



January 6, 2015

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

Re: Cottonwood Frac Water Spill Closure Request

Dear Mr. Spencer,

Attached are the laboratory reports and the sample location map for soil samples collected from the impacted area and nearby non-impacted native soil in order to close the frac water spill that occurred near the Cottonwood Tank Farm on November 30, 2014.

- Three grab samples were collected from the impacted area and were analyzed for the constituents listed in Table 910-1.
- Three grab samples were collected from nearby non-impacted, native soil to establish the background concentrations for arsenic. In accordance with the COGCC Rule 910.b.(3)E, one grab sample was analyzed for inorganics to establish background soil conditions.

Two grab samples exceeded COGCC cleanup standards for benzo(a)pyrene. The area was resampled on 12/9/14.

As the attached lab reports indicate, all constituents of concern listed in the COGCC Table 910-1 tested below the cleanup requirements or below the background concentrations with the exception of the inorganics. Therefore, in accordance with COGCC guideline Q32 regarding inorganics, the impacted area will be covered with 3' of clean soil during the final reclamation of the road to ensure successful reclamation of this area.

Based on these results, WPX respectfully requests closure of this incident.

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



WPXENERGY Sample Location Map: Cottonwood Tank Farm

39.483291 -107.993438
Section 34, Township 6 South, Range 95 West

● Sample Location	Transportation	Hydrography
▨ Impacted Area	— CO Highways	— Ditch
PLSS	— County Roads	— Intermittent Stream
▭ Township	— Local Streets	— Perennial Stream
▭ Section	— WPX Access	— Waterbody
		— Watershed



H&L COMPLIANCE SOLUTIONS, INC.
ENVIRONMENTAL CONSULTANTS



Author: B. Hall

Revision: 1

Date: 12/30/2014

Contaminant of Concern ↓	COGCC standards	Location →	SS 01	SS 01	SS 02	SS 03	SS 03	BKGD 01	BKGD 02	BKGD 03
		Date Sampled →	12/1/2014	12/9/2014	12/1/2014	12/1/2014	12/9/2014	12/1/2014	12/1/2014	12/1/2014
Organic Compounds in Soil										
TPH	500	mg/kg	15		ND	93				
DRO		mg/kg	15		ND	93				
GRO		mg/kg	ND		ND	ND				
Benzene	0.17	mg/kg	ND		ND	ND				
Toluene	85	mg/kg	ND		ND	ND				
Ethylbenzene	100	mg/kg	ND		ND	ND				
Xylenes (Total)	175	mg/kg	ND		ND	ND				
Acenaphthene	1,000	mg/kg	ND		ND	ND				
Anthracene	1,000	mg/kg	ND		ND	ND				
Benzo(A)anthracene	0.22	mg/kg	0.01		ND	0.017				
Benzo(B)fluoranthene	0.22	mg/kg	0.029		ND	0.033				
Benzo(K)fluoranthene	2.2	mg/kg	0.021		ND	0.024				
Benzo(A)pyrene	0.022	mg/kg	0.026	0.019	ND	0.034	ND			
Chrysene	22	mg/kg	0.015		ND	0.011				
Dibenzo(A,H)anthracene	0.022	mg/kg	ND		ND	ND				
Fluoranthene	1,000	mg/kg	0.028		ND	0.023				
Fluorene	1,000	mg/kg	ND		ND	ND				
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	0.021		ND	0.027				
Naphthalene	23	mg/kg	ND		ND	ND				
Pyrene	1,000	mg/kg	0.026		ND	0.018				
Inorganics in Soil										
EC	<4 or 2 x background	mmhos/cm	14		26	12			2.2	
SAR	<12		25		23	47			0.54	
pH	6-9		8.1		7.9	8.5			7.6	
Metals in Soil										
Arsenic	0.39	mg/kg	8.8		14	15		12	10	18
Barium total	15,000	mg/kg	270		360	600				
Cadmium	70	mg/kg	ND		0.32	ND				
Chromium (III)	120,000	mg/kg	13		11	12				
Chromium (VI)	23	mg/kg	ND		ND	ND				
Copper	3,100	mg/kg	18		15	17				
Lead	400	mg/kg	49		16	13				
Mercury	23	mg/kg	ND		0.032	ND				
Nickel	1,600	mg/kg	13		14	12				
Selenium	390	mg/kg	1.1		1	0.81				
Silver	390	mg/kg	ND		ND	ND				
Zinc	23,000	mg/kg	71		66	53				



05-Dec-2014

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

Re: **WPX Cottonwood Poly Line Release 12.1.14**

Work Order: **1412036**

Dear Mark,

ALS Environmental received 3 samples on 02-Dec-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 29.

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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www.alsglobal.com

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Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Work Order: 1412036

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>
1412036-01	SS 01	Soil		12/1/2014 10:15	12/2/2014 09:00	<input type="checkbox"/>
1412036-02	SS 02	Soil		12/1/2014 10:28	12/2/2014 09:00	<input type="checkbox"/>
1412036-03	SS 03	Soil		12/1/2014 10:40	12/2/2014 09:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Work Order: 1412036

Case Narrative

Batch 65540 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 65572 sample SS 02 MS recovery for Mercury was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD were in control. No qualification is required for Mercury.

<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: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 01
Collection Date: 12/1/2014 10:15 AM

Work Order: 1412036
Lab ID: 1412036-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	15		SW8015M		Prep: SW3541 / 12/2/14	Analyst: IT
Surr: 4-Terphenyl-d14	73.7		5.2	mg/Kg-dry	1	12/2/2014 11:58 PM
			39-133	%REC	1	12/2/2014 11:58 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 12/2/14	Analyst: IT
Surr: Toluene-d8	118		3.1	mg/Kg-dry	1	12/2/2014 03:26 PM
			50-150	%REC	1	12/2/2014 03:26 PM
MERCURY BY CVAA						
Mercury	ND		SW7471		Prep: SW7471 / 12/2/14	Analyst: LR
			0.019	mg/Kg-dry	1	12/2/2014 08:41 PM
METALS ANALYSIS BY ICP						
Arsenic	8.8		SW846 6010C		Prep: SW3050B / 12/2/14	Analyst: JEC
Barium	270		0.43	mg/Kg-dry	1	12/2/2014 02:56 PM
Cadmium	ND		0.43	mg/Kg-dry	1	12/2/2014 02:56 PM
Chromium	13		0.35	mg/Kg-dry	1	12/2/2014 02:56 PM
Copper	18		0.43	mg/Kg-dry	1	12/2/2014 05:39 PM
Lead	49		0.43	mg/Kg-dry	1	12/2/2014 02:56 PM
Nickel	13		0.43	mg/Kg-dry	1	12/2/2014 02:56 PM
Selenium	1.1		0.43	mg/Kg-dry	1	12/2/2014 05:39 PM
Silver	ND		0.43	mg/Kg-dry	1	12/2/2014 05:39 PM
Zinc	71		0.43	mg/Kg-dry	1	12/2/2014 05:39 PM
			0.87	mg/Kg-dry	1	12/2/2014 02:56 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Calcium	330		5.0	mg/L	10	12/4/2014 02:23 PM
Magnesium	69		2.0	mg/L	10	12/4/2014 02:23 PM
Sodium	1,900		2.0	mg/L	10	12/4/2014 02:23 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Sodium Adsorption Ratio	25		0.010	none	1	12/4/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 12/2/14	Analyst: RS
Acenaphthene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Acenaphthylene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Anthracene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Benzo(a)anthracene	10		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Benzo(a)pyrene	26		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Benzo(b)fluoranthene	29		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Benzo(g,h,i)perylene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Benzo(k)fluoranthene	21		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Chrysene	15		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 01
Collection Date: 12/1/2014 10:15 AM

Work Order: 1412036
Lab ID: 1412036-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Fluoranthene	28		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Fluorene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Indeno(1,2,3-cd)pyrene	21		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Naphthalene	ND		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Pyrene	26		8.3	µg/Kg-dry	1	12/3/2014 03:57 AM
Surr: 2-Fluorobiphenyl	70.8		12-100	%REC	1	12/3/2014 03:57 AM
Surr: 4-Terphenyl-d14	87.0		25-137	%REC	1	12/3/2014 03:57 AM
Surr: Nitrobenzene-d5	65.3		37-107	%REC	1	12/3/2014 03:57 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 12/2/14		Analyst: BG
Benzene	ND		37	µg/Kg-dry	1	12/2/2014 04:52 PM
Ethylbenzene	ND		37	µg/Kg-dry	1	12/2/2014 04:52 PM
m,p-Xylene	ND		75	µg/Kg-dry	1	12/2/2014 04:52 PM
o-Xylene	ND		37	µg/Kg-dry	1	12/2/2014 04:52 PM
Toluene	ND		37	µg/Kg-dry	1	12/2/2014 04:52 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	12/2/2014 04:52 PM
Surr: 1,2-Dichloroethane-d4	98.0		70-130	%REC	1	12/2/2014 04:52 PM
Surr: 4-Bromofluorobenzene	101		70-130	%REC	1	12/2/2014 04:52 PM
Surr: Dibromofluoromethane	96.6		70-130	%REC	1	12/2/2014 04:52 PM
Surr: Toluene-d8	98.5		70-130	%REC	1	12/2/2014 04:52 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 12/4/14		Analyst: JB
Electrical Conductivity @ Saturation	14		0.050	mmhos/cm @25	10	12/4/2014 07:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	13		0.62	mg/Kg-dry	1	12/3/2014 04:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 12/2/14		Analyst: MB
Chromium, Hexavalent	ND		0.62	mg/Kg-dry	1	12/3/2014 02:00 PM
MOISTURE			A2540 G			Analyst: EVB
Moisture	20		0.050	% of sample	1	12/2/2014 02:00 PM
PH			SW9045D	Prep: EXTRACT / 12/3/14		Analyst: AXL
pH	8.1			s.u.	1	12/3/2014 12:15 PM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 02
Collection Date: 12/1/2014 10:28 AM

Work Order: 1412036
Lab ID: 1412036-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 12/2/14	Analyst: IT
DRO (C10-C28)	ND		4.9	mg/Kg-dry	1	12/3/2014 12:25 PM
Surr: 4-Terphenyl-d14	83.4		39-133	%REC	1	12/3/2014 12:25 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 12/2/14	Analyst: IT
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	12/2/2014 03:52 PM
Surr: Toluene-d8	114		50-150	%REC	1	12/2/2014 03:52 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 12/2/14	Analyst: LR
Mercury	0.032		0.017	mg/Kg-dry	1	12/2/2014 08:44 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 12/2/14	Analyst: JEC
Arsenic	14		0.38	mg/Kg-dry	1	12/2/2014 03:02 PM
Barium	360		0.38	mg/Kg-dry	1	12/2/2014 03:02 PM
Cadmium	0.32		0.30	mg/Kg-dry	1	12/2/2014 03:02 PM
Chromium	11		0.38	mg/Kg-dry	1	12/2/2014 05:45 PM
Copper	15		0.38	mg/Kg-dry	1	12/2/2014 03:02 PM
Lead	16		0.38	mg/Kg-dry	1	12/2/2014 03:02 PM
Nickel	14		0.38	mg/Kg-dry	1	12/2/2014 05:45 PM
Selenium	1.0		0.38	mg/Kg-dry	1	12/2/2014 05:45 PM
Silver	ND		0.38	mg/Kg-dry	1	12/2/2014 05:45 PM
Zinc	66		0.75	mg/Kg-dry	1	12/2/2014 03:02 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Calcium	1,000		5.0	mg/L	10	12/4/2014 02:34 PM
Magnesium	150		2.0	mg/L	10	12/4/2014 02:34 PM
Sodium	3,000		2.0	mg/L	10	12/4/2014 02:34 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Sodium Adsorption Ratio	23		0.010	none	1	12/4/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 12/2/14	Analyst: RS
Acenaphthene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Anthracene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Chrysene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 02
Collection Date: 12/1/2014 10:28 AM

Work Order: 1412036
Lab ID: 1412036-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Fluoranthene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Fluorene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Naphthalene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Pyrene	ND		7.8	µg/Kg-dry	1	12/3/2014 04:21 AM
Surr: 2-Fluorobiphenyl	70.1		12-100	%REC	1	12/3/2014 04:21 AM
Surr: 4-Terphenyl-d14	90.5		25-137	%REC	1	12/3/2014 04:21 AM
Surr: Nitrobenzene-d5	67.3		37-107	%REC	1	12/3/2014 04:21 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 12/2/14		Analyst: BG
Benzene	ND		35	µg/Kg-dry	1	12/2/2014 05:18 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	12/2/2014 05:18 PM
m,p-Xylene	ND		71	µg/Kg-dry	1	12/2/2014 05:18 PM
o-Xylene	ND		35	µg/Kg-dry	1	12/2/2014 05:18 PM
Toluene	ND		35	µg/Kg-dry	1	12/2/2014 05:18 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	12/2/2014 05:18 PM
Surr: 1,2-Dichloroethane-d4	96.9		70-130	%REC	1	12/2/2014 05:18 PM
Surr: 4-Bromofluorobenzene	98.3		70-130	%REC	1	12/2/2014 05:18 PM
Surr: Dibromofluoromethane	93.7		70-130	%REC	1	12/2/2014 05:18 PM
Surr: Toluene-d8	94.4		70-130	%REC	1	12/2/2014 05:18 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 12/4/14		Analyst: JB
Electrical Conductivity @ Saturation	26		0.050	mmhos/cm @25	10	12/4/2014 07:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	11		0.59	mg/Kg-dry	1	12/3/2014 04:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 12/2/14		Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	12/3/2014 02:00 PM
MOISTURE			A2540 G			Analyst: EVB
Moisture	15		0.050	% of sample	1	12/2/2014 02:00 PM
PH			SW9045D	Prep: EXTRACT / 12/3/14		Analyst: AXL
pH	7.9			s.u.	1	12/3/2014 12:15 PM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 03
Collection Date: 12/1/2014 10:40 AM

Work Order: 1412036
Lab ID: 1412036-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 12/2/14	Analyst: IT
DRO (C10-C28)	93		5.1	mg/Kg-dry	1	12/3/2014 12:53 PM
Surr: 4-Terphenyl-d14	71.1		39-133	%REC	1	12/3/2014 12:53 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 12/2/14	Analyst: IT
GRO (C6-C10)	ND		3.1	mg/Kg-dry	1	12/2/2014 04:17 PM
Surr: Toluene-d8	105		50-150	%REC	1	12/2/2014 04:17 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 12/2/14	Analyst: LR
Mercury	ND		0.018	mg/Kg-dry	1	12/2/2014 08:50 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 12/2/14	Analyst: JEC
Arsenic	15		0.42	mg/Kg-dry	1	12/2/2014 03:07 PM
Barium	600		0.42	mg/Kg-dry	1	12/2/2014 03:07 PM
Cadmium	ND		0.34	mg/Kg-dry	1	12/2/2014 03:07 PM
Chromium	12		0.42	mg/Kg-dry	1	12/2/2014 05:50 PM
Copper	17		0.42	mg/Kg-dry	1	12/2/2014 03:07 PM
Lead	13		0.42	mg/Kg-dry	1	12/2/2014 03:07 PM
Nickel	12		0.42	mg/Kg-dry	1	12/2/2014 05:50 PM
Selenium	0.81		0.42	mg/Kg-dry	1	12/3/2014 12:47 PM
Silver	ND		0.42	mg/Kg-dry	1	12/2/2014 05:50 PM
Zinc	53		0.84	mg/Kg-dry	1	12/2/2014 03:07 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Calcium	58		5.0	mg/L	10	12/4/2014 02:40 PM
Magnesium	29		2.0	mg/L	10	12/4/2014 02:40 PM
Sodium	1,800		2.0	mg/L	10	12/4/2014 02:40 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 12/4/14	Analyst: JEC
Sodium Adsorption Ratio	47		0.010	none	1	12/4/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 12/2/14	Analyst: RS
Acenaphthene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Acenaphthylene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Anthracene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Benzo(a)anthracene	17		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Benzo(a)pyrene	34		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Benzo(b)fluoranthene	33		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Benzo(g,h,i)perylene	13		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Benzo(k)fluoranthene	24		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Chrysene	11		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release 12.1.14
Sample ID: SS 03
Collection Date: 12/1/2014 10:40 AM

Work Order: 1412036
Lab ID: 1412036-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Fluoranthene	23		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Fluorene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Indeno(1,2,3-cd)pyrene	27		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Naphthalene	ND		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Pyrene	18		8.1	µg/Kg-dry	1	12/3/2014 04:46 AM
Surr: 2-Fluorobiphenyl	74.7		12-100	%REC	1	12/3/2014 04:46 AM
Surr: 4-Terphenyl-d14	85.4		25-137	%REC	1	12/3/2014 04:46 AM
Surr: Nitrobenzene-d5	70.3		37-107	%REC	1	12/3/2014 04:46 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 12/2/14		Analyst: BG
Benzene	ND		37	µg/Kg-dry	1	12/2/2014 05:44 PM
Ethylbenzene	ND		37	µg/Kg-dry	1	12/2/2014 05:44 PM
m,p-Xylene	ND		73	µg/Kg-dry	1	12/2/2014 05:44 PM
o-Xylene	ND		37	µg/Kg-dry	1	12/2/2014 05:44 PM
Toluene	ND		37	µg/Kg-dry	1	12/2/2014 05:44 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	12/2/2014 05:44 PM
Surr: 1,2-Dichloroethane-d4	96.9		70-130	%REC	1	12/2/2014 05:44 PM
Surr: 4-Bromofluorobenzene	98.6		70-130	%REC	1	12/2/2014 05:44 PM
Surr: Dibromofluoromethane	93.2		70-130	%REC	1	12/2/2014 05:44 PM
Surr: Toluene-d8	95.2		70-130	%REC	1	12/2/2014 05:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 12/4/14		Analyst: JB
Electrical Conductivity @ Saturation	12		0.050	mmhos/cm @25	10	12/4/2014 07:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	12		0.61	mg/Kg-dry	1	12/3/2014 04:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 12/2/14		Analyst: MB
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	12/3/2014 02:00 PM
MOISTURE			A2540 G			Analyst: EVB
Moisture	18		0.050	% of sample	1	12/2/2014 02:00 PM
PH			SW9045D	Prep: EXTRACT / 12/3/14		Analyst: AXL
pH	8.5			s.u.	1	12/3/2014 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: 1412036

Project: WPX Cottonwood Poly Line Release 12.1.14

Batch ID: 65555 Instrument ID GC8 Method: SW8015M

MBLK		Sample ID: DBLKS1-65555-65555				Units: mg/Kg		Analysis Date: 12/2/2014 09:54 PM		
Client ID:		Run ID: GC8_141202A				SeqNo: 3059917		Prep Date: 12/2/2014		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	1.711	0	2	0	85.5	39-133	0			

LCS		Sample ID: DLCSS1-65555-65555				Units: mg/Kg		Analysis Date: 12/2/2014 10:35 PM		
Client ID:		Run ID: GC8_141202A				SeqNo: 3059918		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	198.8	5.0	200	0	99.4	61-109	0			
Surr: 4-Terphenyl-d14	1.449	0	2	0	72.4	39-133	0			

MS		Sample ID: 1412036-01B MS				Units: mg/Kg		Analysis Date: 12/2/2014 11:02 PM		
Client ID: SS 01		Run ID: GC8_141202A				SeqNo: 3059919		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	294.1	7.8	313.5	12.19	89.9	48-110	0			
Surr: 4-Terphenyl-d14	2.011	0	3.135	0	64.1	39-133	0			

MSD		Sample ID: 1412036-01B MSD				Units: mg/Kg		Analysis Date: 12/2/2014 11:30 PM		
Client ID: SS 01		Run ID: GC8_141202A				SeqNo: 3059920		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	325	7.9	314.6	12.19	99.4	48-110	294.1	9.99	30	
Surr: 4-Terphenyl-d14	2.245	0	3.146	0	71.4	39-133	2.011	11	30	

The following samples were analyzed in this batch: 1412036-01B 1412036-02B 1412036-03B

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65563** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-65563-65563				Units: µg/Kg		Analysis Date: 12/2/2014 01:22 PM		
Client ID:		Run ID: GC9_141202A				SeqNo: 3060144		Prep Date: 12/2/2014		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>5110</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>102</i>	<i>50-150</i>	<i>0</i>			

LCS		Sample ID: LCS-65563-65563				Units: µg/Kg		Analysis Date: 12/2/2014 12:57 PM		
Client ID:		Run ID: GC9_141202A				SeqNo: 3060143		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	571700	2,500	500000	0	114	70-130	0			
<i>Surr: Toluene-d8</i>	<i>4868</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>97.4</i>	<i>50-150</i>	<i>0</i>			

MS		Sample ID: 1412036-01A MS				Units: µg/Kg		Analysis Date: 12/2/2014 05:11 PM		
Client ID: SS 01		Run ID: GC9_141202A				SeqNo: 3060149		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	435300	2,500	500000	0	87.1	70-130	0			
<i>Surr: Toluene-d8</i>	<i>4610</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>92.2</i>	<i>50-150</i>	<i>0</i>			

MSD		Sample ID: 1412036-01A MSD				Units: µg/Kg		Analysis Date: 12/2/2014 05:37 PM		
Client ID: SS 01		Run ID: GC9_141202A				SeqNo: 3060151		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	364800	2,500	500000	0	73	70-130	435300	17.6	30	
<i>Surr: Toluene-d8</i>	<i>4010</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>80.2</i>	<i>50-150</i>	<i>4610</i>	<i>13.9</i>	<i>30</i>	

The following samples were analyzed in this batch:

1412036-01A	1412036-02A	1412036-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65572** Instrument ID **HG1** Method: **SW7471**

MBLK				Sample ID: MBLK-65572-65572				Units: mg/Kg			Analysis Date: 12/2/2014 08:37 PM			
Client ID:				Run ID: HG1_141202A				SeqNo: 3059494			Prep Date: 12/2/2014		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-65572-65572				Units:mg/Kg			Analysis Date: 12/2/2014 08:39 PM		
Client ID:				Run ID: HG1_141202A				SeqNo:3059495		Prep Date: 12/2/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.1877 0.020 0.1665 0 113 80-120 0

MS				Sample ID: 1412036-02BMS				Units:mg/Kg			Analysis Date: 12/2/2014 08:46 PM		
Client ID: SS 02				Run ID: HG1_141202A				SeqNo:3059498		Prep Date: 12/2/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.1865 0.014 0.1194 0.02722 133 75-125 0 S

MSD				Sample ID: 1412036-02BMSD				Units:mg/Kg		Analysis Date: 12/2/2014 08:48 PM													
Client ID: SS 02				Run ID: HG1_141202A				SeqNo:3059499		Prep Date: 12/2/2014		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.1493 0.014 0.1125 0.02722 108 75-125 0.1584 5.91 35

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65540** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 01:31 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059163		Prep Date: 12/2/2014		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								
Copper	ND	0.50								
Lead	ND	0.25								
Selenium	ND	0.50								
Zinc	0.08061	0.50								J

MBLK		Sample ID: MBLK-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 04:59 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059478		Prep Date: 12/2/2014		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	0.07924	0.50								J

LCS		Sample ID: LCS-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 01:37 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059165		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.583	0.25	5	0	91.7	80-120	0			
Barium	4.565	0.25	5	0	91.3	80-120	0			
Cadmium	4.484	0.50	5	0	89.7	80-120	0			
Copper	4.812	0.50	5	0	96.2	80-120	0			
Lead	4.807	0.25	5	0	96.1	80-120	0			
Selenium	4.714	0.50	5	0	94.3	80-120	0			
Zinc	4.699	0.50	5	0	94	80-120	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65540** Instrument ID **ICP2** Method: **SW846 6010C**

LCS		Sample ID: LCS-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 05:05 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059479		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.611	0.25	5	0	92.2	80-120	0			
Barium	4.497	0.25	5	0	89.9	80-120	0			
Cadmium	4.458	0.50	5	0	89.2	80-120	0			
Chromium	4.727	0.25	5	0	94.5	80-120	0			
Copper	4.754	0.50	5	0	95.1	80-120	0			
Lead	4.778	0.25	5	0	95.6	80-120	0			
Nickel	4.678	0.25	5	0	93.6	80-120	0			
Selenium	4.782	0.50	5	0	95.6	80-120	0			
Silver	4.92	0.25	5	0	98.4	80-120	0			
Zinc	4.764	0.50	5	0	95.3	80-120	0			

MS		Sample ID: 14111373-01BMS				Units: mg/Kg		Analysis Date: 12/2/2014 01:54 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059171		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.99	0.32	6.427	4.726	97.5	75-125	0			
Barium	4564	0.32	6.427	4418	2270	75-125	0			SEO
Cadmium	6.327	0.64	6.427	-0.07035	99.5	75-125	0			
Copper	27.49	0.64	6.427	16.73	167	75-125	0			S
Lead	18.2	0.32	6.427	11.93	97.5	75-125	0			
Selenium	7.569	0.64	6.427	1.037	102	75-125	0			
Zinc	66.35	0.64	6.427	49.95	255	75-125	0			SO

MS		Sample ID: 14111373-01BMS				Units: mg/Kg		Analysis Date: 12/2/2014 05:22 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059482		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	16.14	0.32	6.427	8.355	121	75-125	0			
Nickel	16.16	0.32	6.427	9.434	105	75-125	0			
Silver	7.233	0.32	6.427	0.009352	112	75-125	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65540** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 14111373-01BMSD				Units: mg/Kg		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059172		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.63	0.32	6.386	4.726	108	75-125	10.99	5.67	20	
Barium	3850	0.32	6.386	4418	-8900	75-125	4564	17	20	SEO
Cadmium	6.249	0.64	6.386	-0.07035	99	75-125	6.327	1.24	20	
Copper	23.72	0.64	6.386	16.73	109	75-125	27.49	14.7	20	
Lead	17.6	0.32	6.386	11.93	88.8	75-125	18.2	3.32	20	
Selenium	7.495	0.64	6.386	1.037	101	75-125	7.569	0.979	20	
Zinc	62.03	0.64	6.386	49.95	189	75-125	66.35	6.74	20	SO

MSD		Sample ID: 14111373-01BMSD				Units: mg/Kg		Analysis Date: 12/2/2014 05:27 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059483		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	15.18	0.32	6.386	8.355	107	75-125	16.14	6.14	20	
Nickel	16.2	0.32	6.386	9.434	106	75-125	16.16	0.265	20	
Silver	7.227	0.32	6.386	0.009352	113	75-125	7.233	0.0901	20	

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65578** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1412036-01CDUP				Units: mg/L		Analysis Date: 12/4/2014 02:29 PM		
Client ID: SS 01		Run ID: ICP2_141204A				SeqNo: 3061972		Prep Date: 12/4/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	308.6	5.0	0	0	0	0-0	325.5	5.34		
Magnesium	65.29	2.0	0	0	0	0-0	68.69	5.08		
Sodium	1774	2.0	0	0	0	0-0	1934	8.65		

DUP		Sample ID: 1412036-01CDUP				Units: none		Analysis Date: 12/4/2014		
Client ID: SS 01		Run ID: SAR_141204A				SeqNo: 3062028		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
Sodium Adsorption Ratio	23.94	0.010	0	0	0		25.42	6.01	50	

The following samples were analyzed in this batch: | 1412036-01C 1412036-02C 1412036-03C |

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65538** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-65538-65538				Units: µg/Kg		Analysis Date: 12/2/2014 06:10 PM		
Client ID:		Run ID: SVMS5_141202A				SeqNo: 3059859		Prep Date: 12/2/2014		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>	1353	0	1667	0	81.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1601	0	1667	0	96	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1187	0	1667	0	71.2	37-107	0			

LCS		Sample ID: SLCSS1-65538-65538				Units: µg/Kg		Analysis Date: 12/2/2014 06:34 PM		
Client ID:		Run ID: SVMS5_141202A				SeqNo: 3059860		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	577.7	6.7	666.7	0	86.6	45-110	0			
Acenaphthylene	596.3	6.7	666.7	0	89.4	45-105	0			
Anthracene	665.7	6.7	666.7	0	99.8	55-105	0			
Benzo(a)anthracene	666	6.7	666.7	0	99.9	50-110	0			
Benzo(a)pyrene	646	6.7	666.7	0	96.9	50-110	0			
Benzo(b)fluoranthene	660.3	6.7	666.7	0	99	45-115	0			
Benzo(g,h,i)perylene	691	6.7	666.7	0	104	40-125	0			
Benzo(k)fluoranthene	676.3	6.7	666.7	0	101	45-115	0			
Chrysene	711.7	6.7	666.7	0	107	55-110	0			
Dibenzo(a,h)anthracene	675.7	6.7	666.7	0	101	40-125	0			
Fluoranthene	700.3	6.7	666.7	0	105	55-115	0			
Fluorene	632.3	6.7	666.7	0	94.8	50-110	0			
Indeno(1,2,3-cd)pyrene	650.7	6.7	666.7	0	97.6	40-120	0			
Naphthalene	583.3	6.7	666.7	0	87.5	40-105	0			
Pyrene	734	6.7	666.7	0	110	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1293	0	1667	0	77.6	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1633	0	1667	0	98	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1243	0	1667	0	74.6	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65538** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 14111418-14B MS			Units: µg/Kg		Analysis Date: 12/2/2014 06:59 PM	
Client ID:		Run ID: SVMS5_141202A			SeqNo: 3059861		Prep Date: 12/2/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1050	13	1306	0	80.4	45-110	0			
Acenaphthylene	1110	13	1306	0	85	45-105	0			
Anthracene	1213	13	1306	0	92.8	55-105	0			
Benzo(a)anthracene	1200	13	1306	0	91.9	50-110	0			
Benzo(a)pyrene	1163	13	1306	0	89	50-110	0			
Benzo(b)fluoranthene	1209	13	1306	0	92.5	45-115	0			
Benzo(g,h,i)perylene	1242	13	1306	0	95.1	40-125	0			
Benzo(k)fluoranthene	1257	13	1306	0	96.2	45-115	0			
Chrysene	1272	13	1306	0	97.4	55-110	0			
Dibenzo(a,h)anthracene	1228	13	1306	0	94	40-125	0			
Fluoranthene	1270	13	1306	0	97.2	55-115	0			
Fluorene	1158	13	1306	0	88.6	50-110	0			
Indeno(1,2,3-cd)pyrene	1186	13	1306	0	90.8	40-120	0			
Naphthalene	1055	13	1306	0	80.7	40-105	0			
Pyrene	1319	13	1306	0	101	45-125	0			
Surr: 2-Fluorobiphenyl	2415	0	3266	0	74	12-100	0			
Surr: 4-Terphenyl-d14	3019	0	3266	0	92.5	25-137	0			
Surr: Nitrobenzene-d5	2289	0	3266	0	70.1	37-107	0			

MSD				Sample ID: 14111418-14B MSD			Units: µg/Kg		Analysis Date: 12/2/2014 07:23 PM	
Client ID:		Run ID: SVMS5_141202A			SeqNo: 3059862		Prep Date: 12/2/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1175	13	1313	0	89.5	45-110	1050	11.2	30	
Acenaphthylene	1209	13	1313	0	92.1	45-105	1110	8.52	30	
Anthracene	1268	13	1313	0	96.6	55-105	1213	4.46	30	
Benzo(a)anthracene	1127	13	1313	0	85.8	50-110	1200	6.3	30	
Benzo(a)pyrene	1100	13	1313	0	83.8	50-110	1163	5.57	30	
Benzo(b)fluoranthene	1098	13	1313	0	83.6	45-115	1209	9.66	30	
Benzo(g,h,i)perylene	1134	13	1313	0	86.3	40-125	1242	9.14	30	
Benzo(k)fluoranthene	1126	13	1313	0	85.8	45-115	1257	10.9	30	
Chrysene	1203	13	1313	0	91.6	55-110	1272	5.58	30	
Dibenzo(a,h)anthracene	1103	13	1313	0	84	40-125	1228	10.7	30	
Fluoranthene	1242	13	1313	0	94.6	55-115	1270	2.26	30	
Fluorene	1265	13	1313	0	96.3	50-110	1158	8.83	30	
Indeno(1,2,3-cd)pyrene	1055	13	1313	0	80.3	40-120	1186	11.7	30	
Naphthalene	1181	13	1313	0	89.9	40-105	1055	11.3	30	
Pyrene	1288	13	1313	0	98.1	45-125	1319	2.36	30	
Surr: 2-Fluorobiphenyl	2592	0	3282	0	79	12-100	2415	7.07	40	
Surr: 4-Terphenyl-d14	2851	0	3282	0	86.9	25-137	3019	5.74	40	
Surr: Nitrobenzene-d5	2487	0	3282	0	75.8	37-107	2289	8.29	40	

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

Client: HRL Compliance Solutions, Inc

Work Order: 1412036

Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65538**

Instrument ID **SVMS5**

Method: **SW846 8270D**

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65541** Instrument ID **VMS5** Method: **SW8260B**

MBLK				Sample ID: MBLK-65541-65541				Units: µg/Kg			Analysis Date: 12/2/2014 08:17 PM		
Client ID:			Run ID: VMS5_141202A				SeqNo:3059785			Prep Date: 12/2/2014		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	1007	0	1000	0	101	70-130		0					
Surr: 4-Bromofluorobenzene	977.5	0	1000	0	97.8	70-130		0					
Surr: Dibromofluoromethane	986	0	1000	0	98.6	70-130		0					
Surr: Toluene-d8	1000	0	1000	0	100	70-130		0					

LCS				Sample ID: LCS-65541-65541			Units: µg/Kg		Analysis Date: 12/2/2014 06:59 PM		
Client ID:		Run ID: VMS5_141202A			SeqNo:3059784		Prep Date: 12/2/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	972	30	1000	0	97.2	75-125	0				
Ethylbenzene	1023	30	1000	0	102	75-125	0				
m,p-Xylene	2066	60	2000	0	103	80-125	0				
o-Xylene	1038	30	1000	0	104	75-125	0				
Toluene	997	30	1000	0	99.7	70-125	0				
Xylenes, Total	3104	90	3000	0	103	75-125	0				
Surr: 1,2-Dichloroethane-d4	992.5	0	1000	0	99.2	70-130	0				
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0				
Surr: Dibromofluoromethane	1002	0	1000	0	100	70-130	0				
Surr: Toluene-d8	996.5	0	1000	0	99.6	70-130	0				

MS					Sample ID: 1412001-07A MS			Units: µg/Kg		Analysis Date: 12/4/2014 02:09 PM	
Client ID:			Run ID: VMS9_141204A			SeqNo:3062980		Prep Date: 12/2/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1060	30	1000	0	106	75-125	0				
Ethylbenzene	1146	30	1000	0	115	75-125	0				
m,p-Xylene	2284	60	2000	26	113	80-125	0				
o-Xylene	1186	30	1000	29	116	75-125	0				
Toluene	1080	30	1000	0	108	70-125	0				
Xylenes, Total	3471	90	3000	55	114	75-125	0				
Surr: 1,2-Dichloroethane-d4	964.5	0	1000	0	96.4	70-130	0				
Surr: 4-Bromofluorobenzene	1038	0	1000	0	104	70-130	0				
Surr: Dibromofluoromethane	997	0	1000	0	99.7	70-130	0				
Surr: Toluene-d8	960	0	1000	0	96	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65541** Instrument ID **VMS5** Method: **SW8260B**

MSD				Sample ID: 1412001-07A MSD			Units: µg/Kg		Analysis Date: 12/4/2014 02:35 PM	
Client ID:				Run ID: VMS9_141204A			SeqNo: 3062981		Prep Date: 12/2/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1056	30	1000	0	106	75-125	1060	0.378	30	
Ethylbenzene	1148	30	1000	0	115	75-125	1146	0.131	30	
m,p-Xylene	2297	60	2000	26	114	80-125	2284	0.546	30	
o-Xylene	1180	30	1000	29	115	75-125	1186	0.592	30	
Toluene	1070	30	1000	0	107	70-125	1080	0.977	30	
Xylenes, Total	3476	90	3000	55	114	75-125	3471	0.158	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>960</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>96</i>	<i>70-130</i>	<i>964.5</i>	<i>0.468</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>1044</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>104</i>	<i>70-130</i>	<i>1038</i>	<i>0.528</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>988</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</i>	<i>70-130</i>	<i>997</i>	<i>0.907</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>957</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.7</i>	<i>70-130</i>	<i>960</i>	<i>0.313</i>	<i>30</i>	

The following samples were analyzed in this batch: 1412036-01A 1412036-02A 1412036-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65578** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1412036-01C DUP				Units: mmhos/cm @25°C		Analysis Date: 12/4/2014 07:00 PM		
Client ID: SS 01		Run ID: WETCHEM_141204P				SeqNo: 3062365		Prep Date: 12/4/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	13.47	0.050	0	0	0		14.04	4.14	50	

The following samples were analyzed in this batch:

1412036-01C	1412036-02C	1412036-03C
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65600** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-65600-65600				Units: mg/Kg		Analysis Date: 12/3/2014 02:00 PM		
Client ID:		Run ID: WETCHEM_141203K				SeqNo: 3060285		Prep Date: 12/2/2014		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-65600-65600				Units: mg/Kg		Analysis Date: 12/3/2014 02:00 PM		
Client ID:		Run ID: WETCHEM_141203K				SeqNo: 3060284		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.072 0.50 2 0 104 80-120 0

MS		Sample ID: 14111372-01B MS				Units: mg/Kg		Analysis Date: 12/3/2014 02:00 PM		
Client ID:		Run ID: WETCHEM_141203K				SeqNo: 3060273		Prep Date: 12/2/2014		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 0.016 85.2 75-125 0

MS		Sample ID: 14111372-01B MSI				Units: mg/Kg		Analysis Date: 12/3/2014 02:00 PM		
Client ID:		Run ID: WETCHEM_141203K				SeqNo: 3060275		Prep Date: 12/2/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1091 50 1064 0.016 103 75-125 0

MSD		Sample ID: 14111372-01B MSD				Units: mg/Kg		Analysis Date: 12/3/2014 02:00 PM		
Client ID:		Run ID: WETCHEM_141203K				SeqNo: 3060274		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1.62 0.50 2 0.016 80.2 75-125 1.72 5.99 20

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **65604** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-65604-65604				Units: s.u.			Analysis Date: 12/3/2014 12:15 PM				
Client ID:				Run ID: WETCHEM_141203G				SeqNo: 3059953			Prep Date: 12/3/2014			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		3.94	0	4	0	98.5	90-110	0							

DUP		Sample ID: 1412036-01B DUP				Units: s.u.		Analysis Date: 12/3/2014 12:15 PM		
Client ID: SS 01		Run ID: WETCHEM_141203G				SeqNo: 3059956		Prep Date: 12/3/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.11	0	0	0	0	0-0	8.07	0.494	20	

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1412036
Project: WPX Cottonwood Poly Line Release 12.1.14

QC BATCH REPORT

Batch ID: **R153565** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R153565				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060234		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-R153565				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060233		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: 14111385-08A DUP				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060212		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 3.47 0.050 0 0 0 0-0 3.67 5.6 20

DUP		Sample ID: 1412001-05B DUP				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060221		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 23.23 0.050 0 0 0 0-0 24.32 4.58 20

The following samples were analyzed in this batch:

1412036-01B	1412036-02B	1412036-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424
TF: (800) 443-1511 PH: (616) 399-6070 FX: (616) 399-0185

Chain-of-Custody

Form 202r5

WORKORDER #

1412086

PAGE

1 of 1

DISPOSAL

Lab or Return to Client

PROJECT NAME	WPX COTTONWOOD POLY LINE RELEASE	SAMPLER	CASEY RICHARDSON	DATE	12-1-14					
PROJECT No.		SITE ID	SOIL SAMPLES	TURNAROUND	24 HR					
		EDD FORMAT								
		PURCHASE ORDER								
COMPANY NAME	HCSI	BILL TO COMPANY	WPX Energy							
END REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney							
ADDRESS	2385 F 1/2 Road	ADDRESS	1058 County Road 215							
CITY / STATE / ZIP	Grand Junction, CO. 81505	CITY / STATE / ZIP	Parachute, CO 81635							
PHONE	970-243-3271	PHONE	970-883-2295							
FAX	970-243-3280	FAX	970-285-9573							
E-MAIL	mmumby@hrlcomp.com	E-MAIL	karolina.blaney@wpxenergy.com							
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	GRO, BTEX	DRO, PAH, METALS (9101)	SAR, EC, pH
1	SS 01	SOIL	12-1-14	1015	3	8		X	X	X
2	SS 02	1	1	1028	1	1		X	X	X
3	SS 03	1	1	1040	1	1		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:

4.6°C

QC PACKAGE (check below)

☒ 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	CASEY RICHARDSON	CASEY RICHARDSON	12-1-14	1135
RECEIVED BY	A. M. M.	A. M. M.	12-1-14	1140
RELINQUISHED BY	W. M.	W. M.	12-1-14	1140
RECEIVED BY	Diane F. Shen	Diane F. Shen	12/2/14	0900
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **02-Dec-14 09:00**

Work Order: **1412036**

Received by: **DS**

Checklist completed by <u><i>Diane Shaw</i></u>	02-Dec-14	Reviewed by: <u><i>Ann Preston</i></u>	02-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>4.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/2/2014 10:37:56 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
 Nick Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RILA



Ship Date: 01DEC14
 ActWgt: 66.0 LB
 CAD: 2284840/NET3550

Dim: 24 X 15 X 15 IN

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

BILL SENDER

HOLLAND, MI 49424

Delivery Address Bar Code



Ref # 120114-1
 Invoice #
 PO # Parachute
 Dept #

1 of 2

TUE - 02 DEC 10:30A
 PRIORITY OVERNIGHT

TRK# 7720 4704 0099

0201

MASTER

49424

MI-LIS

GRR

XX HLMA

022G2DC758AC3

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 12-17-14

Time 1:00

Name W.M.



16-Dec-2014

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

Re: **WPX Cottonwood Tank Farm 12.9.14**

Work Order: **1412509**

Dear Mark,

ALS Environmental received 2 samples on 10-Dec-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,

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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Environmental The ALS logo, a small blue triangle with a yellow flame inside.

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RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Tank Farm 12.9.14
Work Order: 1412509

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>
1412509-01	SS 01 - 120914	Soil		12/9/2014 10:51	12/10/2014 09:00	<input type="checkbox"/>
1412509-02	SS 03 - 120914	Soil		12/9/2014 10:57	12/10/2014 09:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Tank Farm 12.9.14
WorkOrder: 1412509

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

ALS Group USA, Corp

Date: 16-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Tank Farm 12.9.14
Sample ID: SS 01 - 120914
Collection Date: 12/9/2014 10:51 AM

Work Order: 1412509
Lab ID: 1412509-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8270D	Prep: SW3541 / 12/11/14 Analyst: RM		
Benzo(a)pyrene	19		8.0	µg/Kg-dry	1	12/12/2014 04:24 AM
Surr: 2-Fluorobiphenyl	75.3		12-100	%REC	1	12/12/2014 04:24 AM
Surr: 4-Terphenyl-d14	87.0		25-137	%REC	1	12/12/2014 04:24 AM
Surr: Nitrobenzene-d5	90.5		37-107	%REC	1	12/12/2014 04:24 AM
MOISTURE			A2540 G	Analyst: EVB		
Moisture	19		0.050	% of sample	1	12/12/2014 11:50 AM

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

ALS Group USA, Corp

Date: 16-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Tank Farm 12.9.14
Sample ID: SS 03 - 120914
Collection Date: 12/9/2014 10:57 AM

Work Order: 1412509
Lab ID: 1412509-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW846 8270D	Prep: SW3541 / 12/11/14		Analyst: RM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	12/12/2014 12:01 AM
Surr: 2-Fluorobiphenyl	80.0		12-100	%REC	1	12/12/2014 12:01 AM
Surr: 4-Terphenyl-d14	95.4		25-137	%REC	1	12/12/2014 12:01 AM
Surr: Nitrobenzene-d5	76.3		37-107	%REC	1	12/12/2014 12:01 AM
MOISTURE			A2540 G			Analyst: EVB
Moisture	16		0.050	% of sample	1	12/12/2014 11:50 AM

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

ALS Group USA, Corp

Date: 16-Dec-14

Client: HRL Compliance Solutions, Inc
Work Order: 1412509
Project: WPX Cottonwood Tank Farm 12.9.14

QC BATCH REPORT

Batch ID: **65863** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK				Sample ID: SBLKS1-65863-65863				Units: µg/Kg			Analysis Date: 12/11/2014 08:06 PM		
Client ID:			Run ID: SVMS8_141211A			SeqNo: 3074030			Prep Date: 12/11/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzo(a)pyrene	ND	6.7											
<i>Surr: 2-Fluorobiphenyl</i>	1292	0	1667	0	77.5	12-100	0						
<i>Surr: 4-Terphenyl-d14</i>	1655	0	1667	0	99.3	25-137	0						
<i>Surr: Nitrobenzene-d5</i>	1450	0	1667	0	87	37-107	0						

LCS				Sample ID: SLCSS1-65863-65863			Units: µg/Kg		Analysis Date: 12/11/2014 08:26 PM		
Client ID:			Run ID: SVMS8_141211A			SeqNo:3074031		Prep Date: 12/11/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzo(a)pyrene	641	6.7	666.7	0	96.1	50-110	0				
Surr: 2-Fluorobiphenyl	1287	0	1667	0	77.2	12-100	0				
Surr: 4-Terphenyl-d14	1671	0	1667	0	100	25-137	0				
Surr: Nitrobenzene-d5	1618	0	1667	0	97.1	37-107	0				

MS				Sample ID: 1412509-02A MS			Units: µg/Kg		Analysis Date: 12/11/2014 11:19 PM		
Client ID: SS 03 - 120914			Run ID: SVMS8_141211A			SeqNo:3074035		Prep Date: 12/11/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzo(a)pyrene	1148	13	1271	0	90.3	50-110	0				
Surr: 2-Fluorobiphenyl	2634	0	3178	0	82.9	12-100	0				
Surr: 4-Terphenyl-d14	2838	0	3178	0	89.3	25-137	0				
Surr: Nitrobenzene-d5	3260	0	3178	0	103	37-107	0				

MSD				Sample ID: 1412509-02A MSD				Units: µg/Kg		Analysis Date: 12/11/2014 11:39 PM	
Client ID: SS 03 - 120914			Run ID: SVMS8_141211A			SeqNo:3074036		Prep Date: 12/11/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzo(a)pyrene	1353	13	1322	0	102	50-110	1148	16.4	30		
Surr: 2-Fluorobiphenyl	2609	0	3305	0	79	12-100	2634	0.924	40		
Surr: 4-Terphenyl-d14	3145	0	3305	0	95.2	25-137	2838	10.3	40		
Surr: Nitrobenzene-d5	2835	0	3305	0	85.8	37-107	3260	13.9	40		

The following samples were analyzed in this batch:

1412509-01A 1412509-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412509
Project: WPX Cottonwood Tank Farm 12.9.14

QC BATCH REPORT

Batch ID: **R154292** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R154292				Units: % of sample			Analysis Date: 12/12/2014 11:50 AM			
Client ID:				Run ID: MOIST_141212A				SeqNo: 3076256			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-R154292				Units: % of sample		Analysis Date: 12/12/2014 11:50 AM		
Client ID:		Run ID: MOIST_141212A			SeqNo: 3076255		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: 1412470-02B DUP					Units: % of sample		Analysis Date: 12/12/2014 11:50 AM		
Client ID:			Run ID: MOIST_141212A			SeqNo: 3076239		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 21.7 0.050 0 0 0 0-0 21.28 1.95 20

DUP		Sample ID: 1412576-04B DUP					Units: % of sample		Analysis Date: 12/12/2014 11:50 AM		
Client ID:			Run ID: MOIST_141212A			SeqNo: 3076245		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 9.18 0.050 0 0 0 0-0 9.23 0.543 20

The following samples were analyzed in this batch:

1412509-01A 1412509-02A

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



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424
TF: (800) 443-1511 PH: (616) 399-6070 FX: (616) 399-6185

Chain-of-Custody

Form 202r8

WORKORDER #

1412509

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME

WPX COTTONWOOD TANK FARM

SAMPLER

CASEY RICHARDSON

DATE

12-9-14

TURNAROUND

5 DAY

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME

HCSI

BILL TO COMPANY

WPX Energy

SEND REPORT TO

Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS

2385 F 1/2 Road

ADDRESS

1058 County Road 215

CITY / STATE / ZIP

Grand Junction, CO. 81505

CITY / STATE / ZIP

Parachute, CO 81635

PHONE

970-243-3271

PHONE

970-683-2295

FAX

970-243-3280

FAX

970-285-9573

E-MAIL

mmumby@hricomp.com

E-MAIL

karolina.blaney@wpxenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

BENZO(A)PYRENE

1

SS 01-120914

SOIL

12-9-14

1051

1

8

Y

2

SS 03-120914

SOIL

12-9-14

1057

1

8

X

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

or 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)

Reservative 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

CASEY RICHARDSON

CASEY RICHARDSON

12-9-14

1415

RECEIVED BY

MM

MM

12-9-14

1415

RELINQUISHED BY

MM

MM

12-9-14

1420

RECEIVED BY

MM

KERRY WIERENGA

12/10/14

0900

RELINQUISHED BY

MM

MM

MM

MM

RECEIVED BY

MM

MM

MM

MM

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **10-Dec-14 09:00**

Work Order: **1412509**

Received by: **KRW**

Checklist completed by <u>Keith Wurenga</u>	10-Dec-14	Reviewed by: <u>Ann Preston</u>	10-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>3.2 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/10/2014 11:19:14 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ALS Environmental

3352 128th Avenue
Holland, Michigan 49424
Tel. +1 616 399 6070
Fax. +1 616 399 6185

CUSTODY SEAL

Date: 12 Nov Time: 1140
Name: WV
Company: WV

Seal Broken By:

Date:



05-Dec-2014

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

Re: **WPX Cottonwood Poly Line Release Bkgrd 12.1.14**

Work Order: **1412035**

Dear Mark,

ALS Environmental received 3 samples on 02-Dec-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 13.

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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Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14
Work Order: 1412035

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>
1412035-01	BKGD 01	Soil		12/1/2014 10:28	12/2/2014 09:00	<input type="checkbox"/>
1412035-02	BKGD 02	Soil		12/1/2014 10:40	12/2/2014 09:00	<input type="checkbox"/>
1412035-03	BKGD 03	Soil		12/1/2014 11:20	12/2/2014 09:00	<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
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: 05-Dec-14

Client: HRL Compliance Solutions, Inc

Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

Work Order: 1412035

Sample ID: BKGD 01

Lab ID: 1412035-01

Collection Date: 12/1/2014 10:28 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	12		SW846 6010C 0.38	mg/Kg-dry	1	Prep: SW3050B / 12/2/14 Analyst: JEC 12/2/2014 02:12 PM
MOISTURE						
Moisture	11		A2540 G 0.050	% of sample	1	Analyst: EVB 12/2/2014 02:00 PM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14
Sample ID: BKGD 02
Collection Date: 12/1/2014 10:40 AM

Work Order: 1412035
Lab ID: 1412035-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	10		SW846 6010C 0.40	mg/Kg-dry	Prep: SW3050B / 12/2/14 1	Analyst: JEC 12/2/2014 02:17 PM
SOLUBLE CATIONS FOR SAR						
Calcium	240		SW846 6010C 5.0	mg/L	Prep: USDA Method 20B / 12/4/14 10	Analyst: JEC 12/4/2014 02:12 PM
Magnesium	90		2.0	mg/L	10	12/4/2014 02:12 PM
Sodium	39		2.0	mg/L	10	12/4/2014 02:12 PM
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	0.54		USDA H60 METHOD 0.010	none	Prep: USDA Method 20B / 12/4/14 1	Analyst: JEC 12/4/2014
ELECTRICAL CONDUCTIVITY (SAR)						
Electrical Conductivity @ Saturation	2.2		USDA H60 METHOD 0.050	mmhos/cm @25	Prep: USDA Method 20B / 12/4/14 10	Analyst: JB 12/4/2014 07:00 PM
MOISTURE						
Moisture	11		A2540 G 0.050	% of sample	1	Analyst: EVB 12/2/2014 02:00 PM
PH						
pH	7.6		SW9045D s.u.		Prep: EXTRACT / 12/3/14 1	Analyst: AXL 12/3/2014 12:15 PM

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

ALS Group USA, Corp

Date: 05-Dec-14

Client: HRL Compliance Solutions, Inc

Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

Work Order: 1412035

Sample ID: BKGD 03

Lab ID: 1412035-03

Collection Date: 12/1/2014 11:20 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
METALS ANALYSIS BY ICP			SW846 6010C		Prep: SW3050B / 12/2/14	Analyst: JEC
Arsenic	18		0.41	mg/Kg-dry	1	12/2/2014 02:23 PM
MOISTURE			A2540 G			Analyst: EVB
Moisture	7.3		0.050	% of sample	1	12/2/2014 02:00 PM

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

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1412035

Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

Batch ID: 65540

Instrument ID ICP2

Method: SW846 6010C

MBLK		Sample ID: MBLK-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 01:31 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059163		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

MBLK		Sample ID: MBLK-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 04:59 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059478		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								

LCS		Sample ID: LCS-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 01:37 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059165		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.583	0.25	5	0	91.7	80-120	0			

LCS		Sample ID: LCS-65540-65540				Units: mg/Kg		Analysis Date: 12/2/2014 05:05 PM		
Client ID:		Run ID: ICP2_141202B				SeqNo: 3059479		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.611	0.25	5	0	92.2	80-120	0			

MS		Sample ID: 14111373-01BMS				Units: mg/Kg		Analysis Date: 12/2/2014 01:54 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059171		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.99	0.32	6.427	4.726	97.5	75-125	0			

MSD		Sample ID: 14111373-01BMSD				Units: mg/Kg		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: ICP2_141202A				SeqNo: 3059172		Prep Date: 12/2/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.63	0.32	6.386	4.726	108	75-125	10.99	5.67	20	

The following samples were analyzed in this batch:

1412035-01A 1412035-02A 1412035-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412035
Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

QC BATCH REPORT

Batch ID: **65578** Instrument ID **ICP2** Method: **SW846 6010C**

DUP		Sample ID: 1412036-01CDUP				Units: mg/L		Analysis Date: 12/4/2014 02:29 PM		
Client ID:		Run ID: ICP2_141204A				SeqNo: 3061972		Prep Date: 12/4/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	308.6	5.0	0	0	0	0-0	325.5	5.34		
Magnesium	65.29	2.0	0	0	0	0-0	68.69	5.08		
Sodium	1774	2.0	0	0	0	0-0	1934	8.65		

DUP		Sample ID: 1412036-01CDUP				Units: none		Analysis Date: 12/4/2014		
Client ID:		Run ID: SAR_141204A				SeqNo: 3062028		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
Sodium Adsorption Ratio	23.94	0.010	0	0	0		25.42	6.01	50	

The following samples were analyzed in this batch: 1412035-02B

Batch ID: **65578** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1412036-01C DUP				Units: mmhos/cm @25°C		Analysis Date: 12/4/2014 07:00 PM		
Client ID:		Run ID: WETCHEM_141204P				SeqNo: 3062365		Prep Date: 12/4/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	13.47	0.050	0	0	0		14.04	4.14	50	

The following samples were analyzed in this batch: 1412035-02B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412035
Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

QC BATCH REPORT

Batch ID: **65604** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-65604-65604					Units:s.u.			Analysis Date: 12/3/2014 12:15 PM				
Client ID:					Run ID: WETCHEM_141203G					SeqNo:3059953			Prep Date: 12/3/2014			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH					3.94		0	4	0	98.5		90-110	0				

DUP					Sample ID: 1412036-01B DUP					Units:s.u.			Analysis Date: 12/3/2014 12:15 PM		
Client ID:				Run ID: WETCHEM_141203G				SeqNo:3059956			Prep Date: 12/3/2014			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		8.11	0	0	0	0	0-0	8.07	0.494	20					

The following samples were analyzed in this batch:

1412035-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412035
Project: WPX Cottonwood Poly Line Release Bkgrd 12.1.14

QC BATCH REPORT

Batch ID: **R153565** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R153565				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060234		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-R153565				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060233		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: 14111385-08A DUP				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060212		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 3.47 0.050 0 0 0 0-0 3.67 5.6 20

DUP		Sample ID: 1412001-05B DUP				Units: % of sample		Analysis Date: 12/2/2014 02:00 PM		
Client ID:		Run ID: MOIST_141202A				SeqNo: 3060221		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 23.23 0.050 0 0 0 0-0 24.32 4.58 20

The following samples were analyzed in this batch:

1412035-01A	1412035-02A	1412035-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Chain-of-Custody

Form 202r8

WORKORDER
#

1412035

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

[illegible]

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

r metals or anions, please detail analytes below.

Comments:

QC PACKAGE (check below)	
<input type="checkbox"/> x	LEVEL II (Standard QC)
<input type="checkbox"/>	LEVEL III (Std QC + forms)
<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
<input type="checkbox"/>	

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>C. J. W.</i>	CASEY RICHARDSON	12-1-14	1135
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	12-1-14	1135
RELINQUISHED BY	<i>[Signature]</i>	N.M.	12-1-14	1140
RECEIVED BY	<i>[Signature]</i>	Diane F. Shaw	12/2/14	0900
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **02-Dec-14 09:00**

Work Order: **1412035**

Received by: **DS**

Checklist completed by <u><i>Diane Shaw</i></u>	02-Dec-14	Reviewed by: <u><i>Ann Preston</i></u>	02-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>4.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/2/2014 10:33:30 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) 399-6070
 Nick Martinez
 ALS Environmental
 127 E. 1st Street
 PARACHUTE, CO 81635

Origin ID: RILA



Ship Date: 01DEC14
 ActWgt: 60.0 LB
 CAD: 2264840NET3550

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



SHIP TO: (616) 399-6070
 sample receiving
 ALS Laboratory Group
 3352 128TH AVE

BILL SENDER

HOLLAND, MI 49424

Ref # 120114-1
 Invoice #
 PO # Parachute
 Dept #

1 of 2

TUE - 02 DEC 10:30A
 PRIORITY OVERNIGHT

TRK# 7720 4704 0099

6201

MASTER

49424

MI-US

GRR

XX HLMA

02ZG00C758A03

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 12-17-14

Time 1703

Name W.M.