

WPXENERGY Sample Location Map: PA 22-21

39.510739 -108.008702
Section 21, Township 6 South, Range 95 West

<ul style="list-style-type: none"> Sample Location Impacted Area 	Transportation <ul style="list-style-type: none"> CO Highways County Roads Local Streets WPX Access 	Hydrography <ul style="list-style-type: none"> Ditch Intermittent Stream Perennial Stream Waterbody Watershed
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Author: B. Hall

Revision: 0

Date: 9/11/2014

Soil Analytical Results
PA 22-21

Contaminant of Concern ↓	COGCC standards	Location →	Point of Origin	Behind Separators	Behind Separators	Frac Tanks
		Date Sampled →	9/5/2014	9/5/2014	12/5/2014	9/5/2014
Organic Compounds in Soil						
TPH	500	mg/kg	430	1,900	53	430
DRO		mg/kg	430	1,900	53	430
GRO		mg/kg	ND	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	0.17	ND		0.11
Acenaphthene	1,000	mg/kg	ND	ND		ND
Anthracene	1,000	mg/kg	0.013	0.045		ND
Benzo(A)anthracene	0.22	mg/kg	ND	ND		ND
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND		ND
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND		ND
Benzo(A)pyrene	0.022	mg/kg	ND	ND		ND
Chrysene	22	mg/kg	ND	ND		ND
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND		ND
Fluoranthene	1,000	mg/kg	ND	ND		ND
Fluorene	1,000	mg/kg	0.039	0.084		0.0098
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	ND	ND		ND
Naphthalene	23	mg/kg	0.018	ND		0.017
Pyrene	1,000	mg/kg	ND	ND		0.019
Inorganics in Soil						
EC	<4 or 2 x background	mmhos/cm	6.3	20		85
SAR	<12		19	24		69
pH	6-9		8.5	7.8		8.2
Metals in Soil						
Arsenic	0.39	mg/kg	8.2	8.2		6.9
Barium total	15,000	mg/kg	240	770		2500
Cadmium	70	mg/kg	ND	ND		ND
Chromium (III)	120,000	mg/kg	11	13		11
Chromium (VI)	23	mg/kg	ND	ND		ND
Copper	3,100	mg/kg	9.9	20		18
Lead	400	mg/kg	7.7	15		9.4
Mercury	23	mg/kg	0.024	0.067		0.022
Nickel	1,600	mg/kg	9.1	22		14
Selenium	390	mg/kg	ND	2.3		1.8
Silver	390	mg/kg	ND	ND		ND
Zinc	23,000	mg/kg	29	73		43

Soil Analytical Results
PA 22-21

Contaminant of Concern ↓	COGCC standards	Location →	PA 22-21-B-1	PA 22-21-B-2	PA 22-21-B-3
		Date Sampled →	9/5/2014	9/5/2014	9/5/2014
Organic Compounds in Soil					
TPH	500	mg/kg			
DRO		mg/kg			
GRO		mg/kg			
Benzene	0.17	mg/kg			
Toluene	85	mg/kg			
Ethylbenzene	100	mg/kg			
Xylenes (Total)	175	mg/kg			
Acenaphthene	1,000	mg/kg			
Anthracene	1,000	mg/kg			
Benzo(A)anthracene	0.22	mg/kg			
Benzo(B)fluoranthene	0.22	mg/kg			
Benzo(K)fluoranthene	2.2	mg/kg			
Benzo(A)pyrene	0.022	mg/kg			
Chrysene	22	mg/kg			
Dibenzo(A,H)anthracene	0.022	mg/kg			
Fluoranthene	1,000	mg/kg			
Fluorene	1,000	mg/kg			
Indeno(1,2,3-cd)pyrene	0.22	mg/kg			
Naphthalene	23	mg/kg			
Pyrene	1,000	mg/kg			
Inorganics in Soil					
EC	<4 or 2 x background	mmhos/cm			0.34
SAR	<12				0.89
pH	6-9				8.2
Metals in Soil					
Arsenic	0.39	mg/kg	14	16	17
Barium total	15,000	mg/kg			
Cadmium	70	mg/kg			
Chromium (III)	120,000	mg/kg			
Chromium (VI)	23	mg/kg			
Copper	3,100	mg/kg			
Lead	400	mg/kg			
Mercury	23	mg/kg			
Nickel	1,600	mg/kg			
Selenium	390	mg/kg			
Silver	390	mg/kg			
Zinc	23,000	mg/kg			



15-Sep-2014

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

Re: **WPX PA 22-21 Produced Water Spill 9.5.14**

Work Order: **1409274**

Dear Mark,

ALS Environmental received 3 samples on 06-Sep-2014 11:40 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 27.

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 PA 22-21 Produced Water Spill 9.5.14
Work Order: 1409274

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>
1409274-01	Point of Origin	Soil		9/5/2014 10:10	9/6/2014 11:40	<input type="checkbox"/>
1409274-02	Behind Separators	Soil		9/5/2014 10:20	9/6/2014 11:40	<input type="checkbox"/>
1409274-03	Frac Tanks	Soil		9/5/2014 10:30	9/6/2014 11:40	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Work Order: 1409274

Case Narrative

Batch 62499 MS/MSD data for PAHs is not related to this project's samples. No data requires qualification.

Batch 62500 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch 62519 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 62642 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: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Point of Origin
Collection Date: 9/5/2014 10:10 AM

Work Order: 1409274
Lab ID: 1409274-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	430		SW8015M		Prep: SW3541 / 9/8/14	Analyst: IT
Surr: 4-Terphenyl-d14	67.1		4.4	mg/Kg-dry	1	9/11/2014 11:45 AM
			39-133	%REC	1	9/11/2014 11:45 AM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 9/8/14	Analyst: IT
Surr: Toluene-d8	120		2.7	mg/Kg-dry	1	9/8/2014 10:46 PM
			50-150	%REC	1	9/8/2014 10:46 PM
MERCURY BY CVAA						
Mercury	0.024		SW7471		Prep: SW7471 / 9/12/14	Analyst: LR
			0.013	mg/Kg-dry	1	9/12/2014 04:43 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Calcium	100		5.0	mg/L	10	9/11/2014 07:17 PM
Magnesium	27		2.0	mg/L	10	9/11/2014 07:17 PM
Sodium	840		2.0	mg/L	10	9/11/2014 07:17 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 9/8/14	Analyst: ML
Arsenic	8.2		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Barium	240		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Cadmium	ND		0.82	mg/Kg-dry	5	9/9/2014 05:50 AM
Chromium	11		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Copper	9.9		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Lead	7.7		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Nickel	9.1		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Selenium	ND		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Silver	ND		2.0	mg/Kg-dry	5	9/9/2014 05:50 AM
Zinc	29		4.1	mg/Kg-dry	5	9/9/2014 05:50 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Sodium Adsorption Ratio	19		0.010	none	1	9/11/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 9/8/14	Analyst: RM
Acenaphthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Acenaphthylene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Anthracene	13		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Benzo(a)anthracene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Benzo(a)pyrene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Benzo(b)fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Benzo(g,h,i)perylene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Benzo(k)fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Chrysene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Point of Origin
Collection Date: 9/5/2014 10:10 AM

Work Order: 1409274
Lab ID: 1409274-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Fluorene	39		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Indeno(1,2,3-cd)pyrene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Naphthalene	18		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Pyrene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:06 PM
Surr: 2-Fluorobiphenyl	60.6		12-100	%REC	1	9/9/2014 07:06 PM
Surr: 4-Terphenyl-d14	93.3		25-137	%REC	1	9/9/2014 07:06 PM
Surr: Nitrobenzene-d5	56.6		37-107	%REC	1	9/9/2014 07:06 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 9/8/14		Analyst: RS
Benzene	ND		32	µg/Kg-dry	1	9/10/2014 07:19 PM
Ethylbenzene	ND		32	µg/Kg-dry	1	9/10/2014 07:19 PM
m,p-Xylene	170		64	µg/Kg-dry	1	9/10/2014 07:19 PM
o-Xylene	ND		32	µg/Kg-dry	1	9/10/2014 07:19 PM
Toluene	73		32	µg/Kg-dry	1	9/10/2014 07:19 PM
Xylenes, Total	170		97	µg/Kg-dry	1	9/10/2014 07:19 PM
Surr: 1,2-Dichloroethane-d4	101		70-130	%REC	1	9/10/2014 07:19 PM
Surr: 4-Bromofluorobenzene	99.0		70-130	%REC	1	9/10/2014 07:19 PM
Surr: Dibromofluoromethane	98.0		70-130	%REC	1	9/10/2014 07:19 PM
Surr: Toluene-d8	95.9		70-130	%REC	1	9/10/2014 07:19 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 9/10/14		Analyst: JB
Electrical Conductivity @ Saturation	6.3		0.050	mmhos/cm @25	10	9/11/2014 11:00 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	11		0.54	mg/Kg-dry	1	9/11/2014 02:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 9/8/14		Analyst: MB
Chromium, Hexavalent	ND		0.53	mg/Kg-dry	1	9/10/2014 12:00 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	6.8		0.050	% of sample	1	9/8/2014 07:55 PM
PH			SW9045D	Prep: EXTRACT / 9/9/14		Analyst: STP
pH	8.5			s.u.	1	9/9/2014 04:15 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Behind Separators
Collection Date: 9/5/2014 10:20 AM

Work Order: 1409274
Lab ID: 1409274-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 9/8/14	Analyst: IT
DRO (C10-C28)	1,900		78	mg/Kg-dry	4	9/11/2014 12:11 PM
Surr: 4-Terphenyl-d14	98.2		39-133	%REC	4	9/11/2014 12:11 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015		Prep: SW5035 / 9/8/14	Analyst: IT
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	9/8/2014 11:12 PM
Surr: Toluene-d8	129		50-150	%REC	1	9/8/2014 11:12 PM
MERCURY BY CVAA						
			SW7471		Prep: SW7471 / 9/12/14	Analyst: LR
Mercury	0.067		0.017	mg/Kg-dry	1	9/12/2014 04:46 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Calcium	430		5.0	mg/L	10	9/11/2014 07:22 PM
Magnesium	250		2.0	mg/L	10	9/11/2014 07:22 PM
Sodium	2,500		20	mg/L	100	9/12/2014 12:05 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 9/8/14	Analyst: ML
Arsenic	8.2		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Barium	770		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Cadmium	ND		0.89	mg/Kg-dry	5	9/9/2014 05:57 AM
Chromium	13		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Copper	20		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Lead	15		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Nickel	22		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Selenium	2.3	J	2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Silver	ND		2.2	mg/Kg-dry	5	9/9/2014 05:57 AM
Zinc	73		4.5	mg/Kg-dry	5	9/9/2014 05:57 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Sodium Adsorption Ratio	24		0.010	none	1	9/11/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 9/8/14	Analyst: RM
Acenaphthene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Acenaphthylene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Anthracene	45		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Benzo(a)anthracene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Benzo(a)pyrene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Benzo(b)fluoranthene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Benzo(g,h,i)perylene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Benzo(k)fluoranthene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Chrysene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Behind Separators
Collection Date: 9/5/2014 10:20 AM

Work Order: 1409274
Lab ID: 1409274-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Fluoranthene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Fluorene	84		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Indeno(1,2,3-cd)pyrene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Naphthalene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Pyrene	ND		31	µg/Kg-dry	1	9/9/2014 07:26 PM
Surr: 2-Fluorobiphenyl	83.0		12-100	%REC	1	9/9/2014 07:26 PM
Surr: 4-Terphenyl-d14	104		25-137	%REC	1	9/9/2014 07:26 PM
Surr: Nitrobenzene-d5	79.5		37-107	%REC	1	9/9/2014 07:26 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 9/8/14		Analyst: BG
Benzene	ND		36	µg/Kg-dry	1	9/10/2014 06:09 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	9/10/2014 06:09 PM
m,p-Xylene	ND		72	µg/Kg-dry	1	9/10/2014 06:09 PM
o-Xylene	ND		36	µg/Kg-dry	1	9/10/2014 06:09 PM
Toluene	ND		36	µg/Kg-dry	1	9/10/2014 06:09 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	9/10/2014 06:09 PM
Surr: 1,2-Dichloroethane-d4	101		70-130	%REC	1	9/10/2014 06:09 PM
Surr: 4-Bromofluorobenzene	99.7		70-130	%REC	1	9/10/2014 06:09 PM
Surr: Dibromofluoromethane	93.8		70-130	%REC	1	9/10/2014 06:09 PM
Surr: Toluene-d8	99.2		70-130	%REC	1	9/10/2014 06:09 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 9/10/14		Analyst: JB
Electrical Conductivity @ Saturation	20		0.050	mmhos/cm @25	10	9/11/2014 11:00 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	13		0.60	mg/Kg-dry	1	9/11/2014 02:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 9/8/14		Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	9/10/2014 12:00 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	17		0.050	% of sample	1	9/8/2014 07:55 PM
PH			SW9045D	Prep: EXTRACT / 9/9/14		Analyst: STP
pH	7.8			s.u.	1	9/9/2014 04:15 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Frac Tanks
Collection Date: 9/5/2014 10:30 AM

Work Order: 1409274
Lab ID: 1409274-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	430		SW8015M		Prep: SW3541 / 9/8/14	Analyst: IT
Surr: 4-Terphenyl-d14	64.1		4.4	mg/Kg-dry	1	9/11/2014 12:38 PM
			39-133	%REC	1	9/11/2014 12:38 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 9/8/14	Analyst: IT
Surr: Toluene-d8	104		2.7	mg/Kg-dry	1	9/8/2014 11:37 PM
			50-150	%REC	1	9/8/2014 11:37 PM
MERCURY BY CVAA						
Mercury	0.022		SW7471		Prep: SW7471 / 9/12/14	Analyst: LR
			0.013	mg/Kg-dry	1	9/12/2014 04:48 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Calcium	1,900		5.0	mg/L	10	9/11/2014 07:27 PM
Magnesium	550		2.0	mg/L	10	9/11/2014 07:27 PM
Sodium	13,000		20	mg/L	100	9/12/2014 12:10 PM
METALS BY ICP-MS						
			SW6020A		Prep: SW3050B / 9/8/14	Analyst: ML
Arsenic	6.9		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Barium	2,500		18	mg/Kg-dry	50	9/9/2014 04:42 PM
Cadmium	ND		0.70	mg/Kg-dry	5	9/9/2014 06:03 AM
Chromium	11		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Copper	18		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Lead	9.4		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Nickel	14		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Selenium	1.8		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Silver	ND		1.8	mg/Kg-dry	5	9/9/2014 06:03 AM
Zinc	43		3.5	mg/Kg-dry	5	9/9/2014 06:03 AM
SODIUM ADSORPTION RATIO						
			USDA H60 METHOD		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Sodium Adsorption Ratio	69		0.010	none	1	9/11/2014
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 9/8/14	Analyst: RM
Acenaphthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Acenaphthylene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Anthracene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Benzo(a)anthracene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Benzo(a)pyrene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Benzo(b)fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Benzo(g,h,i)perylene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Benzo(k)fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Chrysene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Produced Water Spill 9.5.14
Sample ID: Frac Tanks
Collection Date: 9/5/2014 10:30 AM

Work Order: 1409274
Lab ID: 1409274-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Fluoranthene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Fluorene	9.8		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Indeno(1,2,3-cd)pyrene	ND		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Naphthalene	17		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Pyrene	19		7.0	µg/Kg-dry	1	9/9/2014 07:46 PM
Surr: 2-Fluorobiphenyl	78.3		12-100	%REC	1	9/9/2014 07:46 PM
Surr: 4-Terphenyl-d14	89.5		25-137	%REC	1	9/9/2014 07:46 PM
Surr: Nitrobenzene-d5	76.1		37-107	%REC	1	9/9/2014 07:46 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 9/8/14		Analyst: RS
Benzene	ND		32	µg/Kg-dry	1	9/10/2014 07:44 PM
Ethylbenzene	ND		32	µg/Kg-dry	1	9/10/2014 07:44 PM
m,p-Xylene	110		64	µg/Kg-dry	1	9/10/2014 07:44 PM
o-Xylene	ND		32	µg/Kg-dry	1	9/10/2014 07:44 PM
Toluene	56		32	µg/Kg-dry	1	9/10/2014 07:44 PM
Xylenes, Total	110		96	µg/Kg-dry	1	9/10/2014 07:44 PM
Surr: 1,2-Dichloroethane-d4	99.5		70-130	%REC	1	9/10/2014 07:44 PM
Surr: 4-Bromofluorobenzene	102		70-130	%REC	1	9/10/2014 07:44 PM
Surr: Dibromofluoromethane	97.2		70-130	%REC	1	9/10/2014 07:44 PM
Surr: Toluene-d8	96.8		70-130	%REC	1	9/10/2014 07:44 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD	Prep: USDA Method 20B / 9/10/14		Analyst: JB
Electrical Conductivity @ Saturation	85		0.050	mmhos/cm @25	10	9/11/2014 11:00 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	11		0.53	mg/Kg-dry	1	9/11/2014 02:00 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 9/8/14		Analyst: MB
Chromium, Hexavalent	ND		0.52	mg/Kg-dry	1	9/10/2014 12:00 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	6.0		0.050	% of sample	1	9/8/2014 07:55 PM
PH			SW9045D	Prep: EXTRACT / 9/9/14		Analyst: STP
pH	8.2			s.u.	1	9/9/2014 04:15 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1409274

Project: WPX PA 22-21 Produced Water Spill 9.5.14

Batch ID: **62500**

Instrument ID **GC8**

Method: **SW8015M**

MBLK		Sample ID: DBLKS1-62500-62500				Units: mg/Kg		Analysis Date: 9/10/2014 10:08 PM		
Client ID:		Run ID: GC8_140910A				SeqNo: 2929140		Prep Date: 9/8/2014		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	1.329	0	1.667	0	79.7	39-133	0			

LCS		Sample ID: DLCSS1-62500-62500				Units: mg/Kg		Analysis Date: 9/10/2014 10:35 PM		
Client ID:		Run ID: GC8_140910A				SeqNo: 2929141		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	149.1	4.2	166.7	0	89.4	61-109	0			
Surr: 4-Terphenyl-d14	1.21	0	1.667	0	72.6	39-133	0			

MS		Sample ID: 1409276-05A MS				Units: mg/Kg		Analysis Date: 9/10/2014 11:01 PM		
Client ID:		Run ID: GC8_140910A				SeqNo: 2929142		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1018	8.0	319.3	571	140	48-110	0			S
Surr: 4-Terphenyl-d14	2.401	0	3.193	0	75.2	39-133	0			

MSD		Sample ID: 1409276-05A MSD				Units: mg/Kg		Analysis Date: 9/10/2014 11:28 PM		
Client ID:		Run ID: GC8_140910A				SeqNo: 2929143		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	869.4	8.2	328.9	571	90.7	48-110	1018	15.7	30	
Surr: 4-Terphenyl-d14	2.396	0	3.289	0	72.8	39-133	2.401	0.213	30	

The following samples were analyzed in this batch: | 1409274-01B | 1409274-02B | 1409274-03B |

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62504** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-62504-62504				Units: µg/Kg		Analysis Date: 9/8/2014 06:32 PM		
Client ID:		Run ID: GC9_140908A				SeqNo: 2925046		Prep Date: 9/8/2014		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>	4930	0	5000	0	98.6	50-150	0			

LCS		Sample ID: LCS-62504-62504				Units: µg/Kg		Analysis Date: 9/8/2014 06:06 PM		
Client ID:		Run ID: GC9_140908A				SeqNo: 2925044		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	530300	2,500	500000	0	106	70-130	0			
<i>Surr: Toluene-d8</i>	5507	0	5000	0	110	50-150	0			

MS		Sample ID: 1409213-02A MS				Units: µg/Kg		Analysis Date: 9/9/2014 12:53 PM		
Client ID:		Run ID: GC9_140908A				SeqNo: 2925061		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	515100	2,500	500000	0	103	70-130	0			
<i>Surr: Toluene-d8</i>	4252	0	5000	0	85	50-150	0			

MSD		Sample ID: 1409213-02A MSD				Units: µg/Kg		Analysis Date: 9/9/2014 01:18 AM		
Client ID:		Run ID: GC9_140908A				SeqNo: 2925058		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	509200	2,500	500000	0	102	70-130	515100	1.16	30	
<i>Surr: Toluene-d8</i>	4286	0	5000	0	85.7	50-150	4252	0.808	30	

The following samples were analyzed in this batch:

1409274-01A	1409274-02A	1409274-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62718** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-62718-62718				Units: mg/Kg		Analysis Date: 9/12/2014 04:06 PM		
Client ID:		Run ID: HG1_140912B				SeqNo: 2932764		Prep Date: 9/12/2014		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-62718-62718				Units: mg/Kg		Analysis Date: 9/12/2014 04:09 PM		
Client ID:		Run ID: HG1_140912B				SeqNo: 2932765		Prep Date: 9/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1756 0.020 0.1665 0 105 80-120 0

MS		Sample ID: 1409272-01BMS				Units: mg/Kg		Analysis Date: 9/12/2014 04:39 PM		
Client ID:		Run ID: HG1_140912B				SeqNo: 2932778		Prep Date: 9/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1448 0.013 0.1084 0.02924 107 75-125 0

MSD		Sample ID: 1409272-01BMSD				Units: mg/Kg		Analysis Date: 9/12/2014 04:41 PM		
Client ID:		Run ID: HG1_140912B				SeqNo: 2932779		Prep Date: 9/12/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1353 0.013 0.1055 0.02924 101 75-125 0.1448 6.76 35

The following samples were analyzed in this batch:

1409274-01B	1409274-02B	1409274-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62519** Instrument ID **ICPMS1** Method: **SW6020A**

Sample ID: MBLK-62519-62519				Units: mg/Kg			Analysis Date: 9/9/2014 02:58 AM			
Client ID:		Run ID: ICPMS1_140908A			SeqNo: 2925450		Prep Date: 9/8/2014		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	0.02578	0.25								J
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	0.1296	0.50								J

LCS				Sample ID: LCS-62519-62519				Units:mg/Kg			Analysis Date: 9/9/2014 03:04 AM			
Client ID:				Run ID: ICPMS1_140908A				SeqNo:2925451			Prep Date: 9/8/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Arsenic	4.538	0.25	5	0	90.8	80-120	0							
Barium	4.661	0.25	5	0	93.2	80-120	0							
Cadmium	4.707	0.10	5	0	94.1	80-120	0							
Chromium	5.055	0.25	5	0	101	80-120	0							
Copper	4.846	0.25	5	0	96.9	80-120	0							
Lead	4.634	0.25	5	0	92.7	80-120	0							
Nickel	4.987	0.25	5	0	99.7	80-120	0							
Selenium	4.657	0.25	5	0	93.1	80-120	0							
Silver	4.453	0.25	5	0	89.1	80-120	0							
Zinc	4.56	0.50	5	0	91.2	80-120	0							

MS					Sample ID: 1409008-05BMS		Units:mg/Kg		Analysis Date: 9/9/2014 03:16 AM		
Client ID:			Run ID: ICPMS1_140908A			SeqNo:2925453		Prep Date: 9/8/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	7.531	0.35	6.935	1.952	80.5	75-125	0				
Barium	51.12	0.35	6.935	36.48	211	75-125	0			SO	
Cadmium	6.531	0.14	6.935	0.05366	93.4	75-125	0				
Chromium	12.05	0.35	6.935	3.92	117	75-125	0				
Copper	9.598	0.35	6.935	3.041	94.5	75-125	0				
Lead	9.979	0.35	6.935	3.084	99.4	75-125	0				
Nickel	9.626	0.35	6.935	2.403	104	75-125	0				
Selenium	7.233	0.35	6.935	1.012	89.7	75-125	0				
Silver	5.638	0.35	6.935	0.01873	81	75-125	0				
Zinc	19.08	0.69	6.935	9.572	137	75-125	0			S	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62519** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 1409008-05BMSD				Units: mg/Kg		Analysis Date: 9/9/2014 03:22 AM		
Client ID:		Run ID: ICPMS1_140908A				SeqNo: 2925454		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.053	0.35	6.983	1.952	73.1	75-125	7.531	6.56	25	S
Barium	69.66	0.35	6.983	36.48	475	75-125	51.12	30.7	25	SRO
Cadmium	6.608	0.14	6.983	0.05366	93.9	75-125	6.531	1.16	25	
Chromium	13.91	0.35	6.983	3.92	143	75-125	12.05	14.4	25	S
Copper	10.38	0.35	6.983	3.041	105	75-125	9.598	7.87	25	
Lead	10.47	0.35	6.983	3.084	106	75-125	9.979	4.85	25	
Nickel	9.546	0.35	6.983	2.403	102	75-125	9.626	0.829	25	
Selenium	7.563	0.35	6.983	1.012	93.8	75-125	7.233	4.46	25	
Silver	5.597	0.35	6.983	0.01873	79.9	75-125	5.638	0.729	25	
Zinc	22.4	0.70	6.983	9.572	184	75-125	19.08	16	25	S

The following samples were analyzed in this batch: 1409274-01B 1409274-02B 1409274-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62545** Instrument ID **SAR** Method: **USDA H60 Method**

DUP				Sample ID: 1409291-04BDUP				Units: none			Analysis Date: 9/11/2014			
Client ID:				Run ID: SAR_140911A				SeqNo: 2934325			Prep Date: 9/10/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Sodium Adsorption Ratio		0.5811	0.010	0	0	0			0					

The following samples were analyzed in this batch:

1409274-01C	1409274-02C	1409274-03C
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62499** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-62499-62499				Units: µg/Kg		Analysis Date: 9/9/2014 12:54 PM		
Client ID:		Run ID: SVMS8_140909A				SeqNo: 2927683		Prep Date: 9/8/2014		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>	1288	0	1667	0	77.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1940	0	1667	0	116	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1235	0	1667	0	74.1	37-107	0			

LCS		Sample ID: SLCSS1-62499-62499				Units: µg/Kg		Analysis Date: 9/9/2014 01:14 PM		
Client ID:		Run ID: SVMS8_140909A				SeqNo: 2927684		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	529	6.7	666.7	0	79.3	45-110	0			
Acenaphthylene	556	6.7	666.7	0	83.4	45-105	0			
Anthracene	606.3	6.7	666.7	0	90.9	55-105	0			
Benzo(a)anthracene	629.7	6.7	666.7	0	94.4	50-110	0			
Benzo(a)pyrene	653	6.7	666.7	0	97.9	50-110	0			
Benzo(b)fluoranthene	681.3	6.7	666.7	0	102	45-115	0			
Benzo(g,h,i)perylene	577.7	6.7	666.7	0	86.6	40-125	0			
Benzo(k)fluoranthene	678	6.7	666.7	0	102	45-115	0			
Chrysene	658.7	6.7	666.7	0	98.8	55-110	0			
Dibenzo(a,h)anthracene	548	6.7	666.7	0	82.2	40-125	0			
Fluoranthene	536	6.7	666.7	0	80.4	55-115	0			
Fluorene	527	6.7	666.7	0	79	50-110	0			
Indeno(1,2,3-cd)pyrene	595.7	6.7	666.7	0	89.3	40-120	0			
Naphthalene	538.3	6.7	666.7	0	80.7	40-105	0			
Pyrene	788.3	6.7	666.7	0	118	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1439	0	1667	0	86.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	2013	0	1667	0	121	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1358	0	1667	0	81.5	37-107	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62499** Instrument ID **SVMS8** Method: **SW846 8270D**

MS				Sample ID: 1409248-03A MS			Units: µg/Kg		Analysis Date: 9/9/2014 03:03 PM	
Client ID:		Run ID: SVMS8_140909A			SeqNo: 2927688		Prep Date: 9/8/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	975.3	13	1298	0	75.1	45-110	0			
Acenaphthylene	999.3	13	1298	0	77	45-105	0			
Anthracene	1180	13	1298	0	90.9	55-105	0			
Benzo(a)anthracene	1266	13	1298	56.08	93.2	50-110	0			
Benzo(a)pyrene	1296	13	1298	0	99.8	50-110	0			
Benzo(b)fluoranthene	1294	13	1298	0	99.7	45-115	0			
Benzo(g,h,i)perylene	1369	13	1298	0	105	40-125	0			
Benzo(k)fluoranthene	1276	13	1298	0	98.3	45-115	0			
Chrysene	1324	13	1298	0	102	55-110	0			
Dibenzo(a,h)anthracene	1230	13	1298	9.511	94.1	40-125	0			
Fluoranthene	1071	13	1298	0	82.5	55-115	0			
Fluorene	966.8	13	1298	0	74.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1394	13	1298	45.26	104	40-120	0			
Naphthalene	892.2	13	1298	0	68.7	40-105	0			
Pyrene	1620	13	1298	0	125	45-125	0			
Surr: 2-Fluorobiphenyl	2495	0	3245	0	76.9	12-100	0			
Surr: 4-Terphenyl-d14	3839	0	3245	0	118	25-137	0			
Surr: Nitrobenzene-d5	2445	0	3245	0	75.4	37-107	0			

MSD				Sample ID: 1409248-03A MSD			Units: µg/Kg		Analysis Date: 9/9/2014 03:23 PM	
Client ID:		Run ID: SVMS8_140909A			SeqNo: 2927689		Prep Date: 9/8/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	954.2	13	1281	0	74.5	45-110	975.3	2.18	30	
Acenaphthylene	994.6	13	1281	0	77.6	45-105	999.3	0.474	30	
Anthracene	1140	13	1281	0	89	55-105	1180	3.43	30	
Benzo(a)anthracene	1233	13	1281	56.08	91.9	50-110	1266	2.66	30	
Benzo(a)pyrene	1240	13	1281	0	96.8	50-110	1296	4.36	30	
Benzo(b)fluoranthene	1242	13	1281	0	97	45-115	1294	4.06	30	
Benzo(g,h,i)perylene	1317	13	1281	0	103	40-125	1369	3.91	30	
Benzo(k)fluoranthene	1214	13	1281	0	94.8	45-115	1276	4.94	30	
Chrysene	1268	13	1281	0	99	55-110	1324	4.35	30	
Dibenzo(a,h)anthracene	1209	13	1281	9.511	93.7	40-125	1230	1.74	30	
Fluoranthene	954.9	13	1281	0	74.5	55-115	1071	11.5	30	
Fluorene	970.2	13	1281	0	75.7	50-110	966.8	0.349	30	
Indeno(1,2,3-cd)pyrene	1322	13	1281	45.26	99.7	40-120	1394	5.3	30	
Naphthalene	908.7	13	1281	0	70.9	40-105	892.2	1.83	30	
Pyrene	1610	13	1281	0	126	45-125	1620	0.637	30	S
Surr: 2-Fluorobiphenyl	2442	0	3202	0	76.3	12-100	2495	2.15	40	
Surr: 4-Terphenyl-d14	3867	0	3202	0	121	25-137	3839	0.726	40	
Surr: Nitrobenzene-d5	2403	0	3202	0	75.1	37-107	2445	1.71	40	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62499** Instrument ID **SVMS8** Method: **SW846 8270D**

The following samples were analyzed in this batch:

1409274-01B	1409274-02B	1409274-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62537** Instrument ID **VMS7** Method: **SW8260B**

MBLK				Sample ID: MBLK-62537-62537				Units: µg/Kg			Analysis Date: 9/9/2014 03:08 AM		
Client ID:			Run ID: VMS7_140908B				SeqNo:2925761			Prep Date: 9/8/2014		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	1008	0	1000	0	101	70-130		0					
Surr: Dibromofluoromethane	975	0	1000	0	97.5	70-130		0					
Surr: Toluene-d8	985.5	0	1000	0	98.6	70-130		0					

LCS				Sample ID: LCS-62537-62537			Units: µg/Kg		Analysis Date: 9/9/2014 12:38 PM		
Client ID:		Run ID: VMS7_140908B			SeqNo:2925767		Prep Date: 9/8/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	908.5	30	1000	0	90.8	75-125	0				
Ethylbenzene	896	30	1000	0	89.6	75-125	0				
m,p-Xylene	1788	60	2000	0	89.4	80-125	0				
o-Xylene	895	30	1000	0	89.5	75-125	0				
Toluene	880.5	30	1000	0	88	70-125	0				
Xylenes, Total	2683	90	3000	0	89.4	75-125	0				
Surr: 1,2-Dichloroethane-d4	1018	0	1000	0	102	70-130	0				
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0				
Surr: Dibromofluoromethane	1020	0	1000	0	102	70-130	0				
Surr: Toluene-d8	994.5	0	1000	0	99.4	70-130	0				

MS					Sample ID: 1409274-02A MS		Units: µg/Kg		Analysis Date: 9/11/2014 01:53 AM		
Client ID: Behind Separators			Run ID: VMS6_140910A			SeqNo:2929532		Prep Date: 9/8/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	986.5	30	1000	0	98.6	75-125	0				
Ethylbenzene	989	30	1000	0	98.9	75-125	0				
m,p-Xylene	2006	60	2000	16	99.5	80-125	0				
o-Xylene	1008	30	1000	0	101	75-125	0				
Toluene	1016	30	1000	13.5	100	70-125	0				
Xylenes, Total	3014	90	3000	0	100	75-125	0				
Surr: 1,2-Dichloroethane-d4	989	0	1000	0	98.9	70-130	0				
Surr: 4-Bromofluorobenzene	1006	0	1000	0	101	70-130	0				
Surr: Dibromofluoromethane	981.5	0	1000	0	98.2	70-130	0				
Surr: Toluene-d8	989	0	1000	0	98.9	70-130	0				

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62537** Instrument ID **VMS7** Method: **SW8260B**

MSD				Sample ID: 1409274-02A MSD			Units: µg/Kg		Analysis Date: 9/11/2014 02:19 AM	
Client ID: Behind Separators				Run ID: VMS6_140910A			SeqNo: 2929534		Prep Date: 9/8/2014	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	960	30	1000	0	96	75-125	986.5	2.72	30	
Ethylbenzene	986.5	30	1000	0	98.6	75-125	989	0.253	30	
m,p-Xylene	1996	60	2000	16	99	80-125	2006	0.5	30	
o-Xylene	1002	30	1000	0	100	75-125	1008	0.498	30	
Toluene	994.5	30	1000	13.5	98.1	70-125	1016	2.14	30	
Xylenes, Total	2998	90	3000	0	100	75-125	3014	0.499	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	995	0	1000	0	99.5	70-130	989	0.605	30	
<i>Surr: 4-Bromofluorobenzene</i>	1022	0	1000	0	102	70-130	1006	1.53	30	
<i>Surr: Dibromofluoromethane</i>	1014	0	1000	0	101	70-130	981.5	3.26	30	
<i>Surr: Toluene-d8</i>	983	0	1000	0	98.3	70-130	989	0.609	30	

The following samples were analyzed in this batch: 1409274-01A 1409274-02A 1409274-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62545** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1409291-04B DUP				Units: mmhos/cm @25°C		Analysis Date: 9/11/2014 11:00 AM		
Client ID:		Run ID: WETCHEM_140911D				SeqNo: 2929761		Prep Date: 9/10/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.604	0.050	0	0	0		0.648	7.03	50	

The following samples were analyzed in this batch:

1409274-01C	1409274-02C	1409274-03C
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62587** Instrument ID **WETCHEM** Method: **SW9045D**

Sample ID: 1409222-01A DUP					Units: s.u.		Analysis Date: 9/9/2014 04:15 PM				
Client ID:			Run ID: WETCHEM_1409090			SeqNo: 2926637		Prep Date: 9/9/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	7.81	0	0	0	0	0-0	7.78	0.385	20		

Sample ID: 1409293-01B DUP					Units: s.u.		Analysis Date: 9/9/2014 04:15 PM				
Client ID:			Run ID: WETCHEM_1409090			SeqNo: 2926647		Prep Date: 9/9/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	9.21	0	0	0	0	0-0	9.18	0.326	20		

The following samples were analyzed in this batch:

1409274-01B	1409274-02B	1409274-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **62642** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-62642-62642				Units: mg/Kg		Analysis Date: 9/10/2014 12:00 PM		
Client ID:		Run ID: WETCHEM_140910M				SeqNo: 2928216		Prep Date: 9/8/2014		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-62642-62642				Units: mg/Kg		Analysis Date: 9/10/2014 12:00 PM		
Client ID:		Run ID: WETCHEM_140910M				SeqNo: 2928215		Prep Date: 9/8/2014		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: 1409213-03B MS				Units: mg/Kg		Analysis Date: 9/10/2014 12:00 PM		
Client ID:		Run ID: WETCHEM_140910M				SeqNo: 2928200		Prep Date: 9/8/2014		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 0.1608 -8.2 75-125 0 S

MS		Sample ID: 1409213-03B MSI				Units: mg/Kg		Analysis Date: 9/10/2014 12:00 PM		
Client ID:		Run ID: WETCHEM_140910M				SeqNo: 2928202		Prep Date: 9/8/2014		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 601.6 49 839.2 0.1608 71.7 75-125 0 S

MSD		Sample ID: 1409213-03B MSD				Units: mg/Kg		Analysis Date: 9/10/2014 12:00 PM		
Client ID:		Run ID: WETCHEM_140910M				SeqNo: 2928201		Prep Date: 9/8/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.5079 0.49 1.969 0.1608 17.6 75-125 0.1137 127 20 SR

The following samples were analyzed in this batch:

1409274-01B	1409274-02B	1409274-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409274
Project: WPX PA 22-21 Produced Water Spill 9.5.14

QC BATCH REPORT

Batch ID: **R147852** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R147852				Units: % of sample		Analysis Date: 9/8/2014 07:55 PM		
Client ID:		Run ID: MOIST_140908F				SeqNo: 2928505		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-R147852				Units: % of sample		Analysis Date: 9/8/2014 07:55 PM		
Client ID:		Run ID: MOIST_140908F				SeqNo: 2928504		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: 1409146-03A DUP				Units: % of sample		Analysis Date: 9/8/2014 07:55 PM		
Client ID:		Run ID: MOIST_140908F				SeqNo: 2928484		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 8.41 0.050 0 0 0 0-0 8.4 0.119 20

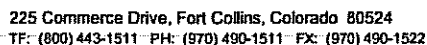
DUP		Sample ID: 1409269-01B DUP				Units: % of sample		Analysis Date: 9/8/2014 07:55 PM		
Client ID:		Run ID: MOIST_140908F				SeqNo: 2928497		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 14.23 0.050 0 0 0 0-0 14.62 2.7 20

The following samples were analyzed in this batch:

1409274-01B	1409274-02B	1409274-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



WORKORDER

1409270





Form 202r8

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Reed W. H.	9/5/14	4:00
RECEIVED BY		[illegible]	9-5	4:00
RELINQUISHED BY		[illegible]	9-5	4:00
RECEIVED BY		T.B. BRAMISH	09/04/14	1140
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **06-Sep-14 11:40**

Work Order: **1409274**

Received by: **TBB**

Checklist completed by <u>Diane Shaw</u>	08-Sep-14	Reviewed by: <u>Ann Preston</u>	09-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>9/8/2014 8:37:45 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:



11-Dec-2014

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

Re: **WPX PA 22-21 Insitu Remediation 12.5.14**

Work Order: **1412382**

Dear Mark,

ALS Environmental received 1 sample on 06-Dec-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 11.

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: 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 22-21 Insitu Remediation 12.5.14
Work Order: 1412382

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>
1412382-01	PA 22-21 Insitu Soil	Soil		12/5/2014 10:10	12/6/2014 10:00	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Insitu Remediation 12.5.14
Work Order: 1412382

Case Narrative

Batch 65761, Method DRO_8015_S, Sample 1412273-01B MS/MSD: The MS and MSD recovery for DRO C10-C28 was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required.

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Insitu Remediation 12.5.14
WorkOrder: 1412382

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:** 11-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Insitu Remediation 12.5.14
Sample ID: PA 22-21 Insitu Soil
Collection Date: 12/5/2014 10:10 AM

Work Order: 1412382
Lab ID: 1412382-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	53		SW8015M		Prep: SW3541 / 12/10/14	Analyst: IT
			4.9	mg/Kg-dry	1	12/11/2014 01:44 PM
<i>Surr: 4-Terphenyl-d14</i>	70.3		39-133	%REC	1	12/11/2014 01:44 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015		Prep: SW5035 / 12/9/14	Analyst: IT
			3.0	mg/Kg-dry	1	12/9/2014 07:11 PM
<i>Surr: Toluene-d8</i>	92.8		50-150	%REC	1	12/9/2014 07:11 PM
MOISTURE						
Moisture	16		A2540 G			Analyst: EVB
			0.050	% of sample	1	12/9/2014 03:00 PM

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

ALS Group USA, Corp

Date: 11-Dec-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1412382

Project: WPX PA 22-21 Insitu Remediation 12.5.14

Batch ID: **65761**

Instrument ID **GC8**

Method: **SW8015M**

MBLK		Sample ID: DBLKS1-65761-65761				Units: mg/Kg		Analysis Date: 12/10/2014 09:08 A		
Client ID:		Run ID: GC8_141210A				SeqNo: 3069288		Prep Date: 12/9/2014		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>	1.774	0	2	0	88.7	39-133	0			

LCS		Sample ID: DLCSS1-65761-65761				Units: mg/Kg		Analysis Date: 12/10/2014 09:36 A		
Client ID:		Run ID: GC8_141210A				SeqNo: 3069289		Prep Date: 12/9/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	161.9	5.0	200	0	80.9	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	1.445	0	2	0	72.2	39-133	0			

MS		Sample ID: 1412273-01B MS				Units: mg/Kg		Analysis Date: 12/10/2014 10:03 A		
Client ID:		Run ID: GC8_141210A				SeqNo: 3069291		Prep Date: 12/9/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	5039	83	331.3	5738	-211	48-110	0			SO
<i>Surr: 4-Terphenyl-d14</i>	3.79	0	3.313	0	114	39-133	0			

MSD		Sample ID: 1412273-01B MSD				Units: mg/Kg		Analysis Date: 12/10/2014 10:31 A		
Client ID:		Run ID: GC8_141210A				SeqNo: 3069292		Prep Date: 12/9/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	5427	80	318.7	5738	-97.4	48-110	5039	7.43	30	SO
<i>Surr: 4-Terphenyl-d14</i>	3.774	0	3.187	0	118	39-133	3.79	0.417	30	

The following samples were analyzed in this batch: 1412382-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412382
Project: WPX PA 22-21 Insitu Remediation 12.5.14

QC BATCH REPORT

Batch ID: **65822** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-65822-65822				Units: mg/Kg		Analysis Date: 12/11/2014 10:33 A		
Client ID:		Run ID: GC8_141211A				SeqNo: 3071546		Prep Date: 12/10/2014		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	1.564	0	2	0	78.2	39-133	0			

LCS		Sample ID: DLCSS1-65822-65822				Units: mg/Kg		Analysis Date: 12/11/2014 11:53 A		
Client ID:		Run ID: GC8_141211A				SeqNo: 3071548		Prep Date: 12/10/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	157.9	5.0	200	0	79	61-109	0			
Surr: 4-Terphenyl-d14	1.362	0	2	0	68.1	39-133	0			

MS		Sample ID: 1412501-01B MS				Units: mg/Kg		Analysis Date: 12/11/2014 12:21 PM		
Client ID:		Run ID: GC8_141211A				SeqNo: 3071550		Prep Date: 12/10/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	288.6	8.1	323.9	35.96	78	48-110	0			
Surr: 4-Terphenyl-d14	2.634	0	3.239	0	81.3	39-133	0			

MSD		Sample ID: 1412501-01B MSD				Units: mg/Kg		Analysis Date: 12/11/2014 12:48 PM		
Client ID:		Run ID: GC8_141211A				SeqNo: 3071552		Prep Date: 12/10/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	290.2	8.1	324.7	35.96	78.3	48-110	288.6	0.571	30	
Surr: 4-Terphenyl-d14	2.639	0	3.247	0	81.3	39-133	2.634	0.222	30	

The following samples were analyzed in this batch:

1412382-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412382
Project: WPX PA 22-21 Insitu Remediation 12.5.14

QC BATCH REPORT

Batch ID: **65768** Instrument ID **GC9** Method: **SW8015**

MBLK		Sample ID: MBLK-65768-65768				Units: µg/Kg		Analysis Date: 12/9/2014 06:22 PM		
Client ID:		Run ID: GC9_141209A				SeqNo: 3068713		Prep Date: 12/9/2014		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	6148	0	5000	0	123	50-150	0			

LCS		Sample ID: LCS-65768-65768				Units: µg/Kg		Analysis Date: 12/9/2014 05:57 PM		
Client ID:		Run ID: GC9_141209A				SeqNo: 3068712		Prep Date: 12/9/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	507300	2,500	500000	0	101	70-130	0			
Surr: Toluene-d8	4714	0	5000	0	94.3	50-150	0			

MS		Sample ID: 1412381-01A MS				Units: µg/Kg		Analysis Date: 12/9/2014 08:01 PM		
Client ID:		Run ID: GC9_141209A				SeqNo: 3068717		Prep Date: 12/9/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	644700	2,500	500000	64330	116	70-130	0			
Surr: Toluene-d8	5331	0	5000	0	107	50-150	0			

MSD		Sample ID: 1412381-01A MSD				Units: µg/Kg		Analysis Date: 12/9/2014 08:26 PM		
Client ID:		Run ID: GC9_141209A				SeqNo: 3068718		Prep Date: 12/9/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	649300	2,500	500000	64330	117	70-130	644700	0.714	30	
Surr: Toluene-d8	5593	0	5000	0	112	50-150	5331	4.8	30	

The following samples were analyzed in this batch:

1412382-01A

Client: HRL Compliance Solutions, Inc
Work Order: 1412382
Project: WPX PA 22-21 Insitu Remediation 12.5.14

QC BATCH REPORT

Batch ID: **R154001** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R154001				Units: % of sample		Analysis Date: 12/9/2014 03:00 PM		
Client ID:		Run ID: MOIST_141209B				SeqNo: 3069655		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-R154001				Units: % of sample		Analysis Date: 12/9/2014 03:00 PM		
Client ID:		Run ID: MOIST_141209B				SeqNo: 3069654		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: 1412361-05B DUP				Units: % of sample		Analysis Date: 12/9/2014 03:00 PM		
Client ID:		Run ID: MOIST_141209B				SeqNo: 3069640		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 4.19 0.050 0 0 0 0-0 4.18 0.239 20

DUP		Sample ID: 1412381-01A DUP				Units: % of sample		Analysis Date: 12/9/2014 03:00 PM		
Client ID:		Run ID: MOIST_141209B				SeqNo: 3069651		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 13.46 0.050 0 0 0 0-0 13.43 0.223 20

The following samples were analyzed in this batch:

1412382-01A

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






1412382

Form 202r8

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

For metals or anions, please detail analytes below.

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Matt Fought	12/5/14	11:30
RECEIVED BY		Npr	12-5-14	12:15
RELINQUISHED BY		KEITH WIERENGA	12/6/14	1000
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **06-Dec-14 10:00**

Work Order: **1412382**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

08-Dec-14
Date

Reviewed by: Ann Preston
eSignature

08-Dec-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 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/8/2014 9:40:48 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:



15-Sep-2014

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

Re: **WPX PA 22-21 Backgrounds 9.5.14**

Work Order: **1409278**

Dear Mark,

ALS Environmental received 3 samples on 06-Sep-2014 11:40 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 14.

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 22-21 Backgrounds 9.5.14
Work Order: 1409278

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>
1409278-01	PA 22-21-B-1	Soil		9/5/2014 10:40	9/6/2014 11:40	<input type="checkbox"/>
1409278-02	PA 22-21-B-2	Soil		9/5/2014 10:45	9/6/2014 11:40	<input type="checkbox"/>
1409278-03	PA 22-21-B-3	Soil		9/5/2014 10:50	9/6/2014 11:40	<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: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Backgrounds 9.5.14
Sample ID: PA 22-21-B-1
Collection Date: 9/5/2014 10:40 AM

Work Order: 1409278
Lab ID: 1409278-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 9/9/14	Analyst: ML
Arsenic	14		2.0	mg/Kg-dry	5	9/9/2014 08:56 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	4.9		0.050	% of sample	1	9/10/2014 04:38 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Backgrounds 9.5.14
Sample ID: PA 22-21-B-2
Collection Date: 9/5/2014 10:45 AM

Work Order: 1409278
Lab ID: 1409278-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 9/9/14	Analyst: ML
Arsenic	16		2.1	mg/Kg-dry	5	9/9/2014 09:21 PM
MOISTURE			A2540 G			Analyst: RLM
Moisture	4.0		0.050	% of sample	1	9/10/2014 04:38 PM

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

ALS Group USA, Corp

Date: 15-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX PA 22-21 Backgrounds 9.5.14
Sample ID: PA 22-21-B-3
Collection Date: 9/5/2014 10:50 AM

Work Order: 1409278
Lab ID: 1409278-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
SOLUBLE CATIONS FOR SAR			SW846 6010C		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Calcium	150		5.0	mg/L	10	9/11/2014 07:33 PM
Magnesium	17		2.0	mg/L	10	9/11/2014 07:33 PM
Sodium	16		2.0	mg/L	10	9/11/2014 07:33 PM
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 9/9/14	Analyst: ML
Arsenic	17		1.7	mg/Kg-dry	5	9/9/2014 09:27 PM
SODIUM ADSORPTION RATIO			USDA H60 METHOD		Prep: USDA Method 20B / 9/10/14	Analyst: JEC
Sodium Adsorption Ratio	0.34		0.010	none	1	9/11/2014
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHOD		Prep: USDA Method 20B / 9/10/14	Analyst: JB
Electrical Conductivity @ Saturation	0.89		0.050	mmhos/cm @25	10	9/11/2014 11:00 AM
MOISTURE			A2540 G			Analyst: RLM
Moisture	3.6		0.050	% of sample	1	9/10/2014 04:38 PM
PH			SW9045D		Prep: EXTRACT / 9/9/14	Analyst: STP
pH	8.2			s.u.	1	9/9/2014 04:15 PM

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409278
Project: WPX PA 22-21 Backgrounds 9.5.14

QC BATCH REPORT

Batch ID: **62545** Instrument ID **SAR** Method: **USDA H60 Method**

DUP		Sample ID: 1409291-04BDUP				Units: none		Analysis Date: 9/11/2014		
Client ID:		Run ID: SAR_140911A				SeqNo: 2934325		Prep Date: 9/10/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.5811	0.010	0	0	0			0		

The following samples were analyzed in this batch:

1409278-03B

Client: HRL Compliance Solutions, Inc
Work Order: 1409278
Project: WPX PA 22-21 Backgrounds 9.5.14

QC BATCH REPORT

Batch ID: **62575** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-62575-62575				Units: mg/Kg		Analysis Date: 9/9/2014 08:14 PM		
Client ID:		Run ID: ICPMS1_140909A				SeqNo: 2927331		Prep Date: 9/9/2014		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-62575-62575				Units: mg/Kg		Analysis Date: 9/9/2014 08:20 PM		
Client ID:		Run ID: ICPMS1_140909A				SeqNo: 2927332		Prep Date: 9/9/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.42	0.25	5	0	88.4	80-120	0			

MS		Sample ID: 1409291-04AMS				Units: mg/Kg		Analysis Date: 9/9/2014 09:57 PM		
Client ID:		Run ID: ICPMS1_140909A				SeqNo: 2927361		Prep Date: 9/9/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.19	1.7	6.711	3.952	92.9	75-125	0			

MSD		Sample ID: 1409291-04AMSD				Units: mg/Kg		Analysis Date: 9/9/2014 10:03 PM		
Client ID:		Run ID: ICPMS1_140909A				SeqNo: 2927362		Prep Date: 9/9/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.983	1.7	6.693	3.952	90.1	75-125	10.19	2.03	25	

The following samples were analyzed in this batch:

1409278-01A	1409278-02A	1409278-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1409278
Project: WPX PA 22-21 Backgrounds 9.5.14

QC BATCH REPORT

Batch ID: **62545** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 1409291-04B DUP				Units: mmhos/cm @25°C		Analysis Date: 9/11/2014 11:00 AM		
Client ID:		Run ID: WETCHEM_140911D				SeqNo: 2929761		Prep Date: 9/10/2014		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.604	0.050	0	0	0		0.648	7.03	50	

The following samples were analyzed in this batch:

1409278-03B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409278
Project: WPX PA 22-21 Backgrounds 9.5.14

QC BATCH REPORT

Batch ID: **62587** Instrument ID **WETCHEM** Method: **SW9045D**

Sample ID: 1409222-01A DUP					Units:s.u.		Analysis Date: 9/9/2014 04:15 PM				
Client ID:			Run ID: WETCHEM_1409090			SeqNo:2926637		Prep Date: 9/9/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	7.81	0	0	0	0	0-0	7.78	0.385	20		

DUP					Sample ID: 1409293-01B DUP					Units:s.u.			Analysis Date: 9/9/2014 04:15 PM		
Client ID:				Run ID: WETCHEM_1409090				SeqNo:2926647			Prep Date: 9/9/2014			DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
pH		9.21	0	0	0	0	0-0	9.18	0.326	20					

The following samples were analyzed in this batch:

1409278-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1409278
Project: WPX PA 22-21 Backgrounds 9.5.14

QC BATCH REPORT

Batch ID: **R147957** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS-R147957				Units: % of sample		Analysis Date: 9/10/2014 04:38 PM		
Client ID:		Run ID: MOIST_140910C				SeqNo: 2930097		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-R147957				Units: % of sample		Analysis Date: 9/10/2014 04:38 PM		
Client ID:		Run ID: MOIST_140910C				SeqNo: 2930096		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: 1409294-02A DUP				Units: % of sample		Analysis Date: 9/10/2014 04:38 PM		
Client ID:		Run ID: MOIST_140910C				SeqNo: 2930089		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 57.57 0.050 0 0 0 0-0 56.42 2.02 20

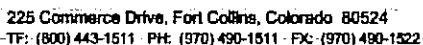
DUP		Sample ID: 1409305-01A DUP				Units: % of sample		Analysis Date: 9/10/2014 04:38 PM		
Client ID:		Run ID: MOIST_140910C				SeqNo: 2930091		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 71.32 0.050 0 0 0 0-0 70.95 0.52 20

The following samples were analyzed in this batch:

1409278-01A	1409278-02A	1409278-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



WORKORDER
#

1409278

Form 202-r8

PAGE

1 of 1

DISPOSAL

☒ By Lab or ☐ Return to Client

*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.

4.6°C		SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>Recd W.L.D</i>	<i>Recd W.L.D</i>		7/5/14	2:00
RECEIVED BY	<i>N.M</i>	<i>N.M</i>		9-5-14	2:00
RELINQUISHED BY	<i>N.M</i>	<i>N.M</i>		9-5-14	2:30
RECEIVED BY	<i>T.B. B...</i>	<i>T.B. B...</i>		09/06/14	1140
RELINQUISHED BY					
RECEIVED BY					

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **06-Sep-14 11:40**

Work Order: **1409278**

Received by: **KRW**

Checklist completed by <u>Keith Wurenga</u>	08-Sep-14	Reviewed by: <u>Ann Preston</u>	09-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>4.6 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>9/8/2014 8:59:54 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:

ALS Parachute Custody Seal

DATE 9-5-14

Time 1500

Name

ALM