March 20, 2015

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

Re: GV 41-34 Produced Water Spill Closure Request

Dear Mr. Spencer,

Attached are the laboratory reports and the sample location map for soil samples collected from the excavated area, landfarmed material, and nearby non-impacted native soil in order to close the produced water spill that occurred at the GV 41-34 well pad and was discovered on January 10, 2014.

Soil impacted by the produced water spill was excavated and a total of five grab confirmation samples were collected from the bottom and four walls of the excavation. Due to the pad size constraints, the soil was landfarmed on location in seven separate batches. One composite sample was collected from each landfarm batch. All samples were analyzed for the constituents listed in the COGCC 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.

As the attached laboratory 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 was covered with 3' of clean soil during the backfilling activities. The landfarmed material is stockpiled on location, inside a bermed containment, pending beneficial reuse. Any beneficial reuse proposal will be submitted to COGCC for prior approval.
Based on these results, WPX respectfully requests closure of this incident.

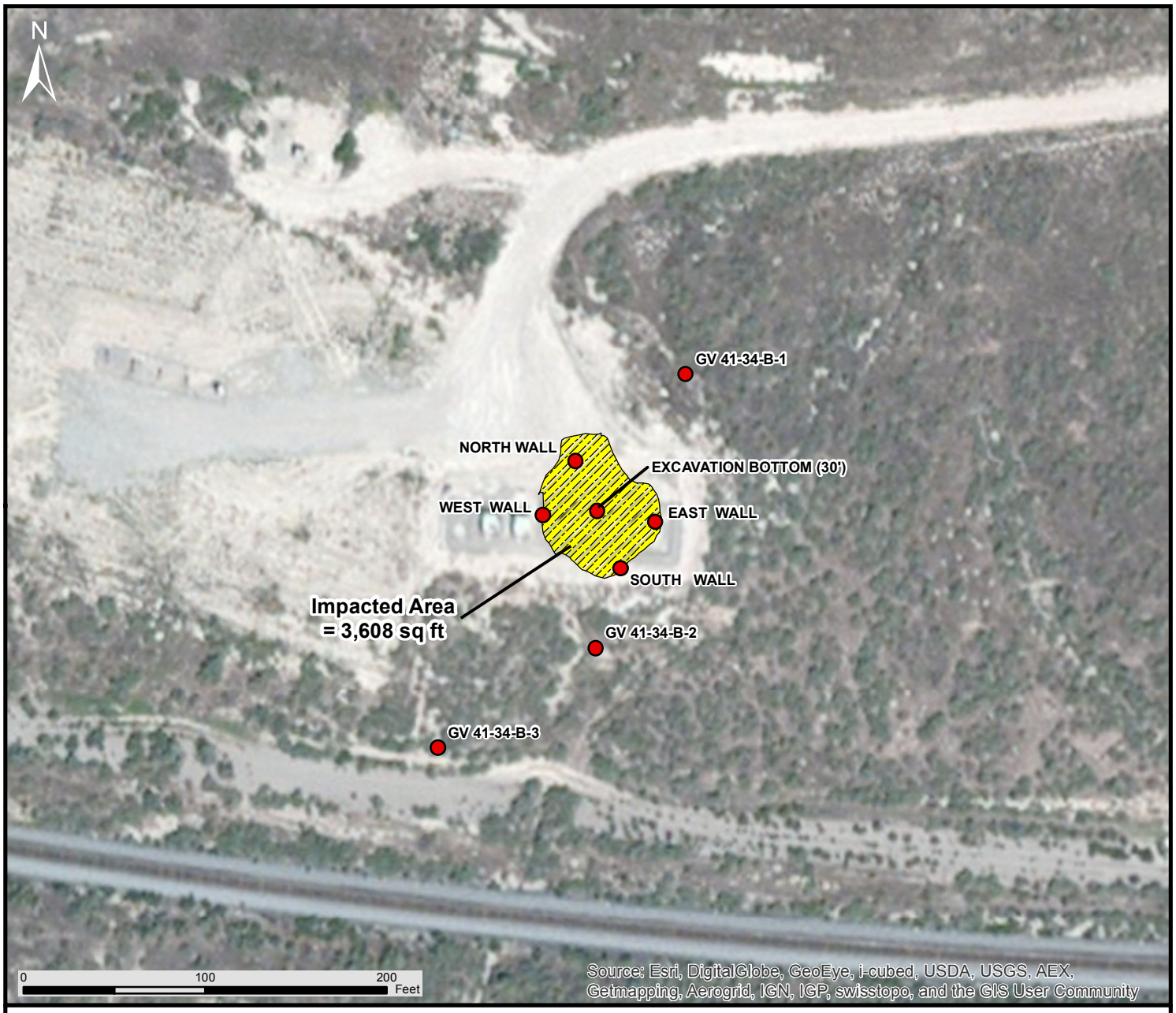
Please do not hesitate to contact me at (970) 683-2295 should you have any questions or concerns regarding this information.

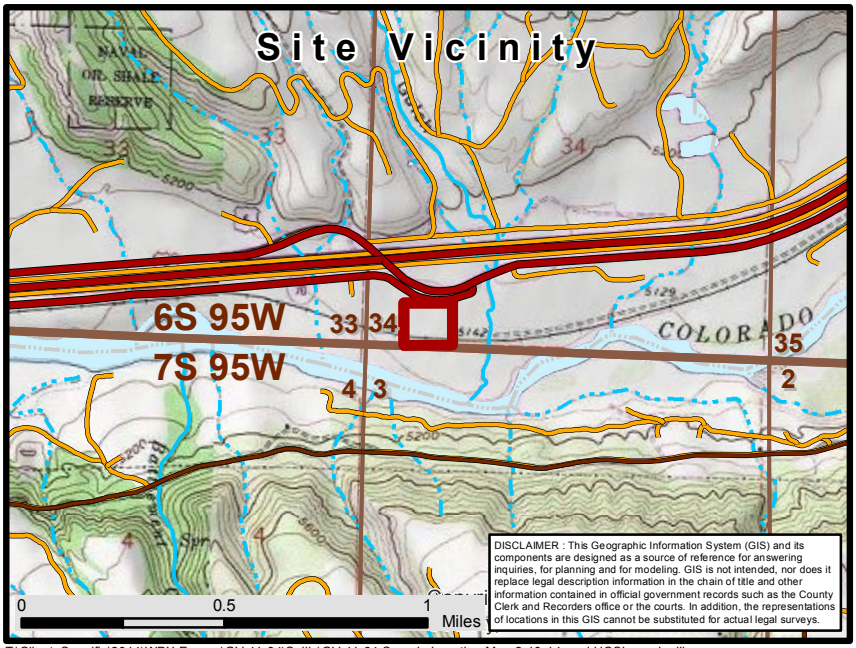
Sincerely,

Karolina Blaney

Karolina Blaney
Environmental Specialist

Attachments (2)
- Sampling Location Map
- Laboratory Reports





Sample Location Map

Location: GV 41-34

39.474551 -107.990874

WPX Energy

Sample Point

Impacted Area

Transportation Features

Public Roads

Access Roads

PLSS

Township

Section

Hydrographic Features

Perennial Stream

Intermittent Stream

WPXENERGY

HCSI ENVIRONMENTAL CONSULTANTS

HRL COMPLIANCE SOLUTIONS, INC.

T:\Client_Specific\2014\WPX Energy\GV 41-34\Spills\GV 41-34 Sample Location Map 2-10-14.mxd HCSI_mspinelli

Revision Date: 2/10/2014 4:30:33 PM

GV 41-34
Analytical Data Summary

Contaminant of Concern ↓	COGCC standards	Location →	West Wall	South Wall	North Wall	East Wall	Excavation Bottom 30'	Landfarm Batch 1	Landfarm Batch 1	Landfarm Batch 1	Landfarm Batch 2	Landfarm Batch 3	Landfarm Batch 4	Landfarm Batch 5	Landfarm Batch 6	Landfarm Batch 7	GV 41-34-B-1	GV 41-34-B-2	GV 41-34-B-3
		Date Sampled →	1/15/2014	1/15/2014	1/17/2014	1/17/2014	1/17/2014	4/10/2014	6/17/2014	7/9/2014	9/22/2014	10/28/2014	12/5/2014	1/26/2015	2/13/2015	3/10/2015	1/23/2014	1/23/2014	1/23/2014
Organic Compounds in Soil																			
TPH (DRO+GRO)	500	mg/kg	ND	ND	37	43	74	840	686	239	37	109	71	49	54	47			
DRO		mg/kg	ND	ND	ND	28	40	110	56	39	37	31	52	49	54	47			
GRO		mg/kg	ND	ND	37	15	34	730	630	200	ND	78	19	ND	ND	ND			
Benzene	0.17	mg/kg	ND	ND	ND	ND	ND	0.18	ND		ND	ND	ND	ND	ND	ND			
Toluene	85	mg/kg	0.058	ND	ND	ND	ND	1.9			ND	ND	ND	ND	ND	ND			
Ethylbenzene	100	mg/kg	ND	ND	ND	ND	ND	2.8			0.083	ND	0.084	ND	ND	ND			
Xylenes (Total)	175	mg/kg	0.65	ND	ND	ND	0.12	45			1	ND	0.56	ND	ND	0.15			
Acenaphthene	1,000	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Anthracene	1,000	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Benzo(A)anthracene	0.22	mg/kg	ND	ND	ND	ND	ND	ND			ND	0.0097	ND	0.013	ND	ND			
Benzo(B)fluoranthene	0.22	mg/kg	ND	ND	ND	ND	ND	ND			ND	0.01	ND	ND	ND	ND			
Benzo(K)fluoranthene	2.2	mg/kg	ND	ND	ND	ND	ND	ND			ND	0.0086	ND	ND	ND	ND			
Benzo(A)pyrene	0.022	mg/kg	ND	ND	ND	ND	ND	ND			ND	0.016	ND	ND	ND	ND			
Chrysene	22	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Dibenzo(A,H)anthracene	0.022	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Fluoranthene	1,000	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	0.019	ND	ND			
Fluorene	1,000	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Naphthalene	23	mg/kg	ND	ND	ND	ND	ND	0.15			ND	ND	0.043	ND	ND	0.032			
Pyrene	1,000	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	0.019	ND	ND			
Inorganics in Soil																			
EC	<4 or 2 x background	mmhos/cm	2.2	53	8.9	22	14	3.9			14	16	9.8	16	2.6	10			6.8
SAR	<12		19	67	13	46	26	39			23	28	13	26	16	14			57
pH	6-9		8	7.7	7.9	8.1	8.1	9.3			8.4	8	7.8	8	7.9	7.8			9.2
Metals in Soil																			
Arsenic	0.39	mg/kg	11	11	9.8	8.6	18	9.4			12	13	12	13	12	15	8.5	7.1	8.7
Barium total	15,000	mg/kg	230	250	220	210	290	360			340	330	300	700	340	290			
Cadmium	70	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Chromium (III)	120,000	mg/kg	13	12	13	11	18	13			11	11	13	11	15	12			
Chromium (VI)	23	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Copper	3,100	mg/kg	14	14	15	14	19	15			13	15	17	16	14	15			
Lead	400	mg/kg	12	12	13	12	15	12			13	20	14	12	12	12			
Mercury	23	mg/kg	0.061	0.035	ND	ND	ND	0.024			0.03	0.023	0.026	0.024	ND	0.028			
Nickel	1,600	mg/kg	18	16	19	18	19	16			15	13	16	13	15	15			
Selenium	390	mg/kg	ND	2	ND	ND	ND	ND			ND	0.62	0.61	ND	ND	ND			
Silver	390	mg/kg	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND			
Zinc	23,000	mg/kg	56	54	63	61	64	55			49	63	64	57	52	62			

22-Jan-2014

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

Re: **WPX GV 41-34 Produced Water Spill 1.15.14** Work Order: **1401533**

Dear Mark,

ALS Environmental received 2 samples on 16-Jan-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 28.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 22-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14
Work Order: **1401533**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1401533-01	West Wall	Soil		1/15/2014 14:00	1/16/2014 09:30	☐
1401533-02	South Wall	Soil		1/15/2014 08:20	1/16/2014 09:30	☐

ALS Group USA, Corp

Date: 22-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14
Work Order: 1401533

Case Narrative

Batch 55032 sample 1401533-02 had one low PAH surrogate recovery. All reporting limits may be biased low out due to matrix interference.

Batch 55032 RPDs between the recoveries for PAHs were above control limits. The individual MS/MSD recoveries met quality control criteria. No data requires qualification.

Batch 55079 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 55100 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

ALS Group USA, Corp

Date: 22-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14
WorkOrder: **1401533**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% 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: *22-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14 **Work Order:** 1401533
Sample ID: West Wall **Lab ID:** 1401533-01
Collection Date: 1/15/2014 02:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **1/16/2014**	Analyst: **IT**
DRO (C10-C28)	ND		5.1	mg/Kg-dry	1	1/17/2014 12:32 PM
Surr: 4-Terphenyl-d14	*49.1*		*39-115*	*%REC*	1	1/17/2014 12:32 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep Date: **1/13/2014**	Analyst: **IT**
GRO (C6-C10)	ND		3.1	mg/Kg-dry	1	1/18/2014 04:19 AM
Surr: Toluene-d8	*123*		*50-150*	*%REC*	1	1/18/2014 04:19 AM
MERCURY BY CVAA			**SW7471**		Prep Date: **1/21/2014**	Analyst: **LR**
Mercury	**0.061**		**0.024**	**mg/Kg-dry**	1	1/21/2014 02:58 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Arsenic	**11**		**2.2**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
Barium	**230**		**2.2**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
Cadmium	ND		0.89	mg/Kg-dry	5	1/20/2014 09:45 PM
Chromium	**13**		**2.2**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
Copper	**14**		**2.2**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
Lead	**12**		**2.2**	**mg/Kg-dry**	5	1/21/2014 10:15 AM
Nickel	**18**		**2.2**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
Selenium	ND		2.2	mg/Kg-dry	5	1/20/2014 09:45 PM
Silver	ND		2.2	mg/Kg-dry	5	1/20/2014 09:45 PM
Zinc	**56**		**4.4**	**mg/Kg-dry**	5	1/20/2014 09:45 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Calcium	**16**		**10**	**mg/L**	20	1/20/2014 02:31 PM
Magnesium	**14**		**4.0**	**mg/L**	20	1/20/2014 02:31 PM
Sodium	**420**		**4.0**	**mg/L**	20	1/20/2014 02:31 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/20/2014**	Analyst: **ML**
Sodium Adsorption Ratio	**19**		**0.010**	**none**	1	1/20/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **1/18/2014**	Analyst: **RM**
Acenaphthene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Acenaphthylene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Benzo(a)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Benzo(a)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Benzo(b)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Benzo(g,h,i)perylene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Benzo(k)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Chrysene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Dibenzo(a,h)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM

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

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14 **Work Order:** 1401533
Sample ID: West Wall **Lab ID:** 1401533-01
Collection Date: 1/15/2014 02:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Indeno(1,2,3-cd)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Naphthalene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 02:19 AM
Surr: 2-Fluorobiphenyl	*75.4*		*12-100*	*%REC*	1	1/22/2014 02:19 AM
Surr: 4-Terphenyl-d14	*102*		*25-137*	*%REC*	1	1/22/2014 02:19 AM
Surr: Nitrobenzene-d5	*81.0*		*37-107*	*%REC*	1	1/22/2014 02:19 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep Date: **1/14/2014**	Analyst: **RS**
Benzene	ND		37	µg/Kg-dry	1	1/17/2014 03:07 AM
Ethylbenzene	ND		37	µg/Kg-dry	1	1/17/2014 03:07 AM
m,p-Xylene	**570**		**73**	**µg/Kg-dry**	1	1/17/2014 03:07 AM
o-Xylene	**76**		**37**	**µg/Kg-dry**	1	1/17/2014 03:07 AM
Toluene	**58**		**37**	**µg/Kg-dry**	1	1/17/2014 03:07 AM
Xylenes, Total	**650**		**110**	**µg/Kg-dry**	1	1/17/2014 03:07 AM
Surr: 1,2-Dichloroethane-d4	*95.6*		*70-130*	*%REC*	1	1/17/2014 03:07 AM
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	1	1/17/2014 03:07 AM
Surr: Dibromofluoromethane	*97.6*		*70-130*	*%REC*	1	1/17/2014 03:07 AM
Surr: Toluene-d8	*98.4*		*70-130*	*%REC*	1	1/17/2014 03:07 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/20/2014**	Analyst: **JJG**
Electrical Conductivity @ Saturation	**2.2**		**0.25**	**mmhos/cm @25**	50	1/21/2014 08:05 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**13**		**0.61**	**mg/Kg-dry**	1	1/21/2014 06:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **1/20/2014**	Analyst: **MB**
Chromium, Hexavalent	ND		0.60	mg/Kg-dry	1	1/21/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**18**		**0.050**	**% of sample**	1	1/16/2014 04:00 PM
PH			**SW9045D**		Prep Date: **1/16/2014**	Analyst: **AT**
pH	**8.0**			**s.u.**	1	1/16/2014

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

ALS Group USA, Corp

Date: *22-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14 **Work Order:** 1401533
Sample ID: South Wall **Lab ID:** 1401533-02
Collection Date: 1/15/2014 08:20 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **1/16/2014**	Analyst: **IT**
DRO (C10-C28)	ND		4.8	mg/Kg-dry	1	1/17/2014 01:02 AM
Surr: 4-Terphenyl-d14	*50.6*		*39-115*	*%REC*	1	1/17/2014 01:02 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep Date: **1/13/2014**	Analyst: **IT**
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	1/18/2014 04:48 AM
Surr: Toluene-d8	*114*		*50-150*	*%REC*	1	1/18/2014 04:48 AM
MERCURY BY CVAA			**SW7471**		Prep Date: **1/21/2014**	Analyst: **LR**
Mercury	**0.035**		**0.019**	**mg/Kg-dry**	1	1/21/2014 03:00 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Arsenic	**11**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Barium	**250**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Cadmium	ND		0.76	mg/Kg-dry	5	1/20/2014 09:51 PM
Chromium	**12**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Copper	**14**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Lead	**12**		**1.9**	**mg/Kg-dry**	5	1/21/2014 10:22 AM
Nickel	**16**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Selenium	**2.0**		**1.9**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
Silver	ND		1.9	mg/Kg-dry	5	1/20/2014 09:51 PM
Zinc	**54**		**3.8**	**mg/Kg-dry**	5	1/20/2014 09:51 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Calcium	**470**		**10**	**mg/L**	20	1/20/2014 02:44 PM
Magnesium	**630**		**4.0**	**mg/L**	20	1/20/2014 02:44 PM
Sodium	**9,400**		**40**	**mg/L**	200	1/20/2014 02:57 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/20/2014**	Analyst: **ML**
Sodium Adsorption Ratio	**67**		**0.010**	**none**	1	1/20/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **1/18/2014**	Analyst: **RM**
Acenaphthene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Anthracene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Chrysene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Fluoranthene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM

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

ALS Group USA, Corp

Date: *22-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Produced Water Spill 1.15.14 **Work Order:** 1401533
Sample ID: South Wall **Lab ID:** 1401533-02
Collection Date: 1/15/2014 08:20 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Naphthalene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Pyrene	ND		7.8	µg/Kg-dry	1	1/22/2014 03:19 AM
Surr: 2-Fluorobiphenyl	*31.2*		*12-100*	*%REC*	1	1/22/2014 03:19 AM
Surr: 4-Terphenyl-d14	*44.0*		*25-137*	*%REC*	1	1/22/2014 03:19 AM
Surr: Nitrobenzene-d5	*33.3*	S	*37-107*	*%REC*	1	1/22/2014 03:19 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep Date: **1/14/2014**	Analyst: **RS**
Benzene	ND		36	µg/Kg-dry	1	1/17/2014 03:32 AM
Ethylbenzene	ND		36	µg/Kg-dry	1	1/17/2014 03:32 AM
m,p-Xylene	ND		71	µg/Kg-dry	1	1/17/2014 03:32 AM
o-Xylene	ND		36	µg/Kg-dry	1	1/17/2014 03:32 AM
Toluene	ND		36	µg/Kg-dry	1	1/17/2014 03:32 AM
Xylenes, Total	ND		110	µg/Kg-dry	1	1/17/2014 03:32 AM
Surr: 1,2-Dichloroethane-d4	*96.5*		*70-130*	*%REC*	1	1/17/2014 03:32 AM
Surr: 4-Bromofluorobenzene	*99.6*		*70-130*	*%REC*	1	1/17/2014 03:32 AM
Surr: Dibromofluoromethane	*97.8*		*70-130*	*%REC*	1	1/17/2014 03:32 AM
Surr: Toluene-d8	*98.4*		*70-130*	*%REC*	1	1/17/2014 03:32 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/20/2014**	Analyst: **JJG**
Electrical Conductivity @ Saturation	**53**		**0.25**	**mmhos/cm @25**	50	1/21/2014 08:05 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**12**		**0.59**	**mg/Kg-dry**	1	1/21/2014 06:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **1/20/2014**	Analyst: **MB**
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	1/21/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**16**		**0.050**	**% of sample**	1	1/16/2014 04:00 PM
PH			**SW9045D**		Prep Date: **1/16/2014**	Analyst: **AT**
pH	**7.7**			**s.u.**	1	1/16/2014

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

ALS Group USA, Corp

Date: 22-Jan-14

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1401533

Project: WPX GV 41-34 Produced Water Spill 1.15.14

Batch ID: **54970** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-54970-54970** Units: **mg/Kg** Analysis Date: **1/16/2014 06:01 PM**

Client ID: Run ID: **GC8_140116A** SeqNo: **2614084** Prep Date: **1/16/2014** 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	*1.109*	0	*2*	0	*55.4*	*39-115*	0			

LCS Sample ID: **DLCSS1-54970-54970** Units: **mg/Kg** Analysis Date: **1/16/2014 06:32 PM**

Client ID: Run ID: **GC8_140116A** SeqNo: **2614085** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	196.4	5.0	200	0	98.2	49-124	0			
Surr: 4-Terphenyl-d14	*1.072*	0	*2*	0	*53.6*	*39-115*	0			

MS Sample ID: **1401530-02B MS** Units: **mg/Kg** Analysis Date: **1/16/2014 07:02 PM**

Client ID: Run ID: **GC8_140116A** SeqNo: **2614086** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	418.6	8.1	322	62.69	111	49-130	0			
Surr: 4-Terphenyl-d14	*1.816*	0	*3.22*	0	*56.4*	*39-115*	0			

MSD Sample ID: **1401530-02B MSD** Units: **mg/Kg** Analysis Date: **1/16/2014 07:32 PM**

Client ID: Run ID: **GC8_140116A** SeqNo: **2614087** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	316	8.1	325.8	62.69	77.7	49-130	418.6	28	30	
Surr: 4-Terphenyl-d14	*1.705*	0	*3.258*	0	*52.3*	*39-115*	1.816	*6.28*	*30*	

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54954** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-54954-54954** Units: **µg/Kg** Analysis Date: **1/17/2014 11:20 AM**
Client ID: Run ID: **GC9_140117A** SeqNo: **2614206** Prep Date: **1/13/2014** 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	*6187*	0	*5000*	0	*124*	*50-150*	0			

LCS Sample ID: **LCS-54954-54954** Units: **µg/Kg** Analysis Date: **1/17/2014 10:04 AM**
Client ID: Run ID: **GC9_140117A** SeqNo: **2614204** Prep Date: **1/13/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	595200	2,500	500000	0	119	70-130	0			
Surr: Toluene-d8	*4604*	0	*5000*	0	*92.1*	*50-150*	0			

MS Sample ID: **1401530-01A MS** Units: **µg/Kg** Analysis Date: **1/17/2014 09:31 PM**
Client ID: Run ID: **GC9_140117A** SeqNo: **2614440** Prep Date: **1/13/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	667900	2,500	500000	54100	123	70-130	0			
Surr: Toluene-d8	*5740*	0	*5000*	0	*115*	*50-150*	0			

MSD Sample ID: **1401530-01A MSD** Units: **µg/Kg** Analysis Date: **1/17/2014 09:57 PM**
Client ID: Run ID: **GC9_140117A** SeqNo: **2614441** Prep Date: **1/13/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	667000	2,500	500000	54100	123	70-130	667900	0.136	30	
Surr: Toluene-d8	*5572*	0	*5000*	0	*111*	*50-150*	5740	*2.96*	*30*	

The following samples were analyzed in this batch: 1401533-01A 1401533-02A

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55074** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-55074-55074** Units: **mg/Kg** Analysis Date: **1/21/2014 02:23 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617604** Prep Date: **1/21/2014** 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-55074-55074** Units: **mg/Kg** Analysis Date: **1/21/2014 02:29 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617605** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1794	0.020	0.1665	0	108	80-120	0			

MS Sample ID: **1401641-01CMS** Units: **mg/Kg** Analysis Date: **1/21/2014 02:37 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617607** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1824	0.019	0.1604	0.007176	109	75-125	0			

MS Sample ID: **1401641-09CMS** Units: **mg/Kg** Analysis Date: **1/21/2014 02:46 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617611** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1413	0.016	0.1292	0.01369	98.7	75-125	0			

MSD Sample ID: **1401641-01CMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 02:39 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617608** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1715	0.019	0.1596	0.007176	103	75-125	0.1824	6.18	35	

MSD Sample ID: **1401641-09CMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 02:49 PM**
Client ID: Run ID: **HG1_140121B** SeqNo: **2617612** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1519	0.015	0.1276	0.01369	108	75-125	0.1413	7.22	35	

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54980** Instrument ID **ICPMS1** Method: **SW6020A**

DUP Sample ID: **1401533-01CDUP** Units: **mg/L** Analysis Date: **1/20/2014 02:37 PM**
Client ID: **West Wall** Run ID: **ICPMS1_140120A** SeqNo: **2615652** Prep Date: **1/20/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	11.23	10	0	0	0	0-0	16.21	36.3		
Magnesium	9.346	4.0	0	0	0	0-0	13.71	37.8		
Sodium	302.4	4.0	0	0	0	0-0	422.2	33.1		

DUP Sample ID: **1401533-01CDUP** Units: **none** Analysis Date: **1/20/2014**
Client ID: **West Wall** Run ID: **SAR_140120A** SeqNo: **2615669** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	16.13	0.010	0	0	0		18.66	14.5	50	

The following samples were analyzed in this batch: 1401533-01C 1401533-02C

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-55079-55079** Units: **mg/Kg** Analysis Date: **1/20/2014 09:33 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616208** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.06275	0.50								J

MBLK Sample ID: **MBLK-55079-55079** Units: **mg/Kg** Analysis Date: **1/21/2014 10:03 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616829** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	ND	0.25								

LCS Sample ID: **LCS-55079-55079** Units: **mg/Kg** Analysis Date: **1/20/2014 09:39 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616209** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.636	0.25	5	0	92.7	80-120	0			
Barium	4.841	0.25	5	0	96.8	80-120	0			
Cadmium	4.76	0.10	5	0	95.2	80-120	0			
Chromium	4.76	0.25	5	0	95.2	80-120	0			
Copper	4.86	0.25	5	0	97.2	80-120	0			
Nickel	4.828	0.25	5	0	96.6	80-120	0			
Selenium	4.165	0.25	5	0	83.3	80-120	0			
Silver	4.876	0.25	5	0	97.5	80-120	0			
Zinc	4.708	0.50	5	0	94.2	80-120	0			

LCS Sample ID: **LCS-55079-55079** Units: **mg/Kg** Analysis Date: **1/21/2014 10:09 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616831** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	4.904	0.25	5	0	98.1	80-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **1401674-05BMS** Units: **mg/Kg** Analysis Date: **1/20/2014 10:09 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616214** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.05	1.4	6.954	9.245	112	75-125	0			
Barium	48.96	1.4	6.954	38.4	152	75-125	0			SO
Cadmium	7.321	0.56	6.954	0.1408	103	75-125	0			
Chromium	16.33	1.4	6.954	7.501	127	75-125	0			S
Copper	17.42	1.4	6.954	10.49	99.6	75-125	0			
Nickel	17.72	1.4	6.954	11.16	94.2	75-125	0			
Selenium	7.477	1.4	6.954	0.5576	99.5	75-125	0			
Silver	6.846	1.4	6.954	0.03394	98	75-125	0			
Zinc	36.02	2.8	6.954	28.84	103	75-125	0			O

MS Sample ID: **1401674-05BMS** Units: **mg/Kg** Analysis Date: **1/21/2014 11:14 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2617399** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	15.18	1.4	6.954	7.719	107	75-125	0			

MSD Sample ID: **1401674-05BMSD** Units: **mg/Kg** Analysis Date: **1/20/2014 10:15 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616215** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.07	1.4	7.062	9.245	111	75-125	17.05	0.0958	25	
Barium	48.42	1.4	7.062	38.4	142	75-125	48.96	1.11	25	SO
Cadmium	7.497	0.56	7.062	0.1408	104	75-125	7.321	2.37	25	
Chromium	15.84	1.4	7.062	7.501	118	75-125	16.33	3.02	25	
Copper	16.73	1.4	7.062	10.49	88.4	75-125	17.42	4.01	25	
Nickel	17.78	1.4	7.062	11.16	93.7	75-125	17.72	0.373	25	
Selenium	7.277	1.4	7.062	0.5576	95.1	75-125	7.477	2.71	25	
Silver	7.059	1.4	7.062	0.03394	99.5	75-125	6.846	3.07	25	
Zinc	36.13	2.8	7.062	28.84	103	75-125	36.02	0.299	25	O

MSD Sample ID: **1401674-05BMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 11:20 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2617401** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	14.76	1.4	7.062	7.719	99.7	75-125	15.18	2.8	25	

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55032** Instrument ID **SVMS8** Method: **SW8270**

MBLK Sample ID: **SBLKS1-55032-55032** Units: **µg/Kg** Analysis Date: **1/20/2014 08:36 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618907** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1297*	0	*1667*	0	*77.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1786*	0	*1667*	0	*107*	*25-137*	0			
Surr: Nitrobenzene-d5	*1289*	0	*1667*	0	*77.3*	*37-107*	0			

LCS Sample ID: **SLCSS1-55032-55032** Units: **µg/Kg** Analysis Date: **1/20/2014 08:56 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618911** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	488.3	6.7	666.7	0	73.2	45-110	0			
Acenaphthylene	501	6.7	666.7	0	75.1	45-105	0			
Anthracene	544.3	6.7	666.7	0	81.6	55-105	0			
Benzo(a)anthracene	544	6.7	666.7	0	81.6	50-110	0			
Benzo(a)pyrene	543.3	6.7	666.7	0	81.5	50-110	0			
Benzo(b)fluoranthene	595	6.7	666.7	0	89.2	45-115	0			
Benzo(g,h,i)perylene	487	6.7	666.7	0	73	40-125	0			
Benzo(k)fluoranthene	593.7	6.7	666.7	0	89	45-115	0			
Chrysene	530.3	6.7	666.7	0	79.5	55-110	0			
Dibenzo(a,h)anthracene	505.7	6.7	666.7	0	75.8	40-125	0			
Fluoranthene	559.3	6.7	666.7	0	83.9	55-115	0			
Fluorene	500.7	6.7	666.7	0	75.1	50-110	0			
Indeno(1,2,3-cd)pyrene	510	6.7	666.7	0	76.5	40-120	0			
Naphthalene	476.7	6.7	666.7	0	71.5	40-105	0			
Pyrene	580.3	6.7	666.7	0	87	45-125	0			
Surr: 2-Fluorobiphenyl	*1184*	0	*1667*	0	*71*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1570*	0	*1667*	0	*94.2*	*25-137*	0			
Surr: Nitrobenzene-d5	*1170*	0	*1667*	0	*70.2*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55032** Instrument ID **SVMS8** Method: **SW8270**

MS Sample ID: **1401641-01C MS** Units: **µg/Kg** Analysis Date: **1/20/2014 10:45 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618915** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1032	13	1264	0	81.6	45-110	0			
Acenaphthylene	1013	13	1264	0	80.1	45-105	0			
Anthracene	1170	13	1264	0	92.5	55-105	0			
Benzo(a)anthracene	1198	13	1264	0	94.8	50-110	0			
Benzo(a)pyrene	1200	13	1264	0	94.9	50-110	0			
Benzo(b)fluoranthene	1254	13	1264	0	99.2	45-115	0			
Benzo(g,h,i)perylene	1218	13	1264	0	96.3	40-125	0			
Benzo(k)fluoranthene	1237	13	1264	0	97.8	45-115	0			
Chrysene	1149	13	1264	0	90.9	55-110	0			
Dibenzo(a,h)anthracene	1190	13	1264	0	94.2	40-125	0			
Fluoranthene	1174	13	1264	0	92.9	55-115	0			
Fluorene	1047	13	1264	0	82.8	50-110	0			
Indeno(1,2,3-cd)pyrene	1222	13	1264	0	96.7	40-120	0			
Naphthalene	939.6	13	1264	0	74.3	40-105	0			
Pyrene	1264	13	1264	0	100	45-125	0			
Surr: 2-Fluorobiphenyl	*2431*	0	*3159*	0	*77*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3349*	0	*3159*	0	*106*	*25-137*	0			
Surr: Nitrobenzene-d5	*2371*	0	*3159*	0	*75.1*	*37-107*	0			

MS Sample ID: **1401641-09C MS** Units: **µg/Kg** Analysis Date: **1/20/2014 11:25 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618924** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1009	13	1254	0	80.5	45-110	0			
Acenaphthylene	1059	13	1254	0	84.4	45-105	0			
Anthracene	1185	13	1254	0	94.5	55-105	0			
Benzo(a)anthracene	1175	13	1254	0	93.7	50-110	0			
Benzo(a)pyrene	1194	13	1254	0	95.2	50-110	0			
Benzo(b)fluoranthene	1257	13	1254	0	100	45-115	0			
Benzo(g,h,i)perylene	1201	13	1254	0	95.8	40-125	0			
Benzo(k)fluoranthene	1225	13	1254	0	97.7	45-115	0			
Chrysene	1141	13	1254	0	91	55-110	0			
Dibenzo(a,h)anthracene	1176	13	1254	0	93.8	40-125	0			
Fluoranthene	1161	13	1254	0	92.6	55-115	0			
Fluorene	1109	13	1254	0	88.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1237	13	1254	0	98.6	40-120	0			
Naphthalene	1014	13	1254	0	80.9	40-105	0			
Pyrene	1252	13	1254	0	99.9	45-125	0			
Surr: 2-Fluorobiphenyl	*2556*	0	*3134*	0	*81.6*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3428*	0	*3134*	0	*109*	*25-137*	0			
Surr: Nitrobenzene-d5	*2521*	0	*3134*	0	*80.4*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55032** Instrument ID **SVMS8** Method: **SW8270**

MSD Sample ID: **1401641-01C MSD** Units: **µg/Kg** Analysis Date: **1/20/2014 11:05 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618919** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1105	13	1282	0	86.2	45-110	1032	6.83	30	
Acenaphthylene	1109	13	1282	0	86.5	45-105	1013	9.03	30	
Anthracene	1211	13	1282	0	94.4	55-105	1170	3.44	30	
Benzo(a)anthracene	1221	13	1282	0	95.3	50-110	1198	1.94	30	
Benzo(a)pyrene	1225	13	1282	0	95.5	50-110	1200	2.04	30	
Benzo(b)fluoranthene	1284	13	1282	0	100	45-115	1254	2.42	30	
Benzo(g,h,i)perylene	1275	13	1282	0	99.4	40-125	1218	4.58	30	
Benzo(k)fluoranthene	1271	13	1282	0	99.2	45-115	1237	2.78	30	
Chrysene	1196	13	1282	0	93.3	55-110	1149	4.02	30	
Dibenzo(a,h)anthracene	1248	13	1282	0	97.4	40-125	1190	4.75	30	
Fluoranthene	1232	13	1282	0	96.1	55-115	1174	4.85	30	
Fluorene	1158	13	1282	0	90.3	50-110	1047	10.1	30	
Indeno(1,2,3-cd)pyrene	1318	13	1282	0	103	40-120	1222	7.57	30	
Naphthalene	1018	13	1282	0	79.4	40-105	939.6	8.04	30	
Pyrene	1288	13	1282	0	100	45-125	1264	1.91	30	
Surr: 2-Fluorobiphenyl	*2622*	0	*3204*	0	*81.8*	*12-100*	2431	*7.56*	*40*	
Surr: 4-Terphenyl-d14	*3389*	0	*3204*	0	*106*	*25-137*	3349	*1.19*	*40*	
Surr: Nitrobenzene-d5	*2551*	0	*3204*	0	*79.6*	*37-107*	2371	*7.31*	*40*	

MSD Sample ID: **1401641-09C MSD** Units: **µg/Kg** Analysis Date: **1/20/2014 11:45 PM**
Client ID: Run ID: **SVMS8_140120A** SeqNo: **2618928** Prep Date: **1/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	659.8	13	1264	0	52.2	45-110	1009	41.8	30	R
Acenaphthylene	688.9	13	1264	0	54.5	45-105	1059	42.3	30	R
Anthracene	728.7	13	1264	0	57.6	55-105	1185	47.7	30	R
Benzo(a)anthracene	730	13	1264	0	57.7	50-110	1175	46.7	30	R
Benzo(a)pyrene	745.2	13	1264	0	58.9	50-110	1194	46.3	30	R
Benzo(b)fluoranthene	770.4	13	1264	0	60.9	45-115	1257	48	30	R
Benzo(g,h,i)perylene	723.7	13	1264	0	57.2	40-125	1201	49.6	30	R
Benzo(k)fluoranthene	756.5	13	1264	0	59.8	45-115	1225	47.3	30	R
Chrysene	700.9	13	1264	0	55.4	55-110	1141	47.8	30	R
Dibenzo(a,h)anthracene	731.9	13	1264	0	57.9	40-125	1176	46.5	30	R
Fluoranthene	722.4	13	1264	0	57.1	55-115	1161	46.6	30	R
Fluorene	695.9	13	1264	0	55	50-110	1109	45.8	30	R
Indeno(1,2,3-cd)pyrene	776.1	13	1264	0	61.4	40-120	1237	45.7	30	R
Naphthalene	693.3	13	1264	0	54.8	40-105	1014	37.6	30	R
Pyrene	770.4	13	1264	0	60.9	45-125	1252	47.6	30	R
Surr: 2-Fluorobiphenyl	*1837*	0	*3160*	0	*58.1*	*12-100*	2556	*32.7*	*40*	
Surr: 4-Terphenyl-d14	*2196*	0	*3160*	0	*69.5*	*25-137*	3428	*43.8*	*40*	*R*
Surr: Nitrobenzene-d5	*1852*	0	*3160*	0	*58.6*	*37-107*	2521	*30.6*	*40*	

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55032** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54963** Instrument ID **VMS9** Method: **SW8260B**

MBLK Sample ID: **MBLK-54963-54963** Units: **µg/Kg** Analysis Date: **1/16/2014 02:14 PM**
Client ID: Run ID: **VMS9_140116A** SeqNo: **2613147** Prep Date: **1/14/2014** 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	*1114*	0	*1000*	0	*111*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*993.5*	0	*1000*	0	*99.4*	*70-130*	0			
Surr: Dibromofluoromethane	*1002*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*926*	0	*1000*	0	*92.6*	*70-130*	0			

LCS Sample ID: **LCS-54963-54963** Units: **µg/Kg** Analysis Date: **1/16/2014 12:37 PM**
Client ID: Run ID: **VMS9_140116A** SeqNo: **2613146** Prep Date: **1/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	970	30	1000	0	97	75-125	0			
Ethylbenzene	1002	30	1000	0	100	75-125	0			
m,p-Xylene	2025	60	2000	0	101	80-125	0			
o-Xylene	978.5	30	1000	0	97.8	75-125	0			
Toluene	954.5	30	1000	0	95.4	70-125	0			
Xylenes, Total	3004	90	3000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1126*	0	*1000*	0	*113*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1028*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*1056*	0	*1000*	0	*106*	*70-130*	0			
Surr: Toluene-d8	*955*	0	*1000*	0	*95.5*	*70-130*	0			

MS Sample ID: **1401533-01A MS** Units: **µg/Kg** Analysis Date: **1/17/2014 10:02 AM**
Client ID: **West Wall** Run ID: **VMS8_140116B** SeqNo: **2613781** Prep Date: **1/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1016	30	1000	0	102	75-125	0			
Ethylbenzene	1098	30	1000	28.5	107	75-125	0			
m,p-Xylene	2668	60	2000	469.5	110	80-125	0			
o-Xylene	1143	30	1000	62.5	108	75-125	0			
Toluene	1130	30	1000	47.5	108	70-125	0			
Xylenes, Total	3811	90	3000	532	109	75-125	0			
Surr: 1,2-Dichloroethane-d4	*956*	0	*1000*	0	*95.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1028*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*979.5*	0	*1000*	0	*98*	*70-130*	0			
Surr: Toluene-d8	*984*	0	*1000*	0	*98.4*	*70-130*	0			

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54963** Instrument ID **VMS9** Method: **SW8260B**

MSD Sample ID: **1401533-01A MSD** Units: **µg/Kg** Analysis Date: **1/17/2014 10:27 AM**
Client ID: **West Wall** Run ID: **VMS8_140116B** SeqNo: **2613782** Prep Date: **1/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	984	30	1000	0	98.4	75-125	1016	3.15	30	
Ethylbenzene	1056	30	1000	28.5	103	75-125	1098	3.81	30	
m,p-Xylene	2545	60	2000	469.5	104	80-125	2668	4.72	30	
o-Xylene	1114	30	1000	62.5	105	75-125	1143	2.52	30	
Toluene	1083	30	1000	47.5	104	70-125	1130	4.2	30	
Xylenes, Total	3660	90	3000	532	104	75-125	3811	4.06	30	
Surr: 1,2-Dichloroethane-d4	*944*	0	*1000*	0	*94.4*	*70-130*	956	*1.26*	*30*	
Surr: 4-Bromofluorobenzene	*1025*	0	*1000*	0	*102*	*70-130*	1028	*0.244*	*30*	
Surr: Dibromofluoromethane	*963*	0	*1000*	0	*96.3*	*70-130*	979.5	*1.7*	*30*	
Surr: Toluene-d8	*967*	0	*1000*	0	*96.7*	*70-130*	984	*1.74*	*30*	

The following samples were analyzed in this batch: 1401533-01A 1401533-02A

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54976** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-54976-54976** Units: **s.u.** Analysis Date: **1/16/2014**
Client ID: Run ID: **WETCHEM_140116E** SeqNo: **2612680** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4	0	4	0	100	90-110	0			

DUP Sample ID: **1401497-01C DUP** Units: **s.u.** Analysis Date: **1/16/2014**
Client ID: Run ID: **WETCHEM_140116E** SeqNo: **2612682** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.04	0	0	0	0	0-0	8.1	0.743	20	

DUP Sample ID: **1401533-01B DUP** Units: **s.u.** Analysis Date: **1/16/2014**
Client ID: **West Wall** Run ID: **WETCHEM_140116E** SeqNo: **2612692** Prep Date: **1/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.09	0	0	0	0	0-0	8.05	0.496	20	

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **54980** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1401533-01C DUP** Units: **mmhos/cm @25°C** Analysis Date: **1/21/2014 08:05 AM**
Client ID: **West Wall** Run ID: **WETCHEM_140121B** SeqNo: **2616286** Prep Date: **1/20/2014** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.59	0.25	0	0	0		2.195	32	50	

The following samples were analyzed in this batch: 1401533-01C 1401533-02C

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55100** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-55100-55100** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617963** Prep Date: **1/20/2014** 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-55100-55100** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617962** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.988	0.50	2	0	99.4	80-120	0			

MS Sample ID: **1401641-09CMS** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617950** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.636	0.50	2	0	31.8	75-125	0			S

MS Sample ID: **1401641-09CMSI** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617952** Prep Date: **1/20/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	821.4	50	798.1	0	103	75-125	0			

MS Sample ID: **1401702-03B MS** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617957** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.604	0.51	2.041	0.1687	70.3	75-125	0			S

MS Sample ID: **1401702-03B MSI** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617959** Prep Date: **1/20/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1129	49	1263	0.1687	89.3	75-125	0			

MSD Sample ID: **1401641-09CMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617951** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4706	0.49	1.961	0	24	75-125	0.636	0	20	JS

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **55100** Instrument ID **WETCHEM** Method: **SW7196A**

MSD Sample ID: **1401702-03B MSD** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617958** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.502	0.49	1.976	0.1687	67.5	75-125	1.604	6.57	20	S

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

Client: HRL Compliance Solutions
Work Order: 1401533
Project: WPX GV 41-34 Produced Water Spill 1.15.14

QC BATCH REPORT

Batch ID: **R134144** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R134144** Units: **% of sample** Analysis Date: **1/16/2014 04:00 PM**
Client ID: Run ID: **MOIST_140116D** SeqNo: **2613773** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.03	0.050								J

LCS Sample ID: **LCS-R134144** Units: **% of sample** Analysis Date: **1/16/2014 04:00 PM**
Client ID: Run ID: **MOIST_140116D** SeqNo: **2613769** 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: **1401533-01B DUP** Units: **% of sample** Analysis Date: **1/16/2014 04:00 PM**
Client ID: **West Wall** Run ID: **MOIST_140116D** SeqNo: **2613749** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.27	0.050	0	0	0	0-0	18.14	0.714	20	

DUP Sample ID: **1401550-07B DUP** Units: **% of sample** Analysis Date: **1/16/2014 04:00 PM**
Client ID: Run ID: **MOIST_140116D** SeqNo: **2613765** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.71	0.050	0	0	0	0-0	12.03	13.1	20	

The following samples were analyzed in this batch: 1401533-01B 1401533-02B

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

ALS Laboratory Group

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TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER # 1401533

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DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX GV 41-34 Produced Water Spill	SAMPLER	Reed Wold
PROJECT No.		SITE ID	GV 41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 1/15/14

TURNAROUND 5 day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX/GRO	DRO/PAH/Metals	SAR/EC/pH
1	West Wall	SO	1/15/14	2:00	3	8		X	X	X
2	South Wall			8:20				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:

4.4°c

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	1/15/14	3:08
RECEIVED BY	W.M.	W.M.	1-15-14	3:16
RELINQUISHED BY	W.M	W.M	1-15-14	3:30
RECEIVED BY	Diane F. Shaw	Diane F. Shaw	1/16/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **16-Jan-14 09:30**

Work Order: **1401533** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 16-Jan-14 (Date) Reviewed by: Ann Preston (eSignature) 16-Jan-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/16/2014 11:18:01 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Lab Hub LLC. Custody seal

Date: 1-15-14

Time: 1530

From: (970) 424-4749
Lab Hub, LLC

127 E First Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J13201306280326

Ship Date: 15JAN14
ActWgt: 76.0 LB
CAD: 103923490/INET

Delivery Address Ba

Ref # 1001-644514-2
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

BILL RECIPIENT

THU - 16 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7976 4591 0466

XX GRRA

49424
MI-US
GRR

51AG1/D6EC/1A9E

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.
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SIX

SIL

27-Jan-2014

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

Re: **WPX GV 41-34 Prod. Water Spill 1.17.14** Work Order: **1401702**

Dear Mark,

ALS Environmental received 3 samples on 18-Jan-2014 11:00 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 32.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 27-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14
Work Order: **1401702**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1401702-01	Excavation Bottom 30ft	Soil		1/17/2014 11:00	1/18/2014 11:00	☐
1401702-02	North Wall	Soil		1/17/2014 12:35	1/18/2014 11:00	☐
1401702-03	East Wall	Soil		1/17/2014 12:45	1/18/2014 11:00	☐

ALS Group USA, Corp

Date: 27-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14
Work Order: 1401702

Case Narrative

Batch 55079 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 55100 sample East Wall MS/MSD recoveries for Hexavalent Chromium were below control limits. The corresponding result in the parent sample may be biased low for Hexavalent Chromium.

ALS Group USA, Corp

Date: 27-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14
WorkOrder: **1401702**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% 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: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: Excavation Bottom 30ft **Lab ID:** 1401702-01
Collection Date: 1/17/2014 11:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **1/20/2014**	Analyst: **IT**
DRO (C10-C28)	**40**		**4.9**	**mg/Kg-dry**	1	1/21/2014 05:38 AM
Surr: 4-Terphenyl-d14	*49.8*		*39-115*	*%REC*	1	1/21/2014 05:38 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep Date: **1/20/2014**	Analyst: **IT**
GRO (C6-C10)	**34**		**3.0**	**mg/Kg-dry**	1	1/20/2014 07:41 PM
Surr: Toluene-d8	*99.9*		*50-150*	*%REC*	1	1/20/2014 07:41 PM
MERCURY BY CVAA			**SW7471**		Prep Date: **1/22/2014**	Analyst: **LR**
Mercury	ND		0.023	mg/Kg-dry	1	1/22/2014 04:21 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Arsenic	**18**		**2.3**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
Barium	**290**		**2.3**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
Cadmium	ND		0.91	mg/Kg-dry	5	1/20/2014 10:27 PM
Chromium	**18**		**2.3**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
Copper	**19**		**2.3**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
Lead	**15**		**2.3**	**mg/Kg-dry**	5	1/21/2014 11:42 AM
Nickel	**19**		**2.3**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
Selenium	ND		2.3	mg/Kg-dry	5	1/20/2014 10:27 PM
Silver	ND		2.3	mg/Kg-dry	5	1/20/2014 10:27 PM
Zinc	**64**		**4.5**	**mg/Kg-dry**	5	1/20/2014 10:27 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/23/2014**	Analyst: **ML**
Calcium	**430**		**10**	**mg/L**	20	1/24/2014 11:07 AM
Magnesium	**130**		**4.0**	**mg/L**	20	1/24/2014 11:07 AM
Sodium	**2,400**		**4.0**	**mg/L**	20	1/24/2014 11:07 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **RH**
Sodium Adsorption Ratio	**26**		**0.010**	**none**	1	1/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **1/20/2014**	Analyst: **RM**
Acenaphthene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Acenaphthylene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Anthracene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Benzo(a)anthracene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Benzo(g,h,i)perylene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Chrysene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Fluoranthene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM

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

ALS Group USA, Corp

Date: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: Excavation Bottom 30ft **Lab ID:** 1401702-01
Collection Date: 1/17/2014 11:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Naphthalene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Pyrene	ND		7.9	µg/Kg-dry	1	1/22/2014 06:19 AM
Surr: 2-Fluorobiphenyl	*64.3*		*12-100*	*%REC*	1	1/22/2014 06:19 AM
Surr: 4-Terphenyl-d14	*113*		*25-137*	*%REC*	1	1/22/2014 06:19 AM
Surr: Nitrobenzene-d5	*65.2*		*37-107*	*%REC*	1	1/22/2014 06:19 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep Date: **1/20/2014**	Analyst: **RS**
Benzene	ND		36	µg/Kg-dry	1	1/20/2014 09:27 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	1/20/2014 09:27 PM
m,p-Xylene	**120**		**72**	**µg/Kg-dry**	1	1/20/2014 09:27 PM
o-Xylene	ND		36	µg/Kg-dry	1	1/20/2014 09:27 PM
Toluene	ND		36	µg/Kg-dry	1	1/20/2014 09:27 PM
Xylenes, Total	**120**		**110**	**µg/Kg-dry**	1	1/20/2014 09:27 PM
Surr: 1,2-Dichloroethane-d4	*93.8*		*70-130*	*%REC*	1	1/20/2014 09:27 PM
Surr: 4-Bromofluorobenzene	*97.0*		*70-130*	*%REC*	1	1/20/2014 09:27 PM
Surr: Dibromofluoromethane	*97.0*		*70-130*	*%REC*	1	1/20/2014 09:27 PM
Surr: Toluene-d8	*92.8*		*70-130*	*%REC*	1	1/20/2014 09:27 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **JB**
Electrical Conductivity @ Saturation	**14**		**0.050**	**mmhos/cm @25**	10	1/23/2014 01:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**18**		**0.60**	**mg/Kg-dry**	1	1/21/2014 06:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **1/20/2014**	Analyst: **MB**
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	1/21/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**17**		**0.050**	**% of sample**	1	1/20/2014 02:37 PM
PH			**SW9045D**		Prep Date: **1/21/2014**	Analyst: **AT**
pH	**8.1**			**s.u.**	1	1/21/2014 04:00 PM

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

ALS Group USA, Corp

Date: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: North Wall **Lab ID:** 1401702-02
Collection Date: 1/17/2014 12:35 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **1/20/2014**	Analyst: **IT**
DRO (C10-C28)	ND		5.0	mg/Kg-dry	1	1/21/2014 06:08 AM
Surr: 4-Terphenyl-d14	*39.7*		*39-115*	*%REC*	1	1/21/2014 06:08 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep Date: **1/20/2014**	Analyst: **IT**
GRO (C6-C10)	**37**		**3.0**	**mg/Kg-dry**	1	1/20/2014 08:29 PM
Surr: Toluene-d8	*112*		*50-150*	*%REC*	1	1/20/2014 08:29 PM
MERCURY BY CVAA			**SW7471**		Prep Date: **1/22/2014**	Analyst: **LR**
Mercury	ND		0.021	mg/Kg-dry	1	1/22/2014 04:23 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Arsenic	**9.8**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Barium	**220**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Cadmium	ND		0.82	mg/Kg-dry	5	1/21/2014 12:11 AM
Chromium	**13**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Copper	**15**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Lead	**13**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Nickel	**19**		**2.0**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
Selenium	ND		2.0	mg/Kg-dry	5	1/21/2014 12:11 AM
Silver	ND		2.0	mg/Kg-dry	5	1/21/2014 12:11 AM
Zinc	**63**		**4.1**	**mg/Kg-dry**	5	1/21/2014 12:11 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/23/2014**	Analyst: **ML**
Calcium	**460**		**10**	**mg/L**	20	1/24/2014 11:13 AM
Magnesium	**160**		**4.0**	**mg/L**	20	1/24/2014 11:13 AM
Sodium	**1,200**		**4.0**	**mg/L**	20	1/24/2014 11:13 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **RH**
Sodium Adsorption Ratio	**13**		**0.010**	**none**	1	1/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **1/20/2014**	Analyst: **RM**
Acenaphthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Acenaphthylene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Benzo(a)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Benzo(a)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Benzo(b)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Benzo(g,h,i)perylene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Benzo(k)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Chrysene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Dibenzo(a,h)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM

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

ALS Group USA, Corp

Date: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: North Wall **Lab ID:** 1401702-02
Collection Date: 1/17/2014 12:35 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Indeno(1,2,3-cd)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Naphthalene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:39 AM
Surr: 2-Fluorobiphenyl	*44.9*		*12-100*	*%REC*	1	1/22/2014 06:39 AM
Surr: 4-Terphenyl-d14	*69.9*		*25-137*	*%REC*	1	1/22/2014 06:39 AM
Surr: Nitrobenzene-d5	*47.4*		*37-107*	*%REC*	1	1/22/2014 06:39 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep Date: **1/20/2014**	Analyst: **RS**
Benzene	ND		36	µg/Kg-dry	1	1/20/2014 09:52 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	1/20/2014 09:52 PM
m,p-Xylene	ND		72	µg/Kg-dry	1	1/20/2014 09:52 PM
o-Xylene	ND		36	µg/Kg-dry	1	1/20/2014 09:52 PM
Toluene	ND		36	µg/Kg-dry	1	1/20/2014 09:52 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	1/20/2014 09:52 PM
Surr: 1,2-Dichloroethane-d4	*90.7*		*70-130*	*%REC*	1	1/20/2014 09:52 PM
Surr: 4-Bromofluorobenzene	*97.0*		*70-130*	*%REC*	1	1/20/2014 09:52 PM
Surr: Dibromofluoromethane	*97.4*		*70-130*	*%REC*	1	1/20/2014 09:52 PM
Surr: Toluene-d8	*94.7*		*70-130*	*%REC*	1	1/20/2014 09:52 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **JB**
Electrical Conductivity @ Saturation	**8.9**		**0.050**	**mmhos/cm @25**	10	1/23/2014 01:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**13**		**0.60**	**mg/Kg-dry**	1	1/21/2014 06:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **1/20/2014**	Analyst: **MB**
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	1/21/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**17**		**0.050**	**% of sample**	1	1/20/2014 02:37 PM
PH			**SW9045D**		Prep Date: **1/21/2014**	Analyst: **AT**
pH	**7.9**			**s.u.**	1	1/21/2014 04:00 PM

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

ALS Group USA, Corp

Date: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: East Wall **Lab ID:** 1401702-03
Collection Date: 1/17/2014 12:45 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **1/20/2014**	Analyst: **IT**
DRO (C10-C28)	**28**		**5.0**	**mg/Kg-dry**	1	1/21/2014 06:38 AM
Surr: 4-Terphenyl-d14	*55.3*		*39-115*	*%REC*	1	1/21/2014 06:38 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep Date: **1/20/2014**	Analyst: **IT**
GRO (C6-C10)	**15**		**3.0**	**mg/Kg-dry**	1	1/20/2014 08:53 PM
Surr: Toluene-d8	*102*		*50-150*	*%REC*	1	1/20/2014 08:53 PM
MERCURY BY CVAA			**SW7471**		Prep Date: **1/22/2014**	Analyst: **LR**
Mercury	ND		0.019	mg/Kg-dry	1	1/22/2014 04:26 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/20/2014**	Analyst: **RH**
Arsenic	**8.6**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Barium	**210**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Cadmium	ND		0.84	mg/Kg-dry	5	1/21/2014 12:17 AM
Chromium	**11**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Copper	**14**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Lead	**12**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Nickel	**18**		**2.1**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
Selenium	ND		2.1	mg/Kg-dry	5	1/21/2014 12:17 AM
Silver	ND		2.1	mg/Kg-dry	5	1/21/2014 12:17 AM
Zinc	**61**		**4.2**	**mg/Kg-dry**	5	1/21/2014 12:17 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/23/2014**	Analyst: **ML**
Calcium	**440**		**10**	**mg/L**	20	1/24/2014 11:26 AM
Magnesium	**150**		**4.0**	**mg/L**	20	1/24/2014 11:26 AM
Sodium	**4,400**		**40**	**mg/L**	200	1/24/2014 03:57 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **RH**
Sodium Adsorption Ratio	**46**		**0.010**	**none**	1	1/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **1/20/2014**	Analyst: **RM**
Acenaphthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Acenaphthylene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Benzo(a)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Benzo(a)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Benzo(b)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Benzo(g,h,i)perylene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Benzo(k)fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Chrysene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Dibenzo(a,h)anthracene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Fluoranthene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM

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

ALS Group USA, Corp

Date: *27-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Prod. Water Spill 1.17.14 **Work Order:** 1401702
Sample ID: East Wall **Lab ID:** 1401702-03
Collection Date: 1/17/2014 12:45 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Indeno(1,2,3-cd)pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Naphthalene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Pyrene	ND		8.0	µg/Kg-dry	1	1/22/2014 06:59 AM
Surr: 2-Fluorobiphenyl	*70.2*		*12-100*	*%REC*	1	1/22/2014 06:59 AM
Surr: 4-Terphenyl-d14	*118*		*25-137*	*%REC*	1	1/22/2014 06:59 AM
Surr: Nitrobenzene-d5	*70.7*		*37-107*	*%REC*	1	1/22/2014 06:59 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep Date: **1/20/2014**	Analyst: **RS**
Benzene	ND		36	µg/Kg-dry	1	1/20/2014 10:16 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	1/20/2014 10:16 PM
m,p-Xylene	ND		72	µg/Kg-dry	1	1/20/2014 10:16 PM
o-Xylene	ND		36	µg/Kg-dry	1	1/20/2014 10:16 PM
Toluene	ND		36	µg/Kg-dry	1	1/20/2014 10:16 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	1/20/2014 10:16 PM
Surr: 1,2-Dichloroethane-d4	*92.8*		*70-130*	*%REC*	1	1/20/2014 10:16 PM
Surr: 4-Bromofluorobenzene	*95.2*		*70-130*	*%REC*	1	1/20/2014 10:16 PM
Surr: Dibromofluoromethane	*97.0*		*70-130*	*%REC*	1	1/20/2014 10:16 PM
Surr: Toluene-d8	*95.7*		*70-130*	*%REC*	1	1/20/2014 10:16 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/23/2014**	Analyst: **JB**
Electrical Conductivity @ Saturation	**22**		**0.050**	**mmhos/cm @25**	10	1/23/2014 01:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**11**		**0.60**	**mg/Kg-dry**	1	1/21/2014 06:15 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **1/20/2014**	Analyst: **MB**
Chromium, Hexavalent	ND		0.60	mg/Kg-dry	1	1/21/2014 03:00 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**17**		**0.050**	**% of sample**	1	1/21/2014 09:25 AM
PH			**SW9045D**		Prep Date: **1/21/2014**	Analyst: **AT**
pH	**8.1**			**s.u.**	1	1/21/2014 04:00 PM

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

QC BATCH REPORT

Batch ID: **55057** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-55057-55057** Units: **mg/Kg** Analysis Date: **1/20/2014 09:39 PM**

Client ID: Run ID: **GC8_140120A** SeqNo: **2616790** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*1.205*	0	*2*	0	*60.3*	*39-115*	0			

LCS Sample ID: **DLCSS1-55057-55057** Units: **mg/Kg** Analysis Date: **1/20/2014 10:09 PM**

Client ID: Run ID: **GC8_140120A** SeqNo: **2616791** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	200.2	5.0	200	0	100	49-124	0			
Surr: 4-Terphenyl-d14	*0.9788*	0	*2*	0	*48.9*	*39-115*	0			

The following samples were analyzed in this batch: 1401702-01B 1401702-02B 1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55059** Instrument ID **GC10** Method: **SW8015**

MBLK Sample ID: **MBLK-55059-55059** Units: **µg/Kg** Analysis Date: **1/20/2014 04:29 PM**
Client ID: Run ID: **GC10_140120B** SeqNo: **2616857** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*5260*	0	*5000*	0	*105*	*50-150*	0			

LCS Sample ID: **LCS-55059-55059** Units: **µg/Kg** Analysis Date: **1/20/2014 03:17 PM**
Client ID: Run ID: **GC10_140120B** SeqNo: **2616855** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	524000	2,500	500000	0	105	70-130	0			
Surr: Toluene-d8	*5315*	0	*5000*	0	*106*	*50-150*	0			

MS Sample ID: **1401694-03A MS** Units: **µg/Kg** Analysis Date: **1/20/2014 10:56 PM**
Client ID: Run ID: **GC10_140120B** SeqNo: **2616885** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	437100	2,500	500000	19060	83.6	70-130	0			
Surr: Toluene-d8	*5564*	0	*5000*	0	*111*	*50-150*	0			

MSD Sample ID: **1401694-03A MSD** Units: **µg/Kg** Analysis Date: **1/20/2014 11:20 PM**
Client ID: Run ID: **GC10_140120B** SeqNo: **2616887** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	424300	2,500	500000	19060	81	70-130	437100	2.98	30	
Surr: Toluene-d8	*5559*	0	*5000*	0	*111*	*50-150*	5564	*0.0899*	*30*	

The following samples were analyzed in this batch: 1401702-01A 1401702-02A 1401702-03A

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55137** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-55137-55137** Units: **mg/Kg** Analysis Date: **1/22/2014 11:23 AM**
Client ID: Run ID: **HG1_140122A** SeqNo: **2618905** Prep Date: **1/22/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-55137-55137** Units: **mg/Kg** Analysis Date: **1/22/2014 11:26 AM**
Client ID: Run ID: **HG1_140122A** SeqNo: **2618908** Prep Date: **1/22/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1728	0.020	0.1665	0	104	80-120	0			

MS Sample ID: **1401707-01BMS** Units: **mg/Kg** Analysis Date: **1/22/2014 11:31 AM**
Client ID: Run ID: **HG1_140122A** SeqNo: **2618913** Prep Date: **1/22/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1363	0.014	0.1151	0.01789	103	75-125	0			

MSD Sample ID: **1401707-01BMSD** Units: **mg/Kg** Analysis Date: **1/22/2014 11:34 AM**
Client ID: Run ID: **HG1_140122A** SeqNo: **2618916** Prep Date: **1/22/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1315	0.014	0.1154	0.01789	98.5	75-125	0.1363	3.65	35	

The following samples were analyzed in this batch: 1401702-01B 1401702-02B 1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-55079-55079** Units: **mg/Kg** Analysis Date: **1/20/2014 09:33 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616208** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.25								
Arsenic	ND	0.25								
Barium	ND	0.25								
Beryllium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	25								
Chromium	ND	0.25								
Cobalt	ND	0.25								
Copper	ND	0.25								
Iron	2.216	4.0								J
Lithium	ND	0.50								
Magnesium	ND	10								
Manganese	ND	0.25								
Molybdenum	ND	0.25								
Nickel	ND	0.25								
Potassium	ND	10								
Selenium	ND	0.25								
Silicon	6.525	10								J
Silver	ND	0.25								
Sodium	ND	10								
Strontium	ND	0.25								
Tin	0.002816	0.10								J
Titanium	0.01028	0.25								J
Vanadium	ND	0.25								
Zinc	0.06275	0.50								J

MBLK Sample ID: **MBLK-55079-55079** Units: **mg/Kg** Analysis Date: **1/21/2014 10:03 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616829** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	ND	0.25								
Thallium	0.00879	0.25								J

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

LCS Sample ID: **LCS-55079-55079** Units: **mg/Kg** Analysis Date: **1/20/2014 09:39 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616209** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	4.862	0.25	5	0	97.2	80-120	0			
Arsenic	4.636	0.25	5	0	92.7	80-120	0			
Barium	4.841	0.25	5	0	96.8	80-120	0			
Beryllium	4.453	0.10	5	0	89.1	80-120	0			
Cadmium	4.76	0.10	5	0	95.2	80-120	0			
Calcium	485.6	25	500	0	97.1	80-120	0			
Chromium	4.76	0.25	5	0	95.2	80-120	0			
Cobalt	4.81	0.25	5	0	96.2	80-120	0			
Copper	4.86	0.25	5	0	97.2	80-120	0			
Iron	490.3	4.0	500	0	98.1	80-120	0			
Lithium	4.384	0.50	5	0	87.7	80-120	0			
Magnesium	472.7	10	500	0	94.5	80-120	0			
Manganese	4.724	0.25	5	0	94.5	80-120	0			
Molybdenum	4.839	0.25	5	0	96.8	80-120	0			
Nickel	4.828	0.25	5	0	96.6	80-120	0			
Potassium	479.4	10	500	0	95.9	80-120	0			
Selenium	4.165	0.25	5	0	83.3	80-120	0			
Silicon	469.8	10	500	0	94	80-120	0			
Silver	4.876	0.25	5	0	97.5	80-120	0			
Sodium	461.8	10	500	0	92.4	80-120	0			
Strontium	4.82	0.25	5	0	96.4	80-120	0			
Tin	4.788	0.10	5	0	95.8	80-120	0			
Titanium	4.87	0.25	5	0	97.4	80-120	0			
Vanadium	4.742	0.25	5	0	94.8	80-120	0			
Zinc	4.708	0.50	5	0	94.2	80-120	0			

LCS Sample ID: **LCS-55079-55079** Units: **mg/Kg** Analysis Date: **1/21/2014 10:09 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616831** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	4.904	0.25	5	0	98.1	80-120	0			
Thallium	4.686	0.25	5	0	93.7	80-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **1401674-05BMS** Units: **mg/Kg** Analysis Date: **1/20/2014 10:09 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616214** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.497	1.4	6.954	0.0991	77.6	75-125	0			
Arsenic	17.05	1.4	6.954	9.245	112	75-125	0			
Barium	48.96	1.4	6.954	38.4	152	75-125	0			SO
Beryllium	6.209	0.56	6.954	0.2068	86.3	75-125	0			
Cadmium	7.321	0.56	6.954	0.1408	103	75-125	0			
Calcium	28260	140	695.4	28220	6.14	75-125	0			SO
Chromium	16.33	1.4	6.954	7.501	127	75-125	0			S
Cobalt	11.57	1.4	6.954	4.48	102	75-125	0			
Copper	17.42	1.4	6.954	10.49	99.6	75-125	0			
Iron	12990	22	695.4	11770	175	75-125	0			SO
Lithium	10.03	2.8	6.954	4.488	79.7	75-125	0			
Magnesium	8261	56	695.4	7167	157	75-125	0			SO
Manganese	565	1.4	6.954	363	2900	75-125	0			SEO
Molybdenum	8	1.4	6.954	1.32	96.1	75-125	0			
Nickel	17.72	1.4	6.954	11.16	94.2	75-125	0			
Potassium	1375	56	695.4	729	92.8	75-125	0			
Selenium	7.477	1.4	6.954	0.5576	99.5	75-125	0			
Silicon	4782	56	695.4	3240	222	75-125	0			SO
Silver	6.846	1.4	6.954	0.03394	98	75-125	0			
Sodium	748.3	56	695.4	60.73	98.9	75-125	0			
Strontium	38.19	1.4	6.954	26.59	167	75-125	0			S
Tin	7.235	0.56	6.954	0.1691	102	75-125	0			
Titanium	152.3	1.4	6.954	125.5	386	75-125	0			SO
Vanadium	22.81	1.4	6.954	14.09	125	75-125	0			S
Zinc	36.02	2.8	6.954	28.84	103	75-125	0			O

MS Sample ID: **1401674-05BMS** Units: **mg/Kg** Analysis Date: **1/21/2014 11:14 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2617399** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	15.18	1.4	6.954	7.719	107	75-125	0			
Thallium	6.698	1.4	6.954	0.1499	94.2	75-125	0			

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55079** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **1401674-05BMSD** Units: **mg/Kg** Analysis Date: **1/20/2014 10:15 PM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2616215** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.011	1.4	7.062	0.0991	83.7	75-125	5.497	8.95	25	
Arsenic	17.07	1.4	7.062	9.245	111	75-125	17.05	0.0958	25	
Barium	48.42	1.4	7.062	38.4	142	75-125	48.96	1.11	25	SO
Beryllium	6.528	0.56	7.062	0.2068	89.5	75-125	6.209	5.02	25	
Cadmium	7.497	0.56	7.062	0.1408	104	75-125	7.321	2.37	25	
Calcium	31100	140	706.2	28220	408	75-125	28260	9.57	25	SO
Chromium	15.84	1.4	7.062	7.501	118	75-125	16.33	3.02	25	
Cobalt	11.23	1.4	7.062	4.48	95.6	75-125	11.57	2.96	25	
Copper	16.73	1.4	7.062	10.49	88.4	75-125	17.42	4.01	25	
Iron	12170	23	706.2	11770	56.6	75-125	12990	6.5	25	SO
Lithium	10.31	2.8	7.062	4.488	82.4	75-125	10.03	2.73	25	
Magnesium	7438	56	706.2	7167	38.4	75-125	8261	10.5	25	SO
Manganese	349.2	1.4	7.062	363	-196	75-125	565	47.2	25	SRO
Molybdenum	8.198	1.4	7.062	1.32	97.4	75-125	8	2.44	25	
Nickel	17.78	1.4	7.062	11.16	93.7	75-125	17.72	0.373	25	
Potassium	1377	56	706.2	729	91.8	75-125	1375	0.177	25	
Selenium	7.277	1.4	7.062	0.5576	95.1	75-125	7.477	2.71	25	
Silicon	4582	56	706.2	3240	190	75-125	4782	4.27	25	SO
Silver	7.059	1.4	7.062	0.03394	99.5	75-125	6.846	3.07	25	
Sodium	753.4	56	706.2	60.73	98.1	75-125	748.3	0.683	25	
Strontium	39.86	1.4	7.062	26.59	188	75-125	38.19	4.27	25	S
Tin	7.446	0.56	7.062	0.1691	103	75-125	7.235	2.88	25	
Titanium	162.4	1.4	7.062	125.5	523	75-125	152.3	6.42	25	SO
Vanadium	22.54	1.4	7.062	14.09	120	75-125	22.81	1.2	25	
Zinc	36.13	2.8	7.062	28.84	103	75-125	36.02	0.299	25	O

MSD Sample ID: **1401674-05BMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 11:20 AM**
Client ID: Run ID: **ICPMS1_140120A** SeqNo: **2617401** Prep Date: **1/20/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	14.76	1.4	7.062	7.719	99.7	75-125	15.18	2.8	25	
Thallium	6.989	1.4	7.062	0.1499	96.8	75-125	6.698	4.25	25	

The following samples were analyzed in this batch: 1401702-01B 1401702-02B 1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55187** Instrument ID **ICPMS1** Method: **SW6020A**

DUP Sample ID: **1401702-02CDUP** Units: **mg/L** Analysis Date: **1/24/2014 11:20 AM**
Client ID: **North Wall** Run ID: **ICPMS1_140123A** SeqNo: **2622320** Prep Date: **1/23/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	459.6	10	0	0	0	0-0	463.4	0.823		
Magnesium	165.7	4.0	0	0	0	0-0	159.1	4.04		
Sodium	1315	4.0	0	0	0	0-0	1250	5.07		

The following samples were analyzed in this batch: 1401702-01C 1401702-02C 1401702-03C

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55066** Instrument ID **SVMS8** Method: **SW8270**

MBLK Sample ID: **SBLKS1-55066-55066** Units: **µg/Kg** Analysis Date: **1/21/2014 08:10 PM**
Client ID: Run ID: **SVMS8_140121A** SeqNo: **2618937** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1300*	0	*1667*	0	*78*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1611*	0	*1667*	0	*96.7*	*25-137*	0			
Surr: Nitrobenzene-d5	*1389*	0	*1667*	0	*83.4*	*37-107*	0			

LCS Sample ID: **SLCSS1-55066-55066** Units: **µg/Kg** Analysis Date: **1/21/2014 08:30 PM**
Client ID: Run ID: **SVMS8_140121A** SeqNo: **2618938** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	461.3	6.7	666.7	0	69.2	45-110	0			
Acenaphthylene	490.7	6.7	666.7	0	73.6	45-105	0			
Anthracene	618.7	6.7	666.7	0	92.8	55-105	0			
Benzo(a)anthracene	605.3	6.7	666.7	0	90.8	50-110	0			
Benzo(a)pyrene	611	6.7	666.7	0	91.6	50-110	0			
Benzo(b)fluoranthene	653.3	6.7	666.7	0	98	45-115	0			
Benzo(g,h,i)perylene	574	6.7	666.7	0	86.1	40-125	0			
Benzo(k)fluoranthene	659.7	6.7	666.7	0	98.9	45-115	0			
Chrysene	599.3	6.7	666.7	0	89.9	55-110	0			
Dibenzo(a,h)anthracene	588	6.7	666.7	0	88.2	40-125	0			
Fluoranthene	699.7	6.7	666.7	0	105	55-115	0			
Fluorene	534.7	6.7	666.7	0	80.2	50-110	0			
Indeno(1,2,3-cd)pyrene	587	6.7	666.7	0	88	40-120	0			
Naphthalene	547.7	6.7	666.7	0	82.1	40-105	0			
Pyrene	568.3	6.7	666.7	0	85.2	45-125	0			
Surr: 2-Fluorobiphenyl	*1117*	0	*1667*	0	*67*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1559*	0	*1667*	0	*93.5*	*25-137*	0			
Surr: Nitrobenzene-d5	*1446*	0	*1667*	0	*86.8*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55066** Instrument ID **SVMS8** Method: **SW8270**

MS Sample ID: **1401674-05B MS** Units: **µg/Kg** Analysis Date: **1/21/2014 11:19 PM**
Client ID: Run ID: **SVMS8_140121A** SeqNo: **2618941** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1542	19	1919	0	80.3	45-110	0			
Acenaphthylene	1638	19	1919	0	85.3	45-105	0			
Anthracene	1810	19	1919	0	94.3	55-105	0			
Benzo(a)anthracene	1821	19	1919	0	94.9	50-110	0			
Benzo(a)pyrene	1849	19	1919	0	96.3	50-110	0			
Benzo(b)fluoranthene	2016	19	1919	0	105	45-115	0			
Benzo(g,h,i)perylene	1368	19	1919	0	71.2	40-125	0			
Benzo(k)fluoranthene	1969	19	1919	0	103	45-115	0			
Chrysene	1742	19	1919	0	90.7	55-110	0			
Dibenzo(a,h)anthracene	1424	19	1919	0	74.2	40-125	0			
Fluoranthene	2130	19	1919	0	111	55-115	0			
Fluorene	1793	19	1919	0	93.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1429	19	1919	0	74.4	40-120	0			
Naphthalene	1537	19	1919	0	80.1	40-105	0			
Pyrene	1653	19	1919	0	86.1	45-125	0			
Surr: 2-Fluorobiphenyl	*3620*	0	*4799*	0	*75.4*	*12-100*	0			
Surr: 4-Terphenyl-d14	*4425*	0	*4799*	0	*92.2*	*25-137*	0			
Surr: Nitrobenzene-d5	*4010*	0	*4799*	0	*83.6*	*37-107*	0			

MSD Sample ID: **1401674-05B MSD** Units: **µg/Kg** Analysis Date: **1/21/2014 11:39 PM**
Client ID: Run ID: **SVMS8_140121A** SeqNo: **2618942** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1535	19	1877	0	81.8	45-110	1542	0.46	30	
Acenaphthylene	1608	19	1877	0	85.7	45-105	1638	1.84	30	
Anthracene	1779	19	1877	0	94.8	55-105	1810	1.72	30	
Benzo(a)anthracene	1770	19	1877	0	94.3	50-110	1821	2.88	30	
Benzo(a)pyrene	1805	19	1877	0	96.2	50-110	1849	2.4	30	
Benzo(b)fluoranthene	1964	19	1877	0	105	45-115	2016	2.63	30	
Benzo(g,h,i)perylene	1336	19	1877	0	71.2	40-125	1368	2.32	30	
Benzo(k)fluoranthene	1970	19	1877	0	105	45-115	1969	0.0156	30	
Chrysene	1719	19	1877	0	91.6	55-110	1742	1.32	30	
Dibenzo(a,h)anthracene	1390	19	1877	0	74	40-125	1424	2.45	30	
Fluoranthene	2071	19	1877	0	110	55-115	2130	2.79	30	
Fluorene	1800	19	1877	0	95.9	50-110	1793	0.392	30	
Indeno(1,2,3-cd)pyrene	1447	19	1877	0	77.1	40-120	1429	1.25	30	
Naphthalene	1500	19	1877	0	79.9	40-105	1537	2.44	30	
Pyrene	1627	19	1877	0	86.7	45-125	1653	1.55	30	
Surr: 2-Fluorobiphenyl	*3485*	0	*4692*	0	*74.3*	*12-100*	3620	*3.8*	*40*	
Surr: 4-Terphenyl-d14	*4290*	0	*4692*	0	*91.4*	*25-137*	4425	*3.1*	*40*	
Surr: Nitrobenzene-d5	*3991*	0	*4692*	0	*85.1*	*37-107*	4010	*0.47*	*40*	

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55066** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:	1401702-01B	1401702-02B	1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55060** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-55060-55060** Units: **µg/Kg** Analysis Date: **1/21/2014 01:07 AM**
Client ID: Run ID: **VMS5_140120A** SeqNo: **2617562** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*1018*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*971.5*	0	*1000*	0	*97.2*	*70-130*	0			
Surr: Dibromofluoromethane	*980.5*	0	*1000*	0	*98*	*70-130*	0			
Surr: Toluene-d8	*999.5*	0	*1000*	0	*100*	*70-130*	0			

LCS Sample ID: **LCS-55060-55060** Units: **µg/Kg** Analysis Date: **1/20/2014 11:22 PM**
Client ID: Run ID: **VMS5_140120A** SeqNo: **2617561** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	903.5	30	1000	0	90.4	75-125	0			
Ethylbenzene	954	30	1000	0	95.4	75-125	0			
m,p-Xylene	1932	60	2000	0	96.6	80-125	0			
o-Xylene	986.5	30	1000	0	98.6	75-125	0			
Toluene	939.5	30	1000	0	94	70-125	0			
Xylenes, Total	2918	90	3000	0	97.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1000*	0	*1000*	0	*100*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1038*	0	*1000*	0	*104*	*70-130*	0			
Surr: Dibromofluoromethane	*1003*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*1012*	0	*1000*	0	*101*	*70-130*	0			

MS Sample ID: **1401604-15A MS** Units: **µg/Kg** Analysis Date: **1/21/2014 08:33 AM**
Client ID: Run ID: **VMS5_140120A** SeqNo: **2617571** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	940	30	1000	0	94	75-125	0			
Ethylbenzene	978	30	1000	0	97.8	75-125	0			
m,p-Xylene	2005	60	2000	0	100	80-125	0			
o-Xylene	1005	30	1000	0	100	75-125	0			
Toluene	970	30	1000	0	97	70-125	0			
Xylenes, Total	3010	90	3000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1009*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1012*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*993.5*	0	*1000*	0	*99.4*	*70-130*	0			
Surr: Toluene-d8	*1025*	0	*1000*	0	*102*	*70-130*	0			

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55060** Instrument ID **VMS5** Method: **SW8260B**

MSD Sample ID: **1401604-15A MSD** Units: **µg/Kg** Analysis Date: **1/21/2014 08:59 AM**
Client ID: Run ID: **VMS5_140120A** SeqNo: **2617572** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	905	30	1000	0	90.5	75-125	940	3.79	30	
Ethylbenzene	951.5	30	1000	0	95.2	75-125	978	2.75	30	
m,p-Xylene	1940	60	2000	0	97	80-125	2005	3.32	30	
o-Xylene	983	30	1000	0	98.3	75-125	1005	2.21	30	
Toluene	919.5	30	1000	0	92	70-125	970	5.35	30	
Xylenes, Total	2922	90	3000	0	97.4	75-125	3010	2.95	30	
Surr: 1,2-Dichloroethane-d4	*1018*	0	*1000*	0	*102*	*70-130*	1009	*0.888*	*30*	
Surr: 4-Bromofluorobenzene	*1009*	0	*1000*	0	*101*	*70-130*	1012	*0.297*	*30*	
Surr: Dibromofluoromethane	*993.5*	0	*1000*	0	*99.4*	*70-130*	993.5	*0*	*30*	
Surr: Toluene-d8	*1007*	0	*1000*	0	*101*	*70-130*	1025	*1.77*	*30*	

The following samples were analyzed in this batch: 1401702-01A 1401702-02A 1401702-03A

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55100** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-55100-55100** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617963** Prep Date: **1/20/2014** 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-55100-55100** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617962** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.988	0.50	2	0	99.4	80-120	0			

MS Sample ID: **1401641-09CMS** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617950** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.636	0.50	2	0	31.8	75-125	0			S

MS Sample ID: **1401641-09CMSI** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617952** Prep Date: **1/20/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	821.4	50	798.1	0	103	75-125	0			

MS Sample ID: **1401702-03B MS** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: **East Wall** Run ID: **WETCHEM_140121M** SeqNo: **2617957** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.604	0.51	2.041	0.1687	70.3	75-125	0			S

MS Sample ID: **1401702-03B MSI** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: **East Wall** Run ID: **WETCHEM_140121M** SeqNo: **2617959** Prep Date: **1/20/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1129	49	1263	0.1687	89.3	75-125	0			

MSD Sample ID: **1401641-09CMSD** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: Run ID: **WETCHEM_140121M** SeqNo: **2617951** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4706	0.49	1.961	0	24	75-125	0.636	0	20	JS

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55100** Instrument ID **WETCHEM** Method: **SW7196A**

MSD Sample ID: **1401702-03B MSD** Units: **mg/Kg** Analysis Date: **1/21/2014 03:00 PM**
Client ID: **East Wall** Run ID: **WETCHEM_140121M** SeqNo: **2617958** Prep Date: **1/20/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.502	0.49	1.976	0.1687	67.5	75-125	1.604	6.57	20	S

The following samples were analyzed in this batch: 1401702-01B 1401702-02B 1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55119** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-55119-55119** Units: **s.u.** Analysis Date: **1/21/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_140121K** SeqNo: **2617910** Prep Date: **1/21/2014** 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: **1401540-01A DUP** Units: **s.u.** Analysis Date: **1/21/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_140121K** SeqNo: **2617912** Prep Date: **1/21/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.87	0	0	0	0	0-0	8.84	0.339	20	

The following samples were analyzed in this batch: 1401702-01B 1401702-02B 1401702-03B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **55187** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1401702-02C DUP** Units: **mmhos/cm @25°C** Analysis Date: **1/23/2014 01:30 PM**

Client ID: **North Wall** Run ID: **WETCHEM_140123H** SeqNo: **2620905** Prep Date: **1/23/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	9.2	0.050	0	0	0		8.88	3.54	50	

The following samples were analyzed in this batch: 1401702-01C 1401702-02C 1401702-03C

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **R134300** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R134300** Units: **% of sample** Analysis Date: **1/20/2014 02:37 PM**
Client ID: Run ID: **MOIST_140120B** SeqNo: **2616557** 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-R134300** Units: **% of sample** Analysis Date: **1/20/2014 02:37 PM**
Client ID: Run ID: **MOIST_140120B** SeqNo: **2616553** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.050	100	0	100	99.5-100.5	0			

DUP Sample ID: **1401497-13B DUP** Units: **% of sample** Analysis Date: **1/20/2014 02:37 PM**
Client ID: Run ID: **MOIST_140120B** SeqNo: **2616535** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.14	0.050	0	0	0	0-0	16.48	9.59	20	

DUP Sample ID: **1401674-01B DUP** Units: **% of sample** Analysis Date: **1/20/2014 02:37 PM**
Client ID: Run ID: **MOIST_140120B** SeqNo: **2616537** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	21.42	0.050	0	0	0	0-0	21.24	0.844	20	

The following samples were analyzed in this batch: 1401702-01B 1401702-02B

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

Client: HRL Compliance Solutions
Work Order: 1401702
Project: WPX GV 41-34 Prod. Water Spill 1.17.14

QC BATCH REPORT

Batch ID: **R134349** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R134349** Units: **% of sample** Analysis Date: **1/21/2014 09:25 AM**
Client ID: Run ID: **MOIST_140121A** SeqNo: **2617845** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.05	0.050								

LCS Sample ID: **LCS-R134349** Units: **% of sample** Analysis Date: **1/21/2014 09:25 AM**
Client ID: Run ID: **MOIST_140121A** SeqNo: **2617841** 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: **1401702-03B DUP** Units: **% of sample** Analysis Date: **1/21/2014 09:25 AM**
Client ID: **East Wall** Run ID: **MOIST_140121A** SeqNo: **2617837** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	16.8	0.050	0	0	0	0-0	16.92	0.712	20	

The following samples were analyzed in this batch: 1401702-03B

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1401702

PAGE 1 of 1

DISPOSAL (By Lab) or Return to Client

PROJECT NAME	WPX GV41-34 Produced Water Spill	SAMPLER	Reed Wold
PROJECT No.		SITE ID	GV41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 1/17/14

TURNAROUND 5 Day ~~24 hr~~ JMP 1/20/14

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX/GRO	DRO/PAH	SARSE IpH Metals
1	Excavation Bottom 30ft	SO	1/17/14	11:00	3	8		X	X	X
2	North Wall	↓	↓	12:35	3	8		X	X	X
3	East Wall	↓	↓	12:45	3	8		X	X	X

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

For metals or anions, please detail analytes below.

Comments: 5.2°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	1/17/14	2:00
RECEIVED BY		Colby Koerner	1/17/14	1400
RELINQUISHED BY		Colby Koerner	1/17/14	1500
RECEIVED BY	Fed Ex			
RELINQUISHED BY				
RECEIVED BY		Diane F. Shaw	1/18/14	1100

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **18-Jan-14 11:00**

Work Order: **1401702** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 20-Jan-14 (Date) Reviewed by: Ann Preston (eSignature) 21-Jan-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.2 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/20/2014 8:34:20 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (970) 424-4749
Lab Hub, LLC
127 E First Street
PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J13201306280326

Ship Date: 17JAN14
ActWgt: 71.0 LB
CAD: 103923490/INET3430

Dims: 25 X 14 X 15 IN

Delivery Address Bar Code

Ref # 1001-011714-2
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

BILL RECIPIENT

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7976 6671 2597

49424
MI-US
GRR

X0 GRRA

51AG1/D6EC/1A9E

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21-Apr-2014

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

Re: **WPX GV 41-34 Landfarm 4.10.14** Work Order: **1404600**

Dear Mark,

ALS Environmental received 1 sample on 11-Apr-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 25.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 21-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Landfarm 4.10.14
Work Order: **1404600**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1404600-01	Batch 1	Soil		4/10/2014 12:00	4/11/2014 10:00	☐

ALS Group USA, Corp

Date: 21-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Landfarm 4.10.14
Work Order: 1404600

Case Narrative

Batch 57755 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% 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: *21-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Landfarm 4.10.14 **Work Order:** 1404600
Sample ID: Batch 1 **Lab ID:** 1404600-01
Collection Date: 4/10/2014 12:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 4/14/14	Analyst: **IT**
DRO (C10-C28)	**110**		**4.8**	**mg/Kg-dry**	1	4/14/2014 08:00 PM
Surr: 4-Terphenyl-d14	*94.3*		*39-115*	*%REC*	1	4/14/2014 08:00 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 4/15/14	Analyst: **IT**
GRO (C6-C10)	**730**		**2.9**	**mg/Kg-dry**	1	4/15/2014 02:26 PM
Surr: Toluene-d8	*112*		*50-150*	*%REC*	1	4/15/2014 02:26 PM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 4/16/14	Analyst: **LR**
Mercury	**0.024**		**0.016**	**mg/Kg-dry**	1	4/16/2014 10:00 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/14/14	Analyst: **ML**
Arsenic	**9.4**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Barium	**360**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Cadmium	ND		0.77	mg/Kg-dry	5	4/16/2014 02:21 AM
Chromium	**13**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Copper	**15**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Lead	**12**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Nickel	**16**		**1.9**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
Selenium	ND		1.9	mg/Kg-dry	5	4/20/2014 09:13 PM
Silver	ND		1.9	mg/Kg-dry	5	4/16/2014 02:21 AM
Zinc	**55**		**3.8**	**mg/Kg-dry**	5	4/16/2014 02:21 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 4/15/14	Analyst: **RH**
Calcium	**12**		**10**	**mg/L**	20	4/16/2014 09:59 PM
Magnesium	ND		4.0	mg/L	20	4/16/2014 09:59 PM
Sodium	**610**		**4.0**	**mg/L**	20	4/16/2014 09:59 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 4/15/14	Analyst: **RH**
Sodium Adsorption Ratio	**39**		**0.010**	**none**	1	4/17/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 4/14/14	Analyst: **RM**
Acenaphthene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Acenaphthylene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Anthracene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Chrysene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM

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

ALS Group USA, Corp

Date: *21-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Landfarm 4.10.14 **Work Order:** 1404600
Sample ID: Batch 1 **Lab ID:** 1404600-01
Collection Date: 4/10/2014 12:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Fluoranthene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Fluorene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Naphthalene	**150**		**7.7**	**µg/Kg-dry**	1	4/16/2014 12:40 AM
Pyrene	ND		7.7	µg/Kg-dry	1	4/16/2014 12:40 AM
Surr: 2-Fluorobiphenyl	*65.7*		*12-100*	*%REC*	1	4/16/2014 12:40 AM
Surr: 4-Terphenyl-d14	*84.2*		*25-137*	*%REC*	1	4/16/2014 12:40 AM
Surr: Nitrobenzene-d5	*54.5*		*37-107*	*%REC*	1	4/16/2014 12:40 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 4/15/14	Analyst: **BG**
Benzene	**180**		**140**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
Ethylbenzene	**2,800**		**140**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
m,p-Xylene	**40,000**		**280**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
o-Xylene	**4,900**		**140**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
Toluene	**1,900**		**140**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
Xylenes, Total	**45,000**		**420**	**µg/Kg-dry**	4	4/17/2014 02:01 PM
Surr: 1,2-Dichloroethane-d4	*103*		*70-130*	*%REC*	4	4/17/2014 02:01 PM
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	4	4/17/2014 02:01 PM
Surr: Dibromofluoromethane	*94.0*		*70-130*	*%REC*	4	4/17/2014 02:01 PM
Surr: Toluene-d8	*114*		*70-130*	*%REC*	4	4/17/2014 02:01 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 4/15/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**3.9**		**0.25**	**mmhos/cm @25**	50	4/15/2014 02:30 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**13**		**0.58**	**mg/Kg-dry**	1	4/18/2014 03:29 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 4/17/14	Analyst: **AG**
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	4/18/2014 11:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**14**		**0.050**	**% of sample**	1	4/11/2014 04:13 PM
PH			**SW9045D**		Prep: EXTRACT / 4/14/14	Analyst: **AT**
pH	**9.3**			**s.u.**	1	4/14/2014 05:00 PM

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

QC BATCH REPORT

Batch ID: **57508** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-57508-57508** Units: **mg/Kg** Analysis Date: **4/14/2014 05:31 PM**

Client ID: Run ID: **GC8_140414A** SeqNo: **2712314** Prep Date: **4/14/2014** 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	*1.459*	0	*1.667*	0	*87.6*	*39-115*	0			

LCS Sample ID: **DLCSS1-57508-57508** Units: **mg/Kg** Analysis Date: **4/14/2014 06:01 PM**

Client ID: Run ID: **GC8_140414A** SeqNo: **2712315** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	153.2	4.2	166.7	0	91.9	49-124	0			
Surr: 4-Terphenyl-d14	*1.41*	0	*1.667*	0	*84.6*	*39-115*	0			

MS Sample ID: **1404598-01B MS** Units: **mg/Kg** Analysis Date: **4/14/2014 06:31 PM**

Client ID: Run ID: **GC8_140414A** SeqNo: **2712316** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	434.8	8.1	322.6	194.4	74.5	49-130	0			
Surr: 4-Terphenyl-d14	*2.844*	0	*3.226*	0	*88.2*	*39-115*	0			

MSD Sample ID: **1404598-01B MSD** Units: **mg/Kg** Analysis Date: **4/14/2014 07:01 PM**

Client ID: Run ID: **GC8_140414A** SeqNo: **2712317** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	415.7	8.1	322.5	194.4	68.6	49-130	434.8	4.49	30	
Surr: 4-Terphenyl-d14	*2.657*	0	*3.225*	0	*82.4*	*39-115*	2.844	*6.8*	*30*	

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57571** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-57571-57571** Units: **µg/Kg** Analysis Date: **4/15/2014 02:00 PM**
Client ID: Run ID: **GC9_140415A** SeqNo: **2714623** Prep Date: **4/15/2014** 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	*4790*	0	*5000*	0	*95.8*	*50-150*	0			

LCS Sample ID: **LCS-57571-57571** Units: **µg/Kg** Analysis Date: **4/15/2014 12:43 PM**
Client ID: Run ID: **GC9_140415A** SeqNo: **2714622** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	483300	2,500	500000	0	96.7	70-130	0			
Surr: Toluene-d8	*4464*	0	*5000*	0	*89.3*	*50-150*	0			

MS Sample ID: **1404731-01A MS** Units: **µg/Kg** Analysis Date: **4/15/2014 11:11 PM**
Client ID: Run ID: **GC9_140415A** SeqNo: **2714642** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	713300	2,500	500000	179100	107	70-130	0			
Surr: Toluene-d8	*5239*	0	*5000*	0	*105*	*50-150*	0			

MSD Sample ID: **1404731-01A MSD** Units: **µg/Kg** Analysis Date: **4/15/2014 11:37 PM**
Client ID: Run ID: **GC9_140415A** SeqNo: **2714643** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	707300	2,500	500000	179100	106	70-130	713300	0.835	30	
Surr: Toluene-d8	*4853*	0	*5000*	0	*97.1*	*50-150*	5239	*7.65*	*30*	

The following samples were analyzed in this batch: 1404600-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57635** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-57635-57635** Units: **mg/Kg** Analysis Date: **4/16/2014 08:58 PM**
Client ID: Run ID: **HG1_140416A** SeqNo: **2717195** Prep Date: **4/16/2014** 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-57635-57635** Units: **mg/Kg** Analysis Date: **4/16/2014 09:00 PM**
Client ID: Run ID: **HG1_140416A** SeqNo: **2717196** Prep Date: **4/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1678	0.020	0.1665	0	101	80-120	0			

MS Sample ID: **1404478-27AMS** Units: **mg/Kg** Analysis Date: **4/16/2014 09:05 PM**
Client ID: Run ID: **HG1_140416A** SeqNo: **2717198** Prep Date: **4/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1296	0.014	0.1201	0.002873	106	75-125	0			

MSD Sample ID: **1404478-27AMSD** Units: **mg/Kg** Analysis Date: **4/16/2014 09:08 PM**
Client ID: Run ID: **HG1_140416A** SeqNo: **2717199** Prep Date: **4/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1269	0.014	0.1188	0.002873	104	75-125	0.1296	2.15	35	

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57495** Instrument ID **ICPMS2** Method: **SW6020A**

DUP Sample ID: **1404615-05ADUP** Units: **mg/L** Analysis Date: **4/17/2014 12:21 AM**
Client ID: Run ID: **ICPMS2_140416A** SeqNo: **2717451** Prep Date: **4/15/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	34.7	10	0	0	0	0-0	27.94	21.6		
Magnesium	7.066	4.0	0	0	0	0-0	5.788	19.9		
Sodium	11.49	4.0	0	0	0	0-0	12.94	11.9		

DUP Sample ID: **1404615-05ADUP** Units: **none** Analysis Date: **4/17/2014**
Client ID: Run ID: **SAR_140417A** SeqNo: **2719985** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.4646	0.010	0	0	0		0.5818	22.4	50	

The following samples were analyzed in this batch: 1404600-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57544** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-57544-57544** Units: **mg/Kg** Analysis Date: **4/16/2014 01:17 AM**
Client ID: Run ID: **ICPMS1_140415A** SeqNo: **2715066** Prep Date: **4/14/2014** 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	0.03881	0.25								J
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	0.00746	0.25								J
Nickel	ND	0.25								
Selenium	0.0349	0.25								J
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-57544-57544** Units: **mg/Kg** Analysis Date: **4/16/2014 01:23 AM**
Client ID: Run ID: **ICPMS1_140415A** SeqNo: **2715067** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.294	0.25	5	0	85.9	80-120	0			
Barium	5.02	0.25	5	0	100	80-120	0			
Cadmium	4.763	0.10	5	0	95.3	80-120	0			
Chromium	4.77	0.25	5	0	95.4	80-120	0			
Copper	4.83	0.25	5	0	96.6	80-120	0			
Lead	5.2	0.25	5	0	104	80-120	0			
Nickel	4.806	0.25	5	0	96.1	80-120	0			
Selenium	3.966	0.25	5	0	79.3	80-120	0			S
Silver	4.954	0.25	5	0	99.1	80-120	0			
Zinc	4.524	0.50	5	0	90.5	80-120	0			

MS Sample ID: **1404595-01AMS** Units: **mg/Kg** Analysis Date: **4/16/2014 01:52 AM**
Client ID: Run ID: **ICPMS1_140415A** SeqNo: **2715072** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.268	0.39	7.74	0.4156	88.5	75-125	0			
Barium	13.23	0.39	7.74	4.385	114	75-125	0			
Cadmium	7.572	0.15	7.74	0.02854	97.5	75-125	0			
Chromium	9.474	0.39	7.74	1.423	104	75-125	0			
Copper	8.127	0.39	7.74	0.6577	96.5	75-125	0			
Lead	10.37	0.39	7.74	2.082	107	75-125	0			
Nickel	8.808	0.39	7.74	1.198	98.3	75-125	0			
Selenium	6.367	0.39	7.74	0.1817	79.9	75-125	0			
Silver	7.618	0.39	7.74	0.006252	98.3	75-125	0			
Zinc	13.23	0.77	7.74	5.39	101	75-125	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57544** Instrument ID **ICPMS1** Method: **SW6020A**

MSD	Sample ID: **1404595-01AMSD**				Units: **mg/Kg**		Analysis Date: **4/16/2014 01:58 AM**			
Client ID:		Run ID: **ICPMS1_140415A**			SeqNo: **2715073**		Prep Date: **4/14/2014**	DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.335	0.39	7.812	0.4156	88.6	75-125	7.268	0.922	25	
Barium	12.94	0.39	7.812	4.385	109	75-125	13.23	2.22	25	
Cadmium	7.595	0.16	7.812	0.02854	96.8	75-125	7.572	0.297	25	
Chromium	9.531	0.39	7.812	1.423	104	75-125	9.474	0.606	25	
Copper	8.227	0.39	7.812	0.6577	96.9	75-125	8.127	1.22	25	
Lead	10.74	0.39	7.812	2.082	111	75-125	10.37	3.51	25	
Nickel	8.914	0.39	7.812	1.198	98.8	75-125	8.808	1.2	25	
Selenium	6.501	0.39	7.812	0.1817	80.9	75-125	6.367	2.08	25	
Silver	7.734	0.39	7.812	0.006252	98.9	75-125	7.618	1.51	25	
Zinc	13.59	0.78	7.812	5.39	105	75-125	13.23	2.73	25	

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57775** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-57775-57775** Units: **mg/Kg** Analysis Date: **4/20/2014 08:24 PM**
Client ID: Run ID: **ICPMS1_140420A** SeqNo: **2722091** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	ND	0.25								

LCS Sample ID: **LCS-57775-57775** Units: **mg/Kg** Analysis Date: **4/20/2014 08:30 PM**
Client ID: Run ID: **ICPMS1_140420A** SeqNo: **2722092** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	4.39	0.25	5	0	87.8	80-120	0			

MS Sample ID: **1404595-01AMS** Units: **mg/Kg** Analysis Date: **4/20/2014 08:42 PM**
Client ID: Run ID: **ICPMS1_140420A** SeqNo: **2722094** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	6.588	0.39	7.825	0.2102	81.5	75-125	0			

MSD Sample ID: **1404595-01AMSD** Units: **mg/Kg** Analysis Date: **4/20/2014 08:49 PM**
Client ID: Run ID: **ICPMS1_140420A** SeqNo: **2722095** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	6.621	0.38	7.53	0.2102	85.1	75-125	6.588	0.497	25	

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57507** Instrument ID **SVMS8** Method: **SW8270**

MBLK Sample ID: **SBLKS1-57507-57507** Units: **µg/Kg** Analysis Date: **4/15/2014 12:01 PM**
Client ID: Run ID: **SVMS8_140415A** SeqNo: **2716226** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1365*	0	*1667*	0	*81.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1860*	0	*1667*	0	*112*	*25-137*	0			
Surr: Nitrobenzene-d5	*1408*	0	*1667*	0	*84.5*	*37-107*	0			

LCS Sample ID: **SLCSS1-57507-57507** Units: **µg/Kg** Analysis Date: **4/15/2014 12:22 PM**
Client ID: Run ID: **SVMS8_140415A** SeqNo: **2716228** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	525	6.7	666.7	0	78.7	45-110	0			
Acenaphthylene	554.3	6.7	666.7	0	83.1	45-105	0			
Anthracene	628.7	6.7	666.7	0	94.3	55-105	0			
Benzo(a)anthracene	632.7	6.7	666.7	0	94.9	50-110	0			
Benzo(a)pyrene	671.3	6.7	666.7	0	101	50-110	0			
Benzo(b)fluoranthene	675.3	6.7	666.7	0	101	45-115	0			
Benzo(g,h,i)perylene	623.3	6.7	666.7	0	93.5	40-125	0			
Benzo(k)fluoranthene	668	6.7	666.7	0	100	45-115	0			
Chrysene	626.7	6.7	666.7	0	94	55-110	0			
Dibenzo(a,h)anthracene	663.7	6.7	666.7	0	99.5	40-125	0			
Fluoranthene	656	6.7	666.7	0	98.4	55-115	0			
Fluorene	537.3	6.7	666.7	0	80.6	50-110	0			
Indeno(1,2,3-cd)pyrene	679	6.7	666.7	0	102	40-120	0			
Naphthalene	503	6.7	666.7	0	75.4	40-105	0			
Pyrene	733.7	6.7	666.7	0	110	45-125	0			
Surr: 2-Fluorobiphenyl	*1266*	0	*1667*	0	*76*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1897*	0	*1667*	0	*114*	*25-137*	0			
Surr: Nitrobenzene-d5	*1367*	0	*1667*	0	*82*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57507** Instrument ID **SVMS8** Method: **SW8270**

MS Sample ID: **1404598-01B MS** Units: **µg/Kg** Analysis Date: **4/15/2014 03:06 PM**

Client ID: Run ID: **SVMS8_140415A** SeqNo: **2716236** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1111	13	1280	0	86.8	45-110	0			
Acenaphthylene	1130	13	1280	0	88.3	45-105	0			
Anthracene	1227	13	1280	0	95.8	55-105	0			
Benzo(a)anthracene	1203	13	1280	0	94	50-110	0			
Benzo(a)pyrene	1284	13	1280	0	100	50-110	0			
Benzo(b)fluoranthene	1207	13	1280	0	94.2	45-115	0			
Benzo(g,h,i)perylene	1322	13	1280	0	103	40-125	0			
Benzo(k)fluoranthene	1225	13	1280	0	95.6	45-115	0			
Chrysene	1164	13	1280	0	90.9	55-110	0			
Dibenzo(a,h)anthracene	1392	13	1280	0	109	40-125	0			
Fluoranthene	1277	13	1280	0	99.7	55-115	0			
Fluorene	1161	13	1280	31.85	88.2	50-110	0			
Indeno(1,2,3-cd)pyrene	1400	13	1280	0	109	40-120	0			
Naphthalene	1137	13	1280	269.1	67.8	40-105	0			
Pyrene	1329	13	1280	0	104	45-125	0			
Surr: 2-Fluorobiphenyl	*2502*	0	*3201*	0	*78.2*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3487*	0	*3201*	0	*109*	*25-137*	0			
Surr: Nitrobenzene-d5	*2592*	0	*3201*	0	*81*	*37-107*	0			

MSD Sample ID: **1404598-01B MSD** Units: **µg/Kg** Analysis Date: **4/15/2014 03:27 PM**

Client ID: Run ID: **SVMS8_140415A** SeqNo: **2716238** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1133	13	1330	0	85.2	45-110	1111	1.97	30	
Acenaphthylene	1164	13	1330	0	87.5	45-105	1130	2.92	30	
Anthracene	1266	13	1330	0	95.1	55-105	1227	3.1	30	
Benzo(a)anthracene	1250	13	1330	0	93.9	50-110	1203	3.78	30	
Benzo(a)pyrene	1350	13	1330	0	101	50-110	1284	5.02	30	
Benzo(b)fluoranthene	1256	13	1330	0	94.4	45-115	1207	4.04	30	
Benzo(g,h,i)perylene	1385	13	1330	0	104	40-125	1322	4.6	30	
Benzo(k)fluoranthene	1257	13	1330	0	94.5	45-115	1225	2.62	30	
Chrysene	1222	13	1330	0	91.9	55-110	1164	4.92	30	
Dibenzo(a,h)anthracene	1467	13	1330	0	110	40-125	1392	5.29	30	
Fluoranthene	1320	13	1330	0	99.2	55-115	1277	3.33	30	
Fluorene	1207	13	1330	31.85	88.3	50-110	1161	3.83	30	
Indeno(1,2,3-cd)pyrene	1477	13	1330	0	111	40-120	1400	5.33	30	
Naphthalene	1195	13	1330	269.1	69.6	40-105	1137	4.95	30	
Pyrene	1348	13	1330	0	101	45-125	1329	1.39	30	
Surr: 2-Fluorobiphenyl	*2525*	0	*3326*	0	*75.9*	*12-100*	2502	*0.923*	*40*	
Surr: 4-Terphenyl-d14	*3536*	0	*3326*	0	*106*	*25-137*	3487	*1.4*	*40*	
Surr: Nitrobenzene-d5	*2692*	0	*3326*	0	*81*	*37-107*	2592	*3.78*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57507** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57570** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **MBLK-57570-57570** Units: **µg/Kg** Analysis Date: **4/15/2014 01:30 PM**
Client ID: Run ID: **VMS6_140415A** SeqNo: **2714786** Prep Date: **4/15/2014** 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	*1022*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*961.5*	0	*1000*	0	*96.2*	*70-130*	0			
Surr: Dibromofluoromethane	*941.5*	0	*1000*	0	*94.2*	*70-130*	0			
Surr: Toluene-d8	*976*	0	*1000*	0	*97.6*	*70-130*	0			

LCS Sample ID: **LCS-57570-57570** Units: **µg/Kg** Analysis Date: **4/15/2014 12:12 PM**
Client ID: Run ID: **VMS6_140415A** SeqNo: **2714785** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1129	30	1000	0	113	75-125	0			
Ethylbenzene	1092	30	1000	0	109	75-125	0			
m,p-Xylene	2170	60	2000	0	108	80-125	0			
o-Xylene	1070	30	1000	0	107	75-125	0			
Toluene	1070	30	1000	0	107	70-125	0			
Xylenes, Total	3240	90	3000	0	108	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1020*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1003*	0	*1000*	0	*100*	*70-130*	0			
Surr: Dibromofluoromethane	*1029*	0	*1000*	0	*103*	*70-130*	0			
Surr: Toluene-d8	*973*	0	*1000*	0	*97.3*	*70-130*	0			

MS Sample ID: **1404633-01A MS** Units: **µg/Kg** Analysis Date: **4/17/2014 10:41 AM**
Client ID: Run ID: **VMS9_140416B** SeqNo: **2717758** Prep Date: **4/15/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1059	30	1000	0	106	75-125	0			
Ethylbenzene	976.5	30	1000	0	97.6	75-125	0			
m,p-Xylene	1978	60	2000	0	98.9	80-125	0			
o-Xylene	966.5	30	1000	0	96.6	75-125	0			
Toluene	1128	30	1000	0	113	70-125	0			
Xylenes, Total	2944	90	3000	0	98.2	75-125	0			
Surr: 1,2-Dichloroethane-d4	*996*	0	*1000*	0	*99.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*958*	0	*1000*	0	*95.8*	*70-130*	0			
Surr: Dibromofluoromethane	*996.5*	0	*1000*	0	*99.6*	*70-130*	0			
Surr: Toluene-d8	*1070*	0	*1000*	0	*107*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57570** Instrument ID **VMS6** Method: **SW8260B**

MSD	Sample ID: **1404633-01A MSD**				Units: **µg/Kg**			Analysis Date: **4/17/2014 11:05 AM**		
Client ID:		Run ID: **VMS9_140416B**			SeqNo: **2717760**		Prep Date: **4/15/2014**		DF: **1**	

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1055	30	1000	0	106	75-125	1059	0.378	30	
Ethylbenzene	1002	30	1000	0	100	75-125	976.5	2.53	30	
m,p-Xylene	2026	60	2000	0	101	80-125	1978	2.4	30	
o-Xylene	999	30	1000	0	99.9	75-125	966.5	3.31	30	
Toluene	1158	30	1000	0	116	70-125	1128	2.54	30	
Xylenes, Total	3025	90	3000	0	101	75-125	2944	2.7	30	
Surr: 1,2-Dichloroethane-d4	*972.5*	0	*1000*	0	*97.2*	*70-130*	996	*2.39*	*30*	
Surr: 4-Bromofluorobenzene	*975*	0	*1000*	0	*97.5*	*70-130*	958	*1.76*	*30*	
Surr: Dibromofluoromethane	*976.5*	0	*1000*	0	*97.6*	*70-130*	996.5	*2.03*	*30*	
Surr: Toluene-d8	*1092*	0	*1000*	0	*109*	*70-130*	1070	*2.04*	*30*	

The following samples were analyzed in this batch: 1404600-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57495** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1404615-05A DUP** Units: **mmhos/cm @25°C** Analysis Date: **4/15/2014 02:30 PM**

Client ID: Run ID: **WETCHEM_140415J** SeqNo: **2713881** Prep Date: **4/15/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.254	0.050	0	0	0		0.26	2.33	50	

The following samples were analyzed in this batch: 1404600-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57529** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-57529-57529** Units: **s.u.** Analysis Date: **4/14/2014 05:00 PM**
Client ID: Run ID: **WETCHEM_140414H** SeqNo: **2712169** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.91	0	4	0	97.8	90-110	0			

DUP Sample ID: **1404598-01B DUP** Units: **s.u.** Analysis Date: **4/14/2014 05:00 PM**
Client ID: Run ID: **WETCHEM_140414H** SeqNo: **2712172** Prep Date: **4/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.32	0	0	0	0	0-0	8.39	0.838	20	

DUP Sample ID: **1404615-01A DUP** Units: **s.u.** Analysis Date: **4/14/2014 05:00 PM**
Client ID: Run ID: **WETCHEM_140414H** SeqNo: **2712178** Prep Date: **4/14/2014** 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	7.76	0.642	20	

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **57755** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-57755-57755** Units: **mg/Kg** Analysis Date: **4/18/2014 11:00 AM**
Client ID: Run ID: **WETCHEM_140418H** SeqNo: **2720618** Prep Date: **4/17/2014** 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-57755-57755** Units: **mg/Kg** Analysis Date: **4/18/2014 11:00 AM**
Client ID: Run ID: **WETCHEM_140418H** SeqNo: **2720617** Prep Date: **4/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.856	0.50	2	0	92.8	80-120	0			

MS Sample ID: **1404598-01B MS** Units: **mg/Kg** Analysis Date: **4/18/2014 11:00 AM**
Client ID: Run ID: **WETCHEM_140418H** SeqNo: **2720516** Prep Date: **4/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.2817	0.50	1.984	0.2795	0.112	75-125	0			JS

MS Sample ID: **1404598-01B MSI** Units: **mg/Kg** Analysis Date: **4/18/2014 11:00 AM**
Client ID: Run ID: **WETCHEM_140418H** SeqNo: **2720518** Prep Date: **4/17/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	527	50	664	0.2795	79.3	75-125	0			

MSD Sample ID: **1404598-01B MSD** Units: **mg/Kg** Analysis Date: **4/18/2014 11:00 AM**
Client ID: Run ID: **WETCHEM_140418H** SeqNo: **2720517** Prep Date: **4/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.4343	0.50	1.992	0.2795	7.77	75-125	0.2817	0	20	JS

The following samples were analyzed in this batch: 1404600-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404600
Project: WPX GV 41-34 Landfarm 4.10.14

QC BATCH REPORT

Batch ID: **R138843** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R138843** Units: **% of sample** Analysis Date: **4/11/2014 04:13 PM**
Client ID: Run ID: **MOIST_140411C** SeqNo: **2711114** 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-R138843** Units: **% of sample** Analysis Date: **4/11/2014 04:13 PM**
Client ID: Run ID: **MOIST_140411C** SeqNo: **2711113** 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: **1404598-01B DUP** Units: **% of sample** Analysis Date: **4/11/2014 04:13 PM**
Client ID: Run ID: **MOIST_140411C** SeqNo: **2711097** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.11	0.050	0	0	0	0-0	9.72	6.48	20	

DUP Sample ID: **1404600-01B DUP** Units: **% of sample** Analysis Date: **4/11/2014 04:13 PM**
Client ID: **Batch 1** Run ID: **MOIST_140411C** SeqNo: **2711099** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.09	0.050	0	0	0	0-0	13.54	3.98	20	

The following samples were analyzed in this batch: 1404600-01B

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #	1404600				
SAMPLER	Reed Wold	DATE	4/10/14	PAGE	1 of 1
PROJECT NAME	WPX GV 41-34 Landfarm	SITE ID	GV 41-34	TURNAROUND	Standard
PROJECT No.		EDD FORMAT		DISPOSAL	(By Lab) or Return to Client
		PURCHASE ORDER			
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX		
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney		
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215		
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635		
PHONE	970-243-3271	PHONE	970-683-2295		
FAX	970-243-3280	FAX			
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX/GRO	DRO/PAH/Metals	SAR/EC/pH
1	Batch 1	SO	4/10/14	12:00	3	8		X	X	X

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

For metals or anions, please detail analytes below.

Comments:

3.8°C

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	4/10/14	1:00
RECEIVED BY	N. Mr	N. Mr	4-10-14	1:00
RELINQUISHED BY	N.M	N. Martinez	4-10-14	1:00
RECEIVED BY	D. F. S.	Diane F. She	4/11/14	1000
RELINQUISHED BY				
RECEIVED BY				

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

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **11-Apr-14 10:00**

Work Order: **1404600** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Apr-14 (Date) Reviewed by: Ann Preston (eSignature) 14-Apr-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.8 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	4/11/2014 1:11:03 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6070
Sample Receiving
ALS Laboratory Group
3352 128th Avenue

Holland, MI 49424

Origin ID: GRRA

FedEx Express

J14101402070326

Ship Date: 10APR14
ActWgt: 51.0 LB
CAD: 2264840/INET3490

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 041014-1
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

FRI - 11 APR AA
STANDARD OVERNIGHT

TRK# 7985 1601 9628
0201

68 GRRA

49424
MI-US
GRR

522G1780BF220

/templates/components/dotcom_label_contents/FoldInstr/en/Folding_instructions.html loading...
/templates/components/dotcom_label_contents/WarningsOriginalLabel/en/Folding_warning.html loading...
/templates/components/dotcom_label_contents/TnCDom/us/en/TC_dom.html loading...

8 W APL. Blue

2 lx.

Lole

ALS Parachute Custody Seal

Date: 4/10 Time: 1700

Name: MM

23-Jun-2014

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

Re: **WPX GV 41-34 Batch 1 6.17.14** Work Order: **1406918**

Dear Mark,

ALS Environmental received 1 sample on 18-Jun-2014 10:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 11.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 23-Jun-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 6.17.14
Work Order: **1406918**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1406918-01	Batch 1	Soil		6/17/2014 10:55	6/18/2014 10:00	☐

ALS Group USA, Corp

Date: 23-Jun-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 6.17.14
WorkOrder: **1406918**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

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

ALS Group USA, Corp

Date: *23-Jun-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 6.17.14
Work Order: 1406918
Sample ID: Batch 1
Lab ID: 1406918-01
Collection Date: 6/17/2014 10:55 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 6/19/14	Analyst: **IT**
DRO (C10-C28)	**56**		**4.9**	**mg/Kg-dry**	1	6/20/2014 03:14 AM
Surr: 4-Terphenyl-d14	*76.0*		*39-133*	*%REC*	1	6/20/2014 03:14 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 6/18/14	Analyst: **IT**
GRO (C6-C10)	**630**		**3.0**	**mg/Kg-dry**	1	6/20/2014 12:43 PM
Surr: Toluene-d8	*102*		*50-150*	*%REC*	1	6/20/2014 12:43 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 6/18/14	Analyst: **BG**
Benzene	ND		36	µg/Kg-dry	1	6/19/2014 12:10 PM
Surr: 1,2-Dichloroethane-d4	*93.1*		*70-130*	*%REC*	1	6/19/2014 12:10 PM
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	1	6/19/2014 12:10 PM
Surr: Dibromofluoromethane	*86.8*		*70-130*	*%REC*	1	6/19/2014 12:10 PM
Surr: Toluene-d8	*113*		*70-130*	*%REC*	1	6/19/2014 12:10 PM
MOISTURE			**A2540 G**			Analyst: **TM**
Moisture	**17**		**0.050**	**% of sample**	1	6/19/2014 12:06 PM

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

QC BATCH REPORT

Batch ID: **59851** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-59851-59851** Units: **mg/Kg** Analysis Date: **6/19/2014 09:45 PM**

Client ID: Run ID: **GC8_140619B** SeqNo: **2817163** Prep Date: **6/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*2.019*	0	*2*	0	*101*	*39-133*	0			

LCS Sample ID: **DLCSS1-59851-59851** Units: **mg/Kg** Analysis Date: **6/19/2014 10:14 PM**

Client ID: Run ID: **GC8_140619B** SeqNo: **2817165** Prep Date: **6/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	155.2	5.0	200	0	77.6	61-109	0			
Surr: 4-Terphenyl-d14	*1.676*	0	*2*	0	*83.8*	*39-133*	0			

MS Sample ID: **1406917-01A MS** Units: **mg/Kg** Analysis Date: **6/19/2014 10:44 PM**

Client ID: Run ID: **GC8_140619B** SeqNo: **2817167** Prep Date: **6/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	641.6	7.9	316.4	337.1	96.3	48-110	0			
Surr: 4-Terphenyl-d14	*2.792*	0	*3.164*	0	*88.2*	*39-133*	0			

MSD Sample ID: **1406917-01A MSD** Units: **mg/Kg** Analysis Date: **6/19/2014 11:14 PM**

Client ID: Run ID: **GC8_140619B** SeqNo: **2817169** Prep Date: **6/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	583.9	8.0	321.6	337.1	76.7	48-110	641.6	9.42	30	
Surr: 4-Terphenyl-d14	*3.167*	0	*3.216*	0	*98.5*	*39-133*	2.792	*12.6*	*30*	

The following samples were analyzed in this batch: 1406918-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406918
Project: WPX GV 41-34 Batch 1 6.17.14

QC BATCH REPORT

Batch ID: **59819** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-59819-59819** Units: **µg/Kg** Analysis Date: **6/18/2014 02:21 PM**
Client ID: Run ID: **GC9_140618A** SeqNo: **2815353** Prep Date: **6/18/2014** 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	*5030*	0	*5000*	0	*101*	*50-150*	0			

LCS Sample ID: **LCS-59819-59819** Units: **µg/Kg** Analysis Date: **6/18/2014 01:55 PM**
Client ID: Run ID: **GC9_140618A** SeqNo: **2815352** Prep Date: **6/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	515800	2,500	500000	0	103	70-130	0			
Surr: Toluene-d8	*5864*	0	*5000*	0	*117*	*50-150*	0			

MS Sample ID: **1406837-01A MS** Units: **µg/Kg** Analysis Date: **6/18/2014 02:47 PM**
Client ID: Run ID: **GC9_140618A** SeqNo: **2815354** Prep Date: **6/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	469200	2,500	500000	0	93.8	70-130	0			
Surr: Toluene-d8	*5880*	0	*5000*	0	*118*	*50-150*	0			

MSD Sample ID: **1406837-01A MSD** Units: **µg/Kg** Analysis Date: **6/18/2014 03:12 PM**
Client ID: Run ID: **GC9_140618A** SeqNo: **2815355** Prep Date: **6/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	464200	2,500	500000	0	92.8	70-130	469200	1.06	30	
Surr: Toluene-d8	*5874*	0	*5000*	0	*117*	*50-150*	5880	*0.102*	*30*	

The following samples were analyzed in this batch: 1406918-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406918
Project: WPX GV 41-34 Batch 1 6.17.14

QC BATCH REPORT

Batch ID: **59833** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **MBLK-59833-59833** Units: **µg/Kg** Analysis Date: **6/18/2014 05:14 PM**
Client ID: Run ID: **VMS6_140618A** SeqNo: **2814899** Prep Date: **6/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Surr: 1,2-Dichloroethane-d4	*957.5*	0	*1000*	0	*95.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*970*	0	*1000*	0	*97*	*70-130*	0			
Surr: Dibromofluoromethane	*942.5*	0	*1000*	0	*94.2*	*70-130*	0			
Surr: Toluene-d8	*964.5*	0	*1000*	0	*96.4*	*70-130*	0			

LCS Sample ID: **LCS-59833-59833** Units: **µg/Kg** Analysis Date: **6/18/2014 03:56 PM**
Client ID: Run ID: **VMS6_140618A** SeqNo: **2814896** Prep Date: **6/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1069	30	1000	0	107	75-125	0			
Surr: 1,2-Dichloroethane-d4	*933*	0	*1000*	0	*93.3*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1012*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*1004*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*985*	0	*1000*	0	*98.5*	*70-130*	0			

MS Sample ID: **1406831-03A MS** Units: **µg/Kg** Analysis Date: **6/20/2014 11:15 AM**
Client ID: Run ID: **VMS9_140619B** SeqNo: **2817912** Prep Date: **6/18/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	138800	3,000	100000	33850	105	75-125	0			
Surr: 1,2-Dichloroethane-d4	*99650*	0	*100000*	0	*99.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*102800*	0	*100000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*95250*	0	*100000*	0	*95.2*	*70-130*	0			
Surr: Toluene-d8	*97400*	0	*100000*	0	*97.4*	*70-130*	0			

MSD Sample ID: **1406831-03A MSD** Units: **µg/Kg** Analysis Date: **6/20/2014 11:40 AM**
Client ID: Run ID: **VMS9_140619B** SeqNo: **2817913** Prep Date: **6/18/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	134500	3,000	100000	33850	101	75-125	138800	3.15	30	
Surr: 1,2-Dichloroethane-d4	*98850*	0	*100000*	0	*98.8*	*70-130*	99650	*0.806*	*30*	
Surr: 4-Bromofluorobenzene	*105300*	0	*100000*	0	*105*	*70-130*	102800	*2.35*	*30*	
Surr: Dibromofluoromethane	*92850*	0	*100000*	0	*92.8*	*70-130*	95250	*2.55*	*30*	
Surr: Toluene-d8	*100400*	0	*100000*	0	*100*	*70-130*	97400	*2.98*	*30*	

The following samples were analyzed in this batch: 1406918-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1406918
Project: WPX GV 41-34 Batch 1 6.17.14

QC BATCH REPORT

Batch ID: **R143055** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R143055** Units: **% of sample** Analysis Date: **6/19/2014 12:06 PM**
Client ID: Run ID: **MOIST_140619C** SeqNo: **2817519** 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-R143055** Units: **% of sample** Analysis Date: **6/19/2014 12:06 PM**
Client ID: Run ID: **MOIST_140619C** SeqNo: **2817518** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.050	100	0	100	99.5-100.5	0			

DUP Sample ID: **1406822-01A DUP** Units: **% of sample** Analysis Date: **6/19/2014 12:06 PM**
Client ID: Run ID: **MOIST_140619C** SeqNo: **2817497** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	80.05	0.050	0	0	0	0-0	81.31	1.56	20	

DUP Sample ID: **1406978-02A DUP** Units: **% of sample** Analysis Date: **6/19/2014 12:06 PM**
Client ID: Run ID: **MOIST_140619C** SeqNo: **2817517** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	6.93	0.050	0	0	0	0-0	6.58	5.18	20	

The following samples were analyzed in this batch: 1406918-01A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1406918

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX GV 41-34 Batch 1	SAMPLER	Reed Wold
PROJECT No.		SITE ID	GV 41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 6/17/14

TURNAROUND 3 Day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO 1680	Benzene
1	Batch 1	SO	6/17/14	10:55	1	8		X	X

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

For metals or anions, please detail analytes below:

Comments:

3.8°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed W. W	6/17/14	4:00
RECEIVED BY			6-17-14	4:07
RELINQUISHED BY			6-17-14	4:10
RECEIVED BY		Diane F She	6/18/14	1000
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **18-Jun-14 10:00**

Work Order: **1406918** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 18-Jun-14 (Date) Reviewed by: Ann Preston (eSignature) 18-Jun-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.8 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	6/18/2014 12:53:46 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (970) 285-5783
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J14014020070326

Ship Date: 17JUN14
ActWgt: 47.0 LB
CAD: 2264840/NET3490

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 061614-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070
BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

4 of 4

MPS# 7703 3544 4970
0263

Mstr# 7703 3544 4855
0201

XX GRRA

WED - 18 JUN 10:30A
PRIORITY OVERNIGHT

49424
MI-US
GRR

522G59804F220

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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ALS Parachute Custody Seal
DATE 6-17 Time 1730
Name

15-Jul-2014

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

Re: **WPX GV 41-34 Batch 1 7.9.14** Work Order: **1407548**

Dear Mark,

ALS Environmental received 1 sample on 11-Jul-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 11.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 15-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 7.9.14
Work Order: **1407548**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1407548-01	Batch 1	Soil		7/9/2014 11:30	7/11/2014 09:30	☐

ALS Group USA, Corp

Date: 15-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 7.9.14
Work Order: 1407548

Case Narrative

Batch 60515 sample Batch 1 MS/MSD recoveries for the GRO surrogate were above control limits due to matrix interference. No data requires qualification, as the GRO MS/MSD recoveries met quality control criteria.

ALS Group USA, Corp

Date: 15-Jul-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 7.9.14
WorkOrder: **1407548**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: *15-Jul-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 1 7.9.14
Work Order: 1407548
Sample ID: Batch 1
Lab ID: 1407548-01
Collection Date: 7/9/2014 11:30 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 7/14/14	Analyst: **IT**
DRO (C10-C28)	**39**		**4.9**	**mg/Kg-dry**	1	7/14/2014 10:09 PM
Surr: 4-Terphenyl-d14	*81.6*		*39-133*	*%REC*	1	7/14/2014 10:09 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 7/11/14	Analyst: **IT**
GRO (C6-C10)	**200**		**2.9**	**mg/Kg-dry**	1	7/14/2014 02:46 PM
Surr: Toluene-d8	*134*		*50-150*	*%REC*	1	7/14/2014 02:46 PM
MOISTURE			**A2540 G**			Analyst: **TM**
Moisture	**15**		**0.050**	**% of sample**	1	7/11/2014 04:14 PM

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

ALS Group USA, Corp

Date: 15-Jul-14

Client: HRL Compliance Solutions, Inc

Work Order: 1407548

Project: WPX GV 41-34 Batch 1 7.9.14

QC BATCH REPORT

Batch ID: **60543** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-60543-60543** Units: **mg/Kg** Analysis Date: **7/15/2014 12:33 PM**

Client ID: Run ID: **GC8_140715B** SeqNo: **2849163** Prep Date: **7/14/2014** 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	*1.539*	0	*1.667*	0	*92.4*	*39-133*	0			

LCS Sample ID: **DLCSS1-60543-60543** Units: **mg/Kg** Analysis Date: **7/15/2014 01:03 PM**

Client ID: Run ID: **GC8_140715B** SeqNo: **2849166** Prep Date: **7/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	128.8	4.2	166.7	0	77.3	61-109	0			
Surr: 4-Terphenyl-d14	*1.362*	0	*1.667*	0	*81.7*	*39-133*	0			

MS Sample ID: **1407456-10B MS** Units: **mg/Kg** Analysis Date: **7/15/2014 01:33 PM**

Client ID: Run ID: **GC8_140715B** SeqNo: **2849167** Prep Date: **7/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	285.9	7.9	316.5	34.56	79.4	48-110	0			
Surr: 4-Terphenyl-d14	*3.073*	0	*3.165*	0	*97.1*	*39-133*	0			

MSD Sample ID: **1407456-10B MSD** Units: **mg/Kg** Analysis Date: **7/15/2014 02:03 PM**

Client ID: Run ID: **GC8_140715B** SeqNo: **2849169** Prep Date: **7/14/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	275.2	8.1	324.7	34.56	74.1	48-110	285.9	3.81	30	
Surr: 4-Terphenyl-d14	*3.034*	0	*3.247*	0	*93.4*	*39-133*	3.073	*1.29*	*30*	

The following samples were analyzed in this batch: 1407548-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1407548
Project: WPX GV 41-34 Batch 1 7.9.14

QC BATCH REPORT

Batch ID: **60515** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-60515-60515** Units: **µg/Kg** Analysis Date: **7/14/2014 01:30 PM**
Client ID: Run ID: **GC9_140714A** SeqNo: **2847030** Prep Date: **7/11/2014** 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	*4435*	0	*5000*	0	*88.7*	*50-150*	0			

LCS Sample ID: **LCS-60515-60515** Units: **µg/Kg** Analysis Date: **7/14/2014 01:04 PM**
Client ID: Run ID: **GC9_140714A** SeqNo: **2847029** Prep Date: **7/11/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	552500	2,500	500000	0	111	70-130	0			
Surr: Toluene-d8	*4926*	0	*5000*	0	*98.5*	*50-150*	0			

MS Sample ID: **1407548-01A MS** Units: **µg/Kg** Analysis Date: **7/14/2014 04:02 PM**
Client ID: **Batch 1** Run ID: **GC9_140714A** SeqNo: **2847307** Prep Date: **7/11/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1145000	2,500	1000000	166900	97.8	70-130	0			
Surr: Toluene-d8	*49840*	0	*5000*	0	*997*	*50-150*	0			*S*

MSD Sample ID: **1407548-01A MSD** Units: **µg/Kg** Analysis Date: **7/14/2014 04:28 PM**
Client ID: **Batch 1** Run ID: **GC9_140714A** SeqNo: **2847308** Prep Date: **7/11/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1269000	2,500	1000000	166900	110	70-130	1145000	10.3	30	
Surr: Toluene-d8	*50150*	0	*5000*	0	*1000*	*50-150*	49840	*0.608*	*30*	*S*

The following samples were analyzed in this batch: 1407548-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1407548
Project: WPX GV 41-34 Batch 1 7.9.14

QC BATCH REPORT

Batch ID: **R144369** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R144369** Units: **% of sample** Analysis Date: **7/11/2014 04:14 PM**
Client ID: Run ID: **MOIST_140711B** SeqNo: **2847236** 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-R144369** Units: **% of sample** Analysis Date: **7/11/2014 04:14 PM**
Client ID: Run ID: **MOIST_140711B** SeqNo: **2847235** 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: **1407489-01A DUP** Units: **% of sample** Analysis Date: **7/11/2014 04:14 PM**
Client ID: Run ID: **MOIST_140711B** SeqNo: **2847222** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.06	0.050	0	0	0	0-0	7.25	2.66	20	

DUP Sample ID: **1407542-01A DUP** Units: **% of sample** Analysis Date: **7/11/2014 04:14 PM**
Client ID: Run ID: **MOIST_140711B** SeqNo: **2847225** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	33.5	0.050	0	0	0	0-0	33.51	0.0298	20	

The following samples were analyzed in this batch: 1407548-01A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 262r8

WORKORDER #	1407548				
PAGE	1 of 1				
DISPOSAL	By Lab or Return to Client				

PROJECT NAME	WPX GV 41-34	SAMPLER	Reed Wold	DATE	7/9/14
PROJECT No.	Batch1	SITE ID	GV 41-34	TURNAROUND	3 Day
		EDD FORMAT			
		PURCHASE ORDER			
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX		
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney		
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215		
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635		
PHONE	970-243-3271	PHONE	970-683-2295		
FAX	970-243-3280	FAX			
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com		

DRO/GRO

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	
1	Batch1	So	7/9/14	11:30	1	8		X

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

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
4.8c	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	7/9/14	2:00
RECEIVED BY	W.M	W.M	7-9-14	3:00
RELINQUISHED BY	W.M	W.M	7-9-14	3:40
RECEIVED BY	Diane F. Shea	Diane F. Shea	7/11/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **11-Jul-14 09:30**

Work Order: **1407548** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Jul-14 (Date) Reviewed by: Ann Preston (eSignature) 14-Jul-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.8 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	7/11/2014 10:40:15 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (970) 285-5783
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J14101402070326

Ship Date: 09JUL14
ActWgt: 64.0 LB
CAD: 2264840/INET3490

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 070914-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070
BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

THU - 10 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7705 6058 7490

49424
MI-US
GRR

XX GRRA

522G2/ED4F/F220

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

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4.8°C

ALS Parachute Cust
DATE 7-9-14
Name

26-Sep-2014

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

Re: **WPX GV 41-34 Batch 2 9.22.14** Work Order: **14091098**

Dear Mark,

ALS Environmental received 1 sample on 23-Sep-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 26.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 26-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 2 9.22.14
Work Order: **14091098**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14091098-01	Batch 2	Soil		9/22/2014 13:20	9/23/2014 10:00	☐

ALS Group USA, Corp

Date: 26-Sep-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 2 9.22.14
Work Order: 14091098

Case Narrative

Batch 63087 LCS recovery for Mercury was above the upper control limit. The result for Mercury for sample Batch 2 may be biased slightly high for Mercury.

Batch 63099 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 63233 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification. Hexavalent Chromium.

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% 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: *26-Sep-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 2 9.22.14 **Work Order:** 14091098
Sample ID: Batch 2 **Lab ID:** 14091098-01
Collection Date: 9/22/2014 01:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 9/23/14	Analyst: **IT**
DRO (C10-C28)	**37**		**4.6**	**mg/Kg-dry**	1	9/23/2014 07:53 PM
Surr: 4-Terphenyl-d14	*69.9*		*39-133*	*%REC*	1	9/23/2014 07:53 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 9/23/14	Analyst: **IT**
GRO (C6-C10)	ND		2.8	mg/Kg-dry	1	9/24/2014 12:11 PM
Surr: Toluene-d8	*106*		*50-150*	*%REC*	1	9/24/2014 12:11 PM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 9/25/14	Analyst: **LR**
Mercury	**0.030**		**0.014**	**mg/Kg-dry**	1	9/25/2014 05:03 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 9/25/14	Analyst: **JEC**
Calcium	**480**		**50**	**mg/L**	100	9/25/2014 06:50 PM
Magnesium	**110**		**20**	**mg/L**	100	9/25/2014 06:50 PM
Sodium	**2,200**		**20**	**mg/L**	100	9/25/2014 06:50 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 9/23/14	Analyst: **ML**
Arsenic	**12**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Barium	**340**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Cadmium	ND		0.82	mg/Kg-dry	5	9/23/2014 10:21 PM
Chromium	**11**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Copper	**13**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Lead	**13**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Nickel	**15**		**2.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
Selenium	ND		2.1	mg/Kg-dry	5	9/24/2014 03:14 PM
Silver	ND		2.1	mg/Kg-dry	5	9/23/2014 10:21 PM
Zinc	**49**		**4.1**	**mg/Kg-dry**	5	9/23/2014 10:21 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHOD**		Prep: USDA Method 20B / 9/25/14	Analyst: **JEC**
Sodium Adsorption Ratio	**23**		**0.010**	**none**	1	9/25/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 9/23/14	Analyst: **RM**
Acenaphthene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Anthracene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Chrysene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM

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

ALS Group USA, Corp

Date: *26-Sep-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 2 9.22.14 **Work Order:** 14091098
Sample ID: Batch 2 **Lab ID:** 14091098-01
Collection Date: 9/22/2014 01:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Fluoranthene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Fluorene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Naphthalene	**41**		**7.4**	**µg/Kg-dry**	1	9/24/2014 01:54 AM
Pyrene	ND		7.4	µg/Kg-dry	1	9/24/2014 01:54 AM
Surr: 2-Fluorobiphenyl	*52.9*		*12-100*	*%REC*	1	9/24/2014 01:54 AM
Surr: 4-Terphenyl-d14	*64.6*		*25-137*	*%REC*	1	9/24/2014 01:54 AM
Surr: Nitrobenzene-d5	*52.9*		*37-107*	*%REC*	1	9/24/2014 01:54 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 9/23/14	Analyst: **BG**
Benzene	ND		34	µg/Kg-dry	1	9/24/2014 07:20 PM
Ethylbenzene	**83**		**34**	**µg/Kg-dry**	1	9/24/2014 07:20 PM
m,p-Xylene	**1,000**		**68**	**µg/Kg-dry**	1	9/24/2014 07:20 PM
o-Xylene	ND		34	µg/Kg-dry	1	9/24/2014 07:20 PM
Toluene	ND		34	µg/Kg-dry	1	9/24/2014 07:20 PM
Xylenes, Total	**1,000**		**100**	**µg/Kg-dry**	1	9/24/2014 07:20 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-130*	*%REC*	1	9/24/2014 07:20 PM
Surr: 4-Bromofluorobenzene	*96.0*		*70-130*	*%REC*	1	9/24/2014 07:20 PM
Surr: Dibromofluoromethane	*99.0*		*70-130*	*%REC*	1	9/24/2014 07:20 PM
Surr: Toluene-d8	*98.4*		*70-130*	*%REC*	1	9/24/2014 07:20 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHOD**		Prep: USDA Method 20B / 9/25/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**14**		**0.050**	**mmhos/cm @25**	10	9/25/2014 03:15 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **ED**
Chromium, Trivalent	**11**		**0.57**	**mg/Kg-dry**	1	9/25/2014 05:30 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 9/24/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	9/25/2014 03:30 PM
MOISTURE			**A2540 G**			Analyst: **RLM**
Moisture	**12**		**0.050**	**% of sample**	1	9/24/2014 05:45 PM
PH			**SW9045D**		Prep: EXTRACT / 9/23/14	Analyst: **STP**
pH	**8.4**			**s.u.**	1	9/23/2014 04:00 PM

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

QC BATCH REPORT

Batch ID: **63072** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-63072-63072** Units: **mg/Kg** Analysis Date: **9/23/2014 04:40 PM**

Client ID: Run ID: **GC8_140923A** SeqNo: **2949730** Prep Date: **9/23/2014** 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	*1.379*	0	*1.667*	0	*82.7*	*39-133*	0			

LCS Sample ID: **DLCSS1-63072-63072** Units: **mg/Kg** Analysis Date: **9/23/2014 05:08 PM**

Client ID: Run ID: **GC8_140923A** SeqNo: **2949732** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	165.9	4.2	166.7	0	99.5	61-109	0			
Surr: 4-Terphenyl-d14	*1.276*	0	*1.667*	0	*76.5*	*39-133*	0			

MS Sample ID: **14091048-01B MS** Units: **mg/Kg** Analysis Date: **9/23/2014 05:35 PM**

Client ID: Run ID: **GC8_140923A** SeqNo: **2949734** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	318.3	8.2	327.5	11.3	93.7	48-110	0			
Surr: 4-Terphenyl-d14	*2.187*	0	*3.275*	0	*66.8*	*39-133*	0			

MSD Sample ID: **14091048-01B MSD** Units: **mg/Kg** Analysis Date: **9/23/2014 06:03 PM**

Client ID: Run ID: **GC8_140923A** SeqNo: **2949736** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	330.5	8.0	321.2	11.3	99.4	48-110	318.3	3.77	30	
Surr: 4-Terphenyl-d14	*2.491*	0	*3.212*	0	*77.5*	*39-133*	2.187	*13*	*30*	

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63096** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-63096-63096** Units: **µg/Kg** Analysis Date: **9/23/2014 05:55 PM**
Client ID: Run ID: **GC9_140923A** SeqNo: **2949510** Prep Date: **9/23/2014** 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	*5202*	0	*5000*	0	*104*	*50-150*	0			

LCS Sample ID: **LCS-63096-63096** Units: **µg/Kg** Analysis Date: **9/23/2014 05:29 PM**
Client ID: Run ID: **GC9_140923A** SeqNo: **2949509** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	484400	2,500	500000	0	96.9	70-130	0			
Surr: Toluene-d8	*5678*	0	*5000*	0	*114*	*50-150*	0			

MS Sample ID: **1409966-01A MS** Units: **µg/Kg** Analysis Date: **9/23/2014 06:46 PM**
Client ID: Run ID: **GC9_140923A** SeqNo: **2949512** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	563500	2,500	500000	0	113	70-130	0			
Surr: Toluene-d8	*4738*	0	*5000*	0	*94.8*	*50-150*	0			

MSD Sample ID: **1409966-01A MSD** Units: **µg/Kg** Analysis Date: **9/23/2014 07:11 PM**
Client ID: Run ID: **GC9_140923A** SeqNo: **2949513** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	540700	2,500	500000	0	108	70-130	563500	4.13	30	
Surr: Toluene-d8	*4674*	0	*5000*	0	*93.5*	*50-150*	4738	*1.36*	*30*	

The following samples were analyzed in this batch: 14091098-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63087** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-63087-63087** Units: **mg/Kg** Analysis Date: **9/23/2014 06:36 PM**
Client ID: Run ID: **HG1_140923A** SeqNo: **2949434** Prep Date: **9/23/2014** 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-63087-63087** Units: **mg/Kg** Analysis Date: **9/23/2014 06:38 PM**
Client ID: Run ID: **HG1_140923A** SeqNo: **2949435** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2088	0.020	0.1665	0	125	80-120	0			S

MS Sample ID: **1409903-13BMS** Units: **mg/Kg** Analysis Date: **9/23/2014 06:57 PM**
Client ID: Run ID: **HG1_140923A** SeqNo: **2949455** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1157	0.012	0.1019	0.002352	111	75-125	0			

MSD Sample ID: **1409903-13BMSD** Units: **mg/Kg** Analysis Date: **9/23/2014 06:59 PM**
Client ID: Run ID: **HG1_140923A** SeqNo: **2949457** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1147	0.012	0.1035	0.002352	108	75-125	0.1157	0.912	35	

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63144** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-63144-63144** Units: **mg/Kg** Analysis Date: **9/25/2014 04:27 PM**
Client ID: Run ID: **HG1_140925A** SeqNo: **2953199** Prep Date: **9/25/2014** 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-63144-63144** Units: **mg/Kg** Analysis Date: **9/25/2014 04:32 PM**
Client ID: Run ID: **HG1_140925A** SeqNo: **2953200** Prep Date: **9/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1983	0.020	0.1665	0	119	80-120	0			

MS Sample ID: **1409903-13BMS** Units: **mg/Kg** Analysis Date: **9/25/2014 04:39 PM**
Client ID: Run ID: **HG1_140925A** SeqNo: **2953203** Prep Date: **9/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1216	0.013	0.1047	0.0001571	116	75-125	0			

MSD Sample ID: **1409903-13BMSD** Units: **mg/Kg** Analysis Date: **9/25/2014 04:41 PM**
Client ID: Run ID: **HG1_140925A** SeqNo: **2953204** Prep Date: **9/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1132	0.012	0.1025	0.0001571	110	75-125	0.1216	7.21	35	

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63099** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-63099-63099** Units: **mg/Kg** Analysis Date: **9/23/2014 08:25 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949712** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	0.00144	0.25								J
Zinc	0.09125	0.50								J

LCS Sample ID: **LCS-63099-63099** Units: **mg/Kg** Analysis Date: **9/23/2014 08:31 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949713** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.563	0.25	5	0	91.3	80-120	0			
Barium	4.81	0.25	5	0	96.2	80-120	0			
Cadmium	4.895	0.10	5	0	97.9	80-120	0			
Chromium	5	0.25	5	0	100	80-120	0			
Copper	4.695	0.25	5	0	93.9	80-120	0			
Lead	4.858	0.25	5	0	97.2	80-120	0			
Nickel	4.838	0.25	5	0	96.8	80-120	0			
Selenium	4.577	0.25	5	0	91.5	80-120	0			
Silver	4.688	0.25	5	0	93.8	80-120	0			
Zinc	4.686	0.50	5	0	93.7	80-120	0			

MS Sample ID: **14091038-06BMS** Units: **mg/Kg** Analysis Date: **9/23/2014 09:08 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949719** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.04	1.6	7.886	9.94	64.7	75-125	0			S
Barium	114.7	1.6	7.886	93.81	265	75-125	0			SO
Cadmium	8.372	0.63	7.886	0.1749	104	75-125	0			
Chromium	33.72	1.6	7.886	22.79	139	75-125	0			S
Copper	28.35	1.6	7.886	28.06	3.63	75-125	0			S
Lead	24	1.6	7.886	14.2	124	75-125	0			
Nickel	42.3	1.6	7.886	38.25	51.3	75-125	0			SO
Silver	7.473	1.6	7.886	0.04108	94.2	75-125	0			
Zinc	59.81	3.2	7.886	52.25	95.8	75-125	0			O

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63099** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **14091038-06BMS** Units: **mg/Kg** Analysis Date: **9/24/2014 02:09 PM**
Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951117** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	6.082	1.6	7.886	-0.3768	81.9	75-125	0			

MSD Sample ID: **14091038-06BMSD** Units: **mg/Kg** Analysis Date: **9/23/2014 09:14 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949720** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.74	1.6	7.886	9.94	99	75-125	15.04	16.5	25	
Barium	116.3	1.6	7.886	93.81	286	75-125	114.7	1.42	25	SO
Cadmium	8.681	0.63	7.886	0.1749	108	75-125	8.372	3.63	25	
Chromium	35.14	1.6	7.886	22.79	157	75-125	33.72	4.12	25	S
Copper	32.33	1.6	7.886	28.06	54.2	75-125	28.35	13.1	25	S
Lead	23.72	1.6	7.886	14.2	121	75-125	24	1.16	25	
Nickel	48.52	1.6	7.886	38.25	130	75-125	42.3	13.7	25	SO
Silver	7.625	1.6	7.886	0.04108	96.2	75-125	7.473	2.01	25	
Zinc	62.74	3.2	7.886	52.25	133	75-125	59.81	4.79	25	SO

MSD Sample ID: **14091038-06BMSD** Units: **mg/Kg** Analysis Date: **9/24/2014 02:15 PM**
Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951119** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	6.11	1.6	7.886	-0.3768	82.3	75-125	6.082	0.466	25	

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63152** Instrument ID **SAR** Method: **USDA H60 Method**

DUP	Sample ID: **14091098-01CDUP**				Units: **none**		Analysis Date: **9/25/2014**			
Client ID: **Batch 2**		Run ID: **SAR_140925A**			SeqNo: **2953985**		Prep Date: **9/25/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	22.82	0.010	0	0	0		23.25	1.85	50	

The following samples were analyzed in this batch: 14091098-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63071** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-63071-63071** Units: **µg/Kg** Analysis Date: **9/23/2014 09:18 PM**
Client ID: Run ID: **SVMS4_140923A** SeqNo: **2951173** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1384*	0	*1667*	0	*83.1*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1708*	0	*1667*	0	*102*	*25-137*	0			
Surr: Nitrobenzene-d5	*1307*	0	*1667*	0	*78.4*	*37-107*	0			

LCS Sample ID: **SLCSS1-63071-63071** Units: **µg/Kg** Analysis Date: **9/23/2014 09:44 PM**
Client ID: Run ID: **SVMS4_140923A** SeqNo: **2951174** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	563.7	6.7	666.7	0	84.5	45-110	0			
Acenaphthylene	609.7	6.7	666.7	0	91.4	45-105	0			
Anthracene	662.3	6.7	666.7	0	99.3	55-105	0			
Benzo(a)anthracene	635	6.7	666.7	0	95.2	50-110	0			
Benzo(a)pyrene	657	6.7	666.7	0	98.5	50-110	0			
Benzo(b)fluoranthene	654.7	6.7	666.7	0	98.2	45-115	0			
Benzo(g,h,i)perylene	778.7	6.7	666.7	0	117	40-125	0			
Benzo(k)fluoranthene	693	6.7	666.7	0	104	45-115	0			
Chrysene	680.7	6.7	666.7	0	102	55-110	0			
Dibenzo(a,h)anthracene	685.7	6.7	666.7	0	103	40-125	0			
Fluoranthene	641.7	6.7	666.7	0	96.2	55-115	0			
Fluorene	590.3	6.7	666.7	0	88.5	50-110	0			
Indeno(1,2,3-cd)pyrene	666.7	6.7	666.7	0	100	40-120	0			
Naphthalene	564	6.7	666.7	0	84.6	40-105	0			
Pyrene	721.7	6.7	666.7	0	108	45-125	0			
Surr: 2-Fluorobiphenyl	*1395*	0	*1667*	0	*83.7*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1792*	0	*1667*	0	*108*	*25-137*	0			
Surr: Nitrobenzene-d5	*1362*	0	*1667*	0	*81.7*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63071** Instrument ID **SVMS4** Method: **SW846 8270D**

MS Sample ID: **1409959-01A MS** Units: **µg/Kg** Analysis Date: **9/23/2014 10:10 PM**
Client ID: Run ID: **SVMS4_140923A** SeqNo: **2951175** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1587	20	1973	0	80.4	45-110	0			
Acenaphthylene	1707	20	1973	0	86.5	45-105	0			
Anthracene	1933	20	1973	0	97.9	55-105	0			
Benzo(a)anthracene	1854	20	1973	42.16	91.8	50-110	0			
Benzo(a)pyrene	1985	20	1973	0	101	50-110	0			
Benzo(b)fluoranthene	2068	20	1973	0	105	45-115	0			
Benzo(g,h,i)perylene	2191	20	1973	0	111	40-125	0			
Benzo(k)fluoranthene	2145	20	1973	0	109	45-115	0			
Chrysene	1956	20	1973	0	99.1	55-110	0			
Dibenzo(a,h)anthracene	1931	20	1973	56.82	95	40-125	0			
Fluoranthene	1946	20	1973	0	98.6	55-115	0			
Fluorene	1699	20	1973	0	86.1	50-110	0			
Indeno(1,2,3-cd)pyrene	1992	20	1973	111.8	95.3	40-120	0			
Naphthalene	1552	20	1973	0	78.6	40-105	0			
Pyrene	1974	20	1973	0	100	45-125	0			
Surr: 2-Fluorobiphenyl	*3790*	0	*4933*	0	*76.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*4781*	0	*4933*	0	*96.9*	*25-137*	0			
Surr: Nitrobenzene-d5	*3650*	0	*4933*	0	*74*	*37-107*	0			

MSD Sample ID: **1409959-01A MSD** Units: **µg/Kg** Analysis Date: **9/23/2014 10:36 PM**
Client ID: Run ID: **SVMS4_140923A** SeqNo: **2951176** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1540	19	1891	0	81.4	45-110	1587	3.01	30	
Acenaphthylene	1639	19	1891	0	86.7	45-105	1707	4.02	30	
Anthracene	1898	19	1891	0	100	55-105	1933	1.78	30	
Benzo(a)anthracene	1807	19	1891	42.16	93.3	50-110	1854	2.56	30	
Benzo(a)pyrene	1863	19	1891	0	98.5	50-110	1985	6.31	30	
Benzo(b)fluoranthene	1993	19	1891	0	105	45-115	2068	3.68	30	
Benzo(g,h,i)perylene	2006	19	1891	0	106	40-125	2191	8.8	30	
Benzo(k)fluoranthene	1983	19	1891	0	105	45-115	2145	7.85	30	
Chrysene	1855	19	1891	0	98.1	55-110	1956	5.31	30	
Dibenzo(a,h)anthracene	1822	19	1891	56.82	93.3	40-125	1931	5.79	30	
Fluoranthene	1870	19	1891	0	98.9	55-115	1946	4	30	
Fluorene	1636	19	1891	0	86.5	50-110	1699	3.79	30	
Indeno(1,2,3-cd)pyrene	1829	19	1891	111.8	90.8	40-120	1992	8.49	30	
Naphthalene	1513	19	1891	0	80	40-105	1552	2.55	30	
Pyrene	1933	19	1891	0	102	45-125	1974	2.07	30	
Surr: 2-Fluorobiphenyl	*3552*	0	*4727*	0	*75.1*	*12-100*	3790	*6.48*	*40*	
Surr: 4-Terphenyl-d14	*4558*	0	*4727*	0	*96.4*	*25-137*	4781	*4.77*	*40*	
Surr: Nitrobenzene-d5	*3540*	0	*4727*	0	*74.9*	*37-107*	3650	*3.07*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63071** Instrument ID **SVMS4** Method: **SW846 8270D**

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63095** Instrument ID **VMS8** Method: **SW8260B**

MBLK Sample ID: **MBLK-63095-63095** Units: **µg/Kg** Analysis Date: **9/24/2014 02:51 AM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950151** Prep Date: **9/23/2014** 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	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*978*	0	*1000*	0	*97.8*	*70-130*	0			
Surr: Dibromofluoromethane	*990.5*	0	*1000*	0	*99*	*70-130*	0			
Surr: Toluene-d8	*990.5*	0	*1000*	0	*99*	*70-130*	0			

MBLK Sample ID: **MBLK-63095-63095** Units: **µg/Kg** Analysis Date: **9/24/2014 02:51 AM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950185** Prep Date: **9/23/2014** 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	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*978*	0	*1000*	0	*97.8*	*70-130*	0			
Surr: Dibromofluoromethane	*990.5*	0	*1000*	0	*99*	*70-130*	0			
Surr: Toluene-d8	*990.5*	0	*1000*	0	*99*	*70-130*	0			

LCS Sample ID: **LCS-63095-63095** Units: **µg/Kg** Analysis Date: **9/23/2014 11:59 PM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950146** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1054	30	1000	0	105	75-125	0			
Ethylbenzene	1017	30	1000	0	102	75-125	0			
m,p-Xylene	2037	60	2000	0	102	80-125	0			
o-Xylene	1008	30	1000	0	101	75-125	0			
Toluene	1064	30	1000	0	106	70-125	0			
Xylenes, Total	3044	90	3000	0	101	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1024*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*985*	0	*1000*	0	*98.5*	*70-130*	0			
Surr: Dibromofluoromethane	*1042*	0	*1000*	0	*104*	*70-130*	0			
Surr: Toluene-d8	*997.5*	0	*1000*	0	*99.8*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63095** Instrument ID **VMS8** Method: **SW8260B**

LCS Sample ID: **LCS-63095-63095** Units: **µg/Kg** Analysis Date: **9/23/2014 11:59 PM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950178** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1054	30	1000	0	105	75-125	0			
Ethylbenzene	1017	30	1000	0	102	75-125	0			
m,p-Xylene	2037	60	2000	0	102	80-125	0			
o-Xylene	1008	30	1000	0	101	75-125	0			
Toluene	1064	30	1000	0	106	70-125	0			
Xylenes, Total	3044	90	3000	0	101	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1024*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*985*	0	*1000*	0	*98.5*	*70-130*	0			
Surr: Dibromofluoromethane	*1042*	0	*1000*	0	*104*	*70-130*	0			
Surr: Toluene-d8	*997.5*	0	*1000*	0	*99.8*	*70-130*	0			

LCSD Sample ID: **LCSD-63095-63095** Units: **µg/Kg** Analysis Date: **9/24/2014 12:24 PM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950191** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	974.5	30	1000	0	97.4	75-125	1054	7.84	25	
Ethylbenzene	983	30	1000	0	98.3	75-125	1017	3.4	25	
m,p-Xylene	1953	60	2000	0	97.6	80-125	2037	4.21	25	
o-Xylene	975	30	1000	0	97.5	75-125	1008	3.28	25	
Toluene	1035	30	1000	0	104	70-125	1064	2.81	25	
Xylenes, Total	2928	90	3000	0	97.6	75-125	3044	3.9	0	
Surr: 1,2-Dichloroethane-d4	*997.5*	0	*1000*	0	*99.8*	*70-130*	1024	*2.57*	*0*	
Surr: 4-Bromofluorobenzene	*1003*	0	*1000*	0	*100*	*70-130*	985	*1.81*	*0*	
Surr: Dibromofluoromethane	*1015*	0	*1000*	0	*102*	*70-130*	1042	*2.58*	*0*	
Surr: Toluene-d8	*998.5*	0	*1000*	0	*99.8*	*70-130*	997.5	*0.1*	*0*	

MS Sample ID: **14091088-01A MS** Units: **µg/Kg** Analysis Date: **9/24/2014 08:57 AM**
Client ID: Run ID: **VMS8_140923A** SeqNo: **2950158** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	962.5	30	1000	22	94	75-125	0			
Ethylbenzene	918.5	30	1000	0	91.8	75-125	0			
m,p-Xylene	1843	60	2000	0	92.2	80-125	0			
o-Xylene	940.5	30	1000	0	94	75-125	0			
Toluene	946	30	1000	35	91.1	70-125	0			
Xylenes, Total	2784	90	3000	0	92.8	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1011*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1025*	0	*1000*	0	*102*	*70-130*	0			
Surr: Dibromofluoromethane	*1024*	0	*1000*	0	*102*	*70-130*	0			
Surr: Toluene-d8	*933*	0	*1000*	0	*93.3*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63095** Instrument ID **VMS8** Method: **SW8260B**

MSD	Sample ID: **14091088-01A MSD**				Units: **µg/Kg**			Analysis Date: **9/24/2014 09:22 AM**		
Client ID:	Run ID: **VMS8_140923A**				SeqNo: **2950165**		Prep Date: **9/23/2014**		DF: **1**	

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	936.5	30	1000	22	91.4	75-125	962.5	2.74	30	
Ethylbenzene	911.5	30	1000	0	91.2	75-125	918.5	0.765	30	
m,p-Xylene	1839	60	2000	0	92	80-125	1843	0.217	30	
o-Xylene	933	30	1000	0	93.3	75-125	940.5	0.801	30	
Toluene	930.5	30	1000	35	89.6	70-125	946	1.65	30	
Xylenes, Total	2772	90	3000	0	92.4	75-125	2784	0.414	30	
Surr: 1,2-Dichloroethane-d4	*983*	0	*1000*	0	*98.3*	*70-130*	1011	*2.81*	*30*	
Surr: 4-Bromofluorobenzene	*1001*	0	*1000*	0	*100*	*70-130*	1025	*2.37*	*30*	
Surr: Dibromofluoromethane	*948*	0	*1000*	0	*94.8*	*70-130*	1024	*7.76*	*30*	
Surr: Toluene-d8	*949*	0	*1000*	0	*94.9*	*70-130*	933	*1.7*	*30*	

The following samples were analyzed in this batch: 14091098-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63106** Instrument ID **WETCHEM** Method: **SW9045D**

LCS	Sample ID: **LCS-63106-63106**				Units: **s.u.**			Analysis Date: **9/23/2014 04:00 PM**			
Client ID:		Run ID: **WETCHEM_140923N**			SeqNo: **2948794**			Prep Date: **9/23/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	4.01	0	4	0	100	90-110	0				

DUP	Sample ID: **1409932-01C DUP**				Units: **s.u.**			Analysis Date: **9/23/2014 04:00 PM**			
Client ID:		Run ID: **WETCHEM_140923N**			SeqNo: **2948799**			Prep Date: **9/23/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8.21	0	0	0	0	0-0	8.34	1.57	20		

DUP	Sample ID: **1409967-03A DUP**				Units: **s.u.**			Analysis Date: **9/23/2014 04:00 PM**			
Client ID:		Run ID: **WETCHEM_140923N**			SeqNo: **2948807**			Prep Date: **9/23/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	8	0	0	0	0	0-0	8	0	20		

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63152** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **14091098-01C DUP** Units: **mmhos/cm @25°C** Analysis Date: **9/25/2014 03:15 PM**

Client ID: **Batch 2** Run ID: **WETCHEM_140925N** SeqNo: **2952727** Prep Date: **9/25/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	13.84	0.050	0	0	0		14.32	3.41	50	

The following samples were analyzed in this batch: 14091098-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **63233** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-63233-63233** Units: **mg/Kg** Analysis Date: **9/25/2014 03:30 PM**
Client ID: Run ID: **WETCHEM_140925Y** SeqNo: **2953126** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50								

LCS Sample ID: **LCS-63233-63233** Units: **mg/Kg** Analysis Date: **9/25/2014 03:30 PM**
Client ID: Run ID: **WETCHEM_140925Y** SeqNo: **2953125** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.672	0.50	2	0	83.6	80-120	0			

MS Sample ID: **14091096-01B MS** Units: **mg/Kg** Analysis Date: **9/25/2014 03:30 PM**
Client ID: Run ID: **WETCHEM_140925Y** SeqNo: **2953119** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.566	0.50	1.992	0.2134	67.9	75-125	0			S

MS Sample ID: **14091096-01B MSI** Units: **mg/Kg** Analysis Date: **9/25/2014 03:30 PM**
Client ID: Run ID: **WETCHEM_140925Y** SeqNo: **2953121** Prep Date: **9/24/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1137	49	1071	0.2134	106	75-125	0			

MSD Sample ID: **14091096-01B MSD** Units: **mg/Kg** Analysis Date: **9/25/2014 03:30 PM**
Client ID: Run ID: **WETCHEM_140925Y** SeqNo: **2953120** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.949	0.49	1.976	0.2134	87.8	75-125	1.566	21.8	20	R

The following samples were analyzed in this batch: 14091098-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14091098
Project: WPX GV 41-34 Batch 2 9.22.14

QC BATCH REPORT

Batch ID: **R148877** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R148877** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951623** 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-R148877** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951621** 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: **1409969-11A DUP** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951596** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	1.15	0.050	0	0	0	0-0	1.15	0	20	

DUP Sample ID: **1409981-08A DUP** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951617** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.83	0.050	0	0	0	0-0	4.88	1.03	20	

The following samples were analyzed in this batch: 14091098-01B

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER #: 14091098

PAGE: 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	WPX GV 41-34	SAMPLER	Reed Wold
PROJECT No.	Batch 2	SITE ID	GV 41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE: 9/22/14

TURNAROUND: 3 Day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX / GRO	DRO / PRH / Metals	SAR / EC / pH
1	Batch 2	SO	9/22/14	1:20	3	8		X	X	X

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

For metals or anions, please detail analytes below.

Comments: 4.2°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Reed Wold	9/22/14	2:00
RECEIVED BY			9-22-14	2:00
RELINQUISHED BY			9-22-14	2:00
RECEIVED BY		Diane F. Shaw	9/23/14	1000
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **23-Sep-14 10:00**

Work Order: **14091098** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 23-Sep-14 (Date) Reviewed by: Ann Preston (eSignature) 23-Sep-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.2 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/23/2014 11:17:06 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6070 Origin ID: RILA
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

FedEx Express

E

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

HOLLAND, MI 49424

Ship Date: 22SEP14
ActWgt: 50.0 LB
CAD: 2204940/INET3550
Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 092214-1
Invoice #
PO # Parachute
Dept #

1 of 2

TUE - 23 SEP 10:30A
PRIORITY OVERNIGHT

TRK# 7712 4119 4770
0201

MASTER

XX HLMA

49424
MI-US
GRR

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

CUSTODY SEAL	Seal Broken By:
Date: 9/22 Time: 1730	
Name:	Date:
Company:	

04-Nov-2014

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

Re: **WPX GV 41-34 Batch 3 10.28.14** Work Order: **14101771**

Dear Mark,

ALS Environmental received 1 sample on 30-Oct-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 24.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 04-Nov-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 3 10.28.14
Work Order: **14101771**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14101771-01	GV 41-34 Batch 3	Soil		10/28/2014 09:50	10/30/2014 09:30	☐

ALS Group USA, Corp

Date: 04-Nov-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 3 10.28.14
Work Order: 14101771

Case Narrative

Batch 64547 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 64560 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% 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: *04-Nov-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 3 10.28.14
Work Order: 14101771
Sample ID: GV 41-34 Batch 3
Lab ID: 14101771-01
Collection Date: 10/28/2014 09:50 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 10/31/14	Analyst: **IT**
DRO (C10-C28)	**31**		**4.5**	**mg/Kg-dry**	1	10/31/2014 08:50 PM
Surr: 4-Terphenyl-d14	*62.0*		*39-133*	*%REC*	1	10/31/2014 08:50 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 10/31/14	Analyst: **IT**
GRO (C6-C10)	**78**		**2.7**	**mg/Kg-dry**	1	11/1/2014 11:07 AM
Surr: Toluene-d8	*127*		*50-150*	*%REC*	1	11/1/2014 11:07 AM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 10/31/14	Analyst: **LR**
Mercury	**0.023**		**0.016**	**mg/Kg-dry**	1	10/31/2014 02:21 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 10/31/14	Analyst: **JEC**
Arsenic	**13**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Barium	**330**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Cadmium	ND		0.31	mg/Kg-dry	1	10/31/2014 06:27 PM
Chromium	**11**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Copper	**15**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Lead	**20**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Nickel	**13**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Selenium	**0.62**		**0.39**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
Silver	ND		0.39	mg/Kg-dry	1	10/31/2014 06:27 PM
Zinc	**63**		**0.79**	**mg/Kg-dry**	1	10/31/2014 06:27 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 11/1/14	Analyst: **JEC**
Calcium	**490**		**5.0**	**mg/L**	10	11/3/2014 03:27 PM
Magnesium	**150**		**2.0**	**mg/L**	10	11/3/2014 03:27 PM
Sodium	**2,700**		**20**	**mg/L**	100	11/3/2014 04:37 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHOD**		Prep: USDA Method 20B / 11/1/14	Analyst: **JEC**
Sodium Adsorption Ratio	**28**		**0.010**	**none**	1	11/3/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 10/31/14	Analyst: **RM**
Acenaphthene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Acenaphthylene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Anthracene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Benzo(a)anthracene	**9.7**		**7.2**	**µg/Kg-dry**	1	11/3/2014 01:46 PM
Benzo(a)pyrene	**16**		**7.2**	**µg/Kg-dry**	1	11/3/2014 01:46 PM
Benzo(b)fluoranthene	**10**		**7.2**	**µg/Kg-dry**	1	11/3/2014 01:46 PM
Benzo(g,h,i)perylene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Benzo(k)fluoranthene	**8.6**		**7.2**	**µg/Kg-dry**	1	11/3/2014 01:46 PM
Chrysene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM

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

ALS Group USA, Corp

Date: *04-Nov-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 3 10.28.14 **Work Order:** 14101771
Sample ID: GV 41-34 Batch 3 **Lab ID:** 14101771-01
Collection Date: 10/28/2014 09:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Fluoranthene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Fluorene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Indeno(1,2,3-cd)pyrene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Naphthalene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Pyrene	ND		7.2	µg/Kg-dry	1	11/3/2014 01:46 PM
Surr: 2-Fluorobiphenyl	*66.6*		*12-100*	*%REC*	1	11/3/2014 01:46 PM
Surr: 4-Terphenyl-d14	*92.1*		*25-137*	*%REC*	1	11/3/2014 01:46 PM
Surr: Nitrobenzene-d5	*56.6*		*37-107*	*%REC*	1	11/3/2014 01:46 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 10/31/14	Analyst: **RS**
Benzene	ND		33	µg/Kg-dry	1	11/1/2014 03:39 AM
Ethylbenzene	ND		33	µg/Kg-dry	1	11/1/2014 03:39 AM
m,p-Xylene	**84**		**65**	**µg/Kg-dry**	1	11/1/2014 03:39 AM
o-Xylene	ND		33	µg/Kg-dry	1	11/1/2014 03:39 AM
Toluene	ND		33	µg/Kg-dry	1	11/1/2014 03:39 AM
Xylenes, Total	ND		98	µg/Kg-dry	1	11/1/2014 03:39 AM
Surr: 1,2-Dichloroethane-d4	*102*		*70-130*	*%REC*	1	11/1/2014 03:39 AM
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	1	11/1/2014 03:39 AM
Surr: Dibromofluoromethane	*93.5*		*70-130*	*%REC*	1	11/1/2014 03:39 AM
Surr: Toluene-d8	*103*		*70-130*	*%REC*	1	11/1/2014 03:39 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHOD**		Prep: USDA Method 20B / 11/1/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**16**		**0.050**	**mmhos/cm @25**	10	11/3/2014 02:00 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**11**		**0.54**	**mg/Kg-dry**	1	11/3/2014 05:30 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 10/30/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.53	mg/Kg-dry	1	10/31/2014 04:00 PM
MOISTURE			**A2540 G**			Analyst: **EVB**
Moisture	**8.2**		**0.050**	**% of sample**	1	10/30/2014 09:00 PM
PH			**SW9045D**		Prep: EXTRACT / 10/31/14	Analyst: **JB**
pH	**8.0**			**s.u.**	1	10/31/2014 02:30 PM

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

ALS Group USA, Corp

Date: 04-Nov-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 14101771

Project: WPX GV 41-34 Batch 3 10.28.14

Batch ID: **64524** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-64524-64524** Units: **mg/Kg** Analysis Date: **10/31/2014 05:10 PM**

Client ID: Run ID: **GC8_141031A** SeqNo: **3013968** Prep Date: **10/31/2014** 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	*1.106*	0	*2*	0	*55.3*	*39-133*	0			

LCS Sample ID: **DLCSS1-64524-64524** Units: **mg/Kg** Analysis Date: **10/31/2014 05:37 PM**

Client ID: Run ID: **GC8_141031A** SeqNo: **3013969** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	157.4	5.0	200	0	78.7	61-109	0			
Surr: 4-Terphenyl-d14	*0.7984*	0	*2*	0	*39.9*	*39-133*	0			

MS Sample ID: **14101675-01A MS** Units: **mg/Kg** Analysis Date: **10/31/2014 06:05 PM**

Client ID: Run ID: **GC8_141031A** SeqNo: **3013970** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	332	7.9	315.7	32.31	94.9	48-110	0			
Surr: 4-Terphenyl-d14	*1.621*	0	*3.157*	0	*51.3*	*39-133*	0			

MSD Sample ID: **14101675-01A MSD** Units: **mg/Kg** Analysis Date: **10/31/2014 06:32 PM**

Client ID: Run ID: **GC8_141031A** SeqNo: **3013971** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	296.1	7.9	316.6	32.31	83.3	48-110	332	11.4	30	
Surr: 4-Terphenyl-d14	*1.796*	0	*3.166*	0	*56.7*	*39-133*	1.621	*10.2*	*30*	

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64541** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-64541-64541** Units: **µg/Kg** Analysis Date: **11/1/2014 03:36 AM**
Client ID: Run ID: **GC9_141031A** SeqNo: **3013773** Prep Date: **10/31/2014** 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	*4925*	0	*5000*	0	*98.5*	*50-150*	0			

LCS Sample ID: **LCS-64541-64541** Units: **µg/Kg** Analysis Date: **11/1/2014 03:11 AM**
Client ID: Run ID: **GC9_141031A** SeqNo: **3013772** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	563600	2,500	500000	0	113	70-130	0			
Surr: Toluene-d8	*4400*	0	*5000*	0	*88*	*50-150*	0			

MS Sample ID: **14101776-01B MS** Units: **µg/Kg** Analysis Date: **11/1/2014 04:26 AM**
Client ID: Run ID: **GC9_141031A** SeqNo: **3013775** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	584900	2,500	500000	0	117	70-130	0			
Surr: Toluene-d8	*4868*	0	*5000*	0	*97.4*	*50-150*	0			

MSD Sample ID: **14101776-01B MSD** Units: **µg/Kg** Analysis Date: **11/1/2014 04:52 AM**
Client ID: Run ID: **GC9_141031A** SeqNo: **3013776** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	571300	2,500	500000	0	114	70-130	584900	2.36	30	
Surr: Toluene-d8	*4797*	0	*5000*	0	*95.9*	*50-150*	4868	*1.46*	*30*	

The following samples were analyzed in this batch: 14101771-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64488** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-64488-64488** Units: **mg/Kg** Analysis Date: **10/31/2014 01:31 PM**
Client ID: Run ID: **HG1_141031A** SeqNo: **3011644** Prep Date: **10/31/2014** 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-64488-64488** Units: **mg/Kg** Analysis Date: **10/31/2014 01:34 PM**
Client ID: Run ID: **HG1_141031A** SeqNo: **3011645** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1772	0.020	0.1665	0	106	80-120	0			

MS Sample ID: **14101776-02AMS** Units: **mg/Kg** Analysis Date: **10/31/2014 01:38 PM**
Client ID: Run ID: **HG1_141031A** SeqNo: **3011647** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1177	0.011	0.09259	0.003715	123	75-125	0			

MSD Sample ID: **14101776-02AMSD** Units: **mg/Kg** Analysis Date: **10/31/2014 01:42 PM**
Client ID: Run ID: **HG1_141031A** SeqNo: **3011648** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1153	0.011	0.09302	0.003715	120	75-125	0.1177	2.05	35	

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64512** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **14101732-01C DUP** Units: **mg/L** Analysis Date: **11/3/2014 03:08 PM**
Client ID: Run ID: **ICP2_141103A** SeqNo: **3014890** Prep Date: **11/1/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	311.1	5.0	0	0	0	0-0	317	1.88		
Magnesium	54.58	2.0	0	0	0	0-0	56.04	2.64		
Sodium	495.1	2.0	0	0	0	0-0	502.5	1.49		

DUP Sample ID: **14101732-01C DUP** Units: **none** Analysis Date: **11/3/2014**
Client ID: Run ID: **SAR_141103A** SeqNo: **3014935** Prep Date: **11/1/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	6.807	0.010	0	0	0		6.839	0.468	50	

The following samples were analyzed in this batch: 14101771-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64547** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-64547-64547** Units: **mg/Kg** Analysis Date: **10/31/2014 05:59 PM**
Client ID: Run ID: **ICP2_141031B** SeqNo: **3013182** Prep Date: **10/31/2014** 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	0.1616	0.50								J

LCS Sample ID: **LCS-64547-64547** Units: **mg/Kg** Analysis Date: **10/31/2014 06:04 PM**
Client ID: Run ID: **ICP2_141031B** SeqNo: **3013183** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.698	0.25	5	0	94	80-120	0			
Barium	4.693	0.25	5	0	93.9	80-120	0			
Cadmium	4.521	0.50	5	0	90.4	80-120	0			
Chromium	4.838	0.25	5	0	96.8	80-120	0			
Copper	4.869	0.50	5	0	97.4	80-120	0			
Lead	4.768	0.25	5	0	95.4	80-120	0			
Nickel	4.749	0.25	5	0	95	80-120	0			
Selenium	4.747	0.50	5	0	94.9	80-120	0			
Silver	4.927	0.25	5	0	98.5	80-120	0			
Zinc	5.021	0.50	5	0	100	80-120	0			

MS Sample ID: **14101823-03AMS** Units: **mg/Kg** Analysis Date: **10/31/2014 07:24 PM**
Client ID: Run ID: **ICP2_141031B** SeqNo: **3013197** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.46	0.38	7.508	7.58	105	75-125	0			
Barium	242.1	0.38	7.508	266	-318	75-125	0			SO
Cadmium	7.121	0.75	7.508	0.1906	92.3	75-125	0			
Chromium	18.31	0.38	7.508	10.66	102	75-125	0			
Copper	19.91	0.75	7.508	13.2	89.3	75-125	0			
Lead	26.37	0.38	7.508	19.95	85.5	75-125	0			
Nickel	20.94	0.38	7.508	13.89	93.9	75-125	0			
Selenium	7.369	0.75	7.508	0.3791	93.1	75-125	0			
Silver	8.355	0.38	7.508	-0.03233	112	75-125	0			
Zinc	76.58	0.75	7.508	67.38	123	75-125	0			O

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64547** Instrument ID **ICP2** Method: **SW846 6010C**

MSD Sample ID: **14101823-03AMSD** Units: **mg/Kg** Analysis Date: **10/31/2014 07:29 PM**

Client ID: Run ID: **ICP2_141031B** SeqNo: **3013198** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.57	0.37	7.496	7.58	93.2	75-125	15.46	5.94	20	
Barium	268.5	0.37	7.496	266	33.6	75-125	242.1	10.3	20	SO
Cadmium	7.08	0.75	7.496	0.1906	91.9	75-125	7.121	0.577	20	
Chromium	17.9	0.37	7.496	10.66	96.5	75-125	18.31	2.25	20	
Copper	19.51	0.75	7.496	13.2	84	75-125	19.91	2.04	20	
Lead	25.67	0.37	7.496	19.95	76.3	75-125	26.37	2.7	20	
Nickel	20.24	0.37	7.496	13.89	84.8	75-125	20.94	3.38	20	
Selenium	7.556	0.75	7.496	0.3791	95.7	75-125	7.369	2.5	20	
Silver	8.241	0.37	7.496	-0.03233	110	75-125	8.355	1.38	20	
Zinc	74.71	0.75	7.496	67.38	97.9	75-125	76.58	2.47	20	O

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64523** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-64523-64523** Units: **µg/Kg** Analysis Date: **11/3/2014 10:23 AM**
Client ID: Run ID: **SVMS8_141103A** SeqNo: **3014423** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1311*	0	*1667*	0	*78.7*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1758*	0	*1667*	0	*105*	*25-137*	0			
Surr: Nitrobenzene-d5	*1172*	0	*1667*	0	*70.3*	*37-107*	0			

LCS Sample ID: **SLCSS1-64523-64523** Units: **µg/Kg** Analysis Date: **11/3/2014 10:43 AM**
Client ID: Run ID: **SVMS8_141103A** SeqNo: **3014431** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	536.7	6.7	666.7	0	80.5	45-110	0			
Acenaphthylene	533	6.7	666.7	0	79.9	45-105	0			
Anthracene	625.3	6.7	666.7	0	93.8	55-105	0			
Benzo(a)anthracene	633.3	6.7	666.7	0	95	50-110	0			
Benzo(a)pyrene	713.7	6.7	666.7	0	107	50-110	0			
Benzo(b)fluoranthene	700.7	6.7	666.7	0	105	45-115	0			
Benzo(g,h,i)perylene	641.3	6.7	666.7	0	96.2	40-125	0			
Benzo(k)fluoranthene	688	6.7	666.7	0	103	45-115	0			
Chrysene	664	6.7	666.7	0	99.6	55-110	0			
Dibenzo(a,h)anthracene	691	6.7	666.7	0	104	40-125	0			
Fluoranthene	635	6.7	666.7	0	95.2	55-115	0			
Fluorene	545.3	6.7	666.7	0	81.8	50-110	0			
Indeno(1,2,3-cd)pyrene	699.7	6.7	666.7	0	105	40-120	0			
Naphthalene	523	6.7	666.7	0	78.4	40-105	0			
Pyrene	660	6.7	666.7	0	99	45-125	0			
Surr: 2-Fluorobiphenyl	*1219*	0	*1667*	0	*73.2*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1567*	0	*1667*	0	*94*	*25-137*	0			
Surr: Nitrobenzene-d5	*1147*	0	*1667*	0	*68.8*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64523** Instrument ID **SVMS8** Method: **SW846 8270D**

MS Sample ID: **14101675-01A MS** Units: **µg/Kg** Analysis Date: **11/3/2014 11:03 AM**
Client ID: Run ID: **SVMS8_141103A** SeqNo: **3014432** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	987.6	13	1313	0	75.2	45-110	0			
Acenaphthylene	1011	13	1313	0	77	45-105	0			
Anthracene	1150	13	1313	0	87.5	55-105	0			
Benzo(a)anthracene	1134	13	1313	0	86.3	50-110	0			
Benzo(a)pyrene	1309	13	1313	0	99.6	50-110	0			
Benzo(b)fluoranthene	1264	13	1313	0	96.2	45-115	0			
Benzo(g,h,i)perylene	1254	13	1313	0	95.4	40-125	0			
Benzo(k)fluoranthene	1265	13	1313	0	96.3	45-115	0			
Chrysene	1184	13	1313	0	90.1	55-110	0			
Dibenzo(a,h)anthracene	1323	13	1313	0	101	40-125	0			
Fluoranthene	1085	13	1313	0	82.6	55-115	0			
Fluorene	1039	13	1313	0	79.1	50-110	0			
Indeno(1,2,3-cd)pyrene	1329	13	1313	0	101	40-120	0			
Naphthalene	943.6	13	1313	0	71.8	40-105	0			
Pyrene	1284	13	1313	4.249	97.5	45-125	0			
Surr: 2-Fluorobiphenyl	*2242*	0	*3283*	0	*68.3*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2906*	0	*3283*	0	*88.5*	*25-137*	0			
Surr: Nitrobenzene-d5	*1991*	0	*3283*	0	*60.6*	*37-107*	0			

MSD Sample ID: **14101675-01A MSD** Units: **µg/Kg** Analysis Date: **11/3/2014 11:24 AM**
Client ID: Run ID: **SVMS8_141103A** SeqNo: **3014433** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	957.2	13	1325	0	72.2	45-110	987.6	3.12	30	
Acenaphthylene	1017	13	1325	0	76.7	45-105	1011	0.552	30	
Anthracene	1096	13	1325	0	82.7	55-105	1150	4.76	30	
Benzo(a)anthracene	1146	13	1325	0	86.5	50-110	1134	1.05	30	
Benzo(a)pyrene	1365	13	1325	0	103	50-110	1309	4.18	30	
Benzo(b)fluoranthene	1235	13	1325	0	93.2	45-115	1264	2.29	30	
Benzo(g,h,i)perylene	1209	13	1325	0	91.2	40-125	1254	3.62	30	
Benzo(k)fluoranthene	1252	13	1325	0	94.5	45-115	1265	1.06	30	
Chrysene	1192	13	1325	0	90	55-110	1184	0.711	30	
Dibenzo(a,h)anthracene	1262	13	1325	0	95.2	40-125	1323	4.74	30	
Fluoranthene	1113	13	1325	0	84	55-115	1085	2.56	30	
Fluorene	960.5	13	1325	0	72.5	50-110	1039	7.89	30	
Indeno(1,2,3-cd)pyrene	1282	13	1325	0	96.7	40-120	1329	3.62	30	
Naphthalene	1017	13	1325	0	76.7	40-105	943.6	7.47	30	
Pyrene	1166	13	1325	4.249	87.7	45-125	1284	9.67	30	
Surr: 2-Fluorobiphenyl	*2199*	0	*3312*	0	*66.4*	*12-100*	2242	*1.91*	*40*	
Surr: 4-Terphenyl-d14	*2663*	0	*3312*	0	*80.4*	*25-137*	2906	*8.72*	*40*	
Surr: Nitrobenzene-d5	*2050*	0	*3312*	0	*61.9*	*37-107*	1991	*2.93*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64523** Instrument ID **SVMS8** Method: **SW846 8270D**

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64543** Instrument ID **VMS9** Method: **SW8260B**

MBLK Sample ID: **MBLK-64543-64543** Units: **µg/Kg** Analysis Date: **10/31/2014 04:10 PM**
Client ID: Run ID: **VMS9_141031A** SeqNo: **3012585** Prep Date: **10/31/2014** 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	*984*	0	*1000*	0	*98.4*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*948*	0	*1000*	0	*94.8*	*70-130*	0			
Surr: Dibromofluoromethane	*948.5*	0	*1000*	0	*94.8*	*70-130*	0			
Surr: Toluene-d8	*987*	0	*1000*	0	*98.7*	*70-130*	0			

LCS Sample ID: **LCS-64543-64543** Units: **µg/Kg** Analysis Date: **10/31/2014 01:22 PM**
Client ID: Run ID: **VMS9_141031A** SeqNo: **3012584** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1072	30	1000	0	107	75-125	0			
Ethylbenzene	1046	30	1000	0	105	75-125	0			
m,p-Xylene	2064	60	2000	0	103	80-125	0			
o-Xylene	1021	30	1000	0	102	75-125	0			
Toluene	1030	30	1000	0	103	70-125	0			
Xylenes, Total	3086	90	3000	0	103	75-125	0			
Surr: 1,2-Dichloroethane-d4	*989.5*	0	*1000*	0	*99*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1029*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*971.5*	0	*1000*	0	*97.2*	*70-130*	0			
Surr: Toluene-d8	*999.5*	0	*1000*	0	*100*	*70-130*	0			

MS Sample ID: **14101776-03B MS** Units: **µg/Kg** Analysis Date: **11/1/2014 01:19 PM**
Client ID: Run ID: **VMS7_141031C** SeqNo: **3012881** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1097	30	1000	0	110	75-125	0			
Ethylbenzene	1062	30	1000	0	106	75-125	0			
m,p-Xylene	2094	60	2000	0	105	80-125	0			
o-Xylene	1032	30	1000	0	103	75-125	0			
Toluene	1040	30	1000	0	104	70-125	0			
Xylenes, Total	3126	90	3000	0	104	75-125	0			
Surr: 1,2-Dichloroethane-d4	*935.5*	0	*1000*	0	*93.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1034*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*967.5*	0	*1000*	0	*96.8*	*70-130*	0			
Surr: Toluene-d8	*961*	0	*1000*	0	*96.1*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64543** Instrument ID **VMS9** Method: **SW8260B**

MSD Sample ID: **14101776-03B MSD** Units: **µg/Kg** Analysis Date: **11/1/2014 01:44 PM**

Client ID: Run ID: **VMS7_141031C** SeqNo: **3012882** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1137	30	1000	0	114	75-125	1097	3.58	30	
Ethylbenzene	1092	30	1000	0	109	75-125	1062	2.79	30	
m,p-Xylene	2187	60	2000	0	109	80-125	2094	4.32	30	
o-Xylene	1080	30	1000	0	108	75-125	1032	4.59	30	
Toluene	1090	30	1000	0	109	70-125	1040	4.69	30	
Xylenes, Total	3268	90	3000	0	109	75-125	3126	4.41	30	
Surr: 1,2-Dichloroethane-d4	*925.5*	0	*1000*	0	*92.6*	*70-130*	935.5	*1.07*	*30*	
Surr: 4-Bromofluorobenzene	*1028*	0	*1000*	0	*103*	*70-130*	1034	*0.631*	*30*	
Surr: Dibromofluoromethane	*976.5*	0	*1000*	0	*97.6*	*70-130*	967.5	*0.926*	*30*	
Surr: Toluene-d8	*962*	0	*1000*	0	*96.2*	*70-130*	961	*0.104*	*30*	

The following samples were analyzed in this batch: 14101771-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64512** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **14101732-01C DUP** Units: **mmhos/cm @25°C** Analysis Date: **11/3/2014 02:00 PM**

Client ID: Run ID: **WETCHEM_141103C** SeqNo: **3014032** Prep Date: **11/1/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.38	0.050	0	0	0		4.52	3.15	50	

The following samples were analyzed in this batch: 14101771-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64548** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-64548-64548** Units: **s.u.** Analysis Date: **10/31/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141031I** SeqNo: **3011817** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.95	0	4	0	98.8	90-110	0			

DUP Sample ID: **14101769-01B DUP** Units: **s.u.** Analysis Date: **10/31/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141031I** SeqNo: **3011820** Prep Date: **10/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.54	0	0	0	0	0-0	8.67	1.51	20	

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **64560** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-64560-64560** Units: **mg/Kg** Analysis Date: **10/31/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_141031K** SeqNo: **3011912** Prep Date: **10/30/2014** 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-64560-64560** Units: **mg/Kg** Analysis Date: **10/31/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_141031K** SeqNo: **3011911** Prep Date: **10/30/2014** 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: **14101675-01A MS** Units: **mg/Kg** Analysis Date: **10/31/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_141031K** SeqNo: **3011897** Prep Date: **10/30/2014** 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	1.992	0	0	75-125	0			S

MS Sample ID: **14101675-01A MSI** Units: **mg/Kg** Analysis Date: **10/31/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_141031K** SeqNo: **3011899** Prep Date: **10/30/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	502.4	49	699.6	0	71.8	75-125	0			S

MSD Sample ID: **14101675-01A MSD** Units: **mg/Kg** Analysis Date: **10/31/2014 04:00 PM**
Client ID: Run ID: **WETCHEM_141031K** SeqNo: **3011898** Prep Date: **10/30/2014** 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	1.992	0	0	75-125	0	0	20	S

The following samples were analyzed in this batch: 14101771-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 14101771
Project: WPX GV 41-34 Batch 3 10.28.14

QC BATCH REPORT

Batch ID: **R151570** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R151570** Units: **% of sample** Analysis Date: **10/30/2014 09:00 PM**
Client ID: Run ID: **MOIST_141030C** SeqNo: **3011991** 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-R151570** Units: **% of sample** Analysis Date: **10/30/2014 09:00 PM**
Client ID: Run ID: **MOIST_141030C** SeqNo: **3011990** 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: **14101731-01ADUP** Units: **% of sample** Analysis Date: **10/30/2014 09:00 PM**
Client ID: Run ID: **MOIST_141030C** SeqNo: **3011969** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.25	0.050	0	0	0	0-0	14.05	13.7	20	

DUP Sample ID: **14101763-01ADUP** Units: **% of sample** Analysis Date: **10/30/2014 09:00 PM**
Client ID: Run ID: **MOIST_141030C** SeqNo: **3011977** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.52	0.050	0	0	0	0-0	20.92	12.2	20	

The following samples were analyzed in this batch: 14101771-01B

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

ALS Environmental

3352 128th Avenue Holland, MI 49424
PH: (616) 399-6070

Chain-of-Custody

Form 202r8

WORKORDER #	1410177		
PAGE	1of1		
DISPOSAL	By Lab or Return to Client		

PROJECT NAME	GV 41-34 Batch 3	SAMPLER	Mike Lobato
PROJECT No.		SITE ID	GV 41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance Solutions, Inc.	BILL TO COMPANY	WPX Energy
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F ½ Road	ADDRESS	1058 Co. Rd. 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	
E-MAIL	mmumby@hrlcomp.com; mlobato@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE	10/28/14
TURNAROUND	3 Day

COGCC Table 910-1

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	
1	GV 41-34 Batch 3	Soil	10/28/14	0950	3	8		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: Complete COGCC Table 910-1.

4.2°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Mike Lobato	10/28/14	1540
RECEIVED BY			10/28	1641
RELINQUISHED BY			10/29	1610
RECEIVED BY		Diane F. Shaw	10/30/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **30-Oct-14 09:30**

Work Order: **14101771** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 30-Oct-14 (Date) Reviewed by: Ann Preston (eSignature) 30-Oct-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.2 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/30/2014 3:25:03 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 399-6070
Nick Martinez
ALS Environmental
127 E. 1st Street

Parshade, CO 81635

Origin ID: RILA

FedEx Express

Ship Date: 29OCT14
ActWgt: 58.0 LB
CAD: 2264846/INET3550

Dims: 14 X 26 X 15 IN

Delivery Address Bar Code

Ref # 102814-2
Invoice #
PO #
Dept # Parachute

SHIP TO: (616) 399-6070 BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

4 of 4

MPS# 7716 6054 8664

Mstr# 7716 6054 8550

WED - 29 OCT 10:30A
PRIORITY OVERNIGHT

49424
MI-UNI
GRR

XX HLMA

ALS Parachute Custody Seal
Time
DATE
Name

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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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

11-Dec-2014

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

Re: **WPX GV 41-34 Batch 4 12.5.14** Work Order: **1412383**

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 24.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 11-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 4 12.5.14
Work Order: **1412383**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1412383-01	GV 41-34 Batch 4	Soil		12/5/2014 11:00	12/6/2014 10:00	☐

ALS Group USA, Corp

Date: 11-Dec-14

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 4 12.5.14
Work Order: 1412383

Case Narrative

Batch 65731 sample 1412383-01 reporting limit for Selenium was elevated due to dilution for high concentrations of non-target analytes. The MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 65748 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 65761 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch 65769 MS/MSD data for BTEX is not related to this project's samples. No data requires qualification.

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
% 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: *11-Dec-14*

Client: HRL Compliance Solutions, Inc
Project: WPX GV 41-34 Batch 4 12.5.14 **Work Order:** 1412383
Sample ID: GV 41-34 Batch 4 **Lab ID:** 1412383-01
Collection Date: 12/5/2014 11:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 12/9/14	Analyst: **IT**
DRO (C10-C28)	**52**		**5.1**	**mg/Kg-dry**	1	12/10/2014 12:48 PM
Surr: 4-Terphenyl-d14	*70.4*		*39-133*	*%REC*	1	12/10/2014 12:48 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 12/9/14	Analyst: **IT**
GRO (C6-C10)	**19**		**3.1**	**mg/Kg-dry**	1	12/9/2014 07:36 PM
Surr: Toluene-d8	*118*		*50-150*	*%REC*	1	12/9/2014 07:36 PM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 12/8/14	Analyst: **LR**
Mercury	**0.026**		**0.016**	**mg/Kg-dry**	1	12/10/2014 03:54 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 12/8/14	Analyst: **JEC**
Arsenic	**12**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Barium	**300**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Cadmium	ND		0.32	mg/Kg-dry	1	12/8/2014 10:26 PM
Chromium	**13**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Copper	**17**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Lead	**14**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Nickel	**16**		**0.39**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
Selenium	**0.61**		**0.39**	**mg/Kg-dry**	1	12/9/2014 04:52 PM
Silver	ND		0.39	mg/Kg-dry	1	12/9/2014 04:52 PM
Zinc	**64**		**0.79**	**mg/Kg-dry**	1	12/8/2014 10:26 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 12/10/14	Analyst: **JEC**
Calcium	**470**		**5.0**	**mg/L**	10	12/10/2014 05:12 PM
Magnesium	**110**		**2.0**	**mg/L**	10	12/10/2014 05:12 PM
Sodium	**1,200**		**2.0**	**mg/L**	10	12/10/2014 05:12 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHOD**		Prep: USDA Method 20B / 12/10/14	Analyst: **JEC**
Sodium Adsorption Ratio	**13**		**0.010**	**none**	1	12/10/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 12/9/14	Analyst: **RM**
Acenaphthene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Acenaphthylene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Anthracene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Benzo(a)anthracene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Benzo(a)pyrene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Benzo(b)fluoranthene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Benzo(g,h,i)perylene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Benzo(k)fluoranthene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Chrysene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 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
Project: WPX GV 41-34 Batch 4 12.5.14 **Work Order:** 1412383
Sample ID: GV 41-34 Batch 4 **Lab ID:** 1412383-01
Collection Date: 12/5/2014 11:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Fluoranthene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Fluorene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Indeno(1,2,3-cd)pyrene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Naphthalene	**43**		**8.2**	**µg/Kg-dry**	1	12/9/2014 08:01 PM
Pyrene	ND		8.2	µg/Kg-dry	1	12/9/2014 08:01 PM
Surr: 2-Fluorobiphenyl	*71.4*		*12-100*	*%REC*	1	12/9/2014 08:01 PM
Surr: 4-Terphenyl-d14	*84.2*		*25-137*	*%REC*	1	12/9/2014 08:01 PM
Surr: Nitrobenzene-d5	*78.1*		*37-107*	*%REC*	1	12/9/2014 08:01 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 12/9/14	Analyst: **JDW**
Benzene	ND		37	µg/Kg-dry	1	12/9/2014 07:40 PM
Ethylbenzene	**84**		**37**	**µg/Kg-dry**	1	12/9/2014 07:40 PM
m,p-Xylene	**560**		**74**	**µg/Kg-dry**	1	12/9/2014 07:40 PM
o-Xylene	ND		37	µg/Kg-dry	1	12/9/2014 07:40 PM
Toluene	ND		37	µg/Kg-dry	1	12/9/2014 07:40 PM
Xylenes, Total	**560**		**110**	**µg/Kg-dry**	1	12/9/2014 07:40 PM
Surr: 1,2-Dichloroethane-d4	*91.6*		*70-130*	*%REC*	1	12/9/2014 07:40 PM
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	1	12/9/2014 07:40 PM
Surr: Dibromofluoromethane	*88.6*		*70-130*	*%REC*	1	12/9/2014 07:40 PM
Surr: Toluene-d8	*98.8*		*70-130*	*%REC*	1	12/9/2014 07:40 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHOD**		Prep: USDA Method 20B / 12/10/14	Analyst: **JB**
Electrical Conductivity @ Saturation	**9.8**		**0.050**	**mmhos/cm @25**	10	12/10/2014 04:15 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**13**		**0.62**	**mg/Kg-dry**	1	12/10/2014 09:00 AM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 12/8/14	Analyst: **DAH**
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	12/9/2014 02:30 PM
MOISTURE			**A2540 G**			Analyst: **EVB**
Moisture	**19**		**0.050**	**% of sample**	1	12/9/2014 03:00 PM
PH			**SW9045D**		Prep: EXTRACT / 12/9/14	Analyst: **AXL**
pH	**7.8**			**s.u.**	1	12/9/2014 02:30 PM

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

QC BATCH REPORT

Batch ID: **65761** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-65761-65761** Units: **mg/Kg** Analysis Date: **12/10/2014 09:08 AM**

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								
Surr: 4-Terphenyl-d14	*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 AM**

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			
Surr: 4-Terphenyl-d14	*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 AM**

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
Surr: 4-Terphenyl-d14	*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 AM**

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
Surr: 4-Terphenyl-d14	*3.774*	0	*3.187*	0	*118*	*39-133*	3.79	*0.417*	*30*	

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 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: 1412383-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65750** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-65750-65750** Units: **mg/Kg** Analysis Date: **12/8/2014 09:59 PM**
Client ID: Run ID: **HG1_141208A** SeqNo: **3066044** Prep Date: **12/8/2014** 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-65750-65750** Units: **mg/Kg** Analysis Date: **12/8/2014 10:02 PM**
Client ID: Run ID: **HG1_141208A** SeqNo: **3066045** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1639	0.020	0.1665	0	98.4	80-120	0			

MS Sample ID: **1412290-01BMS** Units: **mg/Kg** Analysis Date: **12/8/2014 10:17 PM**
Client ID: Run ID: **HG1_141208A** SeqNo: **3066501** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1298	0.015	0.1243	0	104	75-125	0			

MSD Sample ID: **1412290-01BMSD** Units: **mg/Kg** Analysis Date: **12/8/2014 10:19 PM**
Client ID: Run ID: **HG1_141208A** SeqNo: **3066502** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1229	0.015	0.1208	0	102	75-125	0.1298	5.44	35	

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65731** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-65731-65731** Units: **mg/Kg** Analysis Date: **12/8/2014 08:25 PM**
Client ID: Run ID: **ICP2_141208A** SeqNo: **3066229** Prep Date: **12/8/2014** 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	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	0.13	0.50								J

MBLK Sample ID: **MBLK-65731-65731** Units: **mg/Kg** Analysis Date: **12/9/2014 02:54 PM**
Client ID: Run ID: **ICP2_141209A** SeqNo: **3068056** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	ND	0.25								

LCS Sample ID: **LCS-65731-65731** Units: **mg/Kg** Analysis Date: **12/8/2014 08:31 PM**
Client ID: Run ID: **ICP2_141208A** SeqNo: **3066230** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.484	0.25	5	0	89.7	80-120	0			
Barium	4.637	0.25	5	0	92.7	80-120	0			
Cadmium	4.437	0.50	5	0	88.7	80-120	0			
Chromium	4.817	0.25	5	0	96.3	80-120	0			
Copper	4.795	0.50	5	0	95.9	80-120	0			
Lead	4.825	0.25	5	0	96.5	80-120	0			
Nickel	4.691	0.25	5	0	93.8	80-120	0			
Selenium	4.43	0.50	5	0	88.6	80-120	0			
Silver	4.22	0.25	5	0	84.4	80-120	0			
Zinc	4.695	0.50	5	0	93.9	80-120	0			

LCS Sample ID: **LCS-65731-65731** Units: **mg/Kg** Analysis Date: **12/9/2014 03:00 PM**
Client ID: Run ID: **ICP2_141209A** SeqNo: **3068060** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	4.372	0.25	5	0	87.4	80-120	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65731** Instrument ID **ICP2** Method: **SW846 6010C**

MS Sample ID: **1412279-01BMS** Units: **mg/Kg** Analysis Date: **12/8/2014 09:42 PM**
Client ID: Run ID: **ICP2_141208A** SeqNo: **3066247** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.66	0.37	7.331	7.603	110	75-125	0			
Barium	125.1	0.37	7.331	101.6	321	75-125	0			SO
Cadmium	7.141	0.73	7.331	0.001281	97.4	75-125	0			
Chromium	20.78	0.37	7.331	9.978	147	75-125	0			S
Copper	22.19	0.73	7.331	13.89	113	75-125	0			
Lead	28.79	0.37	7.331	14.82	191	75-125	0			S
Nickel	22.92	0.37	7.331	16.3	90.2	75-125	0			
Selenium	8.461	0.73	7.331	1.332	97.2	75-125	0			
Zinc	494.5	0.73	7.331	81.25	5640	75-125	0			SO

MS Sample ID: **1412279-01BMS** Units: **mg/Kg** Analysis Date: **12/9/2014 04:14 PM**
Client ID: Run ID: **ICP2_141209A** SeqNo: **3068322** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	7.333	0.37	7.331	-0.09234	101	75-125	0			

MSD Sample ID: **1412279-01BMSD** Units: **mg/Kg** Analysis Date: **12/8/2014 09:47 PM**
Client ID: Run ID: **ICP2_141208A** SeqNo: **3066248** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.72	0.37	7.353	7.603	110	75-125	15.66	0.344	20	
Barium	128.7	0.37	7.353	101.6	368	75-125	125.1	2.82	20	SO
Cadmium	6.735	0.74	7.353	0.001281	91.6	75-125	7.141	5.85	20	
Chromium	20.54	0.37	7.353	9.978	144	75-125	20.78	1.15	20	S
Copper	21.39	0.74	7.353	13.89	102	75-125	22.19	3.67	20	
Lead	22.48	0.37	7.353	14.82	104	75-125	28.79	24.6	20	R
Nickel	23.7	0.37	7.353	16.3	101	75-125	22.92	3.34	20	
Selenium	8.539	0.74	7.353	1.332	98	75-125	8.461	0.925	20	
Zinc	89.85	0.74	7.353	81.25	117	75-125	494.5	138	20	RO

MSD Sample ID: **1412279-01BMSD** Units: **mg/Kg** Analysis Date: **12/9/2014 04:19 PM**
Client ID: Run ID: **ICP2_141209A** SeqNo: **3068323** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	7.385	0.37	7.353	-0.09234	102	75-125	7.333	0.702	20	

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65781** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1412255-01CDUP** Units: **mg/L** Analysis Date: **12/10/2014 05:17 PM**

Client ID: Run ID: **ICP2_141210A** SeqNo: **3070221** Prep Date: **12/10/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	55.64	5.0	0	0	0	0-0	59.15	6.11		
Magnesium	41.13	2.0	0	0	0	0-0	44.65	8.21		
Sodium	384	2.0	0	0	0	0-0	406.3	5.62		

DUP Sample ID: **1412255-01CDUP** Units: **none** Analysis Date: **12/10/2014**

Client ID: Run ID: **SAR_141210A** SeqNo: **3070226** 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
Sodium Adsorption Ratio	9.518	0.010	0	0	0		9.709	1.99	50	

The following samples were analyzed in this batch: 1412383-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65760** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-65760-65760** Units: **µg/Kg** Analysis Date: **12/9/2014 03:24 PM**
Client ID: Run ID: **SVMS5_141209A** SeqNo: **3068751** 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
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1466*	0	*1667*	0	*88*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1738*	0	*1667*	0	*104*	*25-137*	0			
Surr: Nitrobenzene-d5	*1408*	0	*1667*	0	*84.5*	*37-107*	0			

LCS Sample ID: **SLCSS1-65760-65760** Units: **µg/Kg** Analysis Date: **12/9/2014 03:47 PM**
Client ID: Run ID: **SVMS5_141209A** SeqNo: **3068752** 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
Acenaphthene	616.7	6.7	666.7	0	92.5	45-110	0			
Acenaphthylene	635	6.7	666.7	0	95.2	45-105	0			
Anthracene	692.3	6.7	666.7	0	104	55-105	0			
Benzo(a)anthracene	696	6.7	666.7	0	104	50-110	0			
Benzo(a)pyrene	685.3	6.7	666.7	0	103	50-110	0			
Benzo(b)fluoranthene	697.7	6.7	666.7	0	105	45-115	0			
Benzo(g,h,i)perylene	701.3	6.7	666.7	0	105	40-125	0			
Benzo(k)fluoranthene	706	6.7	666.7	0	106	45-115	0			
Chrysene	718.7	6.7	666.7	0	108	55-110	0			
Dibenzo(a,h)anthracene	688.7	6.7	666.7	0	103	40-125	0			
Fluoranthene	697	6.7	666.7	0	105	55-115	0			
Fluorene	644.3	6.7	666.7	0	96.6	50-110	0			
Indeno(1,2,3-cd)pyrene	649.3	6.7	666.7	0	97.4	40-120	0			
Naphthalene	606.7	6.7	666.7	0	91	40-105	0			
Pyrene	787.7	6.7	666.7	0	118	45-125	0			
Surr: 2-Fluorobiphenyl	*1425*	0	*1667*	0	*85.5*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1727*	0	*1667*	0	*104*	*25-137*	0			
Surr: Nitrobenzene-d5	*1350*	0	*1667*	0	*81*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65760** Instrument ID **SVMS5** Method: **SW846 8270D**

MS Sample ID: **1412361-03B MS** Units: **µg/Kg** Analysis Date: **12/9/2014 04:34 PM**

Client ID: Run ID: **SVMS5_141209A** SeqNo: **3068755** 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
Acenaphthene	1181	13	1284	0	92	45-110	0			
Acenaphthylene	1228	13	1284	0	95.6	45-105	0			
Anthracene	1261	13	1284	0	98.2	55-105	0			
Benzo(a)anthracene	1171	13	1284	0	91.2	50-110	0			
Benzo(a)pyrene	1154	13	1284	0	89.9	50-110	0			
Benzo(b)fluoranthene	1197	13	1284	0	93.2	45-115	0			
Benzo(g,h,i)perylene	1192	13	1284	0	92.8	40-125	0			
Benzo(k)fluoranthene	1199	13	1284	0	93.3	45-115	0			
Chrysene	1219	13	1284	0	94.9	55-110	0			
Dibenzo(a,h)anthracene	1142	13	1284	0	88.9	40-125	0			
Fluoranthene	1233	13	1284	0	96	55-115	0			
Fluorene	1249	13	1284	0	97.2	50-110	0			
Indeno(1,2,3-cd)pyrene	1156	13	1284	0	90	40-120	0			
Naphthalene	1160	13	1284	0	90.3	40-105	0			
Pyrene	1361	13	1284	0	106	45-125	0			
Surr: 2-Fluorobiphenyl	*2689*	0	*3210*	0	*83.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3050*	0	*3210*	0	*95*	*25-137*	0			
Surr: Nitrobenzene-d5	*2687*	0	*3210*	0	*83.7*	*37-107*	0			

MSD Sample ID: **1412361-03B MSD** Units: **µg/Kg** Analysis Date: **12/9/2014 04:57 PM**

Client ID: Run ID: **SVMS5_141209A** SeqNo: **3068756** 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
Acenaphthene	1109	13	1254	0	88.4	45-110	1181	6.29	30	
Acenaphthylene	1185	13	1254	0	94.4	45-105	1228	3.62	30	
Anthracene	1246	13	1254	0	99.3	55-105	1261	1.19	30	
Benzo(a)anthracene	1163	13	1254	0	92.7	50-110	1171	0.723	30	
Benzo(a)pyrene	1138	13	1254	0	90.7	50-110	1154	1.41	30	
Benzo(b)fluoranthene	1171	13	1254	0	93.4	45-115	1197	2.14	30	
Benzo(g,h,i)perylene	1215	13	1254	0	96.8	40-125	1192	1.92	30	
Benzo(k)fluoranthene	1178	13	1254	0	93.9	45-115	1199	1.77	30	
Chrysene	1208	13	1254	0	96.3	55-110	1219	0.838	30	
Dibenzo(a,h)anthracene	1188	13	1254	0	94.7	40-125	1142	3.91	30	
Fluoranthene	1185	13	1254	0	94.4	55-115	1233	4.03	30	
Fluorene	1212	13	1254	0	96.6	50-110	1249	2.97	30	
Indeno(1,2,3-cd)pyrene	1161	13	1254	0	92.6	40-120	1156	0.438	30	
Naphthalene	1136	13	1254	0	90.5	40-105	1160	2.13	30	
Pyrene	1344	13	1254	0	107	45-125	1361	1.27	30	
Surr: 2-Fluorobiphenyl	*2491*	0	*3135*	0	*79.4*	*12-100*	2689	*7.67*	*40*	
Surr: 4-Terphenyl-d14	*2786*	0	*3135*	0	*88.9*	*25-137*	3050	*9.03*	*40*	
Surr: Nitrobenzene-d5	*2581*	0	*3135*	0	*82.3*	*37-107*	2687	*4.04*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65760** Instrument ID **SVMS5** Method: **SW846 8270D**

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65769** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-65769-65769** Units: **µg/Kg** Analysis Date: **12/9/2014 08:39 PM**
Client ID: Run ID: **VMS5_141209A** SeqNo: **3068596** 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
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	*1115*	0	*1000*	0	*112*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1026*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*994.5*	0	*1000*	0	*99.4*	*70-130*	0			
Surr: Toluene-d8	*1066*	0	*1000*	0	*107*	*70-130*	0			

LCS Sample ID: **LCS-65769-65769** Units: **µg/Kg** Analysis Date: **12/9/2014 06:56 PM**
Client ID: Run ID: **VMS5_141209A** SeqNo: **3068595** 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
Benzene	1056	30	1000	0	106	75-125	0			
Ethylbenzene	1041	30	1000	0	104	75-125	0			
m,p-Xylene	1989	60	2000	0	99.4	80-125	0			
o-Xylene	999	30	1000	0	99.9	75-125	0			
Toluene	1024	30	1000	0	102	70-125	0			
Xylenes, Total	2988	90	3000	0	99.6	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1052*	0	*1000*	0	*105*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1067*	0	*1000*	0	*107*	*70-130*	0			
Surr: Dibromofluoromethane	*1060*	0	*1000*	0	*106*	*70-130*	0			
Surr: Toluene-d8	*1000*	0	*1000*	0	*100*	*70-130*	0			

MS Sample ID: **1412383-01A MS** Units: **µg/Kg** Analysis Date: **12/9/2014 08:58 PM**
Client ID: **GV 41-34 Batch 4** Run ID: **VMS6_141209A** SeqNo: **3068454** 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
Benzene	1076	30	1000	0	108	75-125	0			
Ethylbenzene	1126	30	1000	67.5	106	75-125	0			
m,p-Xylene	2544	60	2000	454.5	104	80-125	0			
o-Xylene	1071	30	1000	0	107	75-125	0			
Toluene	1018	30	1000	0	102	70-125	0			
Xylenes, Total	3616	90	3000	450	106	75-125	0			
Surr: 1,2-Dichloroethane-d4	*888.5*	0	*1000*	0	*88.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1019*	0	*1000*	0	*102*	*70-130*	0			
Surr: Dibromofluoromethane	*959.5*	0	*1000*	0	*96*	*70-130*	0			
Surr: Toluene-d8	*1005*	0	*1000*	0	*100*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65769** Instrument ID **VMS5** Method: **SW8260B**

MS Sample ID: **1412421-01A MS** Units: **µg/Kg** Analysis Date: **12/10/2014 10:26 AM**
Client ID: Run ID: **VMS6_141209B** SeqNo: **3069097** 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
Benzene	1176	30	1000	0	118	75-125	0			
Ethylbenzene	1093	30	1000	0	109	75-125	0			
m,p-Xylene	2140	60	2000	0	107	80-125	0			
o-Xylene	1092	30	1000	0	109	75-125	0			
Toluene	1070	30	1000	0	107	70-125	0			
Xylenes, Total	3232	90	3000	0	108	75-125	0			
Surr: 1,2-Dichloroethane-d4	*887.5*	0	*1000*	0	*88.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*964.5*	0	*1000*	0	*96.4*	*70-130*	0			
Surr: Toluene-d8	*925*	0	*1000*	0	*92.5*	*70-130*	0			

MSD Sample ID: **1412383-01A MSD** Units: **µg/Kg** Analysis Date: **12/9/2014 09:24 PM**
Client ID: **GV 41-34 Batch 4** Run ID: **VMS6_141209A** SeqNo: **3068456** 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
Benzene	1050	30	1000	0	105	75-125	1076	2.49	30	
Ethylbenzene	1090	30	1000	67.5	102	75-125	1126	3.34	30	
m,p-Xylene	2496	60	2000	454.5	102	80-125	2544	1.92	30	
o-Xylene	1042	30	1000	0	104	75-125	1071	2.7	30	
Toluene	1002	30	1000	0	100	70-125	1018	1.58	30	
Xylenes, Total	3538	90	3000	450	103	75-125	3616	2.15	30	
Surr: 1,2-Dichloroethane-d4	*883.5*	0	*1000*	0	*88.4*	*70-130*	888.5	*0.564*	*30*	
Surr: 4-Bromofluorobenzene	*1044*	0	*1000*	0	*104*	*70-130*	1019	*2.38*	*30*	
Surr: Dibromofluoromethane	*957.5*	0	*1000*	0	*95.8*	*70-130*	959.5	*0.209*	*30*	
Surr: Toluene-d8	*1008*	0	*1000*	0	*101*	*70-130*	1005	*0.248*	*30*	

MSD Sample ID: **1412421-01A MSD** Units: **µg/Kg** Analysis Date: **12/10/2014 10:51 AM**
Client ID: Run ID: **VMS6_141209B** SeqNo: **3069098** 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
Benzene	1316	30	1000	0	132	75-125	1176	11.3	30	S
Ethylbenzene	1274	30	1000	0	127	75-125	1093	15.3	30	S
m,p-Xylene	2534	60	2000	0	127	80-125	2140	16.8	30	S
o-Xylene	1298	30	1000	0	130	75-125	1092	17.2	30	S
Toluene	1213	30	1000	0	121	70-125	1070	12.5	30	
Xylenes, Total	3831	90	3000	0	128	75-125	3232	17	30	S
Surr: 1,2-Dichloroethane-d4	*870.5*	0	*1000*	0	*87*	*70-130*	887.5	*1.93*	*30*	
Surr: 4-Bromofluorobenzene	*1026*	0	*1000*	0	*103*	*70-130*	1006	*1.92*	*30*	
Surr: Dibromofluoromethane	*974.5*	0	*1000*	0	*97.4*	*70-130*	964.5	*1.03*	*30*	
Surr: Toluene-d8	*944*	0	*1000*	0	*94.4*	*70-130*	925	*2.03*	*30*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65769** Instrument ID **VMS5** Method: **SW8260B**

The following samples were analyzed in this batch: 1412383-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65748** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-65748-65748** Units: **mg/Kg** Analysis Date: **12/9/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141209L** SeqNo: **3067968** Prep Date: **12/8/2014** 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-65748-65748** Units: **mg/Kg** Analysis Date: **12/9/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141209L** SeqNo: **3067969** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.772	0.50	2	0	88.6	80-120	0			

MS Sample ID: **1412255-01B MS** Units: **mg/Kg** Analysis Date: **12/9/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141209L** SeqNo: **3067971** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.508	0.50	1.984	0.368	57.5	75-125	0			S

MS Sample ID: **1412255-01B MSI** Units: **mg/Kg** Analysis Date: **12/9/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141209L** SeqNo: **3067973** Prep Date: **12/8/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	656.2	50	692.3	0.368	94.7	75-125	0			

MSD Sample ID: **1412255-01B MSD** Units: **mg/Kg** Analysis Date: **12/9/2014 02:30 PM**
Client ID: Run ID: **WETCHEM_141209L** SeqNo: **3067972** Prep Date: **12/8/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.62	0.50	2	0.368	62.6	75-125	1.508	7.17	20	S

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65781** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1412255-01C DUP** Units: **mmhos/cm @25°C** Analysis Date: **12/10/2014 04:15 PM**

Client ID: Run ID: **WETCHEM_141210Q** SeqNo: **3070020** Prep Date: **12/10/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	2.79	0.050	0	0	0		2.96	5.91	50	

The following samples were analyzed in this batch: 1412383-01C

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 12.5.14

QC BATCH REPORT

Batch ID: **65787** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-65787-65787** Units: **s.u.** Analysis Date: **12/9/2014 02:30 PM**

Client ID: Run ID: **WETCHEM_141209F** SeqNo: **3067581** 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
pH	4.03	0	4	0	101	90-110	0			

DUP Sample ID: **1412390-03B dup** Units: **s.u.** Analysis Date: **12/9/2014 02:30 PM**

Client ID: Run ID: **WETCHEM_141209F** SeqNo: **3067587** 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
pH	7.85	0	0	0	0	0-0	7.55	3.9	20	

The following samples were analyzed in this batch: 1412383-01B

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

Client: HRL Compliance Solutions, Inc
Work Order: 1412383
Project: WPX GV 41-34 Batch 4 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: 1412383-01B

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

ALS Environmental

3352 128th Avenue Holland, MI 49424
PH: (616) 399-6070

Chain-of-Custody

Form 202r6

WORKORDER # 1412383

PAGE 1 of 1

PROJECT NAME	GV 41-34 Batch 4	SAMPLER	Matt Fought	DATE	12/5/14
PROJECT No.		SITE ID	GV 41-34	TURNAROUND	3 DAY TAT
		EDD FORMAT			
		PURCHASE ORDER		DISPOSAL	By Lab or Return to Client
COMPANY NAME	HRL Compliance Solutions, Inc.	BILL TO COMPANY	WPX Energy		
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney		
ADDRESS	2385 F ½ Road	ADDRESS	1058 Co. Rd. 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			
E-MAIL	mmumby@hrlcomp.com; mfought@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com		

COGCC Table 910.1

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	
1	GV 41-34 Batch 4	S	12/5/14	11:00	3	8		P

*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:

complete organics and Inorganics FOR COGCC Table 910.1 ANALYSIS

2.8°

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

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

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

ALS Group USA, Corp

Sample Receipt Checklist

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

Work Order: **1412383** Received by: **KRW**

Checklist completed by Keith Wierenga (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 ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.8 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	12/8/2014 9:44:33 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

03-Feb-2015

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

Re: **GV 41-34 Batch 5 1.26.15** Work Order: **15011078**

Dear Karolina,

ALS Environmental received 1 sample on 28-Jan-2015 10:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 23.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 03-Feb-15

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 5 1.26.15
Work Order: **15011078**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
15011078-01	GV 41-34 batch 5	Soil		1/26/2015 13:00	1/28/2015	☐

ALS Group USA, Corp

Date: 03-Feb-15

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 5 1.26.15
Work Order: 15011078

Case Narrative

Batch 67254 MS/MSD data for PAHs is not related to this project's samples. No data requires qualification.

Qualifier	Description
*	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

Acronym	Description
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

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

ALS Group USA, Corp

Date: *03-Feb-15*

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 5 1.26.15 **Work Order:** 15011078
Sample ID: GV 41-34 batch 5 **Lab ID:** 15011078-01
Collection Date: 1/26/2015 01:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 1/29/15	Analyst: **IT**
DRO (C10-C28)	**49**		**4.9**	**mg/Kg-dry**	1	1/29/2015 08:14 PM
Surr: 4-Terphenyl-d14	*66.2*		*39-133*	*%REC*	1	1/29/2015 08:14 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 1/29/15	Analyst: **IT**
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	1/29/2015 07:37 PM
Surr: Toluene-d8	*118*		*50-150*	*%REC*	1	1/29/2015 07:37 PM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 1/28/15	Analyst: **LR**
Mercury	**0.024**		**0.018**	**mg/Kg-dry**	1	1/28/2015 07:59 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 1/30/15	Analyst: **JEC**
Arsenic	**13**		**0.42**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
Barium	**700**		**0.42**	**mg/Kg-dry**	1	2/2/2015 02:09 PM
Cadmium	ND		0.83	mg/Kg-dry	1	1/30/2015 11:25 PM
Chromium	**11**		**0.42**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
Copper	**16**		**0.83**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
Lead	**12**		**0.42**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
Nickel	**13**		**0.42**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
Selenium	ND		0.83	mg/Kg-dry	1	2/2/2015 02:09 PM
Silver	ND		0.42	mg/Kg-dry	1	1/30/2015 11:25 PM
Zinc	**57**		**0.83**	**mg/Kg-dry**	1	1/30/2015 11:25 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 1/30/15	Analyst: **JEC**
Calcium	**430**		**5.0**	**mg/Kg**	10	1/30/2015 10:03 PM
Magnesium	**85**		**2.0**	**mg/Kg**	10	1/30/2015 10:03 PM
Sodium	**2,200**		**2.0**	**mg/Kg**	10	1/30/2015 10:03 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHOD**		Prep: USDA Method 20B / 1/30/15	Analyst: **JEC**
Sodium Adsorption Ratio	**26**		**0.010**	**none**	1	1/30/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 1/29/15	Analyst: **RM**
Acenaphthene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Anthracene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Benzo(a)anthracene	**13**		**7.9**	**µg/Kg-dry**	1	1/30/2015 02:12 AM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Benzo(g,h,i)perylene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Chrysene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM

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

ALS Group USA, Corp

Date: *03-Feb-15*

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 5 1.26.15 **Work Order:** 15011078
Sample ID: GV 41-34 batch 5 **Lab ID:** 15011078-01
Collection Date: 1/26/2015 01:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	**19**		**7.9**	**µg/Kg-dry**	1	1/30/2015 02:12 AM
Fluorene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Naphthalene	ND		7.9	µg/Kg-dry	1	1/30/2015 02:12 AM
Pyrene	**19**		**7.9**	**µg/Kg-dry**	1	1/30/2015 02:12 AM
Surr: 2,4,6-Tribromophenol	*72.0*		*34-140*	*%REC*	1	1/30/2015 02:12 AM
Surr: 2-Fluorobiphenyl	*52.5*		*12-100*	*%REC*	1	1/30/2015 02:12 AM
Surr: 2-Fluorophenol	*53.8*		*33-117*	*%REC*	1	1/30/2015 02:12 AM
Surr: 4-Terphenyl-d14	*94.0*		*25-137*	*%REC*	1	1/30/2015 02:12 AM
Surr: Nitrobenzene-d5	*47.8*		*37-107*	*%REC*	1	1/30/2015 02:12 AM
Surr: Phenol-d6	*56.5*		*40-106*	*%REC*	1	1/30/2015 02:12 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 1/29/15	Analyst: **BG**
Benzene	ND		37	µg/Kg-dry	1	1/29/2015 08:14 PM
Ethylbenzene	ND		37	µg/Kg-dry	1	1/29/2015 08:14 PM
m,p-Xylene	ND		73	µg/Kg-dry	1	1/29/2015 08:14 PM
o-Xylene	ND		37	µg/Kg-dry	1	1/29/2015 08:14 PM
Toluene	ND		37	µg/Kg-dry	1	1/29/2015 08:14 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	1/29/2015 08:14 PM
Surr: 1,2-Dichloroethane-d4	*99.6*		*70-130*	*%REC*	1	1/29/2015 08:14 PM
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	1	1/29/2015 08:14 PM
Surr: Dibromofluoromethane	*99.0*		*70-130*	*%REC*	1	1/29/2015 08:14 PM
Surr: Toluene-d8	*103*		*70-130*	*%REC*	1	1/29/2015 08:14 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHOD**		Prep: USDA Method 20B / 1/30/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**16**		**0.050**	**mmhos/cm @25**	10	1/30/2015 03:00 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**11**		**0.61**	**mg/Kg-dry**	1	2/2/2015 11:50 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 1/29/15	Analyst: **DAH**
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	1/30/2015 12:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**18**		**0.050**	**% of sample**	1	1/30/2015 10:45 AM
PH			**SW9045D**		Prep: EXTRACT / 1/30/15	Analyst: **JB**
pH	**8.0**			**s.u.**	1	1/30/2015 02:00 PM

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

QC BATCH REPORT

Batch ID: **67255** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-67255-67255** Units: **mg/Kg** Analysis Date: **1/29/2015 05:15 PM**

Client ID: Run ID: **GC8_150129A** SeqNo: **3128565** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*1.495*	0	*2*	0	*74.7*	*39-133*	0			

LCS Sample ID: **DLCSS1-67255-67255** Units: **mg/Kg** Analysis Date: **1/29/2015 05:45 PM**

Client ID: Run ID: **GC8_150129A** SeqNo: **3128566** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	167.1	5.0	200	0	83.6	61-109	0			
Surr: 4-Terphenyl-d14	*1.349*	0	*2*	0	*67.5*	*39-133*	0			

MS Sample ID: **15011079-01A MS** Units: **mg/Kg** Analysis Date: **1/29/2015 06:15 PM**

Client ID: Run ID: **GC8_150129A** SeqNo: **3128568** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	421.9	8.0	319.9	144.5	86.7	48-110	0			
Surr: 4-Terphenyl-d14	*2.497*	0	*3.199*	0	*78.1*	*39-133*	0			

MSD Sample ID: **15011079-01A MSD** Units: **mg/Kg** Analysis Date: **1/29/2015 06:45 PM**

Client ID: Run ID: **GC8_150129A** SeqNo: **3128570** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	415.5	7.9	314.7	144.5	86.1	48-110	421.9	1.54	30	
Surr: 4-Terphenyl-d14	*2.569*	0	*3.147*	0	*81.6*	*39-133*	2.497	*2.82*	*30*	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67258** Instrument ID **GC10** Method: **SW8015**

MS Sample ID: **15011079-01A MS** Units: **µg/Kg** Analysis Date: **1/29/2015 08:27 PM**
Client ID: Run ID: **GC10_150129A** SeqNo: **3128659** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	503500	2,500	500000	23440	96	70-130	0			
Surr: Toluene-d8	*5313*	0	*5000*	0	*106*	*50-150*	0			

MSD Sample ID: **15011079-01A MSD** Units: **µg/Kg** Analysis Date: **1/29/2015 08:50 PM**
Client ID: Run ID: **GC10_150129A** SeqNo: **3128660** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	495300	2,500	500000	23440	94.4	70-130	503500	1.64	30	
Surr: Toluene-d8	*5826*	0	*5000*	0	*117*	*50-150*	5313	*9.22*	*30*	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67201** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-67201-67201** Units: **mg/Kg** Analysis Date: **1/28/2015 04:39 PM**
Client ID: Run ID: **HG1_150128A** SeqNo: **3126280** Prep Date: **1/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-67201-67201** Units: **mg/Kg** Analysis Date: **1/28/2015 04:41 PM**
Client ID: Run ID: **HG1_150128A** SeqNo: **3126281** Prep Date: **1/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1693	0.020	0.1665	0	102	80-120	0			

MS Sample ID: **1501918-25AMS** Units: **mg/Kg** Analysis Date: **1/28/2015 04:46 PM**
Client ID: Run ID: **HG1_150128A** SeqNo: **3126283** Prep Date: **1/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1178	0.013	0.1065	0.01261	98.7	75-125	0			

MSD Sample ID: **1501918-25AMSD** Units: **mg/Kg** Analysis Date: **1/28/2015 04:48 PM**
Client ID: Run ID: **HG1_150128A** SeqNo: **3126284** Prep Date: **1/28/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1285	0.013	0.1114	0.01261	104	75-125	0.1178	8.72	35	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67273** Instrument ID **ICP2** Method: **SW846 6010C**

DUP	Sample ID: **15011079-01ADUP**				Units: **mg/L**			Analysis Date: **1/30/2015 10:37 PM**		
Client ID:	Run ID: **ICP2_150130A**				SeqNo: **3129919**			Prep Date: **1/30/2015**		DF: **10**
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	287	5.0	0	0	0	0-0	0			
Magnesium	48.8	2.0	0	0	0	0-0	0			
Sodium	471	2.0	0	0	0	0-0	0			

DUP	Sample ID: **15011079-01ADUP**				Units: **none**			Analysis Date: **1/30/2015**		
Client ID:	Run ID: **SAR_150130A**				SeqNo: **3130513**			Prep Date: **1/30/2015**		DF: **1**
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	6.766	0.010	0	0	0		6.312	6.94	50	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67313** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-67313-67313** Units: **mg/L** Analysis Date: **2/2/2015 01:41 PM**
Client ID: Run ID: **ICP2_150202A** SeqNo: **3131172** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1537	0.25								J
Lead	ND	0.25								
Selenium	ND	0.50								

LCS Sample ID: **LCS-67313-67313** Units: **mg/L** Analysis Date: **2/2/2015 01:46 PM**
Client ID: Run ID: **ICP2_150202A** SeqNo: **3131173** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.832	0.25	5	0	96.6	80-120	0			
Lead	5.047	0.25	5	0	101	80-120	0			
Selenium	4.712	0.50	5	0	94.2	80-120	0			

MS Sample ID: **1501995-01AMS** Units: **mg/Kg** Analysis Date: **2/2/2015 02:58 PM**
Client ID: Run ID: **ICP2_150202A** SeqNo: **3131201** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.835	0.33	6.545	-0.1107	106	75-125	0			
Barium	6.495	0.33	6.545	0.2939	94.7	75-125	0			
Cadmium	5.87	0.65	6.545	-0.1145	91.4	75-125	0			
Chromium	6.968	0.33	6.545	-0.003369	107	75-125	0			
Copper	6.558	0.65	6.545	-0.02144	101	75-125	0			
Lead	6.569	0.33	6.545	-0.03012	101	75-125	0			
Nickel	6.429	0.33	6.545	0.07622	97.1	75-125	0			
Selenium	9.611	0.65	6.545	1.708	121	75-125	0			
Silver	7.106	0.33	6.545	-0.004499	109	75-125	0			
Zinc	7.094	0.65	6.545	0.1809	106	75-125	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67313** Instrument ID **ICP2** Method: **SW846 6010C**

MSD Sample ID: **1501995-01AMSD** Units: **mg/Kg** Analysis Date: **2/2/2015 03:03 PM**
Client ID: Run ID: **ICP2_150202A** SeqNo: **3131202** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	6.879	0.33	6.596	-0.1107	106	75-125	6.835	0.641	20	
Barium	6.53	0.33	6.596	0.2939	94.5	75-125	6.495	0.535	20	
Cadmium	5.834	0.66	6.596	-0.1145	90.2	75-125	5.87	0.617	20	
Chromium	7.013	0.33	6.596	-0.003369	106	75-125	6.968	0.655	20	
Copper	6.534	0.66	6.596	-0.02144	99.4	75-125	6.558	0.366	20	
Lead	6.539	0.33	6.596	-0.03012	99.6	75-125	6.569	0.456	20	
Nickel	6.399	0.33	6.596	0.07622	95.9	75-125	6.429	0.465	20	
Selenium	9.644	0.66	6.596	1.708	120	75-125	9.611	0.334	20	
Silver	7.119	0.33	6.596	-0.004499	108	75-125	7.106	0.179	20	
Zinc	6.725	0.66	6.596	0.1809	99.2	75-125	7.094	5.33	20	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67254** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-67254-67254** Units: **µg/Kg** Analysis Date: **1/29/2015 02:02 PM**
Client ID: Run ID: **SVMS8_150129A** SeqNo: **3128038** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1026*	0	*1667*	0	*61.5*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1953*	0	*1667*	0	*117*	*25-137*	0			
Surr: Nitrobenzene-d5	*1048*	0	*1667*	0	*62.9*	*37-107*	0			

LCS Sample ID: **SLCSS1-67254-67254** Units: **µg/Kg** Analysis Date: **1/29/2015 02:22 PM**
Client ID: Run ID: **SVMS8_150129A** SeqNo: **3128039** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	439.7	6.7	666.7	0	65.9	45-110	0			
Anthracene	483	6.7	666.7	0	72.4	55-105	0			
Benzo(a)anthracene	526.7	6.7	666.7	0	79	50-110	0			
Benzo(a)pyrene	633	6.7	666.7	0	94.9	50-110	0			
Benzo(b)fluoranthene	664.7	6.7	666.7	0	99.7	45-115	0			
Benzo(g,h,i)perylene	513.3	6.7	666.7	0	77	40-125	0			
Benzo(k)fluoranthene	660.7	6.7	666.7	0	99.1	45-115	0			
Chrysene	535.7	6.7	666.7	0	80.3	55-110	0			
Dibenzo(a,h)anthracene	509	6.7	666.7	0	76.3	40-125	0			
Fluoranthene	484	6.7	666.7	0	72.6	55-115	0			
Fluorene	466.3	6.7	666.7	0	69.9	50-110	0			
Indeno(1,2,3-cd)pyrene	538.3	6.7	666.7	0	80.7	40-120	0			
Naphthalene	463.7	6.7	666.7	0	69.5	40-105	0			
Pyrene	574.3	6.7	666.7	0	86.1	45-125	0			
Surr: 2-Fluorobiphenyl	*1090*	0	*1667*	0	*65.4*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1763*	0	*1667*	0	*106*	*25-137*	0			
Surr: Nitrobenzene-d5	*1151*	0	*1667*	0	*69.1*	*37-107*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67254** Instrument ID **SVMS8** Method: **SW846 8270D**

MS Sample ID: **15011115-01A MS** Units: **µg/Kg** Analysis Date: **1/29/2015 08:46 PM**
Client ID: Run ID: **SVMS8_150129A** SeqNo: **3128040** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	785	13	1268	0	61.9	45-110	0			
Anthracene	956.8	13	1268	6.313	74.9	55-105	0			
Benzo(a)anthracene	1264	13	1268	14.29	98.5	50-110	0			
Benzo(a)pyrene	1430	13	1268	37.54	110	50-110	0			
Benzo(b)fluoranthene	1480	13	1268	35.88	114	45-115	0			
Benzo(g,h,i)perylene	1356	13	1268	34.22	104	40-125	0			
Benzo(k)fluoranthene	1269	13	1268	31.56	97.6	45-115	0			
Chrysene	1269	13	1268	11.3	99.2	55-110	0			
Dibenzo(a,h)anthracene	1087	13	1268	0	85.7	40-125	0			
Fluoranthene	1467	13	1268	14.95	115	55-115	0			
Fluorene	823	13	1268	0	64.9	50-110	0			
Indeno(1,2,3-cd)pyrene	1370	13	1268	43.19	105	40-120	0			
Naphthalene	664.5	13	1268	0	52.4	40-105	0			
Pyrene	1772	13	1268	18.61	138	45-125	0			S
Surr: 2-Fluorobiphenyl	*1740*	0	*3170*	0	*54.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2895*	0	*3170*	0	*91.3*	*25-137*	0			
Surr: Nitrobenzene-d5	*1614*	0	*3170*	0	*50.9*	*37-107*	0			

MSD Sample ID: **15011115-01A MSD** Units: **µg/Kg** Analysis Date: **1/29/2015 09:07 PM**
Client ID: Run ID: **SVMS8_150129A** SeqNo: **3128041** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	723.3	13	1284	0	56.3	45-110	785	8.18	30	
Anthracene	868.3	13	1284	6.313	67.2	55-105	956.8	9.7	30	
Benzo(a)anthracene	960.7	13	1284	14.29	73.7	50-110	1264	27.2	30	
Benzo(a)pyrene	1135	13	1284	37.54	85.5	50-110	1430	23	30	
Benzo(b)fluoranthene	1157	13	1284	35.88	87.4	45-115	1480	24.5	30	
Benzo(g,h,i)perylene	1108	13	1284	34.22	83.6	40-125	1356	20.2	30	
Benzo(k)fluoranthene	1038	13	1284	31.56	78.4	45-115	1269	20	30	
Chrysene	969.7	13	1284	11.3	74.7	55-110	1269	26.8	30	
Dibenzo(a,h)anthracene	1047	13	1284	0	81.6	40-125	1087	3.75	30	
Fluoranthene	886.3	13	1284	14.95	67.9	55-115	1467	49.4	30	R
Fluorene	793.9	13	1284	0	61.8	50-110	823	3.61	30	
Indeno(1,2,3-cd)pyrene	1125	13	1284	43.19	84.3	40-120	1370	19.6	30	
Naphthalene	677.7	13	1284	0	52.8	40-105	664.5	1.97	30	
Pyrene	1097	13	1284	18.61	84	45-125	1772	47	30	R
Surr: 2-Fluorobiphenyl	*1796*	0	*3209*	0	*56*	*12-100*	1740	*3.19*	*40*	
Surr: 4-Terphenyl-d14	*2855*	0	*3209*	0	*89*	*25-137*	2895	*1.39*	*40*	
Surr: Nitrobenzene-d5	*1747*	0	*3209*	0	*54.4*	*37-107*	1614	*7.93*	*40*	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67282** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-67282-67282** Units: **µg/Kg** Analysis Date: **1/30/2015 01:50 PM**
Client ID: Run ID: **VMS5_150130A** SeqNo: **3129793** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*993*	0	*1000*	0	*99.3*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*938*	0	*1000*	0	*93.8*	*70-130*	0			
Surr: Dibromofluoromethane	*1026*	0	*1000*	0	*103*	*70-130*	0			
Surr: Toluene-d8	*983.5*	0	*1000*	0	*98.4*	*70-130*	0			

LCS Sample ID: **LCS-67282-67282** Units: **µg/Kg** Analysis Date: **1/30/2015 12:33 PM**
Client ID: Run ID: **VMS5_150130A** SeqNo: **3129788** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1061	30	1000	0	106	75-125	0			
Ethylbenzene	1070	30	1000	0	107	75-125	0			
m,p-Xylene	2144	60	2000	0	107	80-125	0			
o-Xylene	1079	30	1000	0	108	75-125	0			
Toluene	1034	30	1000	0	103	70-125	0			
Xylenes, Total	3224	90	3000	0	107	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1016*	0	*1000*	0	*102*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*991.5*	0	*1000*	0	*99.2*	*70-130*	0			
Surr: Dibromofluoromethane	*1078*	0	*1000*	0	*108*	*70-130*	0			
Surr: Toluene-d8	*970*	0	*1000*	0	*97*	*70-130*	0			

MS Sample ID: **15011145-04A MS** Units: **µg/Kg** Analysis Date: **1/31/2015 01:24 AM**
Client ID: Run ID: **VMS7_150130A** SeqNo: **3130379** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	996.5	30	1000	0	99.6	75-125	0			
Ethylbenzene	984	30	1000	0	98.4	75-125	0			
m,p-Xylene	1984	60	2000	0	99.2	80-125	0			
o-Xylene	995.5	30	1000	0	99.6	75-125	0			
Toluene	995	30	1000	0	99.5	70-125	0			
Xylenes, Total	2980	90	3000	0	99.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	*981*	0	*1000*	0	*98.1*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*999*	0	*1000*	0	*99.9*	*70-130*	0			
Surr: Dibromofluoromethane	*972.5*	0	*1000*	0	*97.2*	*70-130*	0			
Surr: Toluene-d8	*948.5*	0	*1000*	0	*94.8*	*70-130*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67282** Instrument ID **VMS5** Method: **SW8260B**

MSD	Sample ID: **15011145-04A MSD**				Units: **µg/Kg**			Analysis Date: **1/31/2015 01:50 AM**		
Client ID:	Run ID: **VMS7_150130A**				SeqNo: **3130380**			Prep Date: **1/29/2015**		DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	902.5	30	1000	0	90.2	75-125	996.5	9.9	30	
Ethylbenzene	900	30	1000	0	90	75-125	984	8.92	30	
m,p-Xylene	1827	60	2000	0	91.4	80-125	1984	8.26	30	
o-Xylene	907.5	30	1000	0	90.8	75-125	995.5	9.25	30	
Toluene	911.5	30	1000	0	91.2	70-125	995	8.76	30	
Xylenes, Total	2734	90	3000	0	91.2	75-125	2980	8.59	30	
Surr: 1,2-Dichloroethane-d4	*963.5*	0	*1000*	0	*96.4*	*70-130*	981	*1.8*	*30*	
Surr: 4-Bromofluorobenzene	*976*	0	*1000*	0	*97.6*	*70-130*	999	*2.33*	*30*	
Surr: Dibromofluoromethane	*952.5*	0	*1000*	0	*95.2*	*70-130*	972.5	*2.08*	*30*	
Surr: Toluene-d8	*944.5*	0	*1000*	0	*94.4*	*70-130*	948.5	*0.423*	*30*	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67273** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **15011079-01A DUP** Units: **mmhos/cm @25°C** Analysis Date: **1/30/2015 03:00 PM**

Client ID: Run ID: **WETCHEM_150130G** SeqNo: **3129115** Prep Date: **1/30/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.95	0.050	0	0	0		4.97	0.403	50	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67314** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-67314-67314** Units: **s.u.** Analysis Date: **1/30/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150130H** SeqNo: **3129118** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.97	0	4	0	99.2	90-110	0			

DUP Sample ID: **15011027-01A DUP** Units: **s.u.** Analysis Date: **1/30/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150130H** SeqNo: **3129122** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.76	0	0	0	0	0-0	8.74	0.229	20	

DUP Sample ID: **15011027-06A DUP** Units: **s.u.** Analysis Date: **1/30/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150130H** SeqNo: **3129128** Prep Date: **1/30/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.77	0	0	0	0	0-0	8.7	0.801	20	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **67315** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-67315-67315** Units: **mg/Kg** Analysis Date: **1/30/2015 12:00 PM**
Client ID: Run ID: **WETCHEM_150130B** SeqNo: **3128523** Prep Date: **1/29/2015** 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-67315-67315** Units: **mg/Kg** Analysis Date: **1/30/2015 12:00 PM**
Client ID: Run ID: **WETCHEM_150130B** SeqNo: **3128522** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.808	0.50	2	0	90.4	80-120	0			

MS Sample ID: **15011027-01A MS** Units: **mg/Kg** Analysis Date: **1/30/2015 12:00 PM**
Client ID: Run ID: **WETCHEM_150130B** SeqNo: **3128509** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.728	0.49	1.969	0.1514	80.1	75-125	0			

MS Sample ID: **15011027-01A MSI** Units: **mg/Kg** Analysis Date: **1/30/2015 12:00 PM**
Client ID: Run ID: **WETCHEM_150130B** SeqNo: **3128511** Prep Date: **1/29/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	729.6	50	862.4	0.1514	84.6	75-125	0			

MSD Sample ID: **15011027-01A MSD** Units: **mg/Kg** Analysis Date: **1/30/2015 12:00 PM**
Client ID: Run ID: **WETCHEM_150130B** SeqNo: **3128510** Prep Date: **1/29/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.889	0.49	1.976	0.1514	87.9	75-125	1.728	8.9	20	

The following samples were analyzed in this batch: 15011078-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 15011078
Project: GV 41-34 Batch 5 1.26.15

QC BATCH REPORT

Batch ID: **R156865** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R156865** Units: **% of sample** Analysis Date: **1/30/2015 10:45 AM**
Client ID: Run ID: **MOIST_150130A** SeqNo: **3131015** 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-R156865** Units: **% of sample** Analysis Date: **1/30/2015 10:45 AM**
Client ID: Run ID: **MOIST_150130A** SeqNo: **3131014** 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: **1501821-08A DUP** Units: **% of sample** Analysis Date: **1/30/2015 10:45 AM**
Client ID: Run ID: **MOIST_150130A** SeqNo: **3130987** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	20.93	0.050	0	0	0		20.67	1.25	20	

DUP Sample ID: **1501821-56A DUP** Units: **% of sample** Analysis Date: **1/30/2015 10:45 AM**
Client ID: Run ID: **MOIST_150130A** SeqNo: **3131008** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	17.88	0.050	0	0	0		17.73	0.842	20	

The following samples were analyzed in this batch: 15011078-01A

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER #	15011078				
PAGE	1 of 1				
PROJECT NAME	GV 41-34 batch 5	SAMPLER		DATE	
PROJECT No.		SITE ID	GV 41-34 batch 5	TURNAROUND	5 day
		EDD FORMAT		DISPOSAL	By Lab or Return to Client
COMPANY NAME	WPX Energy	PURCHASE ORDER			
SEND REPORT TO	Blaney	BILL TO COMPANY	WPX Energy		
ADDRESS		INVOICE ATTN TO	Karolina Blaney; Leo Braun		
CITY / STATE / ZIP		ADDRESS	1058 Co Rd 215		
PHONE		CITY / STATE / ZIP	Parachure CO 81635		
FAX		PHONE	970-683-2295		
E-MAIL	Karolina.blaney@wpxenergy.com	FAX			
		E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	910-1
01	GV 41-34 batch 5	S	1/26/2015	13:00	1	none	x	x

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

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
4oC	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Blaney	karolina blaney	1/26/2015	15:00
RECEIVED BY			1-26	1500
RELINQUISHED BY			1-26	1515
RECEIVED BY			1/28/15	10:00
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **28-Jan-15 10:00**

Work Order: **15011078** Received by: **SAW**

Checklist completed by Samantha Wilson (eSignature) 28-Jan-15 (Date) Reviewed by: Ann Preston (eSignature) 28-Jan-15 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/28/201512:16:58 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (616) 396-1033
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

Ship Date: 26JAN15
ActWgt: 64.0 LB
CAD: 2284484/NET3610

Dims: 14 X 26 X 15 IN

Delivery Address Bar Code

Ref # 012615-1
Invoice #
PO #
Dept # Parachute

BILL SENDER

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

HOLLAND, MI 49424

4 of 4

TUE - 27 JAN 10:30A
PRIORITY OVERNIGHT

MPS# 7727 1754 0114
Mstr# 7727 1754 0272

49424
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XX HLMA

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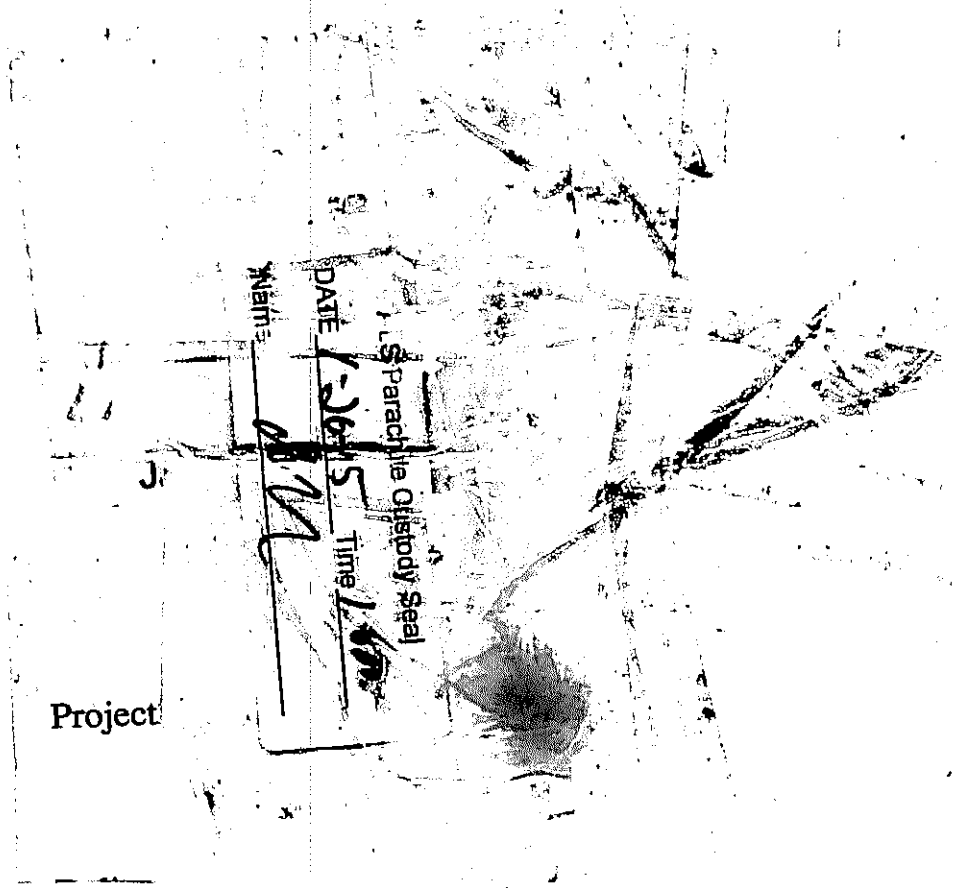

12065 Lebanon Rd.
Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Monday February 23, 2015

Report Number: L748900
Samples Received: 02/13/15
Client Project: GV 41-34 BATCH 6

Description: GV 41-34 Batch 6

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

Entire Report Reviewed By: Alan Harvill

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

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

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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Est. 1970

REPORT OF ANALYSIS

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

February 23, 2015

ESC Sample # : L748900-01

Date Received : February 13, 2015
Description : GV 41-34 Batch 6

Site ID : GV 41-34 BATCH 6

Sample ID : GV 41-34 BATCH 6

Project # : GV 41-34 BATCH 6

Collected By :
Collection Date : 02/12/15 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	02/16/15	1
Chromium,Trivalent	15.	2.0	mg/kg	Calc.	02/19/15	1
ORP	220		mV	2580 B-2011	02/20/15	1
pH	7.9	0.10	su	9045D	02/16/15	1
Sodium Adsorption Ratio	16.			Calc.	02/22/15	1
Specific Conductance	2600		umhos/cm	9050AMod	02/17/15	1
Mercury	BDL	0.020	mg/kg	7471A	02/18/15	1
Arsenic	12.	2.0	mg/kg	6010B	02/18/15	1
Barium	340	0.50	mg/kg	6010B	02/18/15	1
Cadmium	BDL	0.50	mg/kg	6010B	02/18/15	1
Chromium	15.	1.0	mg/kg	6010B	02/18/15	1
Copper	14.	2.0	mg/kg	6010B	02/18/15	1
Lead	12.	0.50	mg/kg	6010B	02/18/15	1
Nickel	15.	2.0	mg/kg	6010B	02/18/15	1
Selenium	BDL	2.0	mg/kg	6010B	02/18/15	1
Silver	BDL	1.0	mg/kg	6010B	02/18/15	1
Zinc	52.	5.0	mg/kg	6010B	02/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 02/23/15 08:31 Printed: 02/23/15 08:32
L748900-01 (PH) - 7.9@21.7c

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REPORT OF ANALYSIS

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

February 23, 2015

ESC Sample # : L748900-02

Site ID : GV 41-34 BATCH 6

Project # : GV 41-34 BATCH 6

Date Received : February 13, 2015
Description : GV 41-34 Batch 6

Sample ID : GV 41-34 BATCH 6

Collected By :
Collection Date : 02/12/15 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021	02/18/15	5
Toluene	BDL	0.025	mg/kg	8021	02/18/15	5
Ethylbenzene	BDL	0.0025	mg/kg	8021	02/18/15	5
Total Xylene	BDL	0.0075	mg/kg	8021	02/18/15	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	8015	02/18/15	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	102.		% Rec.	8015	02/18/15	1
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021	02/18/15	1
TPH (GC/FID) High Fraction	54.	4.0	mg/kg	3546/DRO	02/18/15	1
Surrogate recovery(%)						
o-Terphenyl	70.4		% Rec.	3546/DRO	02/18/15	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	02/19/15	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	02/19/15	1
Surrogate Recovery						
Nitrobenzene-d5	111.		% Rec.	8270C-SIM	02/19/15	1
2-Fluorobiphenyl	79.9		% Rec.	8270C-SIM	02/19/15	1
p-Terphenyl-d14	75.3		% Rec.	8270C-SIM	02/19/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 02/23/15 08:31 Printed: 02/23/15 08:32

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Parachute, CO 81635

Quality Assurance Report
Level II

L748900

February 23, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chromium,Hexavalent	< 2	mg/kg			WG770428	02/16/15 05:08
Specific Conductance	1.58	umhos/cm			WG770581	02/17/15 15:48
TPH (GC/FID) High Fraction	< 4	mg/kg			WG770396	02/17/15 21:53
o-Terphenyl		% Rec.	75.30	50-150	WG770396	02/17/15 21:53
Benzene	< .0005	mg/kg			WG770847	02/18/15 10:50
Ethylbenzene	< .0005	mg/kg			WG770847	02/18/15 10:50
Toluene	< .005	mg/kg			WG770847	02/18/15 10:50
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG770847	02/18/15 10:50
Total Xylene	< .0015	mg/kg			WG770847	02/18/15 10:50
a,a,a-Trifluorotoluene(FID)		% Rec.	104.0	59-128	WG770847	02/18/15 10:50
a,a,a-Trifluorotoluene(PID)		% Rec.	102.0	54-144	WG770847	02/18/15 10:50
Arsenic	< 2	mg/kg			WG770627	02/18/15 14:38
Barium	< .5	mg/kg			WG770627	02/18/15 14:38
Cadmium	< .5	mg/kg			WG770627	02/18/15 14:38
Chromium	< 1	mg/kg			WG770627	02/18/15 14:38
Copper	< 2	mg/kg			WG770627	02/18/15 14:38
Lead	< .5	mg/kg			WG770627	02/18/15 14:38
Nickel	< 2	mg/kg			WG770627	02/18/15 14:38
Selenium	< 2	mg/kg			WG770627	02/18/15 14:38
Silver	< 1	mg/kg			WG770627	02/18/15 14:38
Zinc	< 5	mg/kg			WG770627	02/18/15 14:38
Mercury	< .02	mg/kg			WG770434	02/18/15 16:20
Acenaphthene	< .006	mg/kg			WG770962	02/19/15 05:03
Anthracene	< .006	mg/kg			WG770962	02/19/15 05:03
Benzo(a)anthracene	< .006	mg/kg			WG770962	02/19/15 05:03
Benzo(a)pyrene	< .006	mg/kg			WG770962	02/19/15 05:03
Benzo(b)fluoranthene	< .006	mg/kg			WG770962	02/19/15 05:03
Benzo(k)fluoranthene	< .006	mg/kg			WG770962	02/19/15 05:03
Chrysene	< .006	mg/kg			WG770962	02/19/15 05:03
Dibenz(a,h)anthracene	< .006	mg/kg			WG770962	02/19/15 05:03
Fluoranthene	< .006	mg/kg			WG770962	02/19/15 05:03
Fluorene	< .006	mg/kg			WG770962	02/19/15 05:03
Indeno(1,2,3-cd)pyrene	< .006	mg/kg			WG770962	02/19/15 05:03
Naphthalene	< .02	mg/kg			WG770962	02/19/15 05:03
Pyrene	< .006	mg/kg			WG770962	02/19/15 05:03
2-Fluorobiphenyl		% Rec.	83.40	38.2-135	WG770962	02/19/15 05:03
Nitrobenzene-d5		% Rec.	101.0	28.4-151	WG770962	02/19/15 05:03
p-Terphenyl-d14		% Rec.	76.20	34.2-141	WG770962	02/19/15 05:03

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/kg	0.0	0.0	0.0	20	L748857-01	WG770428
pH	su	7.50	7.60	0.793	1	L748857-03	WG770430
pH	su	6.60	6.60	0.755	1	L748978-08	WG770430

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

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1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L748900

February 23, 2015

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Specific Conductance	umhos/cm	140.	140.	2.12	20	L748857-01	WG770581
Specific Conductance	umhos/cm	820.	820.	0.365	20	L749077-02	WG770581
ORP	mV	62.0	61.0	1.63	20	L748817-01	WG770899
ORP	mV	160.	170.	2.99	20	L749077-02	WG770899

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
Chromium,Hexavalent	mg/kg	146	119.	81.5	80-120	WG770428
pH	su	5.9	5.90	100.	98.3-101.7	WG770430
Specific Conductance	umhos/cm	759	778.	103.	85-115	WG770581
TPH (GC/FID) High Fraction	mg/kg	60	45.7	76.2	50-150	WG770396
o-Terphenyl				69.50	50-150	WG770396
Benzene	mg/kg	.05	0.0416	83.2	70-130	WG770847
Ethylbenzene	mg/kg	.05	0.0463	92.7	70-130	WG770847
Toluene	mg/kg	.05	0.0455	91.0	70-130	WG770847
Total Xylene	mg/kg	.15	0.148	99.0	70-130	WG770847
a,a,a-Trifluorotoluene(PID)				102.0	54-144	WG770847
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.23	95.1	63.5-137	WG770847
a,a,a-Trifluorotoluene(FID)				101.0	59-128	WG770847
Arsenic	mg/kg	100	102.	102.	80-120	WG770627
Barium	mg/kg	100	106.	106.	80-120	WG770627
Cadmium	mg/kg	100	103.	103.	80-120	WG770627
Chromium	mg/kg	100	99.9	100.	80-120	WG770627
Copper	mg/kg	100	101.	101.	80-120	WG770627
Lead	mg/kg	100	103.	103.	80-120	WG770627
Nickel	mg/kg	100	101.	101.	80-120	WG770627
Selenium	mg/kg	100	104.	104.	80-120	WG770627
Silver	mg/kg	100	99.9	100.	80-120	WG770627
Zinc	mg/kg	100	100.	100.	80-120	WG770627
Mercury	mg/kg	.458	0.440	96.0	80-120	WG770434
Acenaphthene	mg/kg	.08	0.0617	77.1	48.7-127	WG770962
Anthracene	mg/kg	.08	0.0636	79.5	51.3-136	WG770962
Benzo(a)anthracene	mg/kg	.08	0.0619	77.3	55-126	WG770962
Benzo(a)pyrene	mg/kg	.08	0.0472	59.0	51.9-127	WG770962
Benzo(b)fluoranthene	mg/kg	.08	0.0592	74.0	54-125	WG770962
Benzo(k)fluoranthene	mg/kg	.08	0.0674	84.3	53.9-132	WG770962
Chrysene	mg/kg	.08	0.0679	84.9	55.7-133	WG770962
Dibenz(a,h)anthracene	mg/kg	.08	0.0663	82.9	52.6-137	WG770962
Fluoranthene	mg/kg	.08	0.0601	75.2	54-132	WG770962
Fluorene	mg/kg	.08	0.0604	75.5	48.7-127	WG770962
Indeno(1,2,3-cd)pyrene	mg/kg	.08	0.0665	83.2	53.8-138	WG770962
Naphthalene	mg/kg	.08	0.0701	87.6	42-127	WG770962

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Quality Assurance Report
Level II

L748900

February 23, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Pyrene	mg/kg	.08	0.0692	86.5	54-129	WG770962
2-Fluorobiphenyl				82.50	38.2-135	WG770962
Nitrobenzene-d5				103.0	28.4-151	WG770962
p-Terphenyl-d14				74.20	34.2-141	WG770962
ORP	mV	100	109.	109.	90-110	WG770899

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Chromium,Hexavalent	mg/kg	120.	119.	82.0	80-120	0.837	20	WG770428
pH	su	5.90	5.90	100.	98.3-101.7	0.0	20	WG770430
Specific Conductance	umhos/	777.	778.	102.	85-115	0.129	20	WG770581
TPH (GC/FID) High Fraction	mg/kg	41.6	45.7	69.0	50-150	9.43	20	WG770396
o-Terphenyl				62.00	50-150			WG770396
Benzene	mg/kg	0.0425	0.0416	85.0	70-130	2.04	20	WG770847
Ethylbenzene	mg/kg	0.0471	0.0463	94.0	70-130	1.65	20	WG770847
Toluene	mg/kg	0.0462	0.0455	92.0	70-130	1.45	20	WG770847
Total Xylene	mg/kg	0.151	0.148	101.	70-130	1.78	20	WG770847
a,a,a-Trifluorotoluene(PID)				102.0	54-144			WG770847
TPH (GC/FID) Low Fraction	mg/kg	5.41	5.23	98.0	63.5-137	3.28	20	WG770847
a,a,a-Trifluorotoluene(FID)				102.0	59-128			WG770847
Arsenic	mg/kg	102.	102.	102.	80-120	0.0	20	WG770627
Barium	mg/kg	106.	106.	106.	80-120	0.0	20	WG770627
Cadmium	mg/kg	103.	103.	102.	80-120	0.0	20	WG770627
Chromium	mg/kg	101.	99.9	101.	80-120	1.00	20	WG770627
Copper	mg/kg	102.	101.	102.	80-120	1.00	20	WG770627
Lead	mg/kg	103.	103.	103.	80-120	0.0	20	WG770627
Nickel	mg/kg	101.	101.	101.	80-120	0.0	20	WG770627
Selenium	mg/kg	104.	104.	104.	80-120	0.0	20	WG770627
Silver	mg/kg	101.	99.9	101.	80-120	1.00	20	WG770627
Zinc	mg/kg	99.9	100.	100.	80-120	0.0	20	WG770627
Mercury	mg/kg	0.451	0.440	98.0	80-120	2.00	20	WG770434
Acenaphthene	mg/kg	0.0588	0.0617	74.0	48.7-127	4.67	20	WG770962
Anthracene	mg/kg	0.0611	0.0636	76.0	51.3-136	3.92	20	WG770962
Benzo(a)anthracene	mg/kg	0.0582	0.0619	73.0	55-126	6.14	20	WG770962
Benzo(a)pyrene	mg/kg	0.0479	0.0472	60.0	51.9-127	1.43	20	WG770962
Benzo(b)fluoranthene	mg/kg	0.0564	0.0592	70.0	54-125	4.83	20	WG770962
Benzo(k)fluoranthene	mg/kg	0.0627	0.0674	78.0	53.9-132	7.19	20	WG770962
Chrysene	mg/kg	0.0642	0.0679	80.0	55.7-133	5.70	20	WG770962
Dibenz(a,h)anthracene	mg/kg	0.0621	0.0663	78.0	52.6-137	6.52	20	WG770962
Fluoranthene	mg/kg	0.0567	0.0601	71.0	54-132	5.93	20	WG770962
Fluorene	mg/kg	0.0572	0.0604	71.0	48.7-127	5.43	20	WG770962
Indeno(1,2,3-cd)pyrene	mg/kg	0.0626	0.0665	78.0	53.8-138	6.10	20	WG770962

* Performance of this Analyte is outside of established criteria.
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Parachute, CO 81635

Quality Assurance Report
Level II

L748900

February 23, 2015

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Naphthalene	mg/kg	0.0668	0.0701	84.0	42-127	4.84	20	WG770962
Pyrene	mg/kg	0.0655	0.0692	82.0	54-129	5.54	20	WG770962
2-Fluorobiphenyl				77.40	38.2-135			WG770962
Nitrobenzene-d5				98.90	28.4-151			WG770962
p-Terphenyl-d14				68.90	34.2-141			WG770962
ORP	mV	108.	109.	108.	90-110	0.922	20	WG770899

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/kg	19.3	0.0	20	96.0	75-125	L748857-01	WG770428
TPH (GC/FID) High Fraction	mg/kg	406.	341.	60	110.	50-150	L748905-01	WG770396
o-Terphenyl					68.90	50-150		WG770396
Benzene	mg/kg	0.181	0.000444	.05	72.0	49.7-127	L748857-02	WG770847
Ethylbenzene	mg/kg	0.189	0.000212	.05	76.0	40.8-141	L748857-02	WG770847
Toluene	mg/kg	0.191	0.000394	.05	76.0	49.8-132	L748857-02	WG770847
Total Xylene	mg/kg	0.601	0.00116	.15	80.0	41.2-140	L748857-02	WG770847
a,a,a-Trifluorotoluene(PID)					101.0	54-144		WG770847
TPH (GC/FID) Low Fraction	mg/kg	20.2	0.0	5.5	73.0	28.5-138	L748857-02	WG770847
a,a,a-Trifluorotoluene(FID)					98.30	59-128		WG770847
Lead	mg/kg	224.	87.5	100	140.*	75-125	L748838-03	WG770627
Mercury	mg/kg	0.425	0.00429	.458	92.0	75-125	L748506-41	WG770434
Acenaphthene	mg/kg	0.0668	0.00462	.08	78.0	39.4-132	L749279-02	WG770962
Anthracene	mg/kg	0.0835	0.0120	.08	89.0	36.7-144	L749279-02	WG770962
Benzo(a)anthracene	mg/kg	0.112	0.0397	.08	91.0	28-144	L749279-02	WG770962
Benzo(a)pyrene	mg/kg	0.105	0.0387	.08	83.0	23.8-147	L749279-02	WG770962
Benzo(b)fluoranthene	mg/kg	0.114	0.0487	.08	81.0	18.2-147	L749279-02	WG770962
Benzo(k)fluoranthene	mg/kg	0.0733	0.0171	.08	70.0	26.5-143	L749279-02	WG770962
Chrysene	mg/kg	0.111	0.0393	.08	90.0	27.4-150	L749279-02	WG770962
Dibenz(a,h)anthracene	mg/kg	0.0661	0.0	.08	83.0	13.8-150	L749279-02	WG770962
Fluoranthene	mg/kg	0.215	0.101	.08	140.	23.2-158	L749279-02	WG770962
Fluorene	mg/kg	0.0705	0.00669	.08	80.0	30.8-139	L749279-02	WG770962
Indeno(1,2,3-cd)pyrene	mg/kg	0.0875	0.00108	.08	110.	10.7-155	L749279-02	WG770962
Naphthalene	mg/kg	0.0658	0.00545	.08	75.0	34.9-133	L749279-02	WG770962
Pyrene	mg/kg	0.164	0.0709	.08	120.	22.6-151	L749279-02	WG770962
2-Fluorobiphenyl					87.20	38.2-135		WG770962
Nitrobenzene-d5					108.0	28.4-151		WG770962
p-Terphenyl-d14					75.10	34.2-141		WG770962

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/kg	19.3	19.3	96.5	75-125	0.0	20	L748857-01	WG770428
TPH (GC/FID) High Fraction	mg/kg	367.	406.	42.4*	50-150	10.2	20	L748905-01	WG770396
o-Terphenyl				70.40	50-150				WG770396

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

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WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L748900

February 23, 2015

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/kg	0.203	0.181	81.2	49.7-127	11.9	23.5	L748857-02	WG770847
Ethylbenzene	mg/kg	0.215	0.189	85.8	40.8-141	12.5	23.8	L748857-02	WG770847
Toluene	mg/kg	0.218	0.191	87.0	49.8-132	13.3	23.5	L748857-02	WG770847
Total Xylene	mg/kg	0.677	0.601	90.1	41.2-140	11.9	23.7	L748857-02	WG770847
a,a,a-Trifluorotoluene(PID)				101.0	54-144				WG770847
TPH (GC/FID) Low Fraction	mg/kg	20.8	20.2	75.7	28.5-138	3.13	23.6	L748857-02	WG770847
a,a,a-Trifluorotoluene(FID)				96.70	59-128				WG770847
Lead	mg/kg	398.	224.	310.*	75-125	56.0*	20	L748838-03	WG770627
Mercury	mg/kg	0.424	0.425	91.6	75-125	0.0	20	L748506-41	WG770434
Acenaphthene	mg/kg	0.0619	0.0668	71.6	39.4-132	7.61	20	L749279-02	WG770962
Anthracene	mg/kg	0.0775	0.0835	81.8	36.7-144	7.48	20.7	L749279-02	WG770962
Benzo(a)anthracene	mg/kg	0.103	0.112	78.6	28-144	9.00	24.7	L749279-02	WG770962
Benzo(a)pyrene	mg/kg	0.101	0.105	77.7	23.8-147	4.39	25.3	L749279-02	WG770962
Benzo(b)fluoranthene	mg/kg	0.104	0.114	69.7	18.2-147	8.48	29.5	L749279-02	WG770962
Benzo(k)fluoranthene	mg/kg	0.0644	0.0733	59.1	26.5-143	12.9	26.1	L749279-02	WG770962
Chrysene	mg/kg	0.105	0.111	82.7	27.4-150	5.14	25.7	L749279-02	WG770962
Dibenz(a,h)anthracene	mg/kg	0.0616	0.0661	77.0	13.8-150	7.09	25.8	L749279-02	WG770962
Fluoranthene	mg/kg	0.187	0.215	107.	23.2-158	13.9	26	L749279-02	WG770962
Fluorene	mg/kg	0.0637	0.0705	71.2	30.8-139	10.1	20	L749279-02	WG770962
Indeno(1,2,3-cd)pyrene	mg/kg	0.0843	0.0875	104.	10.7-155	3.82	26.9	L749279-02	WG770962
Naphthalene	mg/kg	0.0623	0.0658	71.1	34.9-133	5.41	20.4	L749279-02	WG770962
Pyrene	mg/kg	0.145	0.164	92.5	22.6-151	12.5	25.1	L749279-02	WG770962
2-Fluorobiphenyl				84.40	38.2-135				WG770962
Nitrobenzene-d5				103.0	28.4-151				WG770962
p-Terphenyl-d14				76.10	34.2-141				WG770962

Post Spike

Serial Dilution

Batch number /Run number / Sample number cross reference

WG770428: R3020046: L748900-01
WG770430: R3020077: L748900-01
WG770581: R3020235: L748900-01
WG770396: R3020278 R3020478: L748900-02
WG770847: R3020388: L748900-02
WG770627: R3020455 R3020592: L748900-01
WG770434: R3020503: L748900-01
WG770962: R3020623 R3020627 R3020742: L748900-02
WG770899: R3020912: L748900-01
WG771000: R3021074: L748900-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L748900

February 23, 2015

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

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

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

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

18-Mar-2015

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

Re: **GV 41-34 Batch 7** Work Order: **1503595**

Dear Karolina,

ALS Environmental received 1 sample on 11-Mar-2015 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 25.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

Report of Laboratory Analysis

ALS Group USA, Corp

Date: 18-Mar-15

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 7
Work Order: **1503595**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1503595-01	GV 41-34 Batch 7	Soil		3/10/2015 10:45	3/11/2015 09:30	☐

ALS Group USA, Corp

Date: 18-Mar-15

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

Acronym	Description
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

Units Reported	Description
% 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: *18-Mar-15*

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 7 **Work Order:** 1503595
Sample ID: GV 41-34 Batch 7 **Lab ID:** 1503595-01
Collection Date: 3/10/2015 10:45 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/16/15	Analyst: **IT**
DRO (C10-C28)	**47**		**4.8**	**mg/Kg-dry**	1	3/16/2015 11:02 PM
Surr: 4-Terphenyl-d14	*56.9*		*39-133*	*%REC*	1	3/16/2015 11:02 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**		Prep: SW5035 / 3/11/15	Analyst: **IT**
GRO (C6-C10)	ND		2.9	mg/Kg-dry	1	3/13/2015 05:57 AM
Surr: Toluene-d8	*115*		*50-150*	*%REC*	1	3/13/2015 05:57 AM
MERCURY BY CVAA			**SW7471B**		Prep: SW7471 / 3/13/15	Analyst: **LR**
Mercury	**0.028**		**0.014**	**mg/Kg-dry**	1	3/13/2015 08:45 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 3/12/15	Analyst: **JEC**
Arsenic	**15**		**0.37**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Barium	**290**		**0.37**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Cadmium	ND		0.74	mg/Kg-dry	1	3/13/2015 04:58 PM
Chromium	**12**		**0.37**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Copper	**15**		**0.74**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Lead	**12**		**0.37**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Nickel	**15**		**0.37**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
Selenium	ND		0.74	mg/Kg-dry	1	3/13/2015 04:58 PM
Silver	ND		0.37	mg/Kg-dry	1	3/13/2015 04:58 PM
Zinc	**62**		**0.74**	**mg/Kg-dry**	1	3/13/2015 04:58 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 3/17/15	Analyst: **JEC**
Calcium	**460**		**5.0**	**mg/L**	10	3/17/2015 01:24 PM
Magnesium	**120**		**2.0**	**mg/L**	10	3/17/2015 01:24 PM
Sodium	**1,300**		**2.0**	**mg/L**	10	3/17/2015 01:24 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/17/15	Analyst: **JEC**
Sodium Adsorption Ratio	**14**		**0.010**	**none**	1	3/17/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 3/16/15	Analyst: **RM**
Acenaphthene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Anthracene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Chrysene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM

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

ALS Group USA, Corp

Date: *18-Mar-15*

Client: WPX Energy Rocky Mountain, LLC
Project: GV 41-34 Batch 7 **Work Order:** 1503595
Sample ID: GV 41-34 Batch 7 **Lab ID:** 1503595-01
Collection Date: 3/10/2015 10:45 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Fluorene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Naphthalene	**32**		**7.7**	**µg/Kg-dry**	1	3/16/2015 07:08 PM
Pyrene	ND		7.7	µg/Kg-dry	1	3/16/2015 07:08 PM
Surr: 2,4,6-Tribromophenol	*69.9*		*34-140*	*%REC*	1	3/16/2015 07:08 PM
Surr: 2-Fluorobiphenyl	*63.2*		*12-100*	*%REC*	1	3/16/2015 07:08 PM
Surr: 2-Fluorophenol	*64.0*		*33-117*	*%REC*	1	3/16/2015 07:08 PM
Surr: 4-Terphenyl-d14	*90.0*		*25-137*	*%REC*	1	3/16/2015 07:08 PM
Surr: Nitrobenzene-d5	*44.0*		*37-107*	*%REC*	1	3/16/2015 07:08 PM
Surr: Phenol-d6	*75.4*		*40-106*	*%REC*	1	3/16/2015 07:08 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/11/15	Analyst: **BG**
Benzene	ND		35	µg/Kg-dry	1	3/12/2015 07:23 AM
Ethylbenzene	**47**		**35**	**µg/Kg-dry**	1	3/12/2015 07:23 AM
m,p-Xylene	**150**		**69**	**µg/Kg-dry**	1	3/12/2015 07:23 AM
o-Xylene	ND		35	µg/Kg-dry	1	3/12/2015 07:23 AM
Toluene	ND		35	µg/Kg-dry	1	3/12/2015 07:23 AM
Xylenes, Total	**150**		**100**	**µg/Kg-dry**	1	3/12/2015 07:23 AM
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-130*	*%REC*	1	3/12/2015 07:23 AM
Surr: 4-Bromofluorobenzene	*99.4*		*70-130*	*%REC*	1	3/12/2015 07:23 AM
Surr: Dibromofluoromethane	*98.7*		*70-130*	*%REC*	1	3/12/2015 07:23 AM
Surr: Toluene-d8	*114*		*70-130*	*%REC*	1	3/12/2015 07:23 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/17/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**10**		**0.050**	**mmhos/cm @2**	10	3/17/2015 11:45 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**12**		**0.58**	**mg/Kg-dry**	1	3/18/2015 08:30 AM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/16/15	Analyst: **MB**
Chromium, Hexavalent	ND		1.2	mg/Kg-dry	1	3/17/2015 02:00 PM
MOISTURE			**E160.3M**			Analyst: **EVB**
Moisture	**14**		**0.050**	**% of sample**	1	3/13/2015 12:35 PM
PH			**SW9045D**		Prep: EXTRACT / 3/12/15	Analyst: **JRF**
pH	**7.8**			**s.u.**	1	3/12/2015 01:20 PM

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

QC BATCH REPORT

Batch ID: **68624** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-68624-68624** Units: **mg/Kg** Analysis Date: **3/16/2015 05:03 PM**

Client ID: Run ID: **GC8_150316A** SeqNo: **3180178** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*1.237*	0	*2*	0	*61.8*	*39-133*	0			

LCS Sample ID: **DLCSS1-68624-68624** Units: **mg/Kg** Analysis Date: **3/16/2015 05:33 PM**

Client ID: Run ID: **GC8_150316A** SeqNo: **3180179** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	173.3	5.0	200	0	86.6	61-109	0			
Surr: 4-Terphenyl-d14	*1.148*	0	*2*	0	*57.4*	*39-133*	0			

MS Sample ID: **1503588-02A MS** Units: **mg/Kg** Analysis Date: **3/16/2015 06:03 PM**

Client ID: Run ID: **GC8_150316A** SeqNo: **3180181** Prep Date: **3/16/2015** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	921.9	81	322.9	685.4	73.3	48-110	0			
Surr: 4-Terphenyl-d14	*2.247*	0	*3.229*	0	*69.6*	*39-133*	0			

MSD Sample ID: **1503588-02A MSD** Units: **mg/Kg** Analysis Date: **3/16/2015 06:33 PM**

Client ID: Run ID: **GC8_150316A** SeqNo: **3180183** Prep Date: **3/16/2015** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	937.7	78	313.3	685.4	80.5	48-110	921.9	1.7	30	
Surr: 4-Terphenyl-d14	*1.899*	0	*3.133*	0	*60.6*	*39-133*	2.247	*16.8*	*30*	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68523** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-68523-68523** Units: **µg/Kg** Analysis Date: **3/13/2015 03:54 AM**
Client ID: Run ID: **GC9_150312A** SeqNo: **3176256** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*5102*	0	*5000*	0	*102*	*50-150*	0			

LCS Sample ID: **LCS-68523-68523** Units: **µg/Kg** Analysis Date: **3/13/2015 03:29 AM**
Client ID: Run ID: **GC9_150312A** SeqNo: **3176255** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	488700	2,500	500000	0	97.7	70-130	0			
Surr: Toluene-d8	*4533*	0	*5000*	0	*90.7*	*50-150*	0			

MS Sample ID: **1503588-01A MS** Units: **µg/Kg** Analysis Date: **3/13/2015 07:39 AM**
Client ID: Run ID: **GC9_150312A** SeqNo: **3176263** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	451500	2,500	500000	0	90.3	70-130	0			
Surr: Toluene-d8	*4848*	0	*5000*	0	*97*	*50-150*	0			

MSD Sample ID: **1503588-01A MSD** Units: **µg/Kg** Analysis Date: **3/13/2015 08:04 AM**
Client ID: Run ID: **GC9_150312A** SeqNo: **3176264** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	445700	2,500	500000	0	89.1	70-130	451500	1.3	30	
Surr: Toluene-d8	*4528*	0	*5000*	0	*90.6*	*50-150*	4848	*6.85*	*30*	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68556** Instrument ID **HG1** Method: **SW7471B**

MBLK Sample ID: **MBLK-68556-68556** Units: **mg/Kg** Analysis Date: **3/13/2015 08:26 PM**
Client ID: Run ID: **HG1_150313A** SeqNo: **3178004** Prep Date: **3/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-68556-68556** Units: **mg/Kg** Analysis Date: **3/13/2015 08:36 PM**
Client ID: Run ID: **HG1_150313A** SeqNo: **3178008** Prep Date: **3/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1895	0.020	0.1665	0	114	80-120	0			

MS Sample ID: **1503595-01AMS** Units: **mg/Kg** Analysis Date: **3/13/2015 08:47 PM**
Client ID: **GV 41-34 Batch 7** Run ID: **HG1_150313A** SeqNo: **3178013** Prep Date: **3/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1438	0.013	0.1044	0.02387	115	75-125	0			

MSD Sample ID: **1503595-01AMSD** Units: **mg/Kg** Analysis Date: **3/13/2015 08:50 PM**
Client ID: **GV 41-34 Batch 7** Run ID: **HG1_150313A** SeqNo: **3178014** Prep Date: **3/13/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1403	0.012	0.1037	0.02387	112	75-125	0.1438	2.42	35	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68545** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-68545-68545** Units: **mg/Kg** Analysis Date: **3/13/2015 04:14 PM**
Client ID: Run ID: **ICP2_150313A** SeqNo: **3177445** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	0.01016	0.25								J
Copper	ND	0.50								
Lead	0.03105	0.25								J
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-68545-68545** Units: **mg/Kg** Analysis Date: **3/13/2015 04:20 PM**
Client ID: Run ID: **ICP2_150313A** SeqNo: **3177446** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.812	0.25	5	0	96.2	80-120	0			
Barium	5.059	0.25	5	0	101	80-120	0			
Cadmium	4.99	0.50	5	0	99.8	80-120	0			
Chromium	5.233	0.25	5	0	105	80-120	0			
Copper	5.365	0.50	5	0	107	80-120	0			
Lead	5.269	0.25	5	0	105	80-120	0			
Nickel	5.218	0.25	5	0	104	80-120	0			
Selenium	4.917	0.50	5	0	98.3	80-120	0			
Silver	5.439	0.25	5	0	109	80-120	0			
Zinc	5.195	0.50	5	0	104	80-120	0			

MS Sample ID: **1503596-03AMS** Units: **mg/Kg** Analysis Date: **3/13/2015 05:42 PM**
Client ID: Run ID: **ICP2_150313A** SeqNo: **3177462** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.7	0.39	7.825	10.46	118	75-125	0			
Barium	238.7	0.39	7.825	201.8	472	75-125	0			SO
Cadmium	8.629	0.78	7.825	0.4412	105	75-125	0			
Chromium	19.05	0.39	7.825	7.483	148	75-125	0			S
Copper	20.73	0.78	7.825	12.05	111	75-125	0			
Lead	22.21	0.39	7.825	14.02	105	75-125	0			
Nickel	20.68	0.39	7.825	13.16	96	75-125	0			
Selenium	7.573	0.78	7.825	-0.4337	102	75-125	0			
Silver	9.564	0.39	7.825	-0.145	124	75-125	0			
Zinc	67.45	0.78	7.825	56.87	135	75-125	0			SO

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68545** Instrument ID **ICP2** Method: **SW846 6010C**

MS Sample ID: **1503596-03AMS** Units: **mg/Kg** Analysis Date: **3/16/2015 05:06 PM**
Client ID: Run ID: **ICP2_150316B** SeqNo: **3179842** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.83	0.39	7.825	11.51	119	75-125	0			
Barium	256.4	0.39	7.825	205.7	648	75-125	0			SO
Cadmium	8.505	0.78	7.825	0.3991	104	75-125	0			
Chromium	19.67	0.39	7.825	8.379	144	75-125	0			S
Copper	21.01	0.78	7.825	12.4	110	75-125	0			
Lead	23.28	0.39	7.825	14.8	108	75-125	0			
Nickel	20.86	0.39	7.825	13.64	92.3	75-125	0			
Selenium	8.967	0.78	7.825	0.208	112	75-125	0			
Silver	10.58	0.39	7.825	-0.2068	138	75-125	0			S
Zinc	68.78	0.78	7.825	59.17	123	75-125	0			O

MSD Sample ID: **1503596-03AMSD** Units: **mg/Kg** Analysis Date: **3/13/2015 05:48 PM**
Client ID: Run ID: **ICP2_150313A** SeqNo: **3177463** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.33	0.39	7.812	10.46	114	75-125	19.7	1.88	20	
Barium	213.1	0.39	7.812	201.8	145	75-125	238.7	11.3	20	SO
Cadmium	8.616	0.78	7.812	0.4412	105	75-125	8.629	0.156	20	
Chromium	19.19	0.39	7.812	7.483	150	75-125	19.05	0.757	20	S
Copper	20.89	0.78	7.812	12.05	113	75-125	20.73	0.79	20	
Lead	22.47	0.39	7.812	14.02	108	75-125	22.21	1.19	20	
Nickel	20.64	0.39	7.812	13.16	95.7	75-125	20.68	0.183	20	
Selenium	8.108	0.78	7.812	-0.4337	109	75-125	7.573	6.82	20	
Silver	9.479	0.39	7.812	-0.145	123	75-125	9.564	0.895	20	
Zinc	69.37	0.78	7.812	56.87	160	75-125	67.45	2.8	20	SO

MSD Sample ID: **1503596-03AMSD** Units: **mg/Kg** Analysis Date: **3/16/2015 05:11 PM**
Client ID: Run ID: **ICP2_150316B** SeqNo: **3179843** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.91	0.39	7.812	11.51	120	75-125	20.83	0.386	20	
Barium	217.4	0.39	7.812	205.7	150	75-125	256.4	16.5	20	SO
Cadmium	8.63	0.78	7.812	0.3991	105	75-125	8.505	1.45	20	
Chromium	20.14	0.39	7.812	8.379	151	75-125	19.67	2.35	20	S
Copper	21.41	0.78	7.812	12.4	115	75-125	21.01	1.88	20	
Lead	23.8	0.39	7.812	14.8	115	75-125	23.28	2.19	20	
Nickel	21.06	0.39	7.812	13.64	95	75-125	20.86	0.953	20	
Selenium	9.146	0.78	7.812	0.208	114	75-125	8.967	1.97	20	
Silver	10.55	0.39	7.812	-0.2068	138	75-125	10.58	0.222	20	S
Zinc	71.25	0.78	7.812	59.17	155	75-125	68.78	3.53	20	SO

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68545** Instrument ID **ICP2** Method: **SW846 6010C**

The following samples were analyzed in this batch:	1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68575** Instrument ID **ICP2** Method: **SW846 6010C**

DUP	Sample ID: **1503594-01ADUP**				Units: **mg/L**			Analysis Date: **3/17/2015 01:19 PM**			
Client ID:		Run ID: **ICP2_150317A**			SeqNo: **3180998**		Prep Date: **3/17/2015**		DF: **10**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	334.6	5.0	0	0	0	0-0	307	8.58		
Magnesium	60.7	2.0	0	0	0	0-0	57.55	5.34		
Sodium	462.6	2.0	0	0	0	0-0	443.4	4.23		

DUP	Sample ID: **1503594-01ADUP**				Units: **none**			Analysis Date: **3/17/2015**			
Client ID:		Run ID: **SAR_150317A**			SeqNo: **3181110**		Prep Date: **3/17/2015**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	6.11	0.010	0	0	0		6.09	0.32	50	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68623** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-68623-68623** Units: **µg/Kg** Analysis Date: **3/16/2015 06:00 PM**
Client ID: Run ID: **SVMS4_150316A** SeqNo: **3180314** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2,4,6-Tribromophenol	*1181*	0	*1667*	0	*70.9*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*1057*	0	*1667*	0	*63.4*	*12-100*	0			
Surr: 2-Fluorophenol	*1154*	0	*1667*	0	*69.3*	*33-117*	0			
Surr: 4-Terphenyl-d14	*1446*	0	*1667*	0	*86.7*	*25-137*	0			
Surr: Nitrobenzene-d5	*1029*	0	*1667*	0	*61.7*	*37-107*	0			
Surr: Phenol-d6	*1124*	0	*1667*	0	*67.4*	*40-106*	0			

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

QC BATCH REPORT

Batch ID: **68623** Instrument ID **SVMS4** Method: **SW846 8270D**

LCS Sample ID: **SLCSS1-68623-68623** Units: **µg/Kg** Analysis Date: **3/16/2015 06:28 PM**
Client ID: Run ID: **SVMS4_150316A** SeqNo: **3180316** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	537.7	6.7	666.7	0	80.6	45-110	0			
Anthracene	578.7	6.7	666.7	0	86.8	55-105	0			
Benzo(a)anthracene	545.7	6.7	666.7	0	81.8	50-110	0			
Benzo(a)pyrene	583.3	6.7	666.7	0	87.5	50-110	0			
Benzo(b)fluoranthene	593.7	6.7	666.7	0	89	45-115	0			
Benzo(g,h,i)perylene	609	6.7	666.7	0	91.3	40-125	0			
Benzo(k)fluoranthene	588.7	6.7	666.7	0	88.3	45-115	0			
Chrysene	576.3	6.7	666.7	0	86.4	55-110	0			
Dibenzo(a,h)anthracene	611.3	6.7	666.7	0	91.7	40-125	0			
Fluoranthene	602.7	6.7	666.7	0	90.4	55-115	0			
Fluorene	553.7	6.7	666.7	0	83	50-110	0			
Indeno(1,2,3-cd)pyrene	583	6.7	666.7	0	87.4	40-120	0			
Naphthalene	505.3	6.7	666.7	0	75.8	40-105	0			
Pyrene	563.3	6.7	666.7	0	84.5	45-125	0			
Surr: 2,4,6-Tribromophenol	*1486*	0	*1667*	0	*89.1*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*1382*	0	*1667*	0	*82.9*	*12-100*	0			
Surr: 2-Fluorophenol	*1437*	0	*1667*	0	*86.2*	*33-117*	0			
Surr: 4-Terphenyl-d14	*1420*	0	*1667*	0	*85.2*	*25-137*	0			
Surr: Nitrobenzene-d5	*1356*	0	*1667*	0	*81.4*	*37-107*	0			
Surr: Phenol-d6	*1415*	0	*1667*	0	*84.9*	*40-106*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68623** Instrument ID **SVMS4** Method: **SW846 8270D**

MS Sample ID: **1503673-01A MS** Units: **µg/Kg** Analysis Date: **3/16/2015 10:18 PM**
Client ID: Run ID: **SVMS4_150316A** SeqNo: **3180318** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1005	13	1279	0	0	45-110	0			
Anthracene	1077	13	1279	0	0	55-105	0			
Benzo(a)anthracene	1072	13	1279	0	0	50-110	0			
Benzo(a)pyrene	1056	13	1279	0	0	50-110	0			
Benzo(b)fluoranthene	1108	13	1279	0	0	45-115	0			
Benzo(g,h,i)perylene	1138	13	1279	0	0	40-125	0			
Benzo(k)fluoranthene	1038	13	1279	0	0	45-115	0			
Chrysene	1131	13	1279	0	0	55-110	0			
Dibenzo(a,h)anthracene	1104	13	1279	0	0	40-125	0			
Fluoranthene	1150	13	1279	0	0	55-115	0			
Fluorene	1047	13	1279	0	0	50-110	0			
Indeno(1,2,3-cd)pyrene	1131	13	1279	0	0	40-120	0			
Naphthalene	954.8	13	1279	0	0	40-105	0			
Pyrene	1098	13	1279	0	0	45-125	0			
Surr: 2,4,6-Tribromophenol	*2689*	0	*3198*	0	*84.1*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*2556*	0	*3198*	0	*79.9*	*12-100*	0			
Surr: 2-Fluorophenol	*2678*	0	*3198*	0	*83.7*	*33-117*	0			
Surr: 4-Terphenyl-d14	*2804*	0	*3198*	0	*87.7*	*25-137*	0			
Surr: Nitrobenzene-d5	*2594*	0	*3198*	0	*81.1*	*37-107*	0			
Surr: Phenol-d6	*2623*	0	*3198*	0	*82*	*40-106*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68623** Instrument ID **SVMS4** Method: **SW846 8270D**

MSD Sample ID: **1503673-01A MSD** Units: **µg/Kg** Analysis Date: **3/16/2015 10:44 PM**

Client ID: Run ID: **SVMS4_150316A** SeqNo: **3180319** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1025	13	1280	0	0	45-110	1005	2.03	30	
Anthracene	1112	13	1280	0	0	55-105	1077	3.18	30	
Benzo(a)anthracene	1101	13	1280	0	0	50-110	1072	2.61	30	
Benzo(a)pyrene	1087	13	1280	0	0	50-110	1056	2.88	30	
Benzo(b)fluoranthene	1124	13	1280	0	0	45-115	1108	1.45	30	
Benzo(g,h,i)perylene	1206	13	1280	0	0	40-125	1138	5.81	30	
Benzo(k)fluoranthene	1098	13	1280	0	0	45-115	1038	5.65	30	
Chrysene	1201	13	1280	0	0	55-110	1131	6.06	30	
Dibenzo(a,h)anthracene	1164	13	1280	0	0	40-125	1104	5.32	30	
Fluoranthene	1157	13	1280	0	0	55-115	1150	0.631	30	
Fluorene	1071	13	1280	0	0	50-110	1047	2.31	30	
Indeno(1,2,3-cd)pyrene	1167	13	1280	0	0	40-120	1131	3.14	30	
Naphthalene	974.1	13	1280	0	0	40-105	954.8	2	30	
Pyrene	1134	13	1280	0	0	45-125	1098	3.23	30	
Surr: 2,4,6-Tribromophenol	*2761*	0	*3200*	0	*86.3*	*34-140*	2689	*2.64*	*40*	
Surr: 2-Fluorobiphenyl	*2674*	0	*3200*	0	*83.6*	*12-100*	2556	*4.5*	*40*	
Surr: 2-Fluorophenol	*2665*	0	*3200*	0	*83.3*	*33-117*	2678	*0.474*	*40*	
Surr: 4-Terphenyl-d14	*2936*	0	*3200*	0	*91.8*	*25-137*	2804	*4.62*	*40*	
Surr: Nitrobenzene-d5	*2594*	0	*3200*	0	*81.1*	*37-107*	2594	*0.00278*	*40*	
Surr: Phenol-d6	*2568*	0	*3200*	0	*80.3*	*40-106*	2623	*2.12*	*40*	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68509** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **MBLK-68509-68509** Units: **µg/Kg** Analysis Date: **3/11/2015 04:13 PM**
Client ID: Run ID: **VMS6_150311A** SeqNo: **3174629** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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	*1118*	0	*1000*	0	*112*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*945.5*	0	*1000*	0	*94.6*	*70-130*	0			
Surr: Dibromofluoromethane	*944.5*	0	*1000*	0	*94.4*	*70-130*	0			
Surr: Toluene-d8	*1034*	0	*1000*	0	*103*	*70-130*	0			

LCS Sample ID: **LCS-68509-68509** Units: **µg/Kg** Analysis Date: **3/11/2015 02:55 PM**
Client ID: Run ID: **VMS6_150311A** SeqNo: **3173106** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1027	30	1000	0	103	75-125	0			
Ethylbenzene	999.5	30	1000	0	100	75-125	0			
m,p-Xylene	1996	60	2000	0	99.8	80-125	0			
o-Xylene	1006	30	1000	0	101	75-125	0			
Toluene	1039	30	1000	0	104	70-125	0			
Xylenes, Total	3002	90	3000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1114*	0	*1000*	0	*111*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*980.5*	0	*1000*	0	*98*	*70-130*	0			
Surr: Dibromofluoromethane	*1062*	0	*1000*	0	*106*	*70-130*	0			
Surr: Toluene-d8	*1018*	0	*1000*	0	*102*	*70-130*	0			

MS Sample ID: **1503592-01A MS** Units: **µg/Kg** Analysis Date: **3/12/2015 09:31 AM**
Client ID: Run ID: **VMS5_150311B** SeqNo: **3174564** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1100	30	1000	0	110	75-125	0			
Ethylbenzene	1046	30	1000	0	105	75-125	0			
m,p-Xylene	2172	60	2000	116.5	103	80-125	0			
o-Xylene	1063	30	1000	32.5	103	75-125	0			
Toluene	1037	30	1000	0	104	70-125	0			
Xylenes, Total	3234	90	3000	152	103	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1028*	0	*1000*	0	*103*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*993*	0	*1000*	0	*99.3*	*70-130*	0			
Surr: Dibromofluoromethane	*1014*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1002*	0	*1000*	0	*100*	*70-130*	0			

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68509** Instrument ID **VMS6** Method: **SW8260B**

MSD Sample ID: **1503592-01A MSD** Units: **µg/Kg** Analysis Date: **3/12/2015 09:57 AM**
Client ID: Run ID: **VMS5_150311B** SeqNo: **3174565** Prep Date: **3/11/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1116	30	1000	0	112	75-125	1100	1.44	30	
Ethylbenzene	1110	30	1000	0	111	75-125	1046	5.94	30	
m,p-Xylene	2348	60	2000	116.5	112	80-125	2172	7.83	30	
o-Xylene	1266	30	1000	32.5	123	75-125	1063	17.4	30	
Toluene	1057	30	1000	0	106	70-125	1037	1.91	30	
Xylenes, Total	3614	90	3000	152	115	75-125	3234	11.1	30	
Surr: 1,2-Dichloroethane-d4	*1132*	0	*1000*	0	*113*	*70-130*	1028	*9.63*	*30*	
Surr: 4-Bromofluorobenzene	*1106*	0	*1000*	0	*111*	*70-130*	993	*10.8*	*30*	
Surr: Dibromofluoromethane	*952.5*	0	*1000*	0	*95.2*	*70-130*	1014	*6.25*	*30*	
Surr: Toluene-d8	*1020*	0	*1000*	0	*102*	*70-130*	1002	*1.73*	*30*	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68559** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-68559-68559** Units: **s.u.** Analysis Date: **3/12/2015 01:20 PM**
Client ID: Run ID: **WETCHEM_150312F** SeqNo: **3174644** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.97	0	4	0	99.2	90-110	0			

DUP Sample ID: **1503588-02A DUP** Units: **s.u.** Analysis Date: **3/12/2015 01:20 PM**
Client ID: Run ID: **WETCHEM_150312F** SeqNo: **3174648** Prep Date: **3/12/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.05	0	0	0	0	0-0	9.01	0.443	20	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68575** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **1503594-01A DUP** Units: **mmhos/cm @25°** Analysis Date: **3/17/2015 11:45 AM**
Client ID: Run ID: **WETCHEM_150317C** SeqNo: **3180630** Prep Date: **3/17/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.89	0.050	0	0	0		5.02	2.62	50	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **68734** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-68734-68734** Units: **mg/Kg** Analysis Date: **3/17/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150317K** SeqNo: **3181588** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	1.0								

LCS Sample ID: **LCS-68734-68734** Units: **mg/Kg** Analysis Date: **3/17/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150317K** SeqNo: **3181587** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.39	1.0	5	0	87.8	80-120	0			

MS Sample ID: **1503588-01A MS** Units: **mg/Kg** Analysis Date: **3/17/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150317K** SeqNo: **3181578** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.347	0.99	4.95	0.1212	85.4	75-125	0			

MS Sample ID: **1503588-01A MSI** Units: **mg/Kg** Analysis Date: **3/17/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150317K** SeqNo: **3181580** Prep Date: **3/16/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2393	100	2848	0.1212	84	75-125	0			

MSD Sample ID: **1503588-01A MSD** Units: **mg/Kg** Analysis Date: **3/17/2015 02:00 PM**
Client ID: Run ID: **WETCHEM_150317K** SeqNo: **3181579** Prep Date: **3/16/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.057	0.95	4.762	0.1212	82.7	75-125	4.347	6.89	20	

The following samples were analyzed in this batch: 1503595-01A

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

Client: WPX Energy Rocky Mountain, LLC
Work Order: 1503595
Project: GV 41-34 Batch 7

QC BATCH REPORT

Batch ID: **R159209** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R159209** Units: **% of sample** Analysis Date: **3/13/2015 12:35 PM**
Client ID: Run ID: **MOIST_150313A** SeqNo: **3178660** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.03	0.050								J

LCS Sample ID: **LCS-R159209** Units: **% of sample** Analysis Date: **3/13/2015 12:35 PM**
Client ID: Run ID: **MOIST_150313A** SeqNo: **3178659** 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: **1503592-01A DUP** Units: **% of sample** Analysis Date: **3/13/2015 12:35 PM**
Client ID: Run ID: **MOIST_150313A** SeqNo: **3178643** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.02	0.050	0	0	0		8.99	0.333	20	

DUP Sample ID: **1503596-05A DUP** Units: **% of sample** Analysis Date: **3/13/2015 12:35 PM**
Client ID: Run ID: **MOIST_150313A** SeqNo: **3178652** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.71	0.050	0	0	0		10.49	2.08	20	

The following samples were analyzed in this batch: 1503595-01A

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 262r8

WORKORDER #	1503595				
PAGE	1 of 1				
DISPOSAL	By Lab or Return to Client				

SAMPLER		DATE			
PROJECT NAME	GV 41-34 Batch 7	SITE ID	GV 41-34 Batch 7	TURNAROUND	5 day
PROJECT No.		EDD FORMAT			
		PURCHASE ORDER			
COMPANY NAME	WPX Energy	BILL TO COMPANY	WPX Energy		
SEND REPORT TO	Blaney	INVOICE ATTN TO	Karolina Blaney; Leo Braun		
ADDRESS		ADDRESS	1058 Co Rd 215		
CITY / STATE / ZIP		CITY / STATE / ZIP	Parachure CO 81635		
PHONE		PHONE	970-683-2295		
FAX		FAX			
E-MAIL	Karolina.blaney@wpxenergy.com	E-MAIL	Karolina.blaney@wpxenergy.com; leo.braun@wpxenergy.com		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	910-1
1	GV 41-34 Batch 7	S	3/10/2015	10:45	1	8	x	x

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

For metals or anions, please detail analytes below.

Comments:		QC PACKAGE (check below)
4.0°C	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Karolina Blaney	karolina blaney	3/10/2015	16:00
RECEIVED BY			3-10	1700
RELINQUISHED BY			3-10	1700
RECEIVED BY		Diane F. Shaw	3/11/15	0930
RELINQUISHED BY				
RECEIVED BY				

From: (616) 298-1033
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J151215022303uv

Ship Date: 10MAR15
ActWgt: 72.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 0301015-3
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

WED - 11 MAR 10:30A
PRIORITY OVERNIGHT

TRK# 0281 **7730 9554 2370**

XX HLMA

49424
MI-US
GRR

537J1/870AEE4B

/templates/components/dotcom_label_contents/FoldInstr/en/Folding_instructions.html loading...
/templates/components/dotcom_label_contents/WarningsOriginalLabel/en/Folding_warning.html loading...
/templates/components/dotcom_label_contents/TnCDom/us/en/TC_dom.html loading...

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **WPX** Date/Time Received: **11-Mar-15 09:30**

Work Order: **1503595** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Mar-15 (Date) Reviewed by: Chad Whelton (eSignature) 11-Mar-15 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.0 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/11/2015 3:21:48 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

31-Jan-2014

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

Re: **WPX GV 41-34 Backgrounds 1.23.14** Work Order: **1401965**

Dear Mark,

ALS Environmental received 3 samples on 24-Jan-2014 12:15 PM 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 15.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

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

ALS Group USA, Corp

Date: 31-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14
Work Order: **1401965**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1401965-01	GV 41-34-B-1	Soil		1/23/2014 14:30	1/24/2014 12:15	☐
1401965-02	GV 41-34-B-2	Soil		1/23/2014 14:35	1/24/2014 12:15	☐
1401965-03	GV 41-34-B-3	Soil		1/23/2014 14:40	1/24/2014 12:15	☐

ALS Group USA, Corp

Date: 31-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14
Work Order: 1401965

Case Narrative

Batch 55264 MS/MSD data for Arsenic is not related to this project's samples. No data requires qualification.

ALS Group USA, Corp

Date: 31-Jan-14

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14
WorkOrder: **1401965**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

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

ALS Group USA, Corp

Date: *31-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14 **Work Order:** 1401965
Sample ID: GV 41-34-B-1 **Lab ID:** 1401965-01
Collection Date: 1/23/2014 02:30 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/27/2014**	Analyst: **RH**
Arsenic	**8.5**		**2.1**	**mg/Kg-dry**	5	1/27/2014 10:05 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**23**		**0.050**	**% of sample**	1	1/27/2014 09:20 AM

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

ALS Group USA, Corp

Date: *31-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14
Work Order: 1401965
Sample ID: GV 41-34-B-2
Lab ID: 1401965-02
Collection Date: 1/23/2014 02:35 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/27/2014**	Analyst: **RH**
Arsenic	**7.1**		**2.1**	**mg/Kg-dry**	5	1/27/2014 10:10 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**8.9**		**0.050**	**% of sample**	1	1/27/2014 09:20 AM

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

ALS Group USA, Corp

Date: *31-Jan-14*

Client: HRL Compliance Solutions
Project: WPX GV 41-34 Backgrounds 1.23.14 **Work Order:** 1401965
Sample ID: GV 41-34-B-3 **Lab ID:** 1401965-03
Collection Date: 1/23/2014 02:40 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **1/27/2014**	Analyst: **RH**
Arsenic	**8.7**		**2.2**	**mg/Kg-dry**	5	1/27/2014 10:16 PM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep Date: **1/29/2014**	Analyst: **ML**
Calcium	**35**		**10**	**mg/L**	20	1/30/2014 12:33 PM
Magnesium	**7.4**		**4.0**	**mg/L**	20	1/30/2014 12:33 PM
Sodium	**1,400**		**4.0**	**mg/L**	20	1/30/2014 12:33 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep Date: **1/29/2014**	Analyst: **RH**
Sodium Adsorption Ratio	**57**		**0.010**	**none**	1	1/30/2014
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep Date: **1/29/2014**	Analyst: **JB**
Electrical Conductivity @ Saturation	**6.8**		**0.050**	**mmhos/cm @25**	10	1/30/2014 10:15 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**15**		**0.050**	**% of sample**	1	1/27/2014 09:20 AM
PH			**SW9045D**		Prep Date: **1/27/2014**	Analyst: **AT**
pH	**9.2**			**s.u.**	1	1/27/2014 02:56 PM

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

ALS Group USA, Corp

Date: 31-Jan-14

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1401965

Project: WPX GV 41-34 Backgrounds 1.23.14

Batch ID: **55264** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK Sample ID: **MBLK-55264-55264** Units: **mg/Kg** Analysis Date: **1/27/2014 08:16 PM**

Client ID: Run ID: **ICPMS2_140127A** SeqNo: **2624988** Prep Date: **1/27/2014** 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-55264-55264** Units: **mg/Kg** Analysis Date: **1/27/2014 08:22 PM**

Client ID: Run ID: **ICPMS2_140127A** SeqNo: **2624993** Prep Date: **1/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.581	0.25	5	0	91.6	80-120	0			

MS Sample ID: **1401931-01BMS** Units: **mg/Kg** Analysis Date: **1/27/2014 09:42 PM**

Client ID: Run ID: **ICPMS2_140127A** SeqNo: **2625007** Prep Date: **1/27/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.92	1.5	7.485	13.37	101	75-125	0			

MSD Sample ID: **1401931-01BMSD** Units: **mg/Kg** Analysis Date: **1/27/2014 09:48 PM**

Client ID: Run ID: **ICPMS2_140127A** SeqNo: **2625008** Prep Date: **1/27/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	23.13	1.5	7.418	13.37	132	75-125	20.92	10.1	25	S

The following samples were analyzed in this batch: 1401965-01A 1401965-02A 1401965-03A

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

Client: HRL Compliance Solutions
Work Order: 1401965
Project: WPX GV 41-34 Backgrounds 1.23.14

QC BATCH REPORT

Batch ID: **55335** Instrument ID **SAR** Method: **USDA H60 Method**

DUP Sample ID: **1401965-03BDUP** Units: **none** Analysis Date: **1/30/2014**
Client ID: **GV 41-34-B-3** Run ID: **SAR_140130A** SeqNo: **2628336** Prep Date: **1/29/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	52.95	0.010	0	0	0		57	7.37	50	

The following samples were analyzed in this batch: 1401965-03B

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

Client: HRL Compliance Solutions
Work Order: 1401965
Project: WPX GV 41-34 Backgrounds 1.23.14

QC BATCH REPORT

Batch ID: **55275** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-55275-55275** Units: **s.u.** Analysis Date: **1/27/2014 02:56 PM**
Client ID: Run ID: **WETCHEM_140127L** SeqNo: **2624266** Prep Date: **1/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.02	0	4	0	100	90-110	0			

DUP Sample ID: **14011011-01B DUP** Units: **s.u.** Analysis Date: **1/27/2014 02:56 PM**
Client ID: Run ID: **WETCHEM_140127L** SeqNo: **2624268** Prep Date: **1/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.53	0	0	0	0	0-0	7.49	0.533	20	

DUP Sample ID: **14011011-11B DUP** Units: **s.u.** Analysis Date: **1/27/2014 02:56 PM**
Client ID: Run ID: **WETCHEM_140127L** SeqNo: **2624279** Prep Date: **1/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.3	0	0	0	0	0-0	8.33	0.361	20	

The following samples were analyzed in this batch: 1401965-03A

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

Client: HRL Compliance Solutions
Work Order: 1401965
Project: WPX GV 41-34 Backgrounds 1.23.14

QC BATCH REPORT

Batch ID: **55335** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **1401965-03B DUP** Units: **mmhos/cm @25°C** Analysis Date: **1/30/2014 10:15 AM**

Client ID: **GV 41-34-B-3** Run ID: **WETCHEM_140130C** SeqNo: **2627977** Prep Date: **1/29/2014** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	6.31	0.050	0	0	0		6.79	7.33	50	

The following samples were analyzed in this batch: 1401965-03B

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

Client: HRL Compliance Solutions
Work Order: 1401965
Project: WPX GV 41-34 Backgrounds 1.23.14

QC BATCH REPORT

Batch ID: **R134670** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R134670** Units: **% of sample** Analysis Date: **1/27/2014 09:20 AM**
Client ID: Run ID: **MOIST_140127A** SeqNo: **2625193** 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-R134670** Units: **% of sample** Analysis Date: **1/27/2014 09:20 AM**
Client ID: Run ID: **MOIST_140127A** SeqNo: **2625192** 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: **14011012-01C DUP** Units: **% of sample** Analysis Date: **1/27/2014 09:20 AM**
Client ID: Run ID: **MOIST_140127A** SeqNo: **2625174** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.4	0.050	0	0	0	0-0	5.32	1.49	20	

DUP Sample ID: **14011012-02C DUP** Units: **% of sample** Analysis Date: **1/27/2014 09:20 AM**
Client ID: Run ID: **MOIST_140127A** SeqNo: **2625176** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	8.43	0.050	0	0	0	0-0	7.69	9.18	20	

The following samples were analyzed in this batch: 1401965-01A 1401965-02A 1401965-03A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1401965

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX GV 41-34 Background	SAMPLER	Reed Wold
PROJECT No.		SITE ID	GV 41-34
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 1/23/14

TURNAROUND Standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic	SAR/Ecopy
1	GV 41-34-B-1	SO	1/23/14	2:30	1	8		X	
2	GV 41-34-B-2	↓	↓	2:35	1	8		X	
3	GV 41-34-B-3	↓	↓	2:40	2	8		X	X

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

For metals or anions, please detail analytes below.

Comments: 2.4°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Reed Wold	1/23/14	3:00
RECEIVED BY		N.M	1-23-14	3:00
RELINQUISHED BY		N.M	1-23-14	3:?C
RECEIVED BY		Diane F Shaw	1/24/14	125
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **24-Jan-14 12:15**

Work Order: **1401965** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 24-Jan-14 (Date) Reviewed by: Ann Preston (eSignature) 24-Jan-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/24/2014 1:37:54 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (970) 424-4749
Lab Hub, LLC
127 E First Street
PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J14101312270326

Ship Date: 23JAN14
ActWgt: 36.0 LB
CAD: 103923490/INET3490

Dims: 25 X 14 X 15 IN

Delivery Address Bar Code

Ref # 1001-012314-1
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
BILL RECIPIENT

Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

FRI - 24 JAN AA
STANDARD OVERNIGHT

TRK# 0201 7977 1309 3557

XX GRRA

49424
MI-US
GRR

522G1/D6EC/F220

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