.9	88.0	80-120	1.00	20	WG768677
Acenaphthene	mg/kg	0.0718	0.0725	90.0	48.7-127	0.920	20	WG768741
Anthracene	mg/kg	0.0722	0.0730	90.0	51.3-136	1.16	20	WG768741
Benzo(a)anthracene	mg/kg	0.0701	0.0695	88.0	55-126	0.890	20	WG768741
Benzo(a)pyrene	mg/kg	0.0607	0.0634	76.0	51.9-127	4.38	20	WG768741
Benzo(b)fluoranthene	mg/kg	0.0703	0.0735	88.0	54-125	4.51	20	WG768741
Benzo(k)fluoranthene	mg/kg	0.0745	0.0720	93.0	53.9-132	3.33	20	WG768741
Chrysene	mg/kg	0.0735	0.0743	92.0	55.7-133	1.14	20	WG768741
Dibenz(a,h)anthracene	mg/kg	0.0753	0.0766	94.0	52.6-137	1.78	20	WG768741
Fluoranthene	mg/kg	0.0767	0.0774	96.0	54-132	0.980	20	WG768741
Fluorene	mg/kg	0.0718	0.0729	90.0	48.7-127	1.61	20	WG768741
Indeno(1,2,3-cd)pyrene	mg/kg	0.0767	0.0779	96.0	53.8-138	1.61	20	WG768741
Naphthalene	mg/kg	0.0642	0.0635	80.0	42-127	1.12	20	WG768741
Pyrene	mg/kg	0.0761	0.0771	95.0	54-129	1.31	20	WG768741
2-Fluorobiphenyl				92.00	38.2-135			WG768741
Nitrobenzene-d5				101.0	28.4-151			WG768741
p-Terphenyl-d14				90.30	34.2-141			WG768741
Mercury	mg/kg	0.460	0.458	100.	80-120	0.0	20	WG768720
pH	su	5.88	5.87	100.	98.3-101.7	0.170	20	WG768775
Benzene	mg/kg	0.0521	0.0518	104.	70-130	0.600	20	WG768838
Ethylbenzene	mg/kg	0.0529	0.0525	106.	70-130	0.730	20	WG768838
Toluene	mg/kg	0.0515	0.0513	103.	70-130	0.330	20	WG768838
Total Xylene	mg/kg	0.145	0.144	96.0	70-130	0.460	20	WG768838
a,a,a-Trifluorotoluene(PID)				104.0	54-144			WG768838
TPH (GC/FID) Low Fraction	mg/kg	5.29	5.13	96.0	63.5-137	2.90	20	WG768838
a,a,a-Trifluorotoluene(FID)				97.40	59-128			WG768838
TPH (GC/FID) High Fraction	mg/kg	53.1	55.2	88.0	50-150	4.04	20	WG768746
o-Terphenyl				75.40	50-150			WG768746

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
ORP	mV	109.	109.	109.	90-110	0.0	20	WG768938
Specific Conductance	umhos/	796.	801.	105.	85-115	0.626	20	WG768942
Chromium,Hexavalent	mg/kg	184.	184.	98.0	80-120	0.0	20	WG769306

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Cadmium	mg/kg	91.0	0.341	100	91.0	75-125	L747123-03	WG768677
Chromium	mg/kg	110.	15.6	100	94.0	75-125	L747123-03	WG768677
Lead	mg/kg	103.	14.2	100	89.0	75-125	L747123-03	WG768677
Mercury	mg/kg	0.533	0.0133	.458	110.	75-125	L747179-01	WG768720
Acenaphthene	mg/kg	0.0616	0.00149	.08	75.0	39.4-132	L747142-01	WG768741
Anthracene	mg/kg	0.0563	0.00173	.08	68.0	36.7-144	L747142-01	WG768741
Benzo(a)anthracene	mg/kg	0.0518	0.0	.08	65.0	28-144	L747142-01	WG768741
Benzo(a)pyrene	mg/kg	0.0501	0.0	.08	63.0	23.8-147	L747142-01	WG768741
Benzo(b)fluoranthene	mg/kg	0.0449	0.0	.08	56.0	18.2-147	L747142-01	WG768741
Benzo(k)fluoranthene	mg/kg	0.0529	0.0	.08	66.0	26.5-143	L747142-01	WG768741
Chrysene	mg/kg	0.0539	0.000674	.08	67.0	27.4-150	L747142-01	WG768741
Dibenz(a,h)anthracene	mg/kg	0.0551	0.0	.08	69.0	13.8-150	L747142-01	WG768741
Fluoranthene	mg/kg	0.0575	0.00209	.08	69.0	23.2-158	L747142-01	WG768741
Fluorene	mg/kg	0.0662	0.00587	.08	75.0	30.8-139	L747142-01	WG768741
Indeno(1,2,3-cd)pyrene	mg/kg	0.0507	0.0	.08	63.0	10.7-155	L747142-01	WG768741
Naphthalene	mg/kg	0.0676	0.00484	.08	78.0	34.9-133	L747142-01	WG768741
Pyrene	mg/kg	0.0553	0.00149	.08	67.0	22.6-151	L747142-01	WG768741
2-Fluorobiphenyl					86.80	38.2-135		WG768741
Nitrobenzene-d5					159.0*	28.4-151		WG768741
p-Terphenyl-d14					79.80	34.2-141		WG768741
Benzene	mg/kg	0.206	0.0107	.05	78.0	49.7-127	L747104-01	WG768838
Ethylbenzene	mg/kg	0.193	0.00176	.05	76.0	40.8-141	L747104-01	WG768838
Toluene	mg/kg	0.199	0.0110	.05	75.0	49.8-132	L747104-01	WG768838
Total Xylene	mg/kg	0.561	0.00526	.15	74.0	41.2-140	L747104-01	WG768838
a,a,a-Trifluorotoluene(PID)					97.30	54-144		WG768838
TPH (GC/FID) Low Fraction	mg/kg	18.4	0.0	5.5	67.0	28.5-138	L747104-01	WG768838
a,a,a-Trifluorotoluene(FID)					93.90	59-128		WG768838
Chromium,Hexavalent	mg/kg	20.2	1.40	20	94.0	75-125	L746878-01	WG769306

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Cadmium	mg/kg	92.5	91.0	92.1	75-125	2.00	20	L747123-03	WG768677
Chromium	mg/kg	111.	110.	95.7	75-125	1.00	20	L747123-03	WG768677
Lead	mg/kg	107.	103.	92.9	75-125	3.00	20	L747123-03	WG768677
Mercury	mg/kg	0.492	0.533	104.	75-125	8.00	20	L747179-01	WG768720

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Acenaphthene	mg/kg	0.0630	0.0616	76.9	39.4-132	2.37	20	L747142-01	WG768741
Anthracene	mg/kg	0.0588	0.0563	71.3	36.7-144	4.36	20.7	L747142-01	WG768741
Benzo(a)anthracene	mg/kg	0.0528	0.0518	66.0	28-144	1.89	24.7	L747142-01	WG768741
Benzo(a)pyrene	mg/kg	0.0507	0.0501	63.4	23.8-147	1.10	25.3	L747142-01	WG768741
Benzo(b)fluoranthene	mg/kg	0.0443	0.0449	55.4	18.2-147	1.25	29.5	L747142-01	WG768741
Benzo(k)fluoranthene	mg/kg	0.0537	0.0529	67.1	26.5-143	1.59	26.1	L747142-01	WG768741
Chrysene	mg/kg	0.0555	0.0539	68.5	27.4-150	2.79	25.7	L747142-01	WG768741
Dibenz(a,h)anthracene	mg/kg	0.0562	0.0551	70.3	13.8-150	2.06	25.8	L747142-01	WG768741
Fluoranthene	mg/kg	0.0594	0.0575	71.7	23.2-158	3.23	26	L747142-01	WG768741
Fluorene	mg/kg	0.0658	0.0662	75.0	30.8-139	0.520	20	L747142-01	WG768741
Indeno(1,2,3-cd)pyrene	mg/kg	0.0509	0.0507	63.6	10.7-155	0.310	26.9	L747142-01	WG768741
Naphthalene	mg/kg	0.0665	0.0676	77.0	34.9-133	1.65	20.4	L747142-01	WG768741
Pyrene	mg/kg	0.0568	0.0553	69.1	22.6-151	2.71	25.1	L747142-01	WG768741
2-Fluorobiphenyl				85.00	38.2-135				WG768741
Nitrobenzene-d5				114.0	28.4-151				WG768741
p-Terphenyl-d14				79.60	34.2-141				WG768741
Benzene	mg/kg	0.183	0.206	69.1	49.7-127	11.5	23.5	L747104-01	WG768838
Ethylbenzene	mg/kg	0.162	0.193	64.0	40.8-141	17.3	23.8	L747104-01	WG768838
Toluene	mg/kg	0.176	0.199	66.0	49.8-132	12.4	23.5	L747104-01	WG768838
Total Xylene	mg/kg	0.471	0.561	62.1	41.2-140	17.4	23.7	L747104-01	WG768838
a,a,a-Trifluorotoluene(PID)				99.40	54-144				WG768838
TPH (GC/FID) Low Fraction	mg/kg	16.9	18.4	61.4	28.5-138	8.81	23.6	L747104-01	WG768838
a,a,a-Trifluorotoluene(FID)				93.70	59-128				WG768838
Chromium,Hexavalent	mg/kg	20.2	20.2	94.0	75-125	0.0	20	L746878-01	WG769306

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG768677: R3018463: L747147-02
WG768741: R3018472 R3018861: L747147-01
WG768720: R3018514: L747147-02
WG768775: R3018589: L747147-02
WG768838: R3018616: L747147-01
WG768746: R3018659: L747147-01
WG768850: R3018773: L747147-02
WG768938: R3018804: L747147-02
WG768942: R3018805: L747147-02
WG769306: R3019002: L747147-02

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
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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.



17-Mar-2015

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

Re: **PA 23-33, PA 323-33 Batch 5**

Work Order: **1503374**

Dear Karolina,

ALS Environmental received 1 sample on 07-Mar-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 24.

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: PA 23-33, PA 323-33 Batch 5
Work Order: 1503374

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>
1503374-01	PA 323-33 Batch 5	Soil		3/5/2015 13:26	3/7/2015 10:30	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33, PA 323-33 Batch 5
Work Order: 1503374

Case Narrative

Batch 68392, Method VOC_8260_S, Sample 1503374-01A: Surrogate recovery out high due matrix interference.

Batch 68436, Method ICP_6010_S, Sample 1503374-01A MS/MSD: The MS and MSD recoveries were outside of the control limits for Barium and Zinc; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required.

Batch 68436, Method ICP_6010_S, Sample 1503374-01A MS: The MS recovery was above the upper control limit for Chromium. The corresponding result in the parent sample may be biased high.

Batch 68436, Method ICP_6010_S, Sample 1503374-01A MSD: The MSD recoveries were below the lower control limits for Copper and Nickel. The corresponding result in the parent sample may be biased low.

Batch 68436, Method ICP_6010_S, Sample 1503374-01A MSD: The RPDs between the MS and MSD were outside of the control limits for Chromium, Copper and Nickel. The corresponding result should be considered estimated.

Batch 68436, Method ICP_6010_S, Sample 1503374-01A MSD: The MSD recovery was outside of the control limit for Lead. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required.

Batch 68480, Method SVO_8270_S, Sample 1503374-01A: Surrogate recovery out due to matrix interference.

<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	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 17-Mar-15

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33, PA 323-33 Batch 5
Sample ID: PA 323-33 Batch 5
Collection Date: 3/5/2015 01:26 PM

Work Order: 1503374
Lab ID: 1503374-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 3/11/15	Analyst: IT
DRO (C10-C28)	870		4.8	mg/Kg-dry	1	3/11/2015 05:35 PM
<i>Surr: 4-Terphenyl-d14</i>	73.2		39-133	%REC	1	3/11/2015 05:35 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 3/9/15	Analyst: IT
GRO (C6-C10)	1,500		2.9	mg/Kg-dry	1	3/9/2015 08:43 PM
<i>Surr: Toluene-d8</i>	123		50-150	%REC	1	3/9/2015 08:43 PM
MERCURY BY CVAA						
			SW7471B		Prep: SW7471 / 3/11/15	Analyst: LR
Mercury	0.024		0.014	mg/Kg-dry	1	3/11/2015 05:20 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 3/10/15	Analyst: JEC
Arsenic	10		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Barium	340		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Cadmium	ND		0.83	mg/Kg-dry	1	3/11/2015 03:18 PM
Chromium	13		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Copper	12		0.83	mg/Kg-dry	1	3/11/2015 03:18 PM
Lead	14		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Nickel	15		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Selenium	ND		0.83	mg/Kg-dry	1	3/11/2015 03:18 PM
Silver	ND		0.42	mg/Kg-dry	1	3/11/2015 03:18 PM
Zinc	60		0.83	mg/Kg-dry	1	3/11/2015 03:18 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 3/11/15	Analyst: JEC
Calcium	90		5.0	mg/Kg	10	3/11/2015 04:19 PM
Magnesium	62		2.0	mg/Kg	10	3/11/2015 04:19 PM
Sodium	260		2.0	mg/Kg	10	3/11/2015 04:19 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 3/11/15	Analyst: JEC
Sodium Adsorption Ratio	5.2		0.010	none	1	3/11/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 3/11/15	Analyst: RM
Acenaphthene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Anthracene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Chrysene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM

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

ALS Group USA, Corp

Date: 17-Mar-15

Client: WPX Energy Rocky Mountain, LLC

Project: PA 23-33, PA 323-33 Batch 5

Sample ID: PA 323-33 Batch 5

Collection Date: 3/5/2015 01:26 PM

Work Order: 1503374

Lab ID: 1503374-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Fluorene	73		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Naphthalene	830		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Pyrene	ND		7.7	µg/Kg-dry	1	3/11/2015 06:08 PM
Surr: 2,4,6-Tribromophenol	75.1		34-140	%REC	1	3/11/2015 06:08 PM
Surr: 2-Fluorobiphenyl	68.7		12-100	%REC	1	3/11/2015 06:08 PM
Surr: 2-Fluorophenol	84.4		33-117	%REC	1	3/11/2015 06:08 PM
Surr: 4-Terphenyl-d14	81.9		25-137	%REC	1	3/11/2015 06:08 PM
Surr: Nitrobenzene-d5	113	S	37-107	%REC	1	3/11/2015 06:08 PM
Surr: Phenol-d6	81.8		40-106	%REC	1	3/11/2015 06:08 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 3/9/15	Analyst: BG	
Benzene	ND		35	µg/Kg-dry	1	3/11/2015 08:32 AM
Ethylbenzene	600		35	µg/Kg-dry	1	3/11/2015 08:32 AM
m,p-Xylene	47,000		350	µg/Kg-dry	5	3/10/2015 08:21 PM
o-Xylene	7,300		180	µg/Kg-dry	5	3/10/2015 08:21 PM
Toluene	1,400		35	µg/Kg-dry	1	3/11/2015 08:32 AM
Xylenes, Total	54,000		530	µg/Kg-dry	5	3/10/2015 08:21 PM
Surr: 1,2-Dichloroethane-d4	98.6		70-130	%REC	1	3/11/2015 08:32 AM
Surr: 1,2-Dichloroethane-d4	98.6		70-130	%REC	5	3/10/2015 08:21 PM
Surr: 4-Bromofluorobenzene	108		70-130	%REC	1	3/11/2015 08:32 AM
Surr: 4-Bromofluorobenzene	92.2		70-130	%REC	5	3/10/2015 08:21 PM
Surr: Dibromofluoromethane	93.0		70-130	%REC	1	3/11/2015 08:32 AM
Surr: Dibromofluoromethane	97.5		70-130	%REC	5	3/10/2015 08:21 PM
Surr: Toluene-d8	126		70-130	%REC	5	3/10/2015 08:21 PM
Surr: Toluene-d8	232	S	70-130	%REC	1	3/11/2015 08:32 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 3/11/15	Analyst: JB	
Electrical Conductivity @ Saturation	2.3		0.025	mmhos/cm @2	5	3/12/2015 11:18 AM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JB		
Chromium, Trivalent	13		0.58	mg/Kg-dry	1	3/16/2015 03:30 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 3/12/15	Analyst: MB	
Chromium, Hexavalent	ND		1.2	mg/Kg-dry	1	3/16/2015 03:00 PM
MOISTURE			E160.3M	Analyst: EVB		
Moisture	14		0.050	% of sample	1	3/10/2015 02:55 PM
PH			SW9045D	Prep: EXTRACT / 3/10/15	Analyst: JRF	
pH	8.6			s.u.	1	3/10/2015 03:30 PM

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

ALS Group USA, Corp

Date: 17-Mar-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68481** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-68481-68481				Units: mg/Kg		Analysis Date: 3/11/2015 03:06 PM		
Client ID:		Run ID: GC8_150311A				SeqNo: 3174570		Prep Date: 3/11/2015		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 1.396 0 2 0 69.8 39-133 0

LCS		Sample ID: DLCSS1-68481-68481				Units: mg/Kg		Analysis Date: 3/11/2015 03:36 PM		
Client ID:		Run ID: GC8_150311A				SeqNo: 3174571		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 172.8 5.0 200 0 86.4 61-109 0
Surr: 4-Terphenyl-d14 1.37 0 2 0 68.5 39-133 0

MS		Sample ID: 1503373-01A MS				Units: mg/Kg		Analysis Date: 3/11/2015 04:06 PM		
Client ID:		Run ID: GC8_150311A				SeqNo: 3174572		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 585.2 8.2 329.5 175.2 124 48-110 0 S
Surr: 4-Terphenyl-d14 2.226 0 3.295 0 67.5 39-133 0

MSD		Sample ID: 1503373-01A MSD				Units: mg/Kg		Analysis Date: 3/11/2015 04:36 PM		
Client ID:		Run ID: GC8_150311A				SeqNo: 3174573		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 630.5 8.2 328 175.2 139 48-110 585.2 7.44 30 S
Surr: 4-Terphenyl-d14 2.167 0 3.28 0 66.1 39-133 2.226 2.68 30

The following samples were analyzed in this batch: 1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68405** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-68405-68405				Units: µg/Kg		Analysis Date: 3/9/2015 03:45 PM		
Client ID:		Run ID: GC9_150309A				SeqNo: 3170917		Prep Date: 3/9/2015		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	5086	0	5000	0	102	50-150	0			

LCS		Sample ID: LCS-68405-68405				Units: µg/Kg		Analysis Date: 3/9/2015 03:20 PM		
Client ID:		Run ID: GC9_150309A				SeqNo: 3170916		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	489500	2,500	500000	0	97.9	70-130	0			
Surr: Toluene-d8	4396	0	5000	0	87.9	50-150	0			

MS		Sample ID: 1503349-01A MS				Units: µg/Kg		Analysis Date: 3/9/2015 07:04 PM		
Client ID:		Run ID: GC9_150309A				SeqNo: 3170919		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	473200	2,500	500000	0	94.6	70-130	0			
Surr: Toluene-d8	4373	0	5000	0	87.5	50-150	0			

MSD		Sample ID: 1503349-01A MSD				Units: µg/Kg		Analysis Date: 3/9/2015 07:29 PM		
Client ID:		Run ID: GC9_150309A				SeqNo: 3170920		Prep Date: 3/9/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	467200	2,500	500000	0	93.4	70-130	473200	1.28	30	
Surr: Toluene-d8	4320	0	5000	0	86.4	50-150	4373	1.21	30	

The following samples were analyzed in this batch: 1503374-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68495** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-68495-68495				Units: mg/Kg		Analysis Date: 3/11/2015 04:59 PM		
Client ID:		Run ID: HG1_150311A				SeqNo: 3173771		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-68495-68495				Units: mg/Kg		Analysis Date: 3/11/2015 05:02 PM		
Client ID:		Run ID: HG1_150311A			SeqNo: 3173772		Prep Date: 3/11/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1852 0.020 0.1665 0 111 80-120 0

MS		Sample ID: 15021255-04AMS				Units: mg/Kg		Analysis Date: 3/11/2015 05:13 PM		
Client ID:			Run ID: HG1_150311A			SeqNo: 3173777		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1347 0.013 0.1077 0.01905 107 75-125 0

MSD		Sample ID: 15021255-04AMSD				Units: mg/Kg		Analysis Date: 3/11/2015 05:16 PM		
Client ID:		Run ID: HG1_150311A			SeqNo: 3173778		Prep Date: 3/11/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.129 0.013 0.1047 0.01905 105 75-125 0.1347 4.33 35

The following samples were analyzed in this batch: 1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68408** Instrument ID **ICP2** Method: **SW846 6010C**

DUP				Sample ID: 1503327-01ADUP				Units: mg/L			Analysis Date: 3/11/2015 04:08 PM			
Client ID:				Run ID: ICP2_150311A				SeqNo: 3173592			Prep Date: 3/11/2015		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Calcium	86.09	5.0	0	0	0	0-0	80.08	7.22						
Magnesium	12.02	2.0	0	0	0	0-0	10.78	10.9						
Sodium	794.8	2.0	0	0	0	0-0	714.8	10.6						

DUP				Sample ID: 1503327-01ADUP				Units: none			Analysis Date: 3/11/2015			
Client ID:				Run ID: SAR_150311A				SeqNo: 3174221			Prep Date: 3/11/2015		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Sodium Adsorption Ratio		21.27	0.010	0	0	0		19.9	6.65	50				

The following samples were analyzed in this batch: | 1503374-01A |

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68436** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-68436-68436				Units: mg/L		Analysis Date: 3/11/2015 02:44 PM		
Client ID:		Run ID: ICP2_150311A				SeqNo: 3173577		Prep Date: 3/10/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	0.009284	0.25								J
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.3434	0.50								J

LCS		Sample ID: LCS-68436-68436				Units: mg/L		Analysis Date: 3/11/2015 02:49 PM		
Client ID:		Run ID: ICP2_150311A				SeqNo: 3173578		Prep Date: 3/10/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.606	0.25	5	0	92.1	80-120	0			
Barium	4.911	0.25	5	0	98.2	80-120	0			
Cadmium	4.57	0.50	5	0	91.4	80-120	0			
Chromium	5.101	0.25	5	0	102	80-120	0			
Copper	4.826	0.50	5	0	96.5	80-120	0			
Lead	5.158	0.25	5	0	103	80-120	0			
Nickel	4.839	0.25	5	0	96.8	80-120	0			
Selenium	4.685	0.50	5	0	93.7	80-120	0			
Silver	5.189	0.25	5	0	104	80-120	0			
Zinc	5.044	0.50	5	0	101	80-120	0			

MS		Sample ID: 1503374-01AMS				Units: mg/Kg		Analysis Date: 3/11/2015 03:23 PM		
Client ID: PA 323-33 Batch 5		Run ID: ICP2_150311A				SeqNo: 3173584		Prep Date: 3/10/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.14	0.36	7.153	8.869	102	75-125	0			
Barium	306	0.36	7.153	287.6	258	75-125	0			SO
Cadmium	6.999	0.72	7.153	0.1487	95.8	75-125	0			
Chromium	21.6	0.36	7.153	11.54	141	75-125	0			S
Copper	18.15	0.72	7.153	10.06	113	75-125	0			
Lead	19.03	0.36	7.153	12.42	92.5	75-125	0			
Nickel	21.33	0.36	7.153	12.76	120	75-125	0			
Selenium	6.489	0.72	7.153	-0.3193	95.2	75-125	0			
Silver	8.369	0.36	7.153	-0.1213	119	75-125	0			
Zinc	66.83	0.72	7.153	51.77	210	75-125	0			SO

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68436** Instrument ID **ICP2** Method: **SW846 6010C**

MSD				Sample ID: 1503374-01AMSD			Units: mg/Kg		Analysis Date: 3/11/2015 03:29 PM		
Client ID: PA 323-33 Batch 5			Run ID: ICP2_150311A			SeqNo: 3173585		Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	15.07	0.36	7.184	8.869	86.3	75-125	16.14	6.83	20		
Barium	291	0.36	7.184	287.6	47.8	75-125	306	5.03	20	SO	
Cadmium	7.131	0.72	7.184	0.1487	97.2	75-125	6.999	1.87	20		
Chromium	17.56	0.36	7.184	11.54	83.8	75-125	21.6	20.7	20	R	
Copper	14.73	0.72	7.184	10.06	65.1	75-125	18.15	20.8	20	SR	
Lead	17.01	0.36	7.184	12.42	63.9	75-125	19.03	11.2	20	S	
Nickel	17.09	0.36	7.184	12.76	60.2	75-125	21.33	22.1	20	SR	
Selenium	6.934	0.72	7.184	-0.3193	101	75-125	6.489	6.63	20		
Silver	8.524	0.36	7.184	-0.1213	120	75-125	8.369	1.83	20		
Zinc	56.24	0.72	7.184	51.77	62.2	75-125	66.83	17.2	20	SO	

The following samples were analyzed in this batch: 1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68480** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-68480-68480				Units: µg/Kg		Analysis Date: 3/11/2015 03:06 PM		
Client ID:		Run ID: SVMS8_150311A				SeqNo: 3174833		Prep Date: 3/11/2015		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								
Surr: 2,4,6-Tribromophenol	1126	0	1667	0	67.5	34-140		0		
Surr: 2-Fluorobiphenyl	1201	0	1667	0	72.1	12-100		0		
Surr: 2-Fluorophenol	1265	0	1667	0	75.9	33-117		0		
Surr: 4-Terphenyl-d14	1566	0	1667	0	93.9	25-137		0		
Surr: Nitrobenzene-d5	1087	0	1667	0	65.2	37-107		0		
Surr: Phenol-d6	1205	0	1667	0	72.3	40-106		0		

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68480** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS		Sample ID: SLCSS1-68480-68480				Units: µg/Kg		Analysis Date: 3/11/2015 03:26 PM		
Client ID:		Run ID: SVMS8_150311A				SeqNo: 3174834		Prep Date: 3/11/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	509.7	6.7	666.7	0	76.4	45-110	0			
Anthracene	570.7	6.7	666.7	0	85.6	55-105	0			
Benzo(a)anthracene	573	6.7	666.7	0	85.9	50-110	0			
Benzo(a)pyrene	628.7	6.7	666.7	0	94.3	50-110	0			
Benzo(b)fluoranthene	635	6.7	666.7	0	95.2	45-115	0			
Benzo(g,h,i)perylene	654.7	6.7	666.7	0	98.2	40-125	0			
Benzo(k)fluoranthene	612	6.7	666.7	0	91.8	45-115	0			
Chrysene	613.3	6.7	666.7	0	92	55-110	0			
Dibenzo(a,h)anthracene	639.7	6.7	666.7	0	95.9	40-125	0			
Fluoranthene	576	6.7	666.7	0	86.4	55-115	0			
Fluorene	494.3	6.7	666.7	0	74.1	50-110	0			
Indeno(1,2,3-cd)pyrene	647.7	6.7	666.7	0	97.1	40-120	0			
Naphthalene	476	6.7	666.7	0	71.4	40-105	0			
Pyrene	651.7	6.7	666.7	0	97.7	45-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	1319	0	1667	0	79.2	34-140	0			
<i>Surr: 2-Fluorobiphenyl</i>	1209	0	1667	0	72.5	12-100	0			
<i>Surr: 2-Fluorophenol</i>	1204	0	1667	0	72.3	33-117	0			
<i>Surr: 4-Terphenyl-d14</i>	1592	0	1667	0	95.5	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1099	0	1667	0	65.9	37-107	0			
<i>Surr: Phenol-d6</i>	1134	0	1667	0	68.1	40-106	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68480** Instrument ID **SVMS8** Method: **SW846 8270D**

MS				Sample ID: 1503414-02B MS			Units: µg/Kg		Analysis Date: 3/11/2015 03:47 PM	
Client ID:				Run ID: SVMS8_150311A			SeqNo: 3174835		Prep Date: 3/11/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	991.7	13	1314	0	75.4	45-110	0			
Anthracene	1110	13	1314	0	84.4	55-105	0			
Benzo(a)anthracene	1122	13	1314	20.07	83.9	50-110	0			
Benzo(a)pyrene	1207	13	1314	9.71	91.1	50-110	0			
Benzo(b)fluoranthene	1230	13	1314	13.27	92.6	45-115	0			
Benzo(g,h,i)perylene	1293	13	1314	13.27	97.4	40-125	0			
Benzo(k)fluoranthene	1124	13	1314	3.884	85.2	45-115	0			
Chrysene	1175	13	1314	6.15	88.9	55-110	0			
Dibenzo(a,h)anthracene	1243	13	1314	0	94.5	40-125	0			
Fluoranthene	1099	13	1314	7.121	83.1	55-115	0			
Fluorene	964.1	13	1314	0	73.3	50-110	0			
Indeno(1,2,3-cd)pyrene	1299	13	1314	10.36	98.1	40-120	0			
Naphthalene	938.4	13	1314	0	71.4	40-105	0			
Pyrene	1262	13	1314	9.063	95.3	45-125	0			
Surr: 2,4,6-Tribromophenol	2617	0	3286	0	79.6	34-140	0			
Surr: 2-Fluorobiphenyl	2376	0	3286	0	72.3	12-100	0			
Surr: 2-Fluorophenol	2328	0	3286	0	70.9	33-117	0			
Surr: 4-Terphenyl-d14	3031	0	3286	0	92.2	25-137	0			
Surr: Nitrobenzene-d5	2202	0	3286	0	67	37-107	0			
Surr: Phenol-d6	2214	0	3286	0	67.4	40-106	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68480** Instrument ID **SVMS8** Method: **SW846 8270D**

MSD				Sample ID: 1503414-02B MSD			Units: µg/Kg		Analysis Date: 3/11/2015 04:07 PM	
Client ID:				Run ID: SVMS8_150311A			SeqNo: 3174836		Prep Date: 3/11/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	971.5	13	1319	0	73.6	45-110	991.7	2.05	30	
Anthracene	1097	13	1319	0	83.2	55-105	1110	1.13	30	
Benzo(a)anthracene	1116	13	1319	20.07	83.1	50-110	1122	0.579	30	
Benzo(a)pyrene	1191	13	1319	9.71	89.6	50-110	1207	1.29	30	
Benzo(b)fluoranthene	1200	13	1319	13.27	90	45-115	1230	2.45	30	
Benzo(g,h,i)perylene	1257	13	1319	13.27	94.3	40-125	1293	2.84	30	
Benzo(k)fluoranthene	1113	13	1319	3.884	84.1	45-115	1124	0.933	30	
Chrysene	1163	13	1319	6.15	87.7	55-110	1175	1.05	30	
Dibenzo(a,h)anthracene	1218	13	1319	0	92.3	40-125	1243	1.99	30	
Fluoranthene	1102	13	1319	7.121	83	55-115	1099	0.242	30	
Fluorene	968.2	13	1319	0	73.4	50-110	964.1	0.43	30	
Indeno(1,2,3-cd)pyrene	1281	13	1319	10.36	96.4	40-120	1299	1.37	30	
Naphthalene	861.4	13	1319	0	65.3	40-105	938.4	8.56	30	
Pyrene	1226	13	1319	9.063	92.3	45-125	1262	2.87	30	
Surr: 2,4,6-Tribromophenol	2539	0	3298	0	77	34-140	2617	3.01	40	
Surr: 2-Fluorobiphenyl	2293	0	3298	0	69.5	12-100	2376	3.53	40	
Surr: 2-Fluorophenol	2175	0	3298	0	65.9	33-117	2328	6.83	40	
Surr: 4-Terphenyl-d14	2948	0	3298	0	89.4	25-137	3031	2.77	40	
Surr: Nitrobenzene-d5	2056	0	3298	0	62.4	37-107	2202	6.84	40	
Surr: Phenol-d6	2102	0	3298	0	63.7	40-106	2214	5.19	40	

The following samples were analyzed in this batch: | 1503374-01A |

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68392** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-68392-68392				Units: µg/Kg			Analysis Date: 3/9/2015 01:10 PM			
Client ID:				Run ID: VMS5_150309A				SeqNo: 3170853			Prep Date: 3/9/2015		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	1032	0	1000	0	103	70-130		0						
Surr: 4-Bromofluorobenzene	995.5	0	1000	0	99.6	70-130		0						
Surr: Dibromofluoromethane	1027	0	1000	0	103	70-130		0						
Surr: Toluene-d8	965.5	0	1000	0	96.6	70-130		0						

LCS				Sample ID: LCS-68392-68392			Units: µg/Kg		Analysis Date: 3/9/2015 11:53 AM		
Client ID:			Run ID: VMS5_150309A			SeqNo: 3170852		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1148	30	1000	0	115	75-125	0				
Ethylbenzene	1112	30	1000	0	111	75-125	0				
m,p-Xylene	2224	60	2000	0	111	80-125	0				
o-Xylene	1096	30	1000	0	110	75-125	0				
Toluene	1088	30	1000	0	109	70-125	0				
Xylenes, Total	3319	90	3000	0	111	75-125	0				
Surr: 1,2-Dichloroethane-d4	1004	0	1000	0	100	70-130	0				
Surr: 4-Bromofluorobenzene	1035	0	1000	0	104	70-130	0				
Surr: Dibromofluoromethane	1025	0	1000	0	102	70-130	0				
Surr: Toluene-d8	962	0	1000	0	96.2	70-130	0				

MS				Sample ID: 1503325-01A MS				Units: µg/Kg		Analysis Date: 3/10/2015 09:35 PM	
Client ID:			Run ID: VMS7_150310A			SeqNo: 3172243		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1158	30	1000	0	116	75-125	0				
Ethylbenzene	1078	30	1000	0	108	75-125	0				
m,p-Xylene	2190	60	2000	0	110	80-125	0				
o-Xylene	1046	30	1000	0	105	75-125	0				
Toluene	1092	30	1000	0	109	70-125	0				
Xylenes, Total	3236	90	3000	0	108	75-125	0				
Surr: 1,2-Dichloroethane-d4	964	0	1000	0	96.4	70-130	0				
Surr: 4-Bromofluorobenzene	1002	0	1000	0	100	70-130	0				
Surr: Dibromofluoromethane	972.5	0	1000	0	97.2	70-130	0				
Surr: Toluene-d8	933.5	0	1000	0	93.4	70-130	0				

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68392** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 1503325-01A MSD				Units: µg/Kg		Analysis Date: 3/10/2015 10:00 PM	
Client ID:			Run ID: VMS7_150310A			SeqNo: 3172244		Prep Date: 3/9/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1120	30	1000	0	112	75-125	1158	3.34	30		
Ethylbenzene	1044	30	1000	0	104	75-125	1078	3.2	30		
m,p-Xylene	2124	60	2000	0	106	80-125	2190	3.04	30		
o-Xylene	1038	30	1000	0	104	75-125	1046	0.816	30		
Toluene	1074	30	1000	0	107	70-125	1092	1.66	30		
Xylenes, Total	3162	90	3000	0	105	75-125	3236	2.31	30		
Surr: 1,2-Dichloroethane-d4	953	0	1000	0	95.3	70-130	964	1.15	30		
Surr: 4-Bromofluorobenzene	1006	0	1000	0	101	70-130	1002	0.448	30		
Surr: Dibromofluoromethane	984.5	0	1000	0	98.4	70-130	972.5	1.23	30		
Surr: Toluene-d8	954	0	1000	0	95.4	70-130	933.5	2.17	30		

The following samples were analyzed in this batch: 1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68408** Instrument ID **Titration 1** Method: **USDA H60 Metho**

DUP		Sample ID: 1503327-01A DUP				Units: mmhos/cm @25°		Analysis Date: 3/12/2015 11:18 AM		
Client ID:		Run ID: TITRATOR 1_150312A			SeqNo: 3174366		Prep Date: 3/11/2015		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.197	0.025	0	0	0		3.709	12.4	50	

The following samples were analyzed in this batch:

1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68449** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-68449-68449				Units: s.u.		Analysis Date: 3/10/2015 03:30 PM		
Client ID:		Run ID: WETCHEM_150310H				SeqNo: 3172010		Prep Date: 3/10/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.97	0	4	0	99.2	90-110	0			

DUP				Sample ID: 1503373-01A DUP				Units: s.u.			Analysis Date: 3/10/2015 03:30 PM			
Client ID:				Run ID: WETCHEM_150310H				SeqNo: 3172013			Prep Date: 3/10/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH	8.53	0	0	0	0	0-0	8.64	1.28	20					

The following samples were analyzed in this batch:

1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **68673** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-68673-68673				Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM		
Client ID:		Run ID: WETCHEM_150316E		SeqNo: 3179071		Prep Date: 3/12/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS		Sample ID: LCS-68673-68673				Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM		
Client ID:		Run ID: WETCHEM_150316E		SeqNo: 3179070		Prep Date: 3/12/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.65 1.0 5 0 93 80-120 0

MS		Sample ID: 1503327-01A MS				Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM		
Client ID:		Run ID: WETCHEM_150316E		SeqNo: 3179064		Prep Date: 3/12/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.765 0.98 4.902 0.3725 28.4 75-125 0 S

MS		Sample ID: 1503327-01A MSI				Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM		
Client ID:		Run ID: WETCHEM_150316E		SeqNo: 3179066		Prep Date: 3/12/2015		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2018 100 2269 0.3725 88.9 75-125 0

MSD		Sample ID: 1503327-01A MSD				Units: mg/Kg		Analysis Date: 3/16/2015 03:00 PM		
Client ID:		Run ID: WETCHEM_150316E		SeqNo: 3179065		Prep Date: 3/12/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.04 0.99 4.95 0.3725 33.7 75-125 1.765 14.5 20 S

The following samples were analyzed in this batch:

1503374-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503374
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **R158917** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R158917				Units: % of sample		Analysis Date: 3/10/2015 02:55 PM		
Client ID:		Run ID: MOIST_150310B				SeqNo: 3172790		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-R158917				Units: % of sample		Analysis Date: 3/10/2015 02:55 PM		
Client ID:		Run ID: MOIST_150310B				SeqNo: 3172789		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: 1503373-01A DUP				Units: % of sample		Analysis Date: 3/10/2015 02:55 PM		
Client ID:		Run ID: MOIST_150310B				SeqNo: 3172780		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.44 0.050 0 0 0 14.1 4.79 20

DUP		Sample ID: 1503414-01B DUP				Units: % of sample		Analysis Date: 3/10/2015 02:55 PM		
Client ID:		Run ID: MOIST_150310B				SeqNo: 3172785		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 9.91 0.050 0 0 0 9.46 4.65 20

The following samples were analyzed in this batch:

1503374-01A

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



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER
#

1503374

PROJECT NAME		PA 23-33, PA 323-33 Batch 5		SAMPLER				DATE				PAGE		1 of 1	
PROJECT No.				SITE ID		PA 23-33, PA 323-33 Batch 5		TURNAROUND		5 day		DISPOSAL		By Lab or Return to Client	
COMPANY NAME		WPX Energy		EDD FORMAT											
SEND REPORT TO		Blaney		PURCHASE ORDER											
ADDRESS				BILL TO COMPANY		WPX Energy									
CITY/STATE/ZIP				INVOICE ATTN TO		Karolina Blaney; Leo Braun									
PHONE				ADDRESS		1058 Co Rd 215									
FAX				CITY/STATE/ZIP		Parachure CO 81635									
E-MAIL		Karolina.blaney@wpxenergy.com		PHONE		870-683-2295									
				FAX											
				E-MAIL		Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com		910-1							
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC								
/	PA 323-33 Batch 5	S	3/5/2015	1:26	1	8	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)	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
<p>Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035</p>		

4.0°
C

SIGNATURE	PRINTED NAME	DATE	TIME
Karolina Blaney	karolina blaney	3/5/2015	18:00
[Signature]	[Signature]	3-5-15	1600
[Signature]	[Signature]	3-5-15	1700
[Signature]	KENTY L. JERENGA	3/7/15	1030
RELINQUISHED BY			
RECEIVED BY			
RELINQUISHED BY			
RECEIVED BY			
RELINQUISHED BY			
RECEIVED BY			

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **07-Mar-15 10:30**

Work Order: **1503374**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

07-Mar-15
Date

Reviewed by: Chad Whelton
eSignature

09-Mar-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): 4.0 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 3/7/2015 9:02:25 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:



27-Apr-2015

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

Re: **PA 23-33, PA 323-33 Batch 5**

Work Order: **15041117**

Dear Karolina,

ALS Environmental received 1 sample on 18-Apr-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 9.

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33, PA 323-33 Batch 5
Work Order: 15041117

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>
15041117-01	PA 23-33, PA 323-33 Batch 5	Soil		4/16/2015 10:00	4/18/2015 10:00	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33, PA 323-33 Batch 5
WorkOrder: 15041117

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>
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp**Date:** 27-Apr-15**Client:** WPX Energy Rocky Mountain, LLC**Project:** PA 23-33, PA 323-33 Batch 5**Work Order:** 15041117**Sample ID:** PA 23-33, PA 323-33 Batch 5**Lab ID:** 15041117-01**Collection Date:** 4/16/2015 10:00 AM**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			SW8015M		Prep: SW3541 / 4/21/15	Analyst: IT
DRO (C10-C28)	290		4.1	mg/Kg	1	4/22/2015 02:30 AM
<i>Surr: 4-Terphenyl-d14</i>	76.4		39-133	%REC	1	4/22/2015 02:30 AM
GASOLINE RANGE ORGANICS BY GC-FID			SW8015D		Prep: SW5035 / 4/20/15	Analyst: IT
GRO (C6-C10)	54		2.5	mg/Kg	1	4/20/2015 04:01 PM
<i>Surr: Toluene-d8</i>	82.1		50-150	%REC	1	4/20/2015 04:01 PM

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

ALS Group USA, Corp

Date: 27-Apr-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15041117
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **70092** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-70092-70092				Units: mg/Kg		Analysis Date: 4/21/2015 10:59 PM		
Client ID:		Run ID: GC8_150421B				SeqNo: 3236762		Prep Date: 4/21/2015		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	1.69	0	2	0	84.5	39-133		0		

LCS		Sample ID: DLCSS1-70092-70092				Units: mg/Kg		Analysis Date: 4/21/2015 11:29 PM		
Client ID:		Run ID: GC8_150421B				SeqNo: 3236764		Prep Date: 4/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	187.6	5.0	200	0	93.8	61-109		0		
Surr: 4-Terphenyl-d14	1.477	0	2	0	73.9	39-133		0		

MS		Sample ID: 15041165-01A MS				Units: mg/Kg		Analysis Date: 4/21/2015 11:59 PM		
Client ID:		Run ID: GC8_150421B				SeqNo: 3236765		Prep Date: 4/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	1471	7.8	313.9	1487	-5.05	48-110		0		SO
Surr: 4-Terphenyl-d14	2.598	0	3.139	0	82.8	39-133		0		

MSD		Sample ID: 15041165-01A MSD				Units: mg/Kg		Analysis Date: 4/22/2015 12:29 PM		
Client ID:		Run ID: GC8_150421B				SeqNo: 3236774		Prep Date: 4/21/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	1416	8.0	319.6	1487	-22	48-110	1471	3.78	30	SO
Surr: 4-Terphenyl-d14	2.505	0	3.196	0	78.4	39-133	2.598	3.62	30	

The following samples were analyzed in this batch:

15041117-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15041117
Project: PA 23-33, PA 323-33 Batch 5

QC BATCH REPORT

Batch ID: **70010** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-70010-70010				Units: µg/Kg		Analysis Date: 4/20/2015 02:21 PM		
Client ID:		Run ID: GC9_150420A				SeqNo: 3234008		Prep Date: 4/20/2015		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>	4978	0	5000	0	99.6	50-150	0			

LCS		Sample ID: LCS-70010-70010				Units: µg/Kg		Analysis Date: 4/20/2015 01:57 PM		
Client ID:		Run ID: GC9_150420A				SeqNo: 3234006		Prep Date: 4/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	431400	2,500	500000	0	86.3	70-130	0			
<i>Surr: Toluene-d8</i>	5049	0	5000	0	101	50-150	0			

MS		Sample ID: 1504975-01A MS				Units: µg/Kg		Analysis Date: 4/20/2015 05:18 PM		
Client ID:		Run ID: GC9_150420A				SeqNo: 3234034		Prep Date: 4/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	554700	2,500	500000	94410	92.1	70-130	0			
<i>Surr: Toluene-d8</i>	4390	0	5000	0	87.8	50-150	0			

MSD		Sample ID: 1504975-01A MSD				Units: µg/Kg		Analysis Date: 4/20/2015 05:43 PM		
Client ID:		Run ID: GC9_150420A				SeqNo: 3234037		Prep Date: 4/20/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	541800	2,500	500000	94410	89.5	70-130	554700	2.36	30	
<i>Surr: Toluene-d8</i>	4389	0	5000	0	87.8	50-150	4390	0.0114	30	

The following samples were analyzed in this batch:

15041117-01A

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



ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER
#

15041117

PROJECT NAME		PA 23-33, PA 323-33 Batch 5		SAMPLER				DATE				PAGE		1 of 1		
PROJECT No.				SITE ID		PA 23-33, PA 323-33 Batch 5		TURNAROUND		5 day		DISPOSAL		By Lab or Return to Client		
COMPANY NAME		WPX Energy		PURCHASE ORDER				DRO + GRO								
SEND REPORT TO		Blaney		BILL TO COMPANY		WPX Energy										
ADDRESS				INVOICE ATTN TO		Karolina Blaney; Leo Braun										
CITY / STATE / ZIP				ADDRESS		1058 Co Rd 215										
PHONE				CITY / STATE / ZIP		Parachure CO 81635										
FAX				PHONE		970-683-2295										
E-MAIL		Karolina.blaney@wpxenergy.com;		E-MAIL		Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com										
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC									
(PA 23-33, PA 323-33 Batch 5	S	4/16/2015	10:00	1			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)	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	Karolina Blaney	4/16/2015	17:00
RECEIVED BY	M	NM	4-16	1730
RELINQUISHED BY	Q2222	NM	4-16	1735
RECEIVED BY		Diane F. Shaw	4/18/15	1000
RELINQUISHED BY				
RECEIVED BY				

From: (616) 298-1033
 Nick Martinez
 ALS Environmental
 127 E. 1st Street

Origin ID: RILA

FedEx
 Express



J151215022303uw

PARACHUTE, CO 81635

Ship Date: 17APR15
 ActWgt: 90.0 LB
 CAD: 2284840/NET3610

Dims: 24 X 15 X 15 IN

SHIP TO: (616) 399-6870

BILL SENDER

sample receiving
 ALS Laboratory Group
 3352 128TH AVE

HOLLAND, MI 49424

Delivery Address Bar Code



Ref # 041715-1
 Invoice #
 PO # Parachute
 Dept #

SATURDAY 12:00P
 PRIORITY OVERNIGHT

TRK# 7734 0127 3610

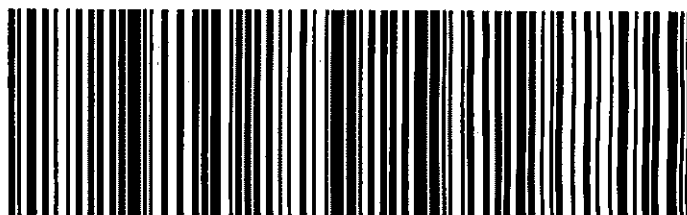
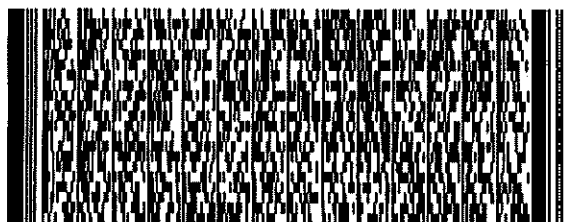
8281

X0 HLMA

49424

MI-US

GRR



537J2BFC5EE4B

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. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations of sales, income interest, profit, attorney's fees, ALS Parachute Custody Seal, loss, including intrinsic value of the package, loss direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized d actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, prec Time 1700 Date 4-17 ar items listed in our Service Guide. Written claims must be filed within strict time limits, see

Name

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **18-Apr-15 10:00**

Work Order: **15041117**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

20-Apr-15
Date

Reviewed by: Chad Whelton
eSignature

20-Apr-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): 2.8 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 4/20/2015 11:18:47 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:



10-Jun-2015

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

Re: **PA 23-33_PA 323-33 Batch 6**

Work Order: **1506197**

Dear Karolina,

ALS Environmental received 1 sample on 03-Jun-2015 09:45 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 23.

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

Sincerely,

Chad Whelton

Electronically approved by: Les Arnold

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 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33_PA 323-33 Batch 6
Work Order: 1506197

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>
1506197-01	PA 323-33 Batch 6	Soil		6/2/2015 10:00	6/3/2015 09:45	<input type="checkbox"/>

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33_PA 323-33 Batch 6
WorkOrder: 1506197

**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
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33_PA 323-33 Batch 6
Work Order: 1506197

Case Narrative

Samples for the above noted Work Order were received on 06/03/2015. 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.

Volatile Organics:

No deviations or anomalies were noted.

Extractable Organics:

Batch 71866, Method SVO_8270_S, Sample 1506197-01A MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Naphthalene

Batch 71866, Method SVO_8270_S, Sample 1506197-01A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for this analyte: Naphthalene

No other deviations or anomalies were noted.

Metals:

No other deviations or anomalies were noted.

Wet Chemistry:

No other deviations or anomalies were noted.

ALS Group USA, Corp

Date: 10-Jun-15

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33_PA 323-33 Batch 6
Sample ID: PA 323-33 Batch 6
Collection Date: 6/2/2015 10:00 AM

Work Order: 1506197
Lab ID: 1506197-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	150		SW8015M		Prep Date: 6/4/2015	Analyst: RM
			4.3	mg/Kg-dry	1	6/5/2015 05:55 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>51.5</i>		<i>39-133</i>	<i>%REC</i>	<i>1</i>	6/5/2015 05:55 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	35		SW8015D		Prep Date: 6/6/2015	Analyst: IT
			2.6	mg/Kg-dry	1	6/9/2015 11:15 AM
<i>Surr: Toluene-d8</i>	<i>124</i>		<i>50-150</i>	<i>%REC</i>	<i>1</i>	6/9/2015 11:15 AM
MERCURY BY CVAA						
Mercury	0.025		SW7471B		Prep Date: 6/4/2015	Analyst: LR
			0.013	mg/Kg-dry	1	6/5/2015 12:39 AM
METALS ANALYSIS BY ICP						
Arsenic	13		SW846 6010C		Prep Date: 6/3/2015	Analyst: JEC
			0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Barium	730		0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Cadmium	ND		0.83	mg/Kg-dry	1	6/4/2015 12:02 PM
Chromium	12		0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Copper	14		0.83	mg/Kg-dry	1	6/4/2015 12:02 PM
Lead	13		0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Nickel	15		0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Selenium	ND		0.83	mg/Kg-dry	1	6/4/2015 12:02 PM
Silver	ND		0.42	mg/Kg-dry	1	6/4/2015 12:02 PM
Zinc	67		0.83	mg/Kg-dry	1	6/4/2015 12:02 PM
SOLUBLE CATIONS FOR SAR						
Calcium	77		SW846 6010C		Prep Date: 6/5/2015	Analyst: JEC
			5.0	mg/L	10	6/7/2015 02:31 PM
Magnesium	45		2.0	mg/L	10	6/7/2015 02:31 PM
Sodium	320		2.0	mg/L	10	6/7/2015 02:31 PM
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.2		USDA H60 METHO		Prep Date: 6/5/2015	Analyst: JEC
			0.010	none	1	6/7/2015
SEMI-VOLATILE ORGANIC COMPOUNDS						
Acenaphthene	ND		SW846 8270D		Prep Date: 6/4/2015	Analyst: RS
			7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Anthracene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Benzo(a)anthracene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Benzo(a)pyrene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Benzo(b)fluoranthene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Benzo(g,h,i)perylene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Benzo(k)fluoranthene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Chrysene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Dibenzo(a,h)anthracene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Fluoranthene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Fluorene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM

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

ALS Group USA, Corp

Date: 10-Jun-15

Client: WPX Energy Rocky Mountain, LLC
Project: PA 23-33_PA 323-33 Batch 6
Sample ID: PA 323-33 Batch 6
Collection Date: 6/2/2015 10:00 AM

Work Order: 1506197
Lab ID: 1506197-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Naphthalene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Pyrene	ND		7.0	µg/Kg-dry	1	6/4/2015 08:50 PM
Surr: 2-Fluorobiphenyl	72.7		12-100	%REC	1	6/4/2015 08:50 PM
Surr: 4-Terphenyl-d14	105		25-137	%REC	1	6/4/2015 08:50 PM
Surr: Nitrobenzene-d5	63.0		37-107	%REC	1	6/4/2015 08:50 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep Date: 6/4/2015	Analyst: JNJ
Benzene	ND		32	µg/Kg-dry	1	6/7/2015 04:35 PM
Ethylbenzene	ND		32	µg/Kg-dry	1	6/7/2015 04:35 PM
m,p-Xylene	160		64	µg/Kg-dry	1	6/7/2015 04:35 PM
o-Xylene	38		32	µg/Kg-dry	1	6/7/2015 04:35 PM
Toluene	ND		32	µg/Kg-dry	1	6/7/2015 04:35 PM
Xylenes, Total	210		95	µg/Kg-dry	1	6/7/2015 04:35 PM
Surr: 1,2-Dichloroethane-d4	90.7		70-130	%REC	1	6/7/2015 04:35 PM
Surr: 4-Bromofluorobenzene	101		70-130	%REC	1	6/7/2015 04:35 PM
Surr: Dibromofluoromethane	103		70-130	%REC	1	6/7/2015 04:35 PM
Surr: Toluene-d8	94.2		70-130	%REC	1	6/7/2015 04:35 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO		Prep Date: 6/5/2015	Analyst: JB
Electrical Conductivity @ Saturation	2.5		0.050	mmhos/cm @2	10	6/7/2015 08:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JB
Chromium, Trivalent	12		0.53	mg/Kg-dry	1	6/9/2015 06:00 PM
CHROMIUM, HEXAVALENT			SW7196A		Prep Date: 6/8/2015	Analyst: MB
Chromium, Hexavalent	ND		1.0	mg/Kg-dry	1	6/9/2015 04:00 PM
MOISTURE			E160.3M			Analyst: EVB
Moisture	5.6		0.050	% of sample	1	6/5/2015 12:25 PM
PH			SW9045D		Prep Date: 6/4/2015	Analyst: STP
pH	8.4			s.u.	1	6/4/2015 05:30 PM

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

ALS Group USA, Corp

Date: 10-Jun-15

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71867** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-71867-71867				Units: mg/Kg		Analysis Date: 6/5/2015 03:55 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310431		Prep Date: 6/4/2015		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 1.426 0 2 0 71.3 39-133 0

LCS		Sample ID: DLCSS1-71867-71867				Units: mg/Kg		Analysis Date: 6/5/2015 04:25 PM		
Client ID:		Run ID: GC8_150605B				SeqNo: 3310432		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 156.5 5.0 200 0 78.2 61-109 0
Surr: 4-Terphenyl-d14 1.138 0 2 0 56.9 39-133 0

MS		Sample ID: 1506197-01A MS				Units: mg/Kg		Analysis Date: 6/5/2015 04:55 PM		
Client ID: PA 323-33 Batch 6		Run ID: GC8_150605B				SeqNo: 3310433		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 420.3 8.2 329.2 140.6 84.9 48-110 0
Surr: 4-Terphenyl-d14 1.784 0 3.292 0 54.2 39-133 0

MSD		Sample ID: 1506197-01A MSD				Units: mg/Kg		Analysis Date: 6/5/2015 05:25 PM		
Client ID: PA 323-33 Batch 6		Run ID: GC8_150605B				SeqNo: 3310434		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 432.3 8.0 321.1 140.6 90.8 48-110 420.3 2.82 30
Surr: 4-Terphenyl-d14 1.633 0 3.211 0 50.9 39-133 1.784 8.81 30

The following samples were analyzed in this batch: 1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71864** Instrument ID: **GC9** Method: **SW8015D**

MBLK		Sample ID: GBLKS1-71864-71864				Units: µg/Kg		Analysis Date: 6/7/2015 01:29 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310053		Prep Date: 6/6/2015		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	0	0	0		0			
<i>Surr: Toluene-d8</i>	<i>4550</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>91</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: GLCSS1-71864-71864				Units: µg/Kg		Analysis Date: 6/7/2015 11:50 AM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310050		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	454300	2,500	500000	0	90.9	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5206</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>104</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 1506355-01A MS				Units: µg/Kg		Analysis Date: 6/7/2015 12:15 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310051		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	427300	2,500	500000	0	85.5	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5362</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>107</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1506355-01A MSD				Units: µg/Kg		Analysis Date: 6/7/2015 12:40 PM		
Client ID:		Run ID: GC9_150607A				SeqNo: 3310052		Prep Date: 6/6/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	443000	2,500	500000	0	88.6	70-130	427300	3.62	30	
<i>Surr: Toluene-d8</i>	<i>4654</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>93.1</i>	<i>50-150</i>	<i>5362</i>	<i>14.1</i>	<i>30</i>	

The following samples were analyzed in this batch:

1506197-01A

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71898** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-71898-71898				Units: mg/Kg		Analysis Date: 6/4/2015 11:58 PM		
Client ID:		Run ID: HG1_150604A				SeqNo: 3307874		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-71898-71898				Units: mg/Kg		Analysis Date: 6/5/2015 12:01 AM		
Client ID:		Run ID: HG1_150604A			SeqNo: 3307875		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1812 0.020 0.1665 0 109 80-120 0

MS		Sample ID: 1506239-01BMS					Units: mg/Kg		Analysis Date: 6/5/2015 12:44 AM		
Client ID:			Run ID: HG1_150604A			SeqNo: 3307892		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.155 0.012 0.1036 0.04354 108 75-125 0

MSD		Sample ID: 1506239-01BMSD				Units: mg/Kg		Analysis Date: 6/5/2015 12:53 AM		
Client ID:		Run ID: HG1_150604A				SeqNo: 3307898		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1588 0.012 0.1035 0.04354 111 75-125 0.155 2.41 35

The following samples were analyzed in this batch:

1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71840** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-71840-71840				Units: mg/L		Analysis Date: 6/4/2015 11:18 AM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3306711		Prep Date: 6/3/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	0.04445	0.25								J
Copper	0.03703	0.50								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS		Sample ID: LCS-71840-71840				Units: mg/L		Analysis Date: 6/4/2015 11:23 AM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3306713		Prep Date: 6/3/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.87	0.25	5	0	97.4	80-120	0			
Barium	5.066	0.25	5	0	101	80-120	0			
Cadmium	4.894	0.50	5	0	97.9	80-120	0			
Chromium	5.383	0.25	5	0	108	80-120	0			
Copper	5.289	0.50	5	0	106	80-120	0			
Lead	5.228	0.25	5	0	105	80-120	0			
Nickel	5.078	0.25	5	0	102	80-120	0			
Selenium	5.07	0.50	5	0	101	80-120	0			
Silver	5.058	0.25	5	0	101	80-120	0			
Zinc	5.146	0.50	5	0	103	80-120	0			

MS		Sample ID: 1506160-01BMS				Units: mg/Kg		Analysis Date: 6/4/2015 11:40 AM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3306718		Prep Date: 6/3/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.88	0.34	6.784	6.501	124	75-125	0			
Barium	186.2	0.34	6.784	163	342	75-125	0			SO
Cadmium	6.97	0.68	6.784	0.3307	97.9	75-125	0			
Chromium	18.51	0.34	6.784	9.505	133	75-125	0			S
Copper	22.67	0.68	6.784	15.39	107	75-125	0			
Lead	17.9	0.34	6.784	10.53	109	75-125	0			
Nickel	21.75	0.34	6.784	16.01	84.6	75-125	0			
Selenium	7.192	0.68	6.784	-0.05114	107	75-125	0			
Silver	7.046	0.34	6.784	-0.07405	105	75-125	0			
Zinc	74.33	0.68	6.784	65.13	135	75-125	0			SO

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71840** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 1506160-01BMSD				Units: mg/Kg		Analysis Date: 6/4/2015 11:45 AM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3306720		Prep Date: 6/3/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.35	0.34	6.859	6.501	114	75-125	14.88	3.62	20	
Barium	181.8	0.34	6.859	163	274	75-125	186.2	2.4	20	SO
Cadmium	6.853	0.69	6.859	0.3307	95.1	75-125	6.97	1.69	20	
Chromium	17.49	0.34	6.859	9.505	116	75-125	18.51	5.64	20	
Copper	21.46	0.69	6.859	15.39	88.5	75-125	22.67	5.48	20	
Lead	17.21	0.34	6.859	10.53	97.4	75-125	17.9	3.94	20	
Nickel	21.21	0.34	6.859	16.01	75.7	75-125	21.75	2.54	20	
Selenium	7.213	0.69	6.859	-0.05114	106	75-125	7.192	0.296	20	
Silver	6.96	0.34	6.859	-0.07405	103	75-125	7.046	1.24	20	
Zinc	69.96	0.69	6.859	65.13	70.4	75-125	74.33	6.05	20	SO

The following samples were analyzed in this batch: 1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71885** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1506195-01BDUP				Units: mg/L		Analysis Date: 6/7/2015 02:26 PM		
Client ID:		Run ID: ICP2_150607A				SeqNo: 3310408		Prep Date: 6/5/2015		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	743.8	5.0	0	0	0	0-0	801.8	7.51		
Magnesium	180.5	2.0	0	0	0	0-0	197.8	9.14		
Sodium	354.9	2.0	0	0	0	0-0	388.4	9.01		

DUP		Sample ID: 1506195-01BDUP				Units: none		Analysis Date: 6/7/2015		
Client ID:		Run ID: SAR_150607A				SeqNo: 3310452		Prep Date: 6/5/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	3.028	0.010	0	0	0		3.184	5.02	50	

The following samples were analyzed in this batch: | 1506197-01A |

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71866** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-71866-71866				Units: µg/Kg		Analysis Date: 6/4/2015 06:15 PM		
Client ID:		Run ID: SVMS5_150604A				SeqNo: 3308264		Prep Date: 6/4/2015		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								
Surr: 2-Fluorobiphenyl	1290	0	1667	0	77.4	12-100	0			
Surr: 4-Terphenyl-d14	1772	0	1667	0	106	25-137	0			
Surr: Nitrobenzene-d5	1274	0	1667	0	76.4	37-107	0			

LCS		Sample ID: SLCSS1-71866-71866				Units: µg/Kg		Analysis Date: 6/4/2015 06:37 PM		
Client ID:		Run ID: SVMS5_150604A				SeqNo: 3308265		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	499	6.7	666.7	0	74.8	45-110	0			
Anthracene	605.3	6.7	666.7	0	90.8	55-105	0			
Benzo(a)anthracene	614.7	6.7	666.7	0	92.2	50-110	0			
Benzo(a)pyrene	610.7	6.7	666.7	0	91.6	50-110	0			
Benzo(b)fluoranthene	614.7	6.7	666.7	0	92.2	45-115	0			
Benzo(g,h,i)perylene	572	6.7	666.7	0	85.8	40-125	0			
Benzo(k)fluoranthene	589.3	6.7	666.7	0	88.4	45-115	0			
Chrysene	570.7	6.7	666.7	0	85.6	55-110	0			
Dibenzo(a,h)anthracene	578	6.7	666.7	0	86.7	40-125	0			
Fluoranthene	613	6.7	666.7	0	91.9	55-115	0			
Fluorene	533	6.7	666.7	0	79.9	50-110	0			
Indeno(1,2,3-cd)pyrene	575.3	6.7	666.7	0	86.3	40-120	0			
Naphthalene	372.7	6.7	666.7	0	55.9	40-105	0			
Pyrene	579.7	6.7	666.7	0	86.9	45-125	0			
Surr: 2-Fluorobiphenyl	1307	0	1667	0	78.4	12-100	0			
Surr: 4-Terphenyl-d14	1775	0	1667	0	107	25-137	0			
Surr: Nitrobenzene-d5	1234	0	1667	0	74.1	37-107	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71866** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1506197-01A MS			Units: µg/Kg		Analysis Date: 6/4/2015 08:05 PM	
Client ID: PA 323-33 Batch 6				Run ID: SVMS5_150604A			SeqNo: 3308266		Prep Date: 6/4/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	969.3	13	1265	0	76.6	45-110	0			
Anthracene	1119	13	1265	0	88.4	55-105	0			
Benzo(a)anthracene	1107	13	1265	0	87.5	50-110	0			
Benzo(a)pyrene	1101	13	1265	0	87	50-110	0			
Benzo(b)fluoranthene	1103	13	1265	0	87.2	45-115	0			
Benzo(g,h,i)perylene	1008	13	1265	0	79.7	40-125	0			
Benzo(k)fluoranthene	1063	13	1265	0	84	45-115	0			
Chrysene	1007	13	1265	0	79.5	55-110	0			
Dibenzo(a,h)anthracene	1022	13	1265	0	80.8	40-125	0			
Fluoranthene	1079	13	1265	0	85.2	55-115	0			
Fluorene	1065	13	1265	0	84.1	50-110	0			
Indeno(1,2,3-cd)pyrene	1065	13	1265	0	84.2	40-120	0			
Naphthalene	489.1	13	1265	0	38.6	40-105	0			S
Pyrene	1052	13	1265	0	83.1	45-125	0			
Surr: 2-Fluorobiphenyl	2197	0	3163	0	69.4	12-100	0			
Surr: 4-Terphenyl-d14	3210	0	3163	0	101	25-137	0			
Surr: Nitrobenzene-d5	1538	0	3163	0	48.6	37-107	0			

MSD				Sample ID: 1506197-01A MSD			Units: µg/Kg		Analysis Date: 6/4/2015 08:28 PM	
Client ID: PA 323-33 Batch 6				Run ID: SVMS5_150604A			SeqNo: 3308267		Prep Date: 6/4/2015	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	968	13	1268	0	76.3	45-110	969.3	0.131	30	
Anthracene	1215	13	1268	0	95.8	55-105	1119	8.17	30	
Benzo(a)anthracene	1184	13	1268	0	93.4	50-110	1107	6.72	30	
Benzo(a)pyrene	1190	13	1268	0	93.8	50-110	1101	7.71	30	
Benzo(b)fluoranthene	1179	13	1268	0	93	45-115	1103	6.63	30	
Benzo(g,h,i)perylene	1086	13	1268	0	85.6	40-125	1008	7.39	30	
Benzo(k)fluoranthene	1118	13	1268	0	88.1	45-115	1063	5.02	30	
Chrysene	1085	13	1268	0	85.6	55-110	1007	7.52	30	
Dibenzo(a,h)anthracene	1096	13	1268	0	86.4	40-125	1022	6.95	30	
Fluoranthene	1190	13	1268	0	93.9	55-115	1079	9.85	30	
Fluorene	1102	13	1268	0	86.9	50-110	1065	3.41	30	
Indeno(1,2,3-cd)pyrene	1125	13	1268	0	88.7	40-120	1065	5.46	30	
Naphthalene	701.1	13	1268	0	55.3	40-105	489.1	35.6	30	R
Pyrene	1114	13	1268	0	87.9	45-125	1052	5.75	30	
Surr: 2-Fluorobiphenyl	2298	0	3170	0	72.5	12-100	2197	4.51	40	
Surr: 4-Terphenyl-d14	3426	0	3170	0	108	25-137	3210	6.53	40	
Surr: Nitrobenzene-d5	2219	0	3170	0	70	37-107	1538	36.2	40	

The following samples were analyzed in this batch: 1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71863** Instrument ID **VMS6** Method: **SW8260B**

MBLK				Sample ID: MBLK-71863-71863			Units: µg/Kg		Analysis Date: 6/4/2015 05:39 PM		
Client ID:			Run ID: VMS6_150604A			SeqNo: 3307524		Prep Date: 6/4/2015		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	972.5	0	1000	0	97.2	70-130		0			
Surr: 4-Bromofluorobenzene	946.5	0	1000	0	94.6	70-130		0			
Surr: Dibromofluoromethane	961	0	1000	0	96.1	70-130		0			
Surr: Toluene-d8	954.5	0	1000	0	95.4	70-130		0			

LCS				Sample ID: LCS-71863-71863			Units: µg/Kg		Analysis Date: 6/4/2015 04:24 PM		
Client ID:			Run ID: VMS6_150604A			SeqNo: 3307523		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	933	30	1000	0	93.3	75-125	0				
Ethylbenzene	942.5	30	1000	0	94.2	75-125	0				
m,p-Xylene	1968	60	2000	0	98.4	80-125	0				
o-Xylene	941.5	30	1000	0	94.2	75-125	0				
Toluene	966.5	30	1000	0	96.6	70-125	0				
Xylenes, Total	2909	90	3000	0	97	75-125	0				
Surr: 1,2-Dichloroethane-d4	971	0	1000	0	97.1	70-130	0				
Surr: 4-Bromofluorobenzene	1012	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	987.5	0	1000	0	98.8	70-130	0				
Surr: Toluene-d8	988	0	1000	0	98.8	70-130	0				

The following samples were analyzed in this batch:

1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71885** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1506195-01B DUP				Units: mmhos/cm @25°		Analysis Date: 6/7/2015 08:00 PM		
Client ID:		Run ID: WETCHEM_150607B				SeqNo: 3310063		Prep Date: 6/5/2015		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	7	0.050	0	0	0		7.58	7.96	50	

The following samples were analyzed in this batch:

1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **71888** Instrument ID **WETCHEM** Method: **SW9045D**

DUP				Sample ID: 1506195-01B DUP				Units: s.u.			Analysis Date: 6/4/2015 05:30 PM			
Client ID:				Run ID: WETCHEM_150604I				SeqNo: 3307102			Prep Date: 6/4/2015		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		8.03	0	0	0	0	0-0	8.07	0.497	20				

DUP				Sample ID: 1506202-01A DUP				Units: s.u.			Analysis Date: 6/4/2015 05:30 PM			
Client ID:				Run ID: WETCHEM_150604I				SeqNo: 3307106			Prep Date: 6/4/2015		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		8.8	0	0	0	0	0-0	8.76	0.456	20				

The following samples were analyzed in this batch:

1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **72077** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-72077-72077				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313987		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS		Sample ID: LCS-72077-72077				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313986		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.44 1.0 5 0 88.8 80-120 0

MS		Sample ID: 1506202-01A MS				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313970		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.108 0.98 4.902 0.7129 89.7 75-125 0

MS		Sample ID: 1506202-01A MSI				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313972		Prep Date: 6/8/2015		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2377 100 2454 0.7129 96.8 75-125 0

MSD		Sample ID: 1506202-01A MSD				Units: mg/Kg		Analysis Date: 6/9/2015 04:00 PM		
Client ID:		Run ID: WETCHEM_1506090		SeqNo: 3313971		Prep Date: 6/8/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.237 1.0 5.155 0.7129 87.8 75-125 5.108 2.5 20

The following samples were analyzed in this batch:

1506197-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1506197
Project: PA 23-33_PA 323-33 Batch 6

QC BATCH REPORT

Batch ID: **R164958** Instrument ID **MOIST** Method: **E160.3M**

MBLK		Sample ID: WBLKS-R164958					Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:			Run ID: MOIST_150605A			SeqNo: 3310703		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-R164958				Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A			SeqNo: 3310702		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: 1506194-01A DUP				Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A			SeqNo: 3310684		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 15.22 0.050 0 0 0 15.15 0.461 20

DUP		Sample ID: 1506246-01A DUP				Units: % of sample		Analysis Date: 6/5/2015 12:25 PM		
Client ID:		Run ID: MOIST_150605A			SeqNo: 3310698		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 5.4 0.050 0 0 0 5.6 3.64 20

The following samples were analyzed in this batch:

1506197-01A

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

WORKORDER
#

1506197

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:								
	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 <div style="text-align: center; margin-top: 20px;">4.6°</div>								

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>Karolina Blaney</i>	Karolina Blaney	6/2/2015	16:00:00 PM
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	6-2-15	1600
RELINQUISHED BY	<i>W. H. [Signature]</i>	<i>W. H. [Signature]</i>	6-2-15	1600
RECEIVED BY	<i>H. Lee Feary</i>	<i>W. H. [Signature]</i>	6-3-15	9:45
RELINQUISHED BY				
RECEIVED BY				

6/2/2015

FedEx Ship Manager - Print Your Label(s)

From: (616) 298-1033
Nick Martinez
ALS Environmental
127 E. 1st Street

Origin ID: RILA

FedEx
Express



J151215022303UNL

PARACHUTE, CO 81635

Ship Date: 02JUN15
ActWgt: 79.0 LB
CAD: 2264840/NET3810

Dims: 24 X 16 X 15 IN

Delivery Address Bar Code



SHIP TO: (616) 399-6870

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

Ref # 080215-1
Invoice #
PO # Parachute
Dept #

1 of 2

WED - 03 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 7737 4197 0932

0201

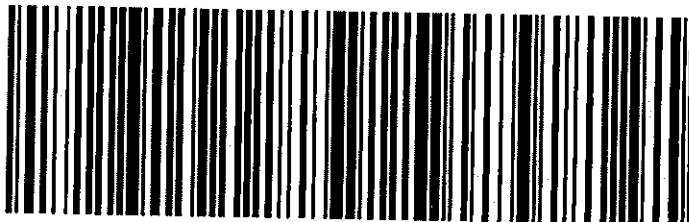
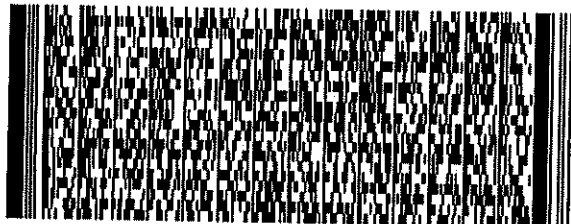
MASTER

XX HLMA

49424

MI-US

GRR



ALS Parachute Custody Seal

Time 1730 Date 6-2-15

Name NA

Sample Receipt Checklist

Client Name: **WPX**

Date/Time Received: **03-Jun-15 09:45**

Work Order: **1506197**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

03-Jun-15
Date

Reviewed by: Lee Arnold
eSignature

04-Jun-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): 4.6 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 6/3/2015 2:20:03 PM

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: