

# **Site Characterization Summary**

WPX Energy Rocky Mountain, LLC  
PA 31-36 Well Pad



**WPX Energy Rocky Mountain, LLC**  
1058 County Road 215  
Parachute, Colorado 81635

May 2014

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## **1. Introduction**

WPX Energy Rocky Mountain, LLC (WPX) retained HRL Compliance Solutions, Inc. (HCSI) to complete the sub-surface soil investigation at the PA 31-36 pad in Rulison, CO. The sub-surface investigation commenced on April 9<sup>th</sup>, 2014 and was completed, per the COGCC approved Site Characterization Plan (COGCC Document # 400568904).

## **2. Background**

The following sections report information regarding the site location and release summary for the PA 31-36 well pad.

### ***2.1 Site Location***

The WPX PA 31-36 well pad is located in the South Parachute Field located in Garfield County, Colorado. Specifically, the well pad is located in the NWNE of Section 28, Township 6 South Range 95 West of the 6<sup>th</sup> Primary Meridian. Topographically the well pad is situated in thick Quaternary age colluvial deposits consisting of loam with interbedded clay loam at the surface to approximately 20 feet and large basalt cobbles and boulders below 20 feet.

### ***2.2 Release Summary***

The release was caused by corrosion of a buried condensate dump line. The leak was discovered during a quarterly pressure integrity test of the dump line. The leaking line, buried approximately six (6) feet below the pad surface, allowed the condensate to be released into subsurface soils. The impacted area has currently been excavated to a depth of twenty (20) to twenty-two (22) feet. Very large basaltic boulders (3' to 4' diameter) and wet soils were encountered at approximately 20 feet. The large boulders in the bottom of the excavation, and moist, unstable soils on the side walls prevented further excavation. Confirmation samples have been collected from all four (4) walls and the bottom of the excavation. Results indicate compliance with the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards with the exception of the east wall at approximately fourteen (14) to fifteen (15) below the surface. The analytical data for soil samples collected from the walls and the bottom of the excavation is summarized in Table 1. The sample location map is included in the Attachment A. The laboratory reports are included in the Attachment D.

A site visit with the COGCC was held on February 26, 2014. Issues with further excavation of the east wall and bottom were discussed and it was decided that the excavation will be backfilled with clean fill and the contamination present on the eastern side of the excavation will be further characterized to determine the vertical and lateral extent of any remaining impacts.

## **3. Soil Characterization Summary**

Seven (7) boreholes (BH01-BH07) were advanced to depths ranging from sixteen (16) to twenty-one (21) feet below ground surface (bgs). Samples were collected at five (5) foot intervals from each borehole and field screened utilizing a photo ionization detector (PID). The soil borings were located just outside the perimeter of the formerly excavated area near the northeast corner. A borehole location map is attached.

The sub-surface investigation revealed that boreholes BH01 and BH03-BH07 are well below Table 910-1 standards. However, field screen analysis from BH02 displayed hydrocarbon odor and elevated PID

readings from the sandy-loam soil in the 4-6 foot sample interval (1161 ppm), the 9-11 foot sample interval (787 ppm), and slightly elevated readings from the 14-16 foot sample interval (121 ppm). The 9-11 foot interval was submitted to ALS laboratory in Holland, MI and was analyzed for the entire Table 910-1 analytical suite. The 14-16 foot sample interval from BH03 & BH05 was sampled for organic compounds only and the 14-16 foot sample interval from BH04 was analyzed for the full Table 910-1 analytical suite. PID readings from all of the soil borings are depicted in Table 1. Groundwater was not encountered in any of the soil borings. Analytical results indicated that BH02 is the only boring with organic constituents that exceed Table 910-1 for TPH (GRO/DRO). Sample results for the organic compounds are depicted in Table 2. Analytical laboratory reports are included in the Attachment D.

**Table 1** Soil Boring PID Readings

<b>Sample ID</b>	<b>Date Sampled</b>	<b>PID Reading (ppm)</b>
BH01 4-6 feet	4/9/2014	5.4
BH01 9-11 feet	4/9/2014	24.8
BH01 14-16 feet	4/9/2014	19.2
BH02 4-6 feet	4/9/2014	1161
BH02 9-11 feet	4/9/2014	787
BH02 14-16 feet	4/9/2014	102
BH03 4-6 feet	4/9/2014	1.4
BH03 9-11 feet	4/9/2014	0.5
BH03 14-16 feet	4/9/2014	1.5
BH04 4-6 feet	4/9/2014	1.4
BH04 9-11 feet	4/9/2014	1.1
BH04 14-16 feet	4/9/2014	3.5
BH05 4-6 feet	4/9/2014	1.1
BH05 9-11 feet	4/9/2014	0.9
BH05 14-16 feet	4/9/2014	0.8
BH06 4-6 feet	4/9/2014	4.3
BH06 9-11 feet	4/9/2014	5.1
BH06 14-16 feet	4/9/2014	2.0
BH06 19-20 feet	4/9/2014	2.0
BH07 4-6 feet	4/9/2014	0.9
BH07 9-11 feet	4/9/2014	6.5
BH07 14-16 feet	4/9/2014	3.0
BH07-19-21 feet	4/9/2014	24.5

## 4. Remediation

On April 26, 2014 passive Soil Vapor Extraction (SVE) ports were installed in BH02, BH03, and BH05. Baroballs™ were installed on the top of the ports. The Baroballs™ allow for air movement in the subsurface soils due to small variations in atmospheric pressure. Pressure gradient changes allow the Baroballs™ to open during periods of low pressure and close with high pressure. The opening and closing of the Baroballs™ allows for maximum contaminant removal without the need for constant maintenance or expensive equipment. Pictures of the Baroballs™ installation and the specifications are included in the Attachment C.

The ports will be monitored with a PID on a quarterly schedule to determine if the residual contamination is being removed. When it is determined that the residual contaminants are removed the area in the vicinity of BH02 will be resampled for the constituents exceeding Table 910-1 standards.

## **5. Conclusion**

HCSI drilled seven (7) boreholes (BH01-BH07) that were advanced to depths ranging from sixteen (16) to twenty-one (21) feet below ground surface (bgs). Groundwater was not encountered in any of the soil borings. Analytical results indicated that BH02 is the only boring with organic constituents that exceed Table 910-1 for TPH (GRO/DRO). Three passive Soil Vapor Extraction ports were installed in BH02, BH03, and BH05 to enhance natural attenuation of the residual impacts. The ports will be monitored quarterly and when it is determined that the residual contaminants are removed the area in the vicinity of BH02 will be resampled for the constituents exceeding Table 910-1 standards.

Table 2

Soil Analytical Results  
PA 31-36

Contaminant of Concern ↓	COGCC standards	Location →	North Wall	South Wall	West Wall	East Wall	Bottom
		Date Sampled →	2/24/2014	2/24/2014	2/25/2014	2/25/2014	2/25/2014
Organic Compounds in Soil							
TPH	500	mg/kg	42	31	51	5,100	217
DRO		mg/kg	8	6	<4.7	2,300	6.8
GRO		mg/kg	34	25	51	2,800	210
Benzene	0.17	mg/kg	<0.036	<0.035	<0.034	3.3	<0.033
Toluene	85	mg/kg	<0.036	<0.035	<0.034	130	<0.033
Ethylbenzene	100	mg/kg	<0.036	<0.035	<0.034	35	<0.033
Xylenes (Total)	175	mg/kg	<0.036	<0.035	<0.034	610	<0.033
Acenaphthene	1,000	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Anthracene	1,000	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Benzo(A)anthracene	0.22	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Benzo(B)fluoranthene	0.22	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Benzo(K)fluoranthene	2.2	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Benzo(A)pyrene	0.022	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Chrysene	22	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Fluoranthene	1,000	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Fluorene	1,000	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Naphthalene	23	mg/kg	<0.0078	<0.0077	<0.0075	2.20	<0.0072
Pyrene	1,000	mg/kg	<0.0078	<0.0077	<0.0075	<0.0075	<0.0072
Inorganics in Soil							
EC	<4 or 2 x background	mmhos/cm	3	0.82	0.82		1.9
SAR	<12		7.5	0.63	3.5		7.2
pH	6-9		8.4	8.2	9	8.7	8.5
Metals in Soil							
Arsenic	0.39	mg/kg	5.4	3.9	3	2.2	3.3
Barium total	15,000	mg/kg	180	180	150	160	240
Cadmium	70	mg/kg	<0.79	<0.86	<0.73	<0.78	<0.85
Chromium (III)	120,000	mg/kg	17	13	11		11
Chromium (VI)	23	mg/kg	<0.59	<0.57	<0.56		<0.55
Copper	3,100	mg/kg	12	11	9.2	8.1	9.6
Lead	400	mg/kg	12	9.2	8.6	7.5	8.7
Mercury	23	mg/kg	0.023	<0.017	<0.017	<0.014	<0.017
Nickel	1,600	mg/kg	19	14	12	9.2	13
Selenium	390	mg/kg	<2	<2.2	<1.8	<1.9	<2.1
Silver	390	mg/kg	<2	<2.2	<1.8	<1.9	<2.1
Zinc	23,000	mg/kg	50	43	38	27	39

Table 2

Soil Analytical Results  
PA 31-36

Contaminant of Concern ↓	COGCC standards	Location →	BH02, 9-11"	BH03, 14-16'	BH04 14-16'	BH05 14-16'
		Date Sampled →	4/9/2014	4/9/2014	4/9/2014	4/9/2014
Organic Compounds in Soil						
TPH	500	mg/kg	600	61	16	0
DRO		mg/kg	150	12	16	<5
GRO		mg/kg	450	49	<3	<3
Benzene	0.17	mg/kg	0.12	<0.032	<0.036	<0.036
Toluene	85	mg/kg	1.6	<0.032	<0.036	<0.036
Ethylbenzene	100	mg/kg	0.24	<0.032	<0.036	<0.036
Xylenes (Total)	175	mg/kg	22	<0.096	<0.11	<0.11
Acenaphthene	1,000	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Anthracene	1,000	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Benzo(A)anthracene	0.22	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Benzo(B)fluoranthene	0.22	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Benzo(K)fluoranthene	2.2	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Benzo(A)pyrene	0.022	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Chrysene	22	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Fluoranthene	1,000	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Fluorene	1,000	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Naphthalene	23	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Pyrene	1,000	mg/kg	<0.0073	<0.007	<0.0079	<0.008
Inorganics in Soil						
EC	<4 or 2 x background	mmhos/cm	3		0.54	
SAR	<12		11		5.2	
pH	6-9		8.8		8.9	
Metals in Soil						
Arsenic	0.39	mg/kg	3.9		3.2	
Barium total	15,000	mg/kg	3900		230	
Cadmium	70	mg/kg	<0.71		<0.74	
Chromium (III)	120,000	mg/kg	13		18	
Chromium (VI)	23	mg/kg	<0.55		<0.58	
Copper	3,100	mg/kg	11		19	
Lead	400	mg/kg	11		5.3	
Mercury	23	mg/kg	<0.0116		0.44	
Nickel	1,600	mg/kg	15		50	
Selenium	390	mg/kg	<1.8		<2.2	
Silver	390	mg/kg	<1.8		<1.8	
Zinc	23,000	mg/kg	46		40	

Table 2

Soil Analytical Results  
PA 31-36

Contaminant of Concern ↓	COGCC standards	Location →	PA 31-36-B-1	PA 31-36-B-2	PA 31-36-B-3
		Date Sampled →	4/10/2014	4/10/2014	4/10/2014
Organic Compounds in Soil					
TPH	500	mg/kg			
DRO		mg/kg			
GRO		mg/kg			
Benzene	0.17	mg/kg			
Toluene	85	mg/kg			
Ethylbenzene	100	mg/kg			
Xylenes (Total)	175	mg/kg			
Acenaphthene	1,000	mg/kg			
Anthracene	1,000	mg/kg			
Benzo(A)anthracene	0.22	mg/kg			
Benzo(B)fluoranthene	0.22	mg/kg			
Benzo(K)fluoranthene	2.2	mg/kg			
Benzo(A)pyrene	0.022	mg/kg			
Chrysene	22	mg/kg			
Dibenzo(A,H)anthracene	0.022	mg/kg			
Fluoranthene	1,000	mg/kg			
Fluorene	1,000	mg/kg			
Indeno(1,2,3-cd)pyrene	0.22	mg/kg			
Naphthalene	23	mg/kg			
Pyrene	1,000	mg/kg			
Inorganics in Soil					
EC	<4 or 2 x background	mmhos/cm			0.58
SAR	<12				0.94
pH	6-9				8.4
Metals in Soil					
Arsenic	0.39	mg/kg	3.3	3.8	2.9
Barium total	15,000	mg/kg			
Cadmium	70	mg/kg			
Chromium (III)	120,000	mg/kg			
Chromium (VI)	23	mg/kg			
Copper	3,100	mg/kg			
Lead	400	mg/kg			
Mercury	23	mg/kg			
Nickel	1,600	mg/kg			
Selenium	390	mg/kg			
Silver	390	mg/kg			
Zinc	23,000	mg/kg			



Table 2

Soil Analytical Results  
PA 31-36

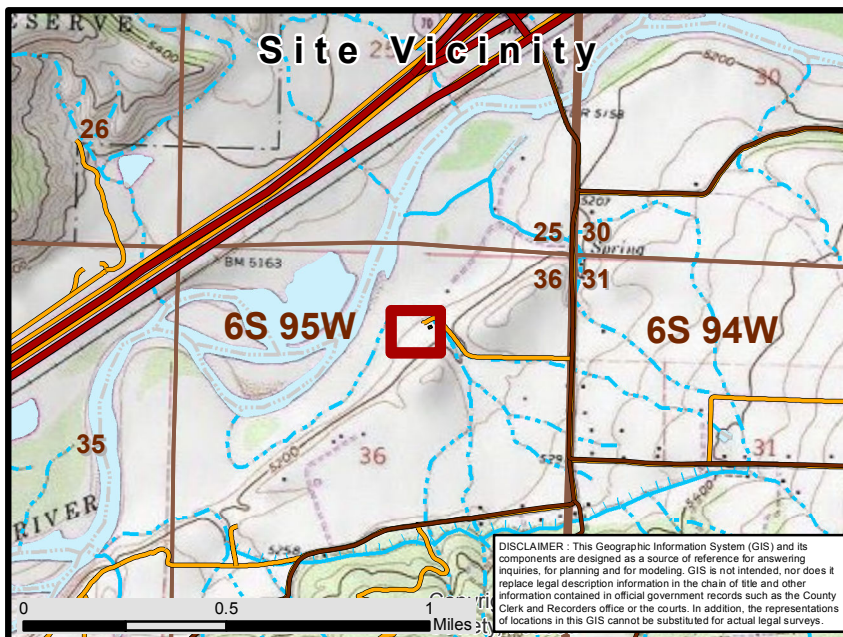
Contaminant of Concern ↓	COGCC standards	Location →				
		Date Sampled →				
Organic Compounds in Soil						
TPH	500	mg/kg				
DRO		mg/kg				
GRO		mg/kg				
Benzene	0.17	mg/kg				
Toluene	85	mg/kg				
Ethylbenzene	100	mg/kg				
Xylenes (Total)	175	mg/kg				
Acenaphthene	1,000	mg/kg				
Anthracene	1,000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

Table 2

Soil Analytical Results  
PA 31-36

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

Attachment A  
Excavation Samples Location Map



### Sample Location Map Location: PA 31-36

39.485984 -107.944526  
WPX Energy

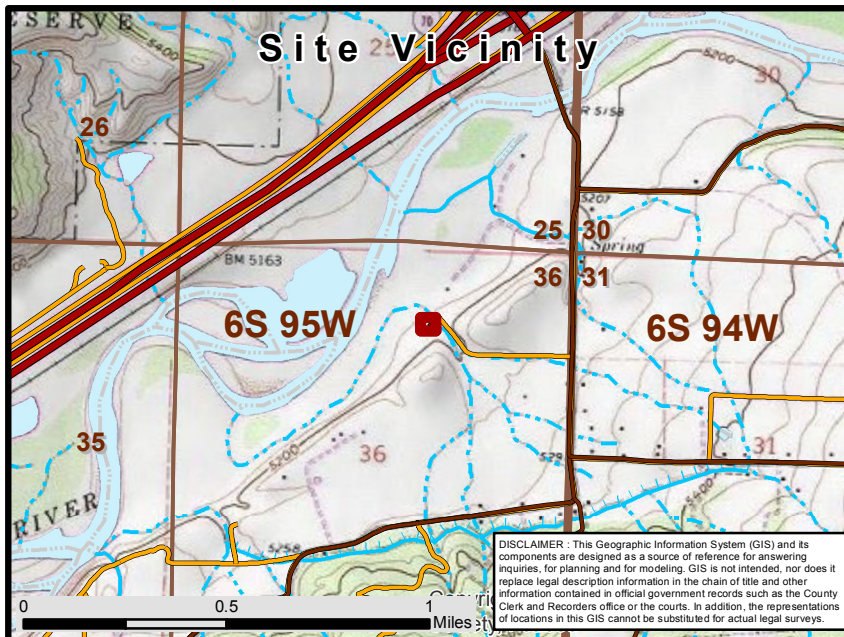
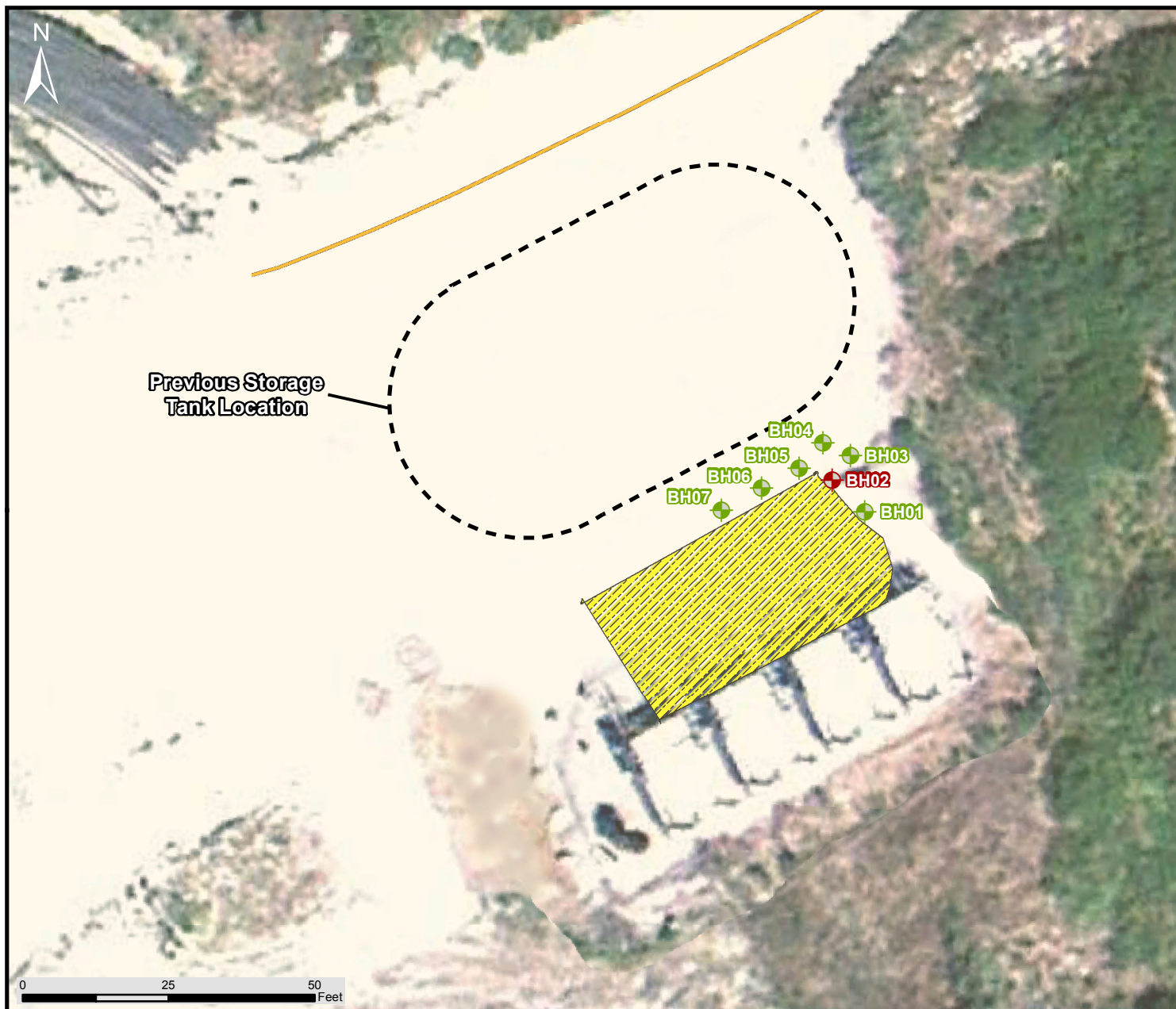
- Sample Location
- ▨ Excavated Area
- PLSS
  - ▭ Township
  - ▭ Section
- Transportation Features**
  - Public Roads
  - Access Roads
- Hydrographic Features**
  - Perennial Stream
  - - - Intermittent Stream



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Attachment B  
Boreholes Location Map





# Soil Boring Location Map **Location: PA 31-36** 39.485792 -107.944906 WPX Energy

- |             |                                 |                                |
|-------------|---------------------------------|--------------------------------|
|             | Contaminated Borehole Locations | <b>Transportation Features</b> |
|             | Clean Borehole Locations        | Public Roads                   |
|             | Excavated Area                  | Access Roads                   |
| <b>PLSS</b> |                                 | <b>Hydrographic Features</b>   |
|             | Township                        | Perennial Stream               |
|             | Section                         | Intermittent Stream            |



Attachment C  
Baroballs™ Specifications and Installation Pictures



## **BaroBall™**

**The BaroBall control valve allows natural soil gas to flow out of an underground well, while restricting air flow from the surface into the well.**



BaroBall™, Standard and Inverted

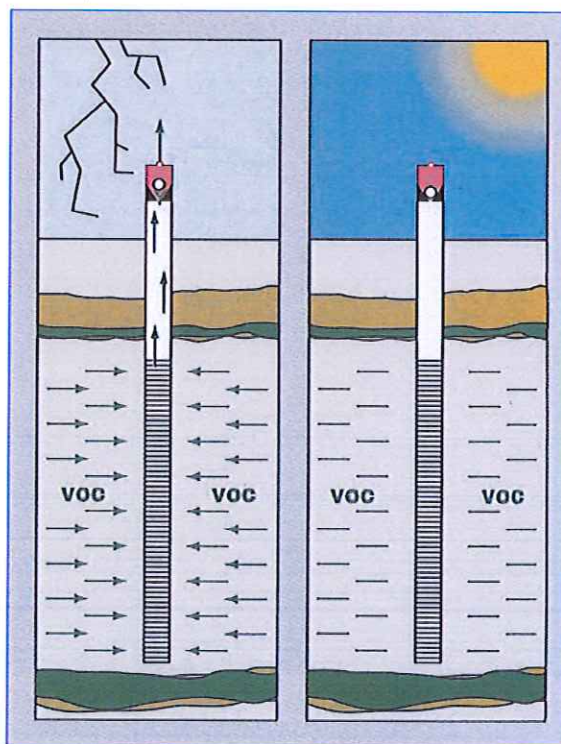
### **Benefits:**

- ❖ **Increase efficiency.** Compared with ordinary passive venting, BaroBall may double the rate of contaminant removal by preventing the dilution of contaminants with fresh air from the surface.
- ❖ **Can be used in multiple flow configurations.** The BaroBall can be modified for gas extraction or air injection, permitting barometric pumping to be used for plume control or oxygen injection in bioremediation systems.
- ❖ **Increases the accuracy of soil gas measurements.** The BaroBall prevents surface air from entering a well and diluting gas concentrations in the subsurface. This allows retrieval and analysis of actual ambient soil gas concentrations.
- ❖ **No power source or pressure sensing required.** The BaroBall is actuated and sustained by the naturally produced pressure gradients between the surface and subsurface.
- ❖ **Rugged, durable construction.** The BaroBall has only one moving part. Unattended operation for an extended period of time can be expected.
- ❖ **High skill level not required for installation.** The BaroBall can be properly installed by any field technician.
- ❖ **Small and unobtrusive.** The BaroBall is cylindrically shaped, three inches in diameter and approximately three inches tall (76 x 83 mm). It can be installed with a low profile and will not stand out from the surrounding landscape.

### **Applications:**

Passive Soil Vapor Extraction and in situ bioremediation.

The BaroBall is a low-cost, low maintenance valve that responds to the natural fluctuations of atmospheric pressure to enhance significantly the removal of volatile organic compounds from contaminated sites that use barometric pumping as a remediation technique.



Atmospheric pressure lower than pressure in the well:  
VOCs can escape.

Atmospheric pressure higher than pressure in the well:  
VOCs cannot escape.



## Description:

The BaroBall™ is a patented\* control valve that harnesses natural fluctuations in atmospheric pressures to create a pumping method that passively removes vapors from the unsaturated soil zone (Passive Soil Vapor Extraction). This technology has been demonstrated at the Savannah River National Laboratory to increase removal rates by up to 50%. Natural atmospheric pressure fluctuations are transmitted through the unsaturated subsurface resulting in pressure differential between the surface and subsurface. When the zones are directly connected by a well placed in the vadose zone, the pressure differentials will result in flow into or out of the well depending on the BaroBall configuration used.

The BaroBall is installed at the top of the well casing to permit gas flow in one direction. The BaroBall has been used in conjunction with the FAP Plus™ pump during LNAPL recovery. The addition of the passive SVE can improve LNAPL recovery depending on the soil and site conditions. Other applications include the final polishing for an active SVE system where removal rates have been substantially reduced to the point where SVE system operation costs are very high. Inverted BaroBall installations have been used to allow air flow into the subsurface, but prevent air escape to improve in-situ bioremediation.

The BaroBall has been used to provide plume control of methane production at landfills. It can be used with the SolarSPARGE for sparging.

## Operation:

Use of barometric pumping to remediate contaminated soils is growing as a finishing technique when active extraction is no longer cost effective due to low contaminant diffusion. It also is used as an interim measure or when funds are unavailable for more expensive systems.

While check valves are currently available, none is suitable for the low pressure requirements of a barometric pumping system. The cracking pressure of these valves is typically seven to 10 millibars, much higher than could be produced by natural pressure differences.

Electrically operated valves are available but are undesirable because of their high costs and maintenance.

The BaroBall conforms to the low-cost, low-maintenance philosophy of barometric pumping through its simple construction, use of low-maintenance, durable materials and its ability to be used for extended, unattended operations. It now allows the remediation of many sites whose pollution levels do not justify the use of currently available, costly remediation technologies.

## SPECIFICATIONS

Input Power	Natural atmospheric pressure fluctuations
Cracking Pressure	As little as on millibar change in atmospheric pressure
Operating Temperature	Ambient air temperature of -40°F to +140°F (-40°C to +60°C)
Remediation Rate	Site specific. Typical flow rates of 0.1 to 1.0 scfm (0.05 to 0.47 dm³/s)
Size	Designed to slide into a 2-in PVC Sch 40 casing. Thread Connection: 1 inch NPT. May be fitted to larger wells by using common PVC adapter fittings.
Max. Well Depth	Site specific. To the top of the water table.
Dimensions	3-in diameter x 3.25-in length (76 x 83 mm)

## ORDERING INFORMATION

TR-965	Standard BaroBall™ for soil gas extraction	2 lb
TR-966	Inverted BaroBall™ for atmospheric air injection	2 lb

### Accessories:

BaroBall can be used on all kinds of vadose zone wells with appropriate reducer or expander pipe sections. Not supplied.

## Common Questions:

### *On what size well can the BaroBall be installed?*

Any size well will accommodate installation. The BaroBall's smallest aperture is one inch and will therefore introduce minimal flow losses for barometric pumping systems.

### *What kind of contaminant removal can I expect?*

This depends solely on the concentration of contaminants in the gas and the flow rate through the well. Typical barometric pumping flow rates range from 0.1 to 1.0 scfm (0.05 to 0.47 dm³/s) depending on the permeability of the formation, the length of the well screen and the diameter of the well. Flows as high as 10 scfm (4.7 dm³/s) have been measured. Removal rates as high as 2.2 lb (1 kg) per day per well in highly contaminated sites have been measured.

### *How often will the wells be removing contaminants?*

The duty cycle of barometric pumping is 50 percent. If there is another driving force at the site (such as methane buoyancy and pressurization at the landfill) the duty cycle will increase.

BaroBall™ is a trademark of Westinghouse Savannah River Company, LLC.

\* U.S. Patent No. 5,641,245 and 6,425,298 and Canadian Patent No. 2,221,770 have been issued on the BaroBall.



Baroballs™ Installed



Attachment D  
Laboratory Reports

Excavation



28-Feb-2014

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

Re: **WPX PA 31-36 Excavation 2.24.14**

Work Order: **14021142**

Dear Mark,

ALS Environmental received 2 samples on 26-Feb-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 26.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Work Order:** 14021142

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
14021142-01	SS01 North Wall 10'	Soil		2/24/2014 16:25	2/26/2014 09:30	<input type="checkbox"/>
14021142-02	SS02 South Wall 10'	Soil		2/24/2014 16:28	2/26/2014 09:30	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Work Order:** 14021142

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**Case Narrative**

Batch 56125 sample SS02 South Wall 10' MS/MSD recoveries for Barium were below control limits, however, the result in the parent sample was greater than 4x the spiked amount. No qualification is required for Barium.

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**WorkOrder:** 14021142

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

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



# ALS Group USA, Corp

Date: 28-Feb-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Sample ID:** SS01 North Wall 10'  
**Collection Date:** 2/24/2014 04:25 PM

**Work Order:** 14021142  
**Lab ID:** 14021142-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3541 / 2/26/14	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>7.6</b>		<b>4.9</b>	<b>mg/Kg-dry</b>	<b>1</b>	2/27/2014 07:25 AM
Surr: 4-Terphenyl-d14	79.8		39-115	%REC	1	2/27/2014 07:25 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>		Prep: SW5035 / 2/26/14	Analyst: <b>IT</b>
<b>GRO (C6-C10)</b>	<b>34</b>		<b>3.0</b>	<b>mg/Kg-dry</b>	<b>1</b>	2/27/2014 10:05 AM
Surr: Toluene-d8	82.2		50-150	%REC	1	2/27/2014 10:05 AM
<b>MERCURY BY CVAA</b>						
			<b>SW7471</b>		Prep: SW7471 / 2/27/14	Analyst: <b>LR</b>
<b>Mercury</b>	<b>0.023</b>		<b>0.015</b>	<b>mg/Kg-dry</b>	<b>1</b>	2/27/2014 03:43 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep: SW3050B / 2/26/14	Analyst: <b>ML</b>
<b>Arsenic</b>	<b>5.4</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
<b>Barium</b>	<b>180</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
Cadmium	ND		0.79	mg/Kg-dry	5	2/27/2014 12:52 AM
<b>Chromium</b>	<b>17</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
<b>Copper</b>	<b>12</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
<b>Lead</b>	<b>12</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
<b>Nickel</b>	<b>19</b>		<b>2.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
Selenium	ND		2.0	mg/Kg-dry	5	2/27/2014 12:52 AM
Silver	ND		2.0	mg/Kg-dry	5	2/27/2014 12:52 AM
<b>Zinc</b>	<b>50</b>		<b>4.0</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:52 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>ML</b>
<b>Calcium</b>	<b>73</b>		<b>10</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:00 PM
<b>Magnesium</b>	<b>68</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:00 PM
<b>Sodium</b>	<b>370</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:00 PM
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>RH</b>
<b>Sodium Adsorption Ratio</b>	<b>7.5</b>		<b>0.010</b>	<b>none</b>	<b>1</b>	2/28/2014
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 2/26/14	Analyst: <b>RM</b>
Acenaphthene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Acenaphthylene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Anthracene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Benzo(a)anthracene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Benzo(a)pyrene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Benzo(b)fluoranthene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Benzo(g,h,i)perylene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Benzo(k)fluoranthene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Chrysene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM

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

# ALS Group USA, Corp

Date: 28-Feb-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Sample ID:** SS01 North Wall 10'  
**Collection Date:** 2/24/2014 04:25 PM

**Work Order:** 14021142  
**Lab ID:** 14021142-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Fluoranthene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Fluorene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Indeno(1,2,3-cd)pyrene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Naphthalene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Pyrene	ND		7.8	µg/Kg-dry	1	2/27/2014 03:50 PM
Surr: 2-Fluorobiphenyl	75.7		12-100	%REC	1	2/27/2014 03:50 PM
Surr: 4-Terphenyl-d14	102		25-137	%REC	1	2/27/2014 03:50 PM
Surr: Nitrobenzene-d5	79.0		37-107	%REC	1	2/27/2014 03:50 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 2/26/14		Analyst: BG
Benzene	ND		36	µg/Kg-dry	1	2/26/2014 10:24 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	2/26/2014 10:24 PM
m,p-Xylene	ND		72	µg/Kg-dry	1	2/26/2014 10:24 PM
o-Xylene	ND		36	µg/Kg-dry	1	2/26/2014 10:24 PM
Toluene	ND		36	µg/Kg-dry	1	2/26/2014 10:24 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	2/26/2014 10:24 PM
Surr: 1,2-Dichloroethane-d4	103		70-130	%REC	1	2/26/2014 10:24 PM
Surr: 4-Bromofluorobenzene	100		70-130	%REC	1	2/26/2014 10:24 PM
Surr: Dibromofluoromethane	99.2		70-130	%REC	1	2/26/2014 10:24 PM
Surr: Toluene-d8	96.0		70-130	%REC	1	2/26/2014 10:24 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 2/28/14		Analyst: MELB
Electrical Conductivity @ Saturation	3.0		0.050	mmhos/cm @25	10	2/28/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: MB
Chromium, Trivalent	17		0.60	mg/Kg-dry	1	2/27/2014 04:30 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 2/26/14		Analyst: MB
Chromium, Hexavalent	ND		0.59	mg/Kg-dry	1	2/27/2014 03:30 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	16		0.050	% of sample	1	2/26/2014 11:44 AM
PH			SW9045D	Prep: EXTRACT / 2/26/14		Analyst: AT
pH	8.4			s.u.	1	2/26/2014

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

# ALS Group USA, Corp

Date: 28-Feb-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Sample ID:** SS02 South Wall 10'  
**Collection Date:** 2/24/2014 04:28 PM

**Work Order:** 14021142  
**Lab ID:** 14021142-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3541 / 2/26/14	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>6.4</b>		<b>4.8</b>	<b>mg/Kg-dry</b>	<b>1</b>	2/27/2014 07:55 AM
Surr: 4-Terphenyl-d14	65.5		39-115	%REC	1	2/27/2014 07:55 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>		Prep: SW5035 / 2/26/14	Analyst: <b>IT</b>
<b>GRO (C6-C10)</b>	<b>25</b>		<b>2.9</b>	<b>mg/Kg-dry</b>	<b>1</b>	2/27/2014 10:31 AM
Surr: Toluene-d8	91.6		50-150	%REC	1	2/27/2014 10:31 AM
<b>MERCURY BY CVAA</b>						
			<b>SW7471</b>		Prep: SW7471 / 2/27/14	Analyst: <b>LR</b>
Mercury	ND		0.017	mg/Kg-dry	1	2/27/2014 03:50 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep: SW3050B / 2/26/14	Analyst: <b>ML</b>
<b>Arsenic</b>	<b>3.9</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
<b>Barium</b>	<b>180</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
Cadmium	ND		0.86	mg/Kg-dry	5	2/27/2014 12:58 AM
<b>Chromium</b>	<b>13</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
<b>Copper</b>	<b>11</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
<b>Lead</b>	<b>9.2</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
<b>Nickel</b>	<b>14</b>		<b>2.2</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
Selenium	ND		2.2	mg/Kg-dry	5	2/27/2014 12:58 AM
Silver	ND		2.2	mg/Kg-dry	5	2/27/2014 12:58 AM
<b>Zinc</b>	<b>43</b>		<b>4.3</b>	<b>mg/Kg-dry</b>	<b>5</b>	2/27/2014 12:58 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>ML</b>
<b>Calcium</b>	<b>59</b>		<b>10</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:06 PM
<b>Magnesium</b>	<b>35</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:06 PM
<b>Sodium</b>	<b>25</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	2/28/2014 01:06 PM
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>RH</b>
<b>Sodium Adsorption Ratio</b>	<b>0.63</b>		<b>0.010</b>	<b>none</b>	<b>1</b>	2/28/2014
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 2/26/14	Analyst: <b>RM</b>
Acenaphthene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Acenaphthylene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Anthracene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Chrysene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM

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

# ALS Group USA, Corp

Date: 28-Feb-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.24.14  
**Sample ID:** SS02 South Wall 10'  
**Collection Date:** 2/24/2014 04:28 PM

**Work Order:** 14021142  
**Lab ID:** 14021142-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Fluoranthene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Fluorene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Naphthalene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Pyrene	ND		7.7	µg/Kg-dry	1	2/27/2014 04:10 PM
Surr: 2-Fluorobiphenyl	57.0		12-100	%REC	1	2/27/2014 04:10 PM
Surr: 4-Terphenyl-d14	80.3		25-137	%REC	1	2/27/2014 04:10 PM
Surr: Nitrobenzene-d5	62.1		37-107	%REC	1	2/27/2014 04:10 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>	Prep: SW5035 / 2/26/14	Analyst: <b>BG</b>	
Benzene	ND		35	µg/Kg-dry	1	2/26/2014 09:59 PM
Ethylbenzene	ND		35	µg/Kg-dry	1	2/26/2014 09:59 PM
<b>m,p-Xylene</b>	<b>70</b>		<b>69</b>	<b>µg/Kg-dry</b>	1	2/26/2014 09:59 PM
o-Xylene	ND		35	µg/Kg-dry	1	2/26/2014 09:59 PM
Toluene	ND		35	µg/Kg-dry	1	2/26/2014 09:59 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	2/26/2014 09:59 PM
Surr: 1,2-Dichloroethane-d4	103		70-130	%REC	1	2/26/2014 09:59 PM
Surr: 4-Bromofluorobenzene	99.3		70-130	%REC	1	2/26/2014 09:59 PM
Surr: Dibromofluoromethane	98.2		70-130	%REC	1	2/26/2014 09:59 PM
Surr: Toluene-d8	95.8		70-130	%REC	1	2/26/2014 09:59 PM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>	Prep: USDA Method 20B / 2/28/14	Analyst: <b>MELB</b>	
Electrical Conductivity @ Saturation	<b>0.82</b>		<b>0.050</b>	mmhos/cm @25	10	2/28/2014 03:00 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>	Analyst: <b>MB</b>		
Chromium, Trivalent	<b>13</b>		<b>0.58</b>	mg/Kg-dry	1	2/27/2014 04:30 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>	Prep: SW3060A / 2/26/14	Analyst: <b>MB</b>	
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	2/27/2014 03:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>	Analyst: <b>AT</b>		
Moisture	<b>13</b>		<b>0.050</b>	% of sample	1	2/26/2014 11:44 AM
<b>PH</b>			<b>SW9045D</b>	Prep: EXTRACT / 2/26/14	Analyst: <b>AT</b>	
pH	<b>8.2</b>			s.u.	1	2/26/2014

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

Client: HRL Compliance Solutions

Work Order: 14021142

Project: WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56128**

Instrument ID **GC8**

Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>DBLKS1-56128-56128</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:25 AM</b>		
Client ID:		Run ID: <b>GC8_140226A</b>				SeqNo: <b>2656589</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
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	1.333	0	1.667	0	80	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-56128-56128</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:55 AM</b>		
Client ID:		Run ID: <b>GC8_140226A</b>				SeqNo: <b>2656590</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	121.7	4.2	166.7	0	73	49-124	0			
Surr: 4-Terphenyl-d14	1.268	0	1.667	0	76.1	39-115	0			

<b>MS</b>		Sample ID: <b>1402951-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 04:25 AM</b>		
Client ID:		Run ID: <b>GC8_140226A</b>				SeqNo: <b>2656591</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	275	8.2	327.3	0	84	49-130	0			
Surr: 4-Terphenyl-d14	2.386	0	3.273	0	72.9	39-115	0			

<b>MSD</b>		Sample ID: <b>1402951-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 04:55 AM</b>		
Client ID:		Run ID: <b>GC8_140226A</b>				SeqNo: <b>2656592</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	257.2	8.2	327.6	0	78.5	49-130	275	6.69	30	
Surr: 4-Terphenyl-d14	2.626	0	3.276	0	80.1	39-115	2.386	9.55	30	

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
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Client: HRL Compliance Solutions  
 Work Order: 14021142  
 Project: WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56126** Instrument ID **GC9** Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>MBLK-56126-56126</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 01:40 AM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657380</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
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	4558	0	5000	0	91.2	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-56126-56126</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 12:23 PM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657386</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	459300	2,500	500000	0	91.9	70-130	0			
Surr: Toluene-d8	4336	0	5000	0	86.7	50-150	0			

<b>MS</b>		Sample ID: <b>14021142-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 10:57 AM</b>		
Client ID: <b>SS01 North Wall 10'</b>		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657384</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	468100	2,500	500000	28420	87.9	70-130	0			
Surr: Toluene-d8	4414	0	5000	0	88.3	50-150	0			

<b>MSD</b>		Sample ID: <b>14021142-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 11:23 AM</b>		
Client ID: <b>SS01 North Wall 10'</b>		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657385</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	468200	2,500	500000	28420	88	70-130	468100	0.0184	30	
Surr: Toluene-d8	4462	0	5000	0	89.2	50-150	4414	1.08	30	

The following samples were analyzed in this batch:

14021142-01A	14021142-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56156**      Instrument ID **HG1**      Method: **SW7471**

MBLK		Sample ID: MBLK-56156-56156					Units: mg/Kg		Analysis Date: 2/27/2014 03:17 PM		
Client ID:			Run ID: HG1_140227A				SeqNo: 2658196		Prep Date: 2/27/2014		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-56156-56156				Units: mg/Kg		Analysis Date: 2/27/2014 03:19 PM		
Client ID:		Run ID: HG1_140227A				SeqNo: 2658198		Prep Date: 2/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1603      0.020      0.1665      0      96.3      80-120      0

MS				Sample ID: 14021142-01BMS				Units: mg/Kg			Analysis Date: 2/27/2014 03:46 PM			
Client ID: SS01 North Wall 10'				Run ID: HG1_140227A				SeqNo: 2658216			Prep Date: 2/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Mercury      0.1151      0.012      0.1021      0.01905      94.1      75-125      0

MSD				Sample ID: 14021142-01BMSD				Units: mg/Kg			Analysis Date: 2/27/2014 03:48 PM			
Client ID: SS01 North Wall 10'				Run ID: HG1_140227A				SeqNo: 2658218			Prep Date: 2/27/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Mercury      0.1124      0.013      0.1047      0.01905      89.1      75-125      0.1151      2.43      35

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56125**      Instrument ID **ICPMS1**      Method: **SW6020A**

Sample ID: <b>MBLK-56125-56125</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>2/26/2014 11:46 PM</b>				
Client ID:			Run ID: <b>ICPMS1_140226A</b>			SeqNo: <b>2656725</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	0.04094	0.25								J	
Barium	ND	0.25									
Cadmium	0.002373	0.10								J	
Chromium	ND	0.25									
Copper	ND	0.25									
Lead	0.002314	0.25								J	
Nickel	ND	0.25									
Selenium	ND	0.25									
Silver	0.003018	0.25								J	
Zinc	0.1296	0.50								J	

LCS				Sample ID: LCS-56125-56125				Units: mg/Kg			Analysis Date: 2/26/2014 11:52 PM			
Client ID:				Run ID: ICPMS1_140226A				SeqNo: 2656726			Prep Date: 2/26/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Arsenic	4.522	0.25	5	0	90.4	80-120	0							
Barium	4.726	0.25	5	0	94.5	80-120	0							
Cadmium	4.672	0.10	5	0	93.4	80-120	0							
Chromium	4.669	0.25	5	0	93.4	80-120	0							
Copper	4.554	0.25	5	0	91.1	80-120	0							
Lead	4.714	0.25	5	0	94.3	80-120	0							
Nickel	4.656	0.25	5	0	93.1	80-120	0							
Selenium	4.307	0.25	5	0	86.1	80-120	0							
Silver	4.522	0.25	5	0	90.4	80-120	0							
Zinc	4.733	0.50	5	0	94.7	80-120	0							

MS					Sample ID: 14021142-02BMS		Units: mg/Kg		Analysis Date: 2/27/2014 01:10 AM		
Client ID: SS02 South Wall 10'			Run ID: ICPMS1_140226A			SeqNo: 2656739		Prep Date: 2/26/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	9.996	1.8	7.289	3.384	90.7	75-125	0				
Barium	138	1.8	7.289	155.1	-235	75-125	0			SO	
Cadmium	6.913	0.73	7.289	0.2741	91.1	75-125	0				
Chromium	18.65	1.8	7.289	10.98	105	75-125	0				
Copper	15.36	1.8	7.289	9.481	80.7	75-125	0				
Lead	14.54	1.8	7.289	7.963	90.2	75-125	0				
Nickel	18.15	1.8	7.289	11.78	87.5	75-125	0				
Selenium	7.263	1.8	7.289	1.329	81.4	75-125	0				
Silver	6.294	1.8	7.289	0.05022	85.7	75-125	0				
Zinc	43.7	3.6	7.289	37.03	91.4	75-125	0			O	

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



**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56125**      Instrument ID **ICPMS1**      Method: **SW6020A**

MSD				Sample ID: 14021142-02BMSD			Units: mg/Kg		Analysis Date: 2/27/2014 01:16 AM	
Client ID: SS02 South Wall 10'				Run ID: ICPMS1_140226A			SeqNo: 2656740		Prep Date: 2/26/2014	
									DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.65	1.8	7.396	3.384	98.2	75-125	9.996	6.34	25	
Barium	159.3	1.8	7.396	155.1	56.4	75-125	138	14.3	25	SO
Cadmium	7.515	0.74	7.396	0.2741	97.9	75-125	6.913	8.34	25	
Chromium	19.53	1.8	7.396	10.98	116	75-125	18.65	4.64	25	
Copper	15.94	1.8	7.396	9.481	87.3	75-125	15.36	3.67	25	
Lead	15.67	1.8	7.396	7.963	104	75-125	14.54	7.47	25	
Nickel	19.02	1.8	7.396	11.78	97.9	75-125	18.15	4.67	25	
Selenium	7.552	1.8	7.396	1.329	84.1	75-125	7.263	3.9	25	
Silver	6.605	1.8	7.396	0.05022	88.6	75-125	6.294	4.83	25	
Zinc	44.86	3.7	7.396	37.03	106	75-125	43.7	2.63	25	O

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56184**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>DUP</b>		Sample ID: <b>14021156-02CDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>2/28/2014 01:24 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140228A</b>				SeqNo: <b>2659778</b>		Prep Date: <b>2/28/2014</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	57.2	10	0	0	0	0-0	43.38	27.5		
Magnesium	36.34	4.0	0	0	0	0-0	26.94	29.7		
Sodium	365.4	4.0	0	0	0	0-0	244.2	39.8		

<b>DUP</b>		Sample ID: <b>14021156-02CDUP</b>				Units: <b>none</b>		Analysis Date: <b>2/28/2014</b>		
Client ID:		Run ID: <b>SAR_140228A</b>				SeqNo: <b>2659794</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	9.296	0.010	0	0	0		7.177	25.7	50	

The following samples were analyzed in this batch:

14021142-01C	14021142-02C
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56140**      Instrument ID **SVMS8**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-56140-56140</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 01:09 PM</b>		
Client ID:		Run ID: <b>SVMS8_140227A</b>				SeqNo: <b>2658380</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1244	0	1667	0	74.6	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1654	0	1667	0	99.2	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1433	0	1667	0	86	37-107	0			

LCS		Sample ID: <b>SLCSS1-56140-56140</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 01:29 PM</b>		
Client ID:		Run ID: <b>SVMS8_140227A</b>				SeqNo: <b>2658383</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	457.7	6.7	666.7	0	68.6	45-110	0			
Acenaphthylene	441.3	6.7	666.7	0	66.2	45-105	0			
Anthracene	489	6.7	666.7	0	73.3	55-105	0			
Benzo(a)anthracene	505.7	6.7	666.7	0	75.8	50-110	0			
Benzo(a)pyrene	524.3	6.7	666.7	0	78.6	50-110	0			
Benzo(b)fluoranthene	550	6.7	666.7	0	82.5	45-115	0			
Benzo(g,h,i)perylene	402.3	6.7	666.7	0	60.3	40-125	0			
Benzo(k)fluoranthene	586.7	6.7	666.7	0	88	45-115	0			
Chrysene	492.3	6.7	666.7	0	73.8	55-110	0			
Dibenzo(a,h)anthracene	483.3	6.7	666.7	0	72.5	40-125	0			
Fluoranthene	466.7	6.7	666.7	0	70	55-115	0			
Fluorene	445.3	6.7	666.7	0	66.8	50-110	0			
Indeno(1,2,3-cd)pyrene	540.7	6.7	666.7	0	81.1	40-120	0			
Naphthalene	442.3	6.7	666.7	0	66.3	40-105	0			
Pyrene	578.3	6.7	666.7	0	86.7	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1161	0	1667	0	69.6	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1629	0	1667	0	97.7	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1308	0	1667	0	78.5	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56140**      Instrument ID **SVMS8**      Method: **SW8270**

MS				Sample ID: <b>1402574-11B MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 02:30 PM</b>	
Client ID:				Run ID: <b>SVMS8_140227A</b>			SeqNo: <b>2658385</b>		Prep Date: <b>2/26/2014</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	454.4	13	644.4	0	70.5	45-110	0			
Acenaphthylene	449.9	13	644.4	0	69.8	45-105	0			
Anthracene	498.2	13	644.4	0	77.3	55-105	0			
Benzo(a)anthracene	496.9	13	644.4	0	77.1	50-110	0			
Benzo(a)pyrene	522	13	644.4	0	81	50-110	0			
Benzo(b)fluoranthene	553.6	13	644.4	0	85.9	45-115	0			
Benzo(g,h,i)perylene	478.2	13	644.4	0	74.2	40-125	0			
Benzo(k)fluoranthene	554.9	13	644.4	0	86.1	45-115	0			
Chrysene	491.1	13	644.4	0	76.2	55-110	0			
Dibenzo(a,h)anthracene	476.3	13	644.4	0	73.9	40-125	0			
Fluoranthene	457.6	13	644.4	0	71	55-115	0			
Fluorene	469.8	13	644.4	0	72.9	50-110	0			
Indeno(1,2,3-cd)pyrene	583.9	13	644.4	0	90.6	40-120	0			
Naphthalene	454.4	13	644.4	0	70.5	40-105	0			
Pyrene	556.8	13	644.4	0	86.4	45-125	0			
Surr: 2-Fluorobiphenyl	2464	0	3223	0	76.5	12-100	0			
Surr: 4-Terphenyl-d14	3306	0	3223	0	103	25-137	0			
Surr: Nitrobenzene-d5	2813	0	3223	0	87.3	37-107	0			

MSD				Sample ID: <b>1402574-11B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 02:50 PM</b>	
Client ID:				Run ID: <b>SVMS8_140227A</b>			SeqNo: <b>2658387</b>		Prep Date: <b>2/26/2014</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	474.8	13	647.6	0	73.3	45-110	454.4	4.39	30	
Acenaphthylene	452.1	13	647.6	0	69.8	45-105	449.9	0.497	30	
Anthracene	526.6	13	647.6	0	81.3	55-105	498.2	5.54	30	
Benzo(a)anthracene	506.5	13	647.6	0	78.2	50-110	496.9	1.91	30	
Benzo(a)pyrene	517.5	13	647.6	0	79.9	50-110	522	0.87	30	
Benzo(b)fluoranthene	580.3	13	647.6	0	89.6	45-115	553.6	4.71	30	
Benzo(g,h,i)perylene	489.7	13	647.6	0	75.6	40-125	478.2	2.37	30	
Benzo(k)fluoranthene	560.9	13	647.6	0	86.6	45-115	554.9	1.08	30	
Chrysene	494.9	13	647.6	0	76.4	55-110	491.1	0.76	30	
Dibenzo(a,h)anthracene	498.1	13	647.6	0	76.9	40-125	476.3	4.48	30	
Fluoranthene	480.6	13	647.6	0	74.2	55-115	457.6	4.9	30	
Fluorene	476.1	13	647.6	0	73.5	50-110	469.8	1.32	30	
Indeno(1,2,3-cd)pyrene	594	13	647.6	0	91.7	40-120	583.9	1.7	30	
Naphthalene	455.3	13	647.6	0	70.3	40-105	454.4	0.213	30	
Pyrene	570	13	647.6	0	88	45-125	556.8	2.33	30	
Surr: 2-Fluorobiphenyl	2542	0	3239	0	78.5	12-100	2464	3.13	40	
Surr: 4-Terphenyl-d14	3291	0	3239	0	102	25-137	3306	0.462	40	
Surr: Nitrobenzene-d5	2700	0	3239	0	83.4	37-107	2813	4.1	40	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

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Batch ID: **56140**      Instrument ID **SVMS8**      Method: **SW8270**

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**The following samples were analyzed in this batch:**

14021142-01B	14021142-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions  
 Work Order: 14021142  
 Project: WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56121** Instrument ID **VMS9** Method: **SW8260B**

MBLK				Sample ID: MBLK-56121-56121				Units: µg/Kg			Analysis Date: 2/26/2014 01:35 PM			
Client ID:				Run ID: VMS9_140226A				SeqNo: 2656622			Prep Date: 2/26/2014		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	982	0	1000	0	98.2	70-130		0						
Surr: 4-Bromofluorobenzene	918	0	1000	0	91.8	70-130		0						
Surr: Dibromofluoromethane	991	0	1000	0	99.1	70-130		0						
Surr: Toluene-d8	974	0	1000	0	97.4	70-130		0						

LCS				Sample ID: LCS-56121-56121			Units: µg/Kg		Analysis Date: 2/26/2014 11:57 AM		
Client ID:		Run ID: VMS9_140226A			SeqNo: 2656620		Prep Date: 2/26/2014		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	992	30	1000	0	99.2	75-125	0				
m,p-Xylene	1988	60	2000	0	99.4	80-125	0				
o-Xylene	994	30	1000	0	99.4	75-125	0				
Toluene	1060	30	1000	0	106	70-125	0				
Xylenes, Total	2982	90	3000	0	99.4	75-125	0				
Surr: 1,2-Dichloroethane-d4	924.5	0	1000	0	92.4	70-130	0				
Surr: 4-Bromofluorobenzene	992.5	0	1000	0	99.2	70-130	0				
Surr: Dibromofluoromethane	1012	0	1000	0	101	70-130	0				
Surr: Toluene-d8	980.5	0	1000	0	98	70-130	0				

The following samples were analyzed in this batch:

14021142-01A	14021142-02A
--------------	--------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56120**      Instrument ID **WETCHEM**      Method: **SW9045D**

LCS					Sample ID: LCS-56120-56120					Units: s.u.		Analysis Date: 2/26/2014		
					Client ID:			Run ID: WETCHEM_140226P			SeqNo: 2656346		Prep Date: 2/26/2014	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		3.96	0	4	0	99	90-110	0						

DUP				Sample ID: 14021073-01A DUP				Units: s.u.		Analysis Date: 2/26/2014	
Client ID:			Run ID: WETCHEM_140226P			SeqNo: 2656348		Prep Date: 2/26/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	7.62	0	0	0	0	0-0	7.54	1.06	20		

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
--------------	--------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56181**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-56181-56181</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658089</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-56181-56181</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658088</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      2.028      0.50      2      0      101      80-120      0

<b>MS</b>		Sample ID: <b>14021156-02B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658085</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.64      0.49      1.976      0.07968      79      75-125      0

<b>MS</b>		Sample ID: <b>14021156-02B MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658087</b>		Prep Date: <b>2/26/2014</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1118      50      1171      0.07968      95.5      75-125      0

<b>MSD</b>		Sample ID: <b>14021156-02B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658086</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.757      0.50      1.992      0.07968      84.2      75-125      1.64      6.87      20

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
--------------	--------------

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



**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **56184**      Instrument ID **WETCHEM**      Method: **USDA H60 Method**

<b>MBLK</b>		Sample ID: <b>WBLKW1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660185</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation      ND      0.0050

<b>DUP</b>		Sample ID: <b>14021156-02C DUP</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660191</b>		Prep Date: <b>2/28/2014</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation      2.76      0.050      0      0      0      1.916      36.1      50

<b>LCS1</b>		Sample ID: <b>WLCS1W1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660192</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation      0.01371      0.0050      0.0149      0      92      85-107      0

<b>LCS2</b>		Sample ID: <b>WLCS2W1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660186</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation      0.575      0.0050      0.592      0      97.1      85-107      0

The following samples were analyzed in this batch:

14021142-01C	14021142-02C
--------------	--------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021142  
**Project:** WPX PA 31-36 Excavation 2.24.14

## QC BATCH REPORT

Batch ID: **R136321**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R136321</b>				Units: % of sample		Analysis Date: <b>2/26/2014 11:44 AM</b>		
Client ID:		Run ID: <b>MOIST_140226C</b>				SeqNo: <b>2657549</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R136321</b>				Units: % of sample		Analysis Date: <b>2/26/2014 11:44 AM</b>		
Client ID:		Run ID: <b>MOIST_140226C</b>				SeqNo: <b>2657548</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>14021071-10B DUP</b>				Units: % of sample		Analysis Date: <b>2/26/2014 11:44 AM</b>		
Client ID:		Run ID: <b>MOIST_140226C</b>				SeqNo: <b>2657541</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      15.35      0.050      0      0      0      0-0      16.19      5.33      20

<b>DUP</b>		Sample ID: <b>14021142-01B DUP</b>				Units: % of sample		Analysis Date: <b>2/26/2014 11:44 AM</b>		
Client ID: <b>SS01 North Wall 10'</b>		Run ID: <b>MOIST_140226C</b>				SeqNo: <b>2657546</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      16.2      0.050      0      0      0      0-0      16.18      0.124      20

The following samples were analyzed in this batch:

14021142-01B	14021142-02B
--------------	--------------

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



**Ann Preston**

**From:** Blaney, Karolina [Karolina.Blaney@wpxenergy.com]  
**Sent:** Thursday, February 27, 2014 11:00 AM  
**To:** Ann Preston  
**Cc:** 'Mark Mumby'; Casey Richardson  
**Subject:** RE: 14021142 WPX PA 31-36 Prod. Water Spill 2.24.14 WOA

Ann,

I would like to change the project names for the samples collected from the PA 31-36 location. There will be a total of 4 COCs for this project.. for now:

Current name:

14021142 WPX PA 31-36 Prod. Water Spill 2.24.14

14021156 WPX PA 31-36 2.25.14

14021147 WPX PA 31-36 Release SW 2.25.14

???????? WPX PA 31-36 2.25.14

sample today for a 24hrs rush)

please change to:

WPX PA 31-36 excavation 2.24.14

WPX PA 31-36 excavation 2.25.14

WPX PA 31-36 SW 2.25.14

WPX PA 31-36 excavation 2.25.14 (you will receive this

Please let me know if you have any questions.  
Thank you,

*Karolina Blaney*

Environmental Specialist

WPX Energy

Office: (970) 683-2295

Cell: (970) 589-0743

Fax: (970) 285-9573

[karolina.blaney@wpxenergy.com](mailto:karolina.blaney@wpxenergy.com)

**From:** Ann Preston [mailto:Ann.Preston@ALSGlobal.com]  
**Sent:** Wednesday, February 26, 2014 10:32 AM  
**To:** mmumby@hrlcomp.com  
**Cc:** Blaney, Karolina; mlobato@hrlcomp.com  
**Subject:** 14021142 WPX PA 31-36 Prod. Water Spill 2.24.14 WOA

Please see the attached file that contains the sample IDs, test assignment, and costs associated with the recent samples you submitted. Please let me know if you have any changes, otherwise we will proceed as shown. Modifications to the final report, after issue, may incur additional cost.

I can get you everything BUT the SARs in a 24 hr TAT. I will send a prelim report with at least all the organics, tomorrow.

Regards,

Ann

Take our short online customer survey for a chance to win a FREE iPad!

**Ann L. Preston**

2/27/2014

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **26-Feb-14 09:30**

Work Order: **14021142**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	26-Feb-14	Reviewed by: <u>Ann Preston</u>	26-Feb-14
eSignature	Date	eSignature	Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>2/26/2014 10:39:50 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

-----

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CUSTODY SEAL

DATE 2/25/14

SIGNATURE Mike Lobato

FedEx Express NEW Package US Airbill

FedEx Tracking Number

8022 0273 1067

QE

1 From

Date 2/25/14

Sender's Name Mike Lobato

Phone 9703612216

Company HRL Compliance Solutions, Inc.

Address 2385 F 1/2 Rd

City Grand Junction State CO ZIP 81505

2 Your Internal Billing Reference

3 To

Recipient's Name Sample Receiving

Phone 616 399-6070

Company ALS Laboratories

Address 3352 128th Ave.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Holland

State MI ZIP 49424

HOLD Weekday  
FedEx location address  
REQUIRED. NOT available for  
FedEx First Overnight.

HOLD Saturday  
FedEx location address  
REQUIRED. Available ONLY for  
FedEx Priority Overnight and  
FedEx 2Day to select locations.

4 Express Package Service

NOTE: Service order has changed. Please select carefully.

Next Business Day

☐ FedEx First Overnight  
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight  
Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight  
Next business afternoon. Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M.  
Second business morning. Saturday Delivery NOT available.

☐ FedEx 2Day  
Second business afternoon. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver  
Third business day. Saturday Delivery NOT available.

5 Packaging

\*Declared value limit \$500.

☐ FedEx Envelope\*

☐ FedEx Pak\*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required  
Package may be left without obtaining a signature for delivery.

☐ Direct Signature  
Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature  
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.  
☒ No ☐ Yes  
As per attached Shipper's Declaration. ☐ Yes  
Shipper's Declaration not required.

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Dry Ice  
Dry Ice, 9 UN 1845 x kg

☐ Cargo Aircraft Only

7 Payment Bill to:

☒ Sender  
Acct. No. in Section 1 will be billed.

☐ Recipient

☐ Third Party

☐ Credit Card

Obtain recip. Acct. No. ☐

☐ Cash/Check

Total Packages 1

Total Weight 3.5

Credit Card Auth.

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

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8022 0273 1067

644



03-Mar-2014

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

Re: **WPX PA 31-36 Excavation 2.25.14**

Work Order: **14021156**

Dear Mark,

ALS Environmental received 2 samples on 26-Feb-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 26.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Work Order:** 14021156**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
14021156-01	West Wall, 15'	Soil		2/25/2014 13:28	2/26/2014 09:30	<input type="checkbox"/>
14021156-02	Bottom, 22'	Soil		2/25/2014 13:25	2/26/2014 09:30	<input type="checkbox"/>



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**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Work Order:** 14021156

---

**Case Narrative**

Batch 56174 sample West Wall, 15' MS recovery for Zinc, and MSD recovery for Barium were outside control limits. However, the MSD recovery for Zinc and the MS recovery for Barium and the RPDs between the MS and MSD were in control. No qualification is required for Zinc or Barium.

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**WorkOrder:** 14021156

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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: 03-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** West Wall, 15'  
**Collection Date:** 2/25/2014 01:28 PM

**Work Order:** 14021156  
**Lab ID:** 14021156-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3541 / 2/28/14	Analyst: <b>IT</b>
DRO (C10-C28)	ND		4.7	mg/Kg-dry	1	2/28/2014 11:47 PM
Surr: 4-Terphenyl-d14	60.7		39-115	%REC	1	2/28/2014 11:47 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>		Prep: SW5035 / 2/26/14	Analyst: <b>IT</b>
GRO (C6-C10)	51		2.8	mg/Kg-dry	1	2/27/2014 09:11 AM
Surr: Toluene-d8	88.0		50-150	%REC	1	2/27/2014 09:11 AM
<b>MERCURY BY CVAA</b>						
			<b>SW7471</b>		Prep: SW7471 / 2/27/14	Analyst: <b>LR</b>
Mercury	ND		0.017	mg/Kg-dry	1	2/27/2014 03:53 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep: SW3050B / 2/27/14	Analyst: <b>ML</b>
Arsenic	3.0		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Barium	150		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Cadmium	ND		0.73	mg/Kg-dry	5	2/28/2014 01:15 AM
Chromium	11		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Copper	9.2		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Lead	8.6		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Nickel	12		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Selenium	ND		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Silver	ND		1.8	mg/Kg-dry	5	2/28/2014 01:15 AM
Zinc	38		3.7	mg/Kg-dry	5	2/28/2014 01:15 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>ML</b>
Calcium	59		10	mg/L	20	2/28/2014 01:12 PM
Magnesium	13		4.0	mg/L	20	2/28/2014 01:12 PM
Sodium	110		4.0	mg/L	20	2/28/2014 01:12 PM
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>RH</b>
Sodium Adsorption Ratio	3.5		0.010	none	1	2/28/2014
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 2/28/14	Analyst: <b>RM</b>
Acenaphthene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Acenaphthylene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Anthracene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Benzo(a)anthracene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Benzo(a)pyrene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Benzo(b)fluoranthene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Benzo(g,h,i)perylene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Benzo(k)fluoranthene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Chrysene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM

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

# ALS Group USA, Corp

Date: 03-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** West Wall, 15'  
**Collection Date:** 2/25/2014 01:28 PM

**Work Order:** 14021156  
**Lab ID:** 14021156-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Fluoranthene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Fluorene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Indeno(1,2,3-cd)pyrene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Naphthalene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Pyrene	ND		7.5	µg/Kg-dry	1	3/3/2014 04:00 PM
Surr: 2-Fluorobiphenyl	66.3		12-100	%REC	1	3/3/2014 04:00 PM
Surr: 4-Terphenyl-d14	94.3		25-137	%REC	1	3/3/2014 04:00 PM
Surr: Nitrobenzene-d5	65.4		37-107	%REC	1	3/3/2014 04:00 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 2/26/14		Analyst: RS
Benzene	ND		34	µg/Kg-dry	1	3/3/2014 02:03 PM
Ethylbenzene	ND		34	µg/Kg-dry	1	3/3/2014 02:03 PM
m,p-Xylene	ND		68	µg/Kg-dry	1	3/3/2014 02:03 PM
o-Xylene	ND		34	µg/Kg-dry	1	3/3/2014 02:03 PM
Toluene	ND		34	µg/Kg-dry	1	3/3/2014 02:03 PM
Xylenes, Total	ND		100	µg/Kg-dry	1	3/3/2014 02:03 PM
Surr: 1,2-Dichloroethane-d4	94.0		70-130	%REC	1	3/3/2014 02:03 PM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	1	3/3/2014 02:03 PM
Surr: Dibromofluoromethane	93.8		70-130	%REC	1	3/3/2014 02:03 PM
Surr: Toluene-d8	94.0		70-130	%REC	1	3/3/2014 02:03 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 2/28/14		Analyst: MELB
Electrical Conductivity @ Saturation	0.82		0.050	mmhos/cm @25	10	2/28/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	11		0.57	mg/Kg-dry	1	3/3/2014 04:45 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 2/26/14		Analyst: MB
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	2/27/2014 03:30 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	12		0.050	% of sample	1	2/26/2014 12:04 PM
PH			SW9045D	Prep: EXTRACT / 2/26/14		Analyst: AT
pH	9.0			s.u.	1	2/26/2014

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

# ALS Group USA, Corp

Date: 03-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** Bottom, 22'  
**Collection Date:** 2/25/2014 01:25 PM

**Work Order:** 14021156  
**Lab ID:** 14021156-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>6.8</b>		<b>SW8015M</b>		Prep: SW3541 / 2/28/14	Analyst: <b>IT</b>
<i>Surr: 4-Terphenyl-d14</i>	<i>62.4</i>		<i>4.5</i>	<i>mg/Kg-dry</i>	<i>1</i>	3/1/2014 12:17 PM
			<i>39-115</i>	<i>%REC</i>	<i>1</i>	3/1/2014 12:17 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>210</b>		<b>SW8015</b>		Prep: SW5035 / 2/26/14	Analyst: <b>IT</b>
<i>Surr: Toluene-d8</i>	<i>107</i>		<i>2.7</i>	<i>mg/Kg-dry</i>	<i>1</i>	2/28/2014 09:16 AM
			<i>50-150</i>	<i>%REC</i>	<i>1</i>	2/28/2014 09:16 AM
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep: SW7471 / 2/27/14	Analyst: <b>LR</b>
			<i>0.017</i>	<i>mg/Kg-dry</i>	<i>1</i>	2/27/2014 03:55 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>3.3</b>		<b>SW6020A</b>		Prep: SW3050B / 2/27/14	Analyst: <b>ML</b>
<b>Barium</b>	<b>240</b>		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
Cadmium	ND		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>Chromium</b>	<b>11</b>		<i>0.85</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>Copper</b>	<b>9.6</b>		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>Lead</b>	<b>8.7</b>		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>Nickel</b>	<b>13</b>		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
Selenium	ND		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
Silver	ND		<i>2.1</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>Zinc</b>	<b>39</b>		<i>4.3</i>	<i>mg/Kg-dry</i>	<i>5</i>	2/28/2014 02:03 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>ML</b>
<b>Calcium</b>	<b>43</b>		<i>10</i>	<i>mg/L</i>	<i>20</i>	2/28/2014 01:18 PM
<b>Magnesium</b>	<b>27</b>		<i>4.0</i>	<i>mg/L</i>	<i>20</i>	2/28/2014 01:18 PM
<b>Sodium</b>	<b>240</b>		<i>4.0</i>	<i>mg/L</i>	<i>20</i>	2/28/2014 01:18 PM
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 2/28/14	Analyst: <b>RH</b>
<b>Sodium Adsorption Ratio</b>	<b>7.2</b>		<i>0.010</i>	<i>none</i>	<i>1</i>	2/28/2014
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 2/28/14	Analyst: <b>RM</b>
Acenaphthene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Acenaphthylene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Anthracene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Benzo(a)anthracene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Benzo(a)pyrene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Benzo(b)fluoranthene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Benzo(g,h,i)perylene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Benzo(k)fluoranthene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM
Chrysene	ND		<i>7.2</i>	<i>µg/Kg-dry</i>	<i>1</i>	3/3/2014 04:21 PM

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

# ALS Group USA, Corp

Date: 03-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** Bottom, 22'  
**Collection Date:** 2/25/2014 01:25 PM

**Work Order:** 14021156  
**Lab ID:** 14021156-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Fluoranthene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Fluorene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Indeno(1,2,3-cd)pyrene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Naphthalene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Pyrene	ND		7.2	µg/Kg-dry	1	3/3/2014 04:21 PM
Surr: 2-Fluorobiphenyl	66.7		12-100	%REC	1	3/3/2014 04:21 PM
Surr: 4-Terphenyl-d14	86.0		25-137	%REC	1	3/3/2014 04:21 PM
Surr: Nitrobenzene-d5	65.8		37-107	%REC	1	3/3/2014 04:21 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 2/26/14		Analyst: RS
Benzene	ND		33	µg/Kg-dry	1	3/3/2014 02:28 PM
Ethylbenzene	ND		33	µg/Kg-dry	1	3/3/2014 02:28 PM
m,p-Xylene	ND		65	µg/Kg-dry	1	3/3/2014 02:28 PM
o-Xylene	ND		33	µg/Kg-dry	1	3/3/2014 02:28 PM
Toluene	ND		33	µg/Kg-dry	1	3/3/2014 02:28 PM
Xylenes, Total	ND		98	µg/Kg-dry	1	3/3/2014 02:28 PM
Surr: 1,2-Dichloroethane-d4	94.0		70-130	%REC	1	3/3/2014 02:28 PM
Surr: 4-Bromofluorobenzene	112		70-130	%REC	1	3/3/2014 02:28 PM
Surr: Dibromofluoromethane	93.4		70-130	%REC	1	3/3/2014 02:28 PM
Surr: Toluene-d8	94.2		70-130	%REC	1	3/3/2014 02:28 PM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 2/28/14		Analyst: MELB
Electrical Conductivity @ Saturation	1.9		0.050	mmhos/cm @25	10	2/28/2014 03:00 PM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: EE
Chromium, Trivalent	11		0.55	mg/Kg-dry	1	3/3/2014 04:45 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 2/26/14		Analyst: MB
Chromium, Hexavalent	ND		0.54	mg/Kg-dry	1	2/27/2014 03:30 PM
MOISTURE			A2540 G			Analyst: AT
Moisture	8.3		0.050	% of sample	1	2/26/2014 12:04 PM
PH			SW9045D	Prep: EXTRACT / 2/26/14		Analyst: AT
pH	8.5			s.u.	1	2/26/2014

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

Client: HRL Compliance Solutions

Work Order: 14021156

Project: WPX PA 31-36 Excavation 2.25.14

# QC BATCH REPORT

Batch ID: 56196

Instrument ID GC8

Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-56196-56196</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/28/2014 03:47 PM</b>		
Client ID:		Run ID: <b>GC8_140228A</b>				SeqNo: <b>2660785</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
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	1.312	0	1.667	0	78.7	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-56196-56196</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/28/2014 04:17 PM</b>		
Client ID:		Run ID: <b>GC8_140228A</b>				SeqNo: <b>2660786</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	122.8	4.2	166.7	0	73.7	49-124	0			
Surr: 4-Terphenyl-d14	1.123	0	1.667	0	67.4	39-115	0			

<b>MS</b>		Sample ID: <b>14021084-09B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/28/2014 04:47 PM</b>		
Client ID:		Run ID: <b>GC8_140228A</b>				SeqNo: <b>2660787</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	356	12	473.2	0	75.2	49-130	0			
Surr: 4-Terphenyl-d14	3.39	0	4.732	0	71.6	39-115	0			

<b>MSD</b>		Sample ID: <b>14021084-09B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/28/2014 05:17 PM</b>		
Client ID:		Run ID: <b>GC8_140228A</b>				SeqNo: <b>2660788</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	348.6	12	486.5	0	71.6	49-130	356	2.12	30	
Surr: 4-Terphenyl-d14	3.485	0	4.865	0	71.6	39-115	3.39	2.78	30	

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
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**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56126**      Instrument ID **GC9**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>MBLK-56126-56126</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 01:40 AM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657380</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	4558	0	5000	0	91.2	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-56126-56126</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 12:23 PM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657386</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	459300	2,500	500000	0	91.9	70-130	0			
<i>Surr: Toluene-d8</i>	4336	0	5000	0	86.7	50-150	0			

<b>MS</b>		Sample ID: <b>14021142-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 10:57 AM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657384</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	468100	2,500	500000	28420	87.9	70-130	0			
<i>Surr: Toluene-d8</i>	4414	0	5000	0	88.3	50-150	0			

<b>MSD</b>		Sample ID: <b>14021142-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/27/2014 11:23 AM</b>		
Client ID:		Run ID: <b>GC9_140226B</b>				SeqNo: <b>2657385</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	468200	2,500	500000	28420	88	70-130	468100	0.0184	30	
<i>Surr: Toluene-d8</i>	4462	0	5000	0	89.2	50-150	4414	1.08	30	

The following samples were analyzed in this batch:

14021156-01A	14021156-02A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56156**      Instrument ID **HG1**      Method: **SW7471**

MBLK		Sample ID: MBLK-56156-56156					Units: mg/Kg		Analysis Date: 2/27/2014 03:17 PM		
Client ID:			Run ID: HG1_140227A				SeqNo: 2658196		Prep Date: 2/27/2014		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-56156-56156				Units: mg/Kg		Analysis Date: 2/27/2014 03:19 PM		
Client ID:		Run ID: HG1_140227A				SeqNo: 2658198		Prep Date: 2/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1603      0.020      0.1665      0      96.3      80-120      0

MS		Sample ID: 14021142-01BMS					Units: mg/Kg		Analysis Date: 2/27/2014 03:46 PM		
Client ID:			Run ID: HG1_140227A			SeqNo: 2658216		Prep Date: 2/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury      0.1151      0.012      0.1021      0.01905      94.1      75-125      0

MSD		Sample ID: 14021142-01BMSD				Units: mg/Kg		Analysis Date: 2/27/2014 03:48 PM		
Client ID:			Run ID: HG1_140227A			SeqNo: 2658218		Prep Date: 2/27/2014		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury      0.1124      0.013      0.1047      0.01905      89.1      75-125      0.1151      2.43      35

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56174**      Instrument ID **ICPMS1**      Method: **SW6020A**

MBLK				Sample ID: MBLK-56174-56174				Units: mg/Kg		Analysis Date: 2/27/2014 11:08 PM		
Client ID:			Run ID: ICPMS1_140227A			SeqNo: 2658992		Prep Date: 2/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Arsenic	ND	0.25										
Barium	ND	0.25										
Cadmium	ND	0.10										
Chromium	ND	0.25										
Copper	ND	0.25										
Lead	0.00291	0.25								J		
Nickel	ND	0.25										
Selenium	ND	0.25										
Silver	0.001411	0.25								J		
Zinc	0.0997	0.50								J		

LCS				Sample ID: LCS-56174-56174				Units: mg/Kg			Analysis Date: 2/27/2014 11:14 PM		
Client ID:			Run ID: ICPMS1_140227A				SeqNo: 2658993		Prep Date: 2/27/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic	4.529	0.25	5	0	90.6	80-120	0						
Barium	4.633	0.25	5	0	92.7	80-120	0						
Cadmium	4.677	0.10	5	0	93.5	80-120	0						
Chromium	4.712	0.25	5	0	94.2	80-120	0						
Copper	4.59	0.25	5	0	91.8	80-120	0						
Lead	4.71	0.25	5	0	94.2	80-120	0						
Nickel	4.636	0.25	5	0	92.7	80-120	0						
Selenium	4.388	0.25	5	0	87.8	80-120	0						
Silver	4.569	0.25	5	0	91.4	80-120	0						
Zinc	4.736	0.50	5	0	94.7	80-120	0						

MS					Sample ID: 14021156-01BMS		Units: mg/Kg		Analysis Date: 2/28/2014 01:27 AM		
Client ID: West Wall, 15'			Run ID: ICPMS1_140227A			SeqNo: 2659012		Prep Date: 2/27/2014		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	8.806	1.6	6.418	2.612	96.5	75-125	0				
Barium	140.9	1.6	6.418	133.6	114	75-125	0			O	
Cadmium	6.457	0.64	6.418	0.2037	97.4	75-125	0				
Chromium	17.31	1.6	6.418	9.965	114	75-125	0				
Copper	14.55	1.6	6.418	8.101	101	75-125	0				
Lead	14.43	1.6	6.418	7.6	106	75-125	0				
Nickel	17.66	1.6	6.418	10.69	109	75-125	0				
Selenium	6.531	1.6	6.418	0.7503	90.1	75-125	0				
Silver	5.796	1.6	6.418	0.0419	89.6	75-125	0				
Zinc	43	3.2	6.418	33.64	146	75-125	0			SO	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56174**      Instrument ID **ICPMS1**      Method: **SW6020A**

MSD		Sample ID: 14021156-01BMSD				Units: mg/Kg		Analysis Date: 2/28/2014 01:33 AM		
Client ID: West Wall, 15'		Run ID: ICPMS1_140227A				SeqNo: 2659013		Prep Date: 2/27/2014		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.154	1.6	6.545	2.612	84.7	75-125	8.806	7.68	25	
Barium	128	1.6	6.545	133.6	-85.6	75-125	140.9	9.62	25	SO
Cadmium	6.171	0.65	6.545	0.2037	91.2	75-125	6.457	4.52	25	
Chromium	16.32	1.6	6.545	9.965	97.1	75-125	17.31	5.9	25	
Copper	14.16	1.6	6.545	8.101	92.5	75-125	14.55	2.77	25	
Lead	13.48	1.6	6.545	7.6	89.8	75-125	14.43	6.86	25	
Nickel	17.26	1.6	6.545	10.69	100	75-125	17.66	2.29	25	
Selenium	6.132	1.6	6.545	0.7503	82.2	75-125	6.531	6.3	25	
Silver	5.622	1.6	6.545	0.0419	85.3	75-125	5.796	3.05	25	
Zinc	40.94	3.3	6.545	33.64	111	75-125	43	4.93	25	O

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56184**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>DUP</b>		Sample ID: <b>14021156-02CDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>2/28/2014 01:24 PM</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>ICPMS1_140228A</b>				SeqNo: <b>2659778</b>		Prep Date: <b>2/28/2014</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	57.2	10	0	0	0	0-0	43.38	27.5		
Magnesium	36.34	4.0	0	0	0	0-0	26.94	29.7		
Sodium	365.4	4.0	0	0	0	0-0	244.2	39.8		

<b>DUP</b>		Sample ID: <b>14021156-02CDUP</b>				Units: <b>none</b>		Analysis Date: <b>2/28/2014</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>SAR_140228A</b>				SeqNo: <b>2659794</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	9.296	0.010	0	0	0		7.177	25.7	50	

The following samples were analyzed in this batch:

14021156-01C	14021156-02C
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-56194-56194</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 08:45 PM</b>		
Client ID:		Run ID: <b>SVMS8_140228A</b>				SeqNo: <b>2661834</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1323	0	1667	0	79.4	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1874	0	1667	0	112	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1347	0	1667	0	80.8	37-107	0			

LCS		Sample ID: <b>SLCSS1-56194-56194</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 09:05 PM</b>		
Client ID:		Run ID: <b>SVMS8_140228A</b>				SeqNo: <b>2661837</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	527.7	6.7	666.7	0	79.1	45-110	0			
Acenaphthylene	549.7	6.7	666.7	0	82.4	45-105	0			
Anthracene	609.3	6.7	666.7	0	91.4	55-105	0			
Benzo(a)anthracene	620	6.7	666.7	0	93	50-110	0			
Benzo(a)pyrene	663	6.7	666.7	0	99.4	50-110	0			
Benzo(b)fluoranthene	669	6.7	666.7	0	100	45-115	0			
Benzo(g,h,i)perylene	669	6.7	666.7	0	100	40-125	0			
Benzo(k)fluoranthene	676.3	6.7	666.7	0	101	45-115	0			
Chrysene	612	6.7	666.7	0	91.8	55-110	0			
Dibenzo(a,h)anthracene	660	6.7	666.7	0	99	40-125	0			
Fluoranthene	573.3	6.7	666.7	0	86	55-115	0			
Fluorene	540.3	6.7	666.7	0	81	50-110	0			
Indeno(1,2,3-cd)pyrene	669.3	6.7	666.7	0	100	40-120	0			
Naphthalene	498.3	6.7	666.7	0	74.7	40-105	0			
Pyrene	653.7	6.7	666.7	0	98	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1308	0	1667	0	78.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1809	0	1667	0	109	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1365	0	1667	0	81.9	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

MS				Sample ID: 14021215-01B MS			Units: µg/Kg		Analysis Date: 2/28/2014 10:46 PM		
Client ID:		Run ID: SVMS8_140228A			SeqNo: 2661700		Prep Date: 2/28/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1248	18	1846	0	67.6	45-110	0				
Acenaphthylene	1316	18	1846	0	71.3	45-105	0				
Anthracene	1510	18	1846	0	81.8	55-105	0				
Benzo(a)anthracene	1568	18	1846	0	84.9	50-110	0				
Benzo(a)pyrene	1717	18	1846	0	93	50-110	0				
Benzo(b)fluoranthene	1670	18	1846	0	90.4	45-115	0				
Benzo(g,h,i)perylene	1871	18	1846	0	101	40-125	0				
Benzo(k)fluoranthene	1623	18	1846	0	87.9	45-115	0				
Chrysene	1497	18	1846	0	81.1	55-110	0				
Dibenzo(a,h)anthracene	1809	18	1846	0	98	40-125	0				
Fluoranthene	1427	18	1846	0	77.3	55-115	0				
Fluorene	1302	18	1846	0	70.5	50-110	0				
Indeno(1,2,3-cd)pyrene	1939	18	1846	0	105	40-120	0				
Naphthalene	1191	18	1846	0	64.5	40-105	0				
Pyrene	1607	18	1846	0	87	45-125	0				
Surr: 2-Fluorobiphenyl	3096	0	4616	0	67.1	12-100	0				
Surr: 4-Terphenyl-d14	4342	0	4616	0	94.1	25-137	0				
Surr: Nitrobenzene-d5	3186	0	4616	0	69	37-107	0				

MSD				Sample ID: 14021215-01B MSD				Units: µg/Kg			Analysis Date: 2/28/2014 11:06 PM		
Client ID:			Run ID: SVMS8_140228A				SeqNo: 2661701			Prep Date: 2/28/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	1325	20	1957	0	67.7	45-110	1248	5.98	30				
Acenaphthylene	1378	20	1957	0	70.4	45-105	1316	4.56	30				
Anthracene	1616	20	1957	0	82.5	55-105	1510	6.74	30				
Benzo(a)anthracene	1669	20	1957	0	85.3	50-110	1568	6.24	30				
Benzo(a)pyrene	1856	20	1957	0	94.8	50-110	1717	7.8	30				
Benzo(b)fluoranthene	1777	20	1957	0	90.8	45-115	1670	6.22	30				
Benzo(g,h,i)perylene	2062	20	1957	0	105	40-125	1871	9.7	30				
Benzo(k)fluoranthene	1690	20	1957	0	86.3	45-115	1623	4.06	30				
Chrysene	1582	20	1957	0	80.8	55-110	1497	5.52	30				
Dibenzo(a,h)anthracene	1975	20	1957	0	101	40-125	1809	8.75	30				
Fluoranthene	1467	20	1957	0	74.9	55-115	1427	2.75	30				
Fluorene	1362	20	1957	0	69.6	50-110	1302	4.55	30				
Indeno(1,2,3-cd)pyrene	2143	20	1957	0	109	40-120	1939	10	30				
Naphthalene	1259	20	1957	0	64.3	40-105	1191	5.6	30				
Pyrene	1800	20	1957	0	91.9	45-125	1607	11.3	30				
Surr: 2-Fluorobiphenyl	3264	0	4893	0	66.7	12-100	3096	5.27	40				
Surr: 4-Terphenyl-d14	4857	0	4893	0	99.3	25-137	4342	11.2	40				
Surr: Nitrobenzene-d5	3430	0	4893	0	70.1	37-107	3186	7.38	40				

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

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Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

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**The following samples were analyzed in this batch:**

14021156-01B	14021156-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56121**      Instrument ID **VMS9**      Method: **SW8260B**

<b>MBLK</b>		Sample ID: <b>MBLK-56121-56121</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/26/2014 01:35 PM</b>		
Client ID:		Run ID: <b>VMS9_140226A</b>				SeqNo: <b>2656622</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
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								
<i>Surr: 1,2-Dichloroethane-d4</i>	982	0	1000	0	98.2	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	918	0	1000	0	91.8	70-130	0			
<i>Surr: Dibromofluoromethane</i>	991	0	1000	0	99.1	70-130	0			
<i>Surr: Toluene-d8</i>	974	0	1000	0	97.4	70-130	0			

<b>LCS</b>		Sample ID: <b>LCS-56121-56121</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/26/2014 11:57 AM</b>		
Client ID:		Run ID: <b>VMS9_140226A</b>				SeqNo: <b>2656620</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
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	992	30	1000	0	99.2	75-125	0			
m,p-Xylene	1988	60	2000	0	99.4	80-125	0			
o-Xylene	994	30	1000	0	99.4	75-125	0			
Toluene	1060	30	1000	0	106	70-125	0			
Xylenes, Total	2982	90	3000	0	99.4	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	924.5	0	1000	0	92.4	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	992.5	0	1000	0	99.2	70-130	0			
<i>Surr: Dibromofluoromethane</i>	1012	0	1000	0	101	70-130	0			
<i>Surr: Toluene-d8</i>	980.5	0	1000	0	98	70-130	0			

The following samples were analyzed in this batch:

14021156-01A	14021156-02A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56120** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-56120-56120					Units: s.u.			Analysis Date: 2/26/2014				
Client ID:					Run ID: WETCHEM_140226P					SeqNo: 2656346			Prep Date: 2/26/2014			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value		%RPD	RPD Limit	Qual
pH					3.96		0	4	0	99		90-110	0				

DUP				Sample ID: 14021073-01A DUP				Units: s.u.		Analysis Date: 2/26/2014	
Client ID:			Run ID: WETCHEM_140226P			SeqNo: 2656348		Prep Date: 2/26/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	7.62	0	0	0	0	0-0	7.54	1.06	20		

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56181**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-56181-56181</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658089</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-56181-56181</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658088</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      2.028      0.50      2      0      101      80-120      0

<b>MS</b>		Sample ID: <b>14021156-02B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658085</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.64      0.49      1.976      0.07968      79      75-125      0

<b>MS</b>		Sample ID: <b>14021156-02B MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658087</b>		Prep Date: <b>2/26/2014</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1118      50      1171      0.07968      95.5      75-125      0

<b>MSD</b>		Sample ID: <b>14021156-02B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 03:30 PM</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>WETCHEM_1402271</b>				SeqNo: <b>2658086</b>		Prep Date: <b>2/26/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.757      0.50      1.992      0.07968      84.2      75-125      1.64      6.87      20

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
--------------	--------------

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

Client: HRL Compliance Solutions  
 Work Order: 14021156  
 Project: WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56184** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>MBLK</b>		Sample ID: <b>WBLKW1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660185</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation ND 0.0050

<b>DUP</b>		Sample ID: <b>14021156-02C DUP</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID: <b>Bottom, 22'</b>		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660191</b>		Prep Date: <b>2/28/2014</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 2.76 0.050 0 0 0 1.916 36.1 50

<b>LCS1</b>		Sample ID: <b>WLCS1W1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660192</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 0.01371 0.0050 0.0149 0 92 85-107 0

<b>LCS2</b>		Sample ID: <b>WLCS2W1-140228-56184</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>2/28/2014 03:00 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140228J</b>				SeqNo: <b>2660186</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Electrical Conductivity @ Saturation 0.575 0.0050 0.592 0 97.1 85-107 0

The following samples were analyzed in this batch:

14021156-01C	14021156-02C
--------------	--------------

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021156  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **R136322** Instrument ID **MOIST** Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R136322</b>				Units: % of sample		Analysis Date: <b>2/26/2014 12:04 PM</b>		
Client ID:		Run ID: <b>MOIST_140226D</b>				SeqNo: <b>2657576</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

<b>LCS</b>		Sample ID: <b>LCS-R136322</b>				Units: % of sample		Analysis Date: <b>2/26/2014 12:04 PM</b>		
Client ID:		Run ID: <b>MOIST_140226D</b>				SeqNo: <b>2657575</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>14021070-03A DUP</b>				Units: % of sample		Analysis Date: <b>2/26/2014 12:04 PM</b>		
Client ID:		Run ID: <b>MOIST_140226D</b>				SeqNo: <b>2657559</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 18.32 0.050 0 0 0 0-0 18.75 2.32 20

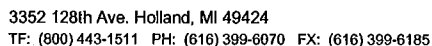
<b>DUP</b>		Sample ID: <b>14021070-08A DUP</b>				Units: % of sample		Analysis Date: <b>2/26/2014 12:04 PM</b>		
Client ID:		Run ID: <b>MOIST_140226D</b>				SeqNo: <b>2657562</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 5.45 0.050 0 0 0 0-0 5.55 1.82 20

The following samples were analyzed in this batch:

14021156-01B	14021156-02B
--------------	--------------

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



W 2/27/04

Form 202r8

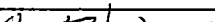


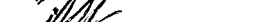
14021156

PAGE 1 of 1

DISPOSAL ☒ By Lab or ☐ Return to Client

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

**For metals or anions, please detail analytes below.**

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		CASEY RICHARDSON	2-25-14	1505
RECEIVED BY		Casey M	2-25-14	1505
RELINQUISHED BY		Casey M	2-25-14	1530
RECEIVED BY		Diane E. Shanley	2/26/14	0930
RELINQUISHED BY				
RECEIVED BY				

**Ann Preston**

**From:** Blaney, Karolina [Karolina.Blaney@wpxenergy.com]  
**Sent:** Thursday, February 27, 2014 11:00 AM  
**To:** Ann Preston  
**Cc:** 'Mark Mumby'; Casey Richardson  
**Subject:** RE: 14021142 WPX PA 31-36 Prod. Water Spill 2.24.14 WOA

Ann,

I would like to change the project names for the samples collected from the PA 31-36 location. There will be a total of 4 COCs for this project.. for now:

Current name:	please change to:
14021142 WPX PA 31-36 Prod. Water Spill 2.24.14	WPX PA 31-36 excavation 2.24.14
14021156 WPX PA 31-36 2.25.14	WPX PA 31-36 excavation 2.25.14
14021147 WPX PA 31-36 Release SW 2.25.14	WPX PA 31-36 SW 2.25.14
???????? WPX PA 31-36 2.25.14	WPX PA 31-36 excavation 2.25.14 (you will receive this
sample today for a 24hrs rush)	

Please let me know if you have any questions.  
Thank you,

*Karolina Blaney*

Environmental Specialist  
WPX Energy  
Office: (970) 683-2295  
Cell: (970) 589-0743  
Fax: (970) 285-9573  
[karolina.blaney@wpxenergy.com](mailto:karolina.blaney@wpxenergy.com)

**From:** Ann Preston [mailto:Ann.Preston@ALSGlobal.com]  
**Sent:** Wednesday, February 26, 2014 10:32 AM  
**To:** mmumby@hrlcomp.com  
**Cc:** Blaney, Karolina; mlobato@hrlcomp.com  
**Subject:** 14021142 WPX PA 31-36 Prod. Water Spill 2.24.14 WOA

Please see the attached file that contains the sample IDs, test assignment, and costs associated with the recent samples you submitted. Please let me know if you have any changes, otherwise we will proceed as shown. Modifications to the final report, after issue, may incur additional cost.

I can get you everything BUT the SARs in a 24 hr TAT. I will send a prelim report with at least all the organics, tomorrow.

Regards,

Ann

**Take our short online customer survey for a chance to win a FREE iPad!**

**Ann L. Preston**

2/27/2014

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **26-Feb-14 09:30**

Work Order: **14021156**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	26-Feb-14	Reviewed by: <u>Ann Preston</u>	26-Feb-14
eSignature	Date	eSignature	Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.4 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>2/26/2014 12:14:55 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

-----

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

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

Origin ID: RILA



Ship Date: 25FEB14  
ActWgt: 67.0 LB  
CAD: 103923490/NET3490  
Dims: 25 X 14 X 15 IN

127 E First Street  
PARACHUTE, CO 81635



Delivery Address Bar Code



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

BILL RECIPIENT

Ref # 1001-022514-1  
Invoice #  
PO #  
Dept #

HOLLAND, MI 49424

WED - 26 FEB 10:30A  
PRIORITY OVERNIGHT

TRK# 7980 3371 9821  
0201

49424  
MI-US  
GRR

**XX GRR**



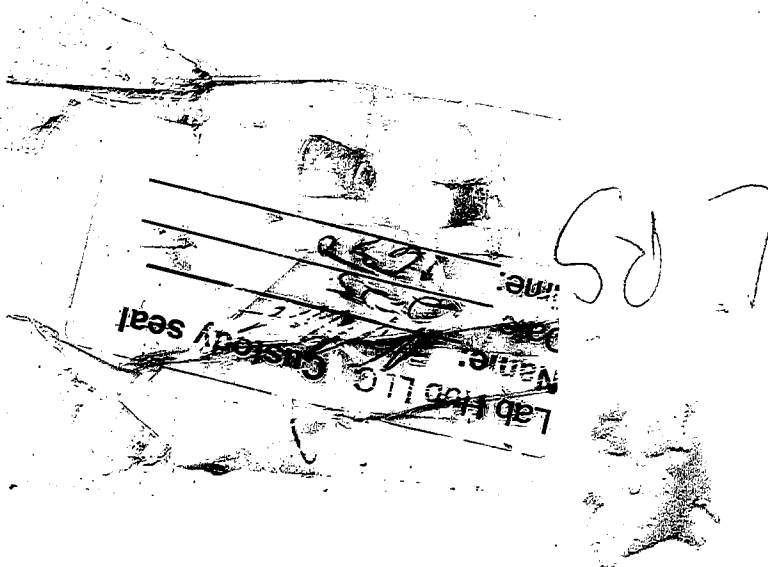
522615625/F220

**After printing this label:**

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

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

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.







04-Mar-2014

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

Re: **WPX PA 31-36 Excavation 2.25.14**

Work Order: **14021226**

Dear Mark,

ALS Environmental received 1 sample on 27-Feb-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 21.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Work Order:** 14021226

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
14021226-01	East Wall, 14'	Soil		2/25/2014 13:32	2/27/2014 11:00	<input type="checkbox"/>

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**WorkOrder:** 14021226

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

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

# ALS Group USA, Corp

Date: 04-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** East Wall, 14'  
**Collection Date:** 2/25/2014 01:32 PM

**Work Order:** 14021226  
**Lab ID:** 14021226-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3541 / 2/27/14	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>2,300</b>		<b>9.3</b>	<b>mg/Kg-dry</b>	2	2/28/2014 10:34 AM
Surr: 4-Terphenyl-d14	74.5		39-115	%REC	2	2/28/2014 10:34 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>		Prep: SW5035 / 2/27/14	Analyst: <b>IT</b>
<b>GRO (C6-C10)</b>	<b>2,800</b>		<b>14</b>	<b>mg/Kg-dry</b>	5	2/28/2014 12:45 PM
Surr: Toluene-d8	114		50-150	%REC	5	2/28/2014 12:45 PM
<b>MERCURY BY CVAA</b>						
			<b>SW7471</b>		Prep: SW7471 / 3/3/14	Analyst: <b>LR</b>
Mercury	ND		0.014	mg/Kg-dry	1	3/3/2014 05:59 PM
<b>METALS BY ICP-MS</b>						
			<b>SW6020A</b>		Prep: SW3050B / 3/3/14	Analyst: <b>ML</b>
<b>Arsenic</b>	<b>2.2</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
<b>Barium</b>	<b>160</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
Cadmium	ND		0.78	mg/Kg-dry	5	3/3/2014 03:35 PM
<b>Chromium</b>	<b>6.2</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
<b>Copper</b>	<b>8.1</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
<b>Lead</b>	<b>7.5</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
<b>Nickel</b>	<b>9.2</b>		<b>1.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
Selenium	ND		1.9	mg/Kg-dry	5	3/3/2014 03:35 PM
Silver	ND		1.9	mg/Kg-dry	5	3/3/2014 03:35 PM
<b>Zinc</b>	<b>27</b>		<b>3.9</b>	<b>mg/Kg-dry</b>	5	3/3/2014 03:35 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 2/28/14	Analyst: <b>RM</b>
Acenaphthene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Acenaphthylene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Anthracene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Benzo(a)anthracene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Benzo(a)pyrene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Benzo(b)fluoranthene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Benzo(g,h,i)perylene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Benzo(k)fluoranthene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Chrysene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Dibenzo(a,h)anthracene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Fluoranthene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
<b>Fluorene</b>	<b>140</b>		<b>7.5</b>	<b>µg/Kg-dry</b>	1	3/1/2014 09:33 AM
Indeno(1,2,3-cd)pyrene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
<b>Naphthalene</b>	<b>2,200</b>		<b>7.5</b>	<b>µg/Kg-dry</b>	1	3/1/2014 09:33 AM
Pyrene	ND		7.5	µg/Kg-dry	1	3/1/2014 09:33 AM
Surr: 2-Fluorobiphenyl	63.6		12-100	%REC	1	3/1/2014 09:33 AM
Surr: 4-Terphenyl-d14	73.7		25-137	%REC	1	3/1/2014 09:33 AM
Surr: Nitrobenzene-d5	80.1		37-107	%REC	1	3/1/2014 09:33 AM

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

# ALS Group USA, Corp

Date: 04-Mar-14

**Client:** HRL Compliance Solutions  
**Project:** WPX PA 31-36 Excavation 2.25.14  
**Sample ID:** East Wall, 14'  
**Collection Date:** 2/25/2014 01:32 PM

**Work Order:** 14021226  
**Lab ID:** 14021226-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 / 2/27/14	Analyst: <b>BG</b>
Benzene	3,300		2,300	µg/Kg-dry	100	2/27/2014 11:24 PM
Ethylbenzene	35,000		3,400	µg/Kg-dry	100	2/27/2014 11:24 PM
m,p-Xylene	520,000		6,800	µg/Kg-dry	100	2/27/2014 11:24 PM
o-Xylene	85,000		3,400	µg/Kg-dry	100	2/27/2014 11:24 PM
Toluene	130,000		3,400	µg/Kg-dry	100	2/27/2014 11:24 PM
Xylenes, Total	610,000		10,000	µg/Kg-dry	100	2/27/2014 11:24 PM
Surr: 1,2-Dichloroethane-d4	100		70-130	%REC	100	2/27/2014 11:24 PM
Surr: 4-Bromofluorobenzene	99.3		70-130	%REC	100	2/27/2014 11:24 PM
Surr: Dibromofluoromethane	96.0		70-130	%REC	100	2/27/2014 11:24 PM
Surr: Toluene-d8	102		70-130	%REC	100	2/27/2014 11:24 PM
<b>CHROMIUM, TRIVALENT</b>						
			<b>CALCULATION</b>			Analyst: <b>EE</b>
Chromium, Trivalent	6.2		0.56	mg/Kg-dry	1	3/3/2014 04:45 PM
<b>CHROMIUM, HEXAVALENT</b>						
			<b>SW7196A</b>		Prep: SW3060A / 2/28/14	Analyst: <b>MB</b>
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	3/3/2014 01:30 PM
<b>MOISTURE</b>						
			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	11		0.050	% of sample	1	2/27/2014 09:58 AM
<b>PH</b>						
			<b>SW9045D</b>		Prep: EXTRACT / 2/28/14	Analyst: <b>AT</b>
pH	8.7			s.u.	1	2/28/2014 04:15 PM

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

Client: HRL Compliance Solutions

Work Order: 14021226

Project: WPX PA 31-36 Excavation 2.25.14

# QC BATCH REPORT

Batch ID: 56175

Instrument ID GC8

Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-56175-56175</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 06:13 PM</b>		
Client ID:		Run ID: <b>GC8_140227A</b>				SeqNo: <b>2658639</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
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	1.264	0	1.667	0	75.8	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-56175-56175</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 06:43 PM</b>		
Client ID:		Run ID: <b>GC8_140227A</b>				SeqNo: <b>2658640</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	129.5	4.2	166.7	0	77.7	49-124	0			
Surr: 4-Terphenyl-d14	1.305	0	1.667	0	78.3	39-115	0			

<b>MS</b>		Sample ID: <b>14021064-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 07:13 PM</b>		
Client ID:		Run ID: <b>GC8_140227A</b>				SeqNo: <b>2658642</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	337.5	12	461.9	25.96	67.4	49-130	0			
Surr: 4-Terphenyl-d14	3.68	0	4.619	0	79.7	39-115	0			

<b>MSD</b>		Sample ID: <b>14021064-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>2/27/2014 07:43 PM</b>		
Client ID:		Run ID: <b>GC8_140227A</b>				SeqNo: <b>2658644</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	330.2	12	486.6	25.96	62.5	49-130	337.5	2.18	30	
Surr: 4-Terphenyl-d14	3.732	0	4.866	0	76.7	39-115	3.68	1.42	30	

The following samples were analyzed in this batch:

14021226-01A

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56167**      Instrument ID **GC9**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>MBLK-56167-56167</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 02:29 AM</b>		
Client ID:		Run ID: <b>GC9_140227B</b>				SeqNo: <b>2659236</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
<i>Surr: Toluene-d8</i>	5514	0	5000	0	110	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-56167-56167</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 01:12 AM</b>		
Client ID:		Run ID: <b>GC9_140227B</b>				SeqNo: <b>2659235</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	478200	2,500	500000	0	95.6	70-130	0			
<i>Surr: Toluene-d8</i>	4622	0	5000	0	92.4	50-150	0			

<b>MS</b>		Sample ID: <b>14021084-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 09:42 AM</b>		
Client ID:		Run ID: <b>GC9_140227B</b>				SeqNo: <b>2659252</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1167000	3,000	594500	532100	107	70-130	0			
<i>Surr: Toluene-d8</i>	6729	0	5945	0	113	50-150	0			

<b>MSD</b>		Sample ID: <b>14021084-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 10:07 AM</b>		
Client ID:		Run ID: <b>GC9_140227B</b>				SeqNo: <b>2659253</b>		Prep Date: <b>2/27/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1244000	3,000	594500	532100	120	70-130	1167000	6.36	30	
<i>Surr: Toluene-d8</i>	6599	0	5945	0	111	50-150	6729	1.95	30	

The following samples were analyzed in this batch:

14021226-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56259** Instrument ID **HG1** Method: **SW7471**

<b>MBLK</b>		Sample ID: <b>MBLK-56259-56259</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 05:54 PM</b>		
Client ID:		Run ID: <b>HG1_140303A</b>				SeqNo: <b>2662073</b>		Prep Date: <b>3/3/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

<b>LCS</b>		Sample ID: <b>LCS-56259-56259</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 05:56 PM</b>		
Client ID:		Run ID: <b>HG1_140303A</b>				SeqNo: <b>2662074</b>		Prep Date: <b>3/3/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1842 0.020 0.1665 0 111 80-120 0

<b>MSD</b>		Sample ID: <b>1402921-19BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 06:10 PM</b>		
Client ID:		Run ID: <b>HG1_140303A</b>				SeqNo: <b>2662105</b>		Prep Date: <b>3/3/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.134 0.013 0.1082 0.004374 120 75-125 0.1349 0.686 35

The following samples were analyzed in this batch:

14021226-01A

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



**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56248**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-56248-56248</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 03:22 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140303A</b>				SeqNo: <b>2661652</b>		Prep Date: <b>3/3/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	0.01388	0.25								J
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

<b>LCS</b>		Sample ID: <b>LCS-56248-56248</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 03:29 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140303A</b>				SeqNo: <b>2661653</b>		Prep Date: <b>3/3/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.433	0.25	5	0	88.7	80-120	0			
Barium	4.676	0.25	5	0	93.5	80-120	0			
Cadmium	4.612	0.10	5	0	92.2	80-120	0			
Chromium	4.56	0.25	5	0	91.2	80-120	0			
Copper	4.444	0.25	5	0	88.9	80-120	0			
Lead	4.652	0.25	5	0	93	80-120	0			
Nickel	4.516	0.25	5	0	90.3	80-120	0			
Selenium	4.201	0.25	5	0	84	80-120	0			
Silver	4.48	0.25	5	0	89.6	80-120	0			
Zinc	4.411	0.50	5	0	88.2	80-120	0			

The following samples were analyzed in this batch:

14021226-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-56194-56194</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 08:45 PM</b>		
Client ID:		Run ID: <b>SVMS8_140228A</b>				SeqNo: <b>2661834</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1323	0	1667	0	79.4	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1874	0	1667	0	112	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1347	0	1667	0	80.8	37-107	0			

LCS		Sample ID: <b>SLCSS1-56194-56194</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>2/28/2014 09:05 PM</b>		
Client ID:		Run ID: <b>SVMS8_140228A</b>				SeqNo: <b>2661837</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	527.7	6.7	666.7	0	79.1	45-110	0			
Acenaphthylene	549.7	6.7	666.7	0	82.4	45-105	0			
Anthracene	609.3	6.7	666.7	0	91.4	55-105	0			
Benzo(a)anthracene	620	6.7	666.7	0	93	50-110	0			
Benzo(a)pyrene	663	6.7	666.7	0	99.4	50-110	0			
Benzo(b)fluoranthene	669	6.7	666.7	0	100	45-115	0			
Benzo(g,h,i)perylene	669	6.7	666.7	0	100	40-125	0			
Benzo(k)fluoranthene	676.3	6.7	666.7	0	101	45-115	0			
Chrysene	612	6.7	666.7	0	91.8	55-110	0			
Dibenzo(a,h)anthracene	660	6.7	666.7	0	99	40-125	0			
Fluoranthene	573.3	6.7	666.7	0	86	55-115	0			
Fluorene	540.3	6.7	666.7	0	81	50-110	0			
Indeno(1,2,3-cd)pyrene	669.3	6.7	666.7	0	100	40-120	0			
Naphthalene	498.3	6.7	666.7	0	74.7	40-105	0			
Pyrene	653.7	6.7	666.7	0	98	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1308	0	1667	0	78.5	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1809	0	1667	0	109	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1365	0	1667	0	81.9	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

MS				Sample ID: 14021215-01B MS			Units: µg/Kg		Analysis Date: 2/28/2014 10:46 PM	
Client ID:				Run ID: SVMS8_140228A			SeqNo: 2661700		Prep Date: 2/28/2014	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1248	18	1846	0	67.6	45-110	0			
Acenaphthylene	1316	18	1846	0	71.3	45-105	0			
Anthracene	1510	18	1846	0	81.8	55-105	0			
Benzo(a)anthracene	1568	18	1846	0	84.9	50-110	0			
Benzo(a)pyrene	1717	18	1846	0	93	50-110	0			
Benzo(b)fluoranthene	1670	18	1846	0	90.4	45-115	0			
Benzo(g,h,i)perylene	1871	18	1846	0	101	40-125	0			
Benzo(k)fluoranthene	1623	18	1846	0	87.9	45-115	0			
Chrysene	1497	18	1846	0	81.1	55-110	0			
Dibenzo(a,h)anthracene	1809	18	1846	0	98	40-125	0			
Fluoranthene	1427	18	1846	0	77.3	55-115	0			
Fluorene	1302	18	1846	0	70.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1939	18	1846	0	105	40-120	0			
Naphthalene	1191	18	1846	0	64.5	40-105	0			
Pyrene	1607	18	1846	0	87	45-125	0			
Surr: 2-Fluorobiphenyl	3096	0	4616	0	67.1	12-100	0			
Surr: 4-Terphenyl-d14	4342	0	4616	0	94.1	25-137	0			
Surr: Nitrobenzene-d5	3186	0	4616	0	69	37-107	0			

MSD				Sample ID: 14021215-01B MSD			Units: µg/Kg		Analysis Date: 2/28/2014 11:06 PM	
Client ID:				Run ID: SVMS8_140228A			SeqNo: 2661701		Prep Date: 2/28/2014	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1325	20	1957	0	67.7	45-110	1248	5.98	30	
Acenaphthylene	1378	20	1957	0	70.4	45-105	1316	4.56	30	
Anthracene	1616	20	1957	0	82.5	55-105	1510	6.74	30	
Benzo(a)anthracene	1669	20	1957	0	85.3	50-110	1568	6.24	30	
Benzo(a)pyrene	1856	20	1957	0	94.8	50-110	1717	7.8	30	
Benzo(b)fluoranthene	1777	20	1957	0	90.8	45-115	1670	6.22	30	
Benzo(g,h,i)perylene	2062	20	1957	0	105	40-125	1871	9.7	30	
Benzo(k)fluoranthene	1690	20	1957	0	86.3	45-115	1623	4.06	30	
Chrysene	1582	20	1957	0	80.8	55-110	1497	5.52	30	
Dibenzo(a,h)anthracene	1975	20	1957	0	101	40-125	1809	8.75	30	
Fluoranthene	1467	20	1957	0	74.9	55-115	1427	2.75	30	
Fluorene	1362	20	1957	0	69.6	50-110	1302	4.55	30	
Indeno(1,2,3-cd)pyrene	2143	20	1957	0	109	40-120	1939	10	30	
Naphthalene	1259	20	1957	0	64.3	40-105	1191	5.6	30	
Pyrene	1800	20	1957	0	91.9	45-125	1607	11.3	30	
Surr: 2-Fluorobiphenyl	3264	0	4893	0	66.7	12-100	3096	5.27	40	
Surr: 4-Terphenyl-d14	4857	0	4893	0	99.3	25-137	4342	11.2	40	
Surr: Nitrobenzene-d5	3430	0	4893	0	70.1	37-107	3186	7.38	40	

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

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Batch ID: **56194**      Instrument ID **SVMS8**      Method: **SW8270**

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**The following samples were analyzed in this batch:**

14021226- 01A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions  
 Work Order: 14021226  
 Project: WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56166** Instrument ID **VMS9** Method: **SW8260B**

MBLK				Sample ID: MBLK-56166-56166				Units: µg/Kg			Analysis Date: 2/27/2014 05:30 PM			
Client ID:				Run ID: VMS9_140227A				SeqNo: 2658620			Prep Date: 2/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Benzene	ND	30												
Ethylbenzene	ND	30												
m,p-Xylene	ND	60												
o-Xylene	ND	30												
Toluene	ND	30												
Xylenes, Total	ND	90												
Surr: 1,2-Dichloroethane-d4	946.5	0	1000	0	94.6	70-130		0						
Surr: 4-Bromofluorobenzene	897	0	1000	0	89.7	70-130		0						
Surr: Dibromofluoromethane	987.5	0	1000	0	98.8	70-130		0						
Surr: Toluene-d8	982	0	1000	0	98.2	70-130		0						

LCS				Sample ID: LCS-56166-56166			Units: µg/Kg		Analysis Date: 2/27/2014 03:28 PM		
Client ID:			Run ID: VMS9_140227A			SeqNo: 2658618		Prep Date: 2/27/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1038	30	1000	0	104	75-125	0				
Ethylbenzene	973.5	30	1000	0	97.4	75-125	0				
m,p-Xylene	1954	60	2000	0	97.7	80-125	0				
o-Xylene	961.5	30	1000	0	96.2	75-125	0				
Toluene	1038	30	1000	0	104	70-125	0				
Xylenes, Total	2916	90	3000	0	97.2	75-125	0				
Surr: 1,2-Dichloroethane-d4	942	0	1000	0	94.2	70-130	0				
Surr: 4-Bromofluorobenzene	1004	0	1000	0	100	70-130	0				
Surr: Dibromofluoromethane	1002	0	1000	0	100	70-130	0				
Surr: Toluene-d8	994	0	1000	0	99.4	70-130	0				

The following samples were analyzed in this batch:

14021226-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56199** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-56199-56199					Units: s.u.			Analysis Date: 2/28/2014 04:15 PM				
Client ID:					Run ID: WETCHEM_140228L					SeqNo: 2660321			Prep Date: 2/28/2014			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD		RPD Limit	Qual
pH					3.92		0	4	0	98		90-110	0				

DUP					Sample ID: 14021227-01B DUP					Units: s.u.		Analysis Date: 2/28/2014 04:15 PM		
Client ID:				Run ID: WETCHEM_140228L				SeqNo: 2660324		Prep Date: 2/28/2014		DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		7.64	0	0	0	0	0-0	7.63	0.131	20				

The following samples were analyzed in this batch:

14021226-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **56257**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-56257-56257</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 01:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140303K</b>				SeqNo: <b>2661749</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-56257-56257</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 01:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140303K</b>				SeqNo: <b>2661750</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      2.08      0.50      2      0      104      80-120      0

<b>MS</b>		Sample ID: <b>14021259-04B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 01:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140303K</b>				SeqNo: <b>2661756</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.743      0.49      1.976      0.02778      86.8      75-125      0

<b>MS</b>		Sample ID: <b>14021259-04B MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 01:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140303K</b>				SeqNo: <b>2661758</b>		Prep Date: <b>2/28/2014</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1125      50      1220      0.02778      92.3      75-125      0

<b>MSD</b>		Sample ID: <b>14021259-04B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>3/3/2014 01:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140303K</b>				SeqNo: <b>2661757</b>		Prep Date: <b>2/28/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.816      0.50      2      0.02778      89.4      75-125      1.743      4.1      20

The following samples were analyzed in this batch:

14021226-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 14021226  
**Project:** WPX PA 31-36 Excavation 2.25.14

## QC BATCH REPORT

Batch ID: **R136391**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R136391</b>				Units: % of sample		Analysis Date: <b>2/27/2014 09:58 AM</b>		
Client ID:		Run ID: <b>MOIST_140227A</b>				SeqNo: <b>2659161</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R136391</b>				Units: % of sample		Analysis Date: <b>2/27/2014 09:58 AM</b>		
Client ID:		Run ID: <b>MOIST_140227A</b>				SeqNo: <b>2659160</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>14021194-01A DUP</b>				Units: % of sample		Analysis Date: <b>2/27/2014 09:58 AM</b>		
Client ID:		Run ID: <b>MOIST_140227A</b>				SeqNo: <b>2659164</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

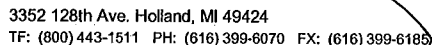
Moisture      0.1      0.050      0      0      0      0-0      0.11      9.52      20

The following samples were analyzed in this batch:

14021226-01A

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





## Form 202r8

14021226

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

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

**For metals or anions, please detail analytes below.**

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>[Signature]</i>	CASEY RICHARDSON	2.26.14	1340
RECEIVED BY	<i>[Signature]</i>	<i>[Signature]</i>	2.26.14	1350
RELINQUISHED BY	<i>[Signature]</i>	Nick MARTINEZ	2.26.14	1355
RECEIVED BY	<i>[Signature]</i>	Diane F Shaw	2/27/14	1100
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 27-Feb-14 11:00

Work Order: 14021226

Received by: DS

Checklist completed by Diane Shaw 27-Feb-14  
eSignature Date

Reviewed by: Ann Preston 27-Feb-14  
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>2/27/2014 11:48:08 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

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

127 E First Street

PARACHUTE, CO 81635

Origin ID: RILA



Ship Date: 26FEB14  
Actual Wt: 40.0 LB  
Est Wt: 103823490/NET3490

Dims: 25 X 14 X 15 IN

Delivery Address Bar Code



1001-022814-3

SHIP TO: (616) 399-6870

Sample receiving  
ALS Holland  
3352 128TH AVE

HOLLAND, MI 49424

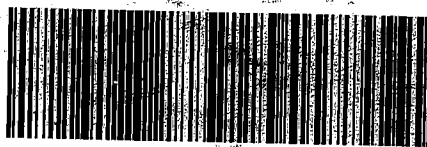
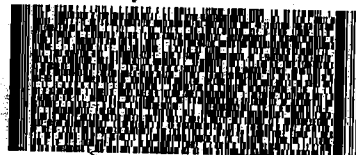
BILL R

THU - 27 FEB 10:30A  
PRIORITY OVERNIGHT

TRKA 7980 4910 4155  
0201

**XX GRRA**

49424  
MI-US  
GRR



522G1502-FZ20

**After printing this label:**

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

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

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

LA # 009

Blue

24

## Backgrounds



18-Apr-2014

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

Re: **WPX PA 31-36 Backgrounds 4.10.14**

Work Order: **1404601**

Dear Mark,

ALS Environmental received 3 samples 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 14.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 Backgrounds 4.10.14  
**Work Order:** 1404601

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**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1404601-01	PA 31-36-B-1	Soil		4/10/2014 12:45	4/11/2014 10:00	<input type="checkbox"/>
1404601-02	PA 31-36-B-2	Soil		4/10/2014 12:50	4/11/2014 10:00	<input type="checkbox"/>
1404601-03	PA 31-36-B-3	Soil		4/10/2014 12:55	4/11/2014 10:00	<input type="checkbox"/>

---

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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: 18-Apr-14

**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 Backgrounds 4.10.14  
**Sample ID:** PA 31-36-B-1  
**Collection Date:** 4/10/2014 12:45 PM

**Work Order:** 1404601  
**Lab ID:** 1404601-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>						
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep: SW3050B / 4/14/14	Analyst: <b>ML</b>
Arsenic	3.3		1.8	mg/Kg-dry	5	4/15/2014 10:37 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	6.1		0.050	% of sample	1	4/11/2014 03:22 PM

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



# ALS Group USA, Corp

Date: 18-Apr-14

**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 Backgrounds 4.10.14  
**Sample ID:** PA 31-36-B-2  
**Collection Date:** 4/10/2014 12:50 PM

**Work Order:** 1404601  
**Lab ID:** 1404601-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep: SW3050B / 4/14/14	Analyst: <b>ML</b>
Arsenic	3.8		2.0	mg/Kg-dry	5	4/15/2014 10:43 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	5.2		0.050	% of sample	1	4/11/2014 03:22 PM

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

# ALS Group USA, Corp

Date: 18-Apr-14

**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 Backgrounds 4.10.14  
**Sample ID:** PA 31-36-B-3  
**Collection Date:** 4/10/2014 12:55 PM

**Work Order:** 1404601  
**Lab ID:** 1404601-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP-MS</b>			<b>SW6020A</b>		Prep: SW3050B / 4/14/14	Analyst: <b>ML</b>
Arsenic	2.9		1.9	mg/Kg-dry	5	4/15/2014 10:50 PM
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW6020A</b>		Prep: USDA Method 20B / 4/15/14	Analyst: <b>RH</b>
Calcium	48		10	mg/L	20	4/16/2014 10:05 PM
Magnesium	11		4.0	mg/L	20	4/16/2014 10:05 PM
Sodium	27		4.0	mg/L	20	4/16/2014 10:05 PM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 4/15/14	Analyst: <b>RH</b>
Sodium Adsorption Ratio	0.94		0.010	none	1	4/17/2014
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 4/15/14	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	0.58		0.050	mmhos/cm @25	10	4/15/2014 02:30 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	5.5		0.050	% of sample	1	4/11/2014 03:22 PM
<b>PH</b>			<b>SW9045D</b>		Prep: EXTRACT / 4/14/14	Analyst: <b>AT</b>
pH	8.4			s.u.	1	4/14/2014 05:00 PM

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

# ALS Group USA, Corp

Date: 18-Apr-14

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404601  
**Project:** WPX PA 31-36 Backgrounds 4.10.14

## QC BATCH REPORT

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

DUP		Sample ID: <b>1404615-05ADUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>4/17/2014 12:21 AM</b>		
Client ID:		Run ID: <b>ICPMS2_140416A</b>				SeqNo: <b>2717451</b>		Prep Date: <b>4/15/2014</b>		DF: <b>20</b>
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: <b>1404615-05ADUP</b>				Units: <b>none</b>		Analysis Date: <b>4/17/2014</b>		
Client ID:		Run ID: <b>SAR_140417A</b>				SeqNo: <b>2719985</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
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:

1404601-03B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404601  
**Project:** WPX PA 31-36 Backgrounds 4.10.14

## QC BATCH REPORT

Batch ID: **57539**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-57539-57539</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/15/2014 08:10 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140415A</b>				SeqNo: <b>2715018</b>		Prep Date: <b>4/14/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      ND      0.25

<b>LCS</b>		Sample ID: <b>LCS-57539-57539</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/15/2014 08:35 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140415A</b>				SeqNo: <b>2715022</b>		Prep Date: <b>4/14/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      4.425      0.25      5      0      88.5      80-120      0

<b>MS</b>		Sample ID: <b>1404590-08AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/15/2014 08:53 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140415A</b>				SeqNo: <b>2715025</b>		Prep Date: <b>4/14/2014</b>		DF: <b>5</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      7.71      1.6      6.369      1.077      104      75-125      0

<b>MSD</b>		Sample ID: <b>1404590-08AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/15/2014 08:59 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140415A</b>				SeqNo: <b>2715026</b>		Prep Date: <b>4/14/2014</b>		DF: <b>5</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic      7.398      1.6      6.562      1.077      96.3      75-125      7.71      4.13      25

The following samples were analyzed in this batch:

1404601-01A	1404601-02A	1404601-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404601  
**Project:** WPX PA 31-36 Backgrounds 4.10.14

## QC BATCH REPORT

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

<b>DUP</b>		Sample ID: <b>1404615-05A DUP</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>4/15/2014 02:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140415J</b>				SeqNo: <b>2713881</b>		Prep Date: <b>4/15/2014</b>		DF: <b>10</b>
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:

1404601-03B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404601  
**Project:** WPX PA 31-36 Backgrounds 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:

1404601-03A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404601  
**Project:** WPX PA 31-36 Backgrounds 4.10.14

## QC BATCH REPORT

Batch ID: **R138842**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R138842</b>				Units: % of sample		Analysis Date: <b>4/11/2014 03:22 PM</b>		
Client ID:		Run ID: <b>MOIST_140411B</b>				SeqNo: <b>2711024</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R138842</b>				Units: % of sample		Analysis Date: <b>4/11/2014 03:22 PM</b>		
Client ID:		Run ID: <b>MOIST_140411B</b>				SeqNo: <b>2711022</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>1404566-01A DUP</b>				Units: % of sample		Analysis Date: <b>4/11/2014 03:22 PM</b>		
Client ID:		Run ID: <b>MOIST_140411B</b>				SeqNo: <b>2710989</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      2.92      0.050      0      0      0      0-0      3.09      5.66      20

<b>DUP</b>		Sample ID: <b>1404566-02A DUP</b>				Units: % of sample		Analysis Date: <b>4/11/2014 03:22 PM</b>		
Client ID:		Run ID: <b>MOIST_140411B</b>				SeqNo: <b>2710992</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      5.09      0.050      0      0      0      0-0      5.55      8.65      20

The following samples were analyzed in this batch:

1404601-01A	1404601-02A	1404601-03A
-------------	-------------	-------------

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

## Chain-of-Custody

WORKORDER #	1404601		
PAGE	1	of	1
DISPOSAL	By Lab or Return to Client		

[illegible]

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

**For metals or anions, please detail analytes below.**

<b>Comments:</b>  <div style="text-align: center;"> </div>	<b>QC PACKAGE</b> (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	<i>[Signature]</i>	Reed Wald	4/10/14	2:00
RECEIVED BY	<i>[Signature]</i>	N. MARTINEZ	4-10-14	2:00
RELINQUISHED BY	<i>[Signature]</i>	N. MARTINEZ	4-10-14	2:00
RECEIVED BY	<i>[Signature]</i>	Diane F Sha	4/11/14	1000
RELINQUISHED BY				
RECEIVED BY				



Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 11-Apr-14 10:00

Work Order: 1404601

Received by: DS

Checklist completed by Diane Shaw 11-Apr-14  
eSignature Date

Reviewed by: Ann Preston 14-Apr-14  
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/11/2014 1:13:44 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

From: (816) 399-6070  
Sample Receiving  
ALS Laboratory Group  
3352 128th Avenue

Holland, MI 49424

Origin ID: GRRR



Ship Date: 10APR14  
ActWgt: 51.0 LB  
CAD: 2264840/NET3480

Dim: 24 X 15 X 15 IN

Delivery Address Bar Code



Ref # 041014-1  
Invoice #  
PO #  
Dept #

SHIP TO: (816) 399-6070

sample receiving  
ALS Laboratory Group  
3352 128TH AVE

HOLLAND, MI 49424

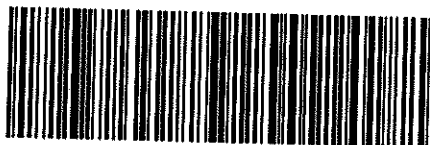
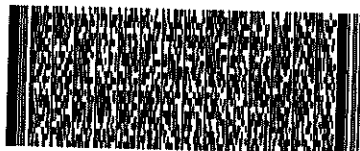
BILL SENDER

FRI - 11 APR AA  
STANDARD OVERNIGHT

TRK# 7985 1601 9828  
0201

68 GRRR

49424  
MI-US  
GRR



522G17009F220

/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...

W 3.80  
A PL. blue  
Dlx.  
Lolc

ALS Parachute Custody Seal

Date: 4/10 Time: 1700

Name: *MM*

## Boreholes



17-Apr-2014

Ted Brewster  
HRL Compliance Solutions, Inc  
2385 F 1/2 Road  
Grand Junction, CO 81505

Re: **WPX PA 31-36 4.9.14**

Work Order: **1404507**

Dear Ted,

ALS Environmental received 1 sample on 10-Apr-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 24.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 4.9.14  
**Work Order:** 1404507

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1404507-01	BH02 9-11'	Soil		4/9/2014 10:30	4/10/2014 09:30	<input type="checkbox"/>

---

**Client:** HRL Compliance Solutions, Inc**Project:** WPX PA 31-36 4.9.14**Work Order:** 1404507**Case Narrative**

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Batch 57444 MS/MSD data for DRO is not related to this project's samples. No data requires qualification.

Batch 57491 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 57600 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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: 17-Apr-14

Client: HRL Compliance Solutions, Inc

Project: WPX PA 31-36 4.9.14

Sample ID: BH02 9-11'

Collection Date: 4/9/2014 10:30 AM

Work Order: 1404507

Lab ID: 1404507-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>150</b>		<b>SW8015M</b>		Prep: SW3541 / 4/11/14	Analyst: <b>IT</b>
<i>Surr: 4-Terphenyl-d14</i>	<i>82.6</i>		<i>39-115</i>	<i>%REC</i>	<i>1</i>	<i>4/11/2014 10:26 PM</i>
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>450</b>		<b>SW8015</b>		Prep: SW5035 / 4/10/14	Analyst: <b>IT</b>
<i>Surr: Toluene-d8</i>	<i>118</i>		<i>50-150</i>	<i>%REC</i>	<i>1</i>	<i>4/10/2014 05:48 PM</i>
<b>MERCURY BY CVAA</b>						
Mercury	ND		<b>SW7471</b>		Prep: SW7471 / 4/16/14	Analyst: <b>LR</b>
			0.016	mg/Kg-dry	1	4/16/2014 09:23 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>3.9</b>		<b>SW6020A</b>		Prep: SW3050B / 4/12/14	Analyst: <b>RH</b>
<b>Barium</b>	<b>3,900</b>		<b>1.8</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>4/14/2014 12:18 AM</b>
Cadmium	ND		<b>18</b>	<b>mg/Kg-dry</b>	<b>50</b>	<b>4/15/2014 12:50 PM</b>
<b>Chromium</b>	<b>13</b>		0.71	mg/Kg-dry	5	4/14/2014 12:18 AM
<b>Copper</b>	<b>11</b>		<b>1.8</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>4/14/2014 12:18 AM</b>
<b>Lead</b>	<b>11</b>		<b>1.8</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>4/14/2014 12:18 AM</b>
<b>Nickel</b>	<b>15</b>		<b>1.8</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>4/14/2014 12:18 AM</b>
Selenium	ND		1.8	mg/Kg-dry	5	4/14/2014 12:18 AM
Silver	ND		1.8	mg/Kg-dry	5	4/14/2014 12:18 AM
<b>Zinc</b>	<b>46</b>		<b>3.6</b>	<b>mg/Kg-dry</b>	<b>5</b>	<b>4/14/2014 12:18 AM</b>
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 4/13/14	Analyst: <b>RH</b>
<b>Calcium</b>	<b>70</b>		<b>10</b>	<b>mg/L</b>	<b>20</b>	<b>4/13/2014 03:51 PM</b>
<b>Magnesium</b>	<b>25</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	<b>4/13/2014 03:51 PM</b>
<b>Sodium</b>	<b>430</b>		<b>4.0</b>	<b>mg/L</b>	<b>20</b>	<b>4/13/2014 03:51 PM</b>
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 4/13/14	Analyst: <b>RH</b>
<b>Sodium Adsorption Ratio</b>	<b>11</b>		<b>0.010</b>	<b>none</b>	<b>1</b>	<b>4/13/2014</b>
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 4/13/14	Analyst: <b>RM</b>
Acenaphthene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Acenaphthylene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Anthracene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Benzo(a)anthracene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Benzo(a)pyrene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Benzo(b)fluoranthene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Benzo(g,h,i)perylene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Benzo(k)fluoranthene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Chrysene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM

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



# ALS Group USA, Corp

Date: 17-Apr-14

Client: HRL Compliance Solutions, Inc

Project: WPX PA 31-36 4.9.14

Sample ID: BH02 9-11'

Collection Date: 4/9/2014 10:30 AM

Work Order: 1404507

Lab ID: 1404507-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Fluoranthene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Fluorene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Indeno(1,2,3-cd)pyrene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Naphthalene	190		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Pyrene	ND		7.3	µg/Kg-dry	1	4/14/2014 06:57 PM
Surr: 2-Fluorobiphenyl	75.0		12-100	%REC	1	4/14/2014 06:57 PM
Surr: 4-Terphenyl-d14	91.0		25-137	%REC	1	4/14/2014 06:57 PM
Surr: Nitrobenzene-d5	82.5		37-107	%REC	1	4/14/2014 06:57 PM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 4/10/14		Analyst: BG
Benzene	120		33	µg/Kg-dry	1	4/13/2014 10:15 PM
Ethylbenzene	240		33	µg/Kg-dry	1	4/13/2014 10:15 PM
m,p-Xylene	19,000		270	µg/Kg-dry	4	4/16/2014 08:28 AM
o-Xylene	2,700		33	µg/Kg-dry	1	4/13/2014 10:15 PM
Toluene	1,600		33	µg/Kg-dry	1	4/13/2014 10:15 PM
Xylenes, Total	22,000		400	µg/Kg-dry	4	4/16/2014 08:28 AM
Surr: 1,2-Dichloroethane-d4	96.2		70-130	%REC	1	4/13/2014 10:15 PM
Surr: 1,2-Dichloroethane-d4	93.5		70-130	%REC	4	4/16/2014 08:28 AM
Surr: 4-Bromofluorobenzene	99.6		70-130	%REC	4	4/16/2014 08:28 AM
Surr: 4-Bromofluorobenzene	99.0		70-130	%REC	1	4/13/2014 10:15 PM
Surr: Dibromofluoromethane	96.3		70-130	%REC	4	4/16/2014 08:28 AM
Surr: Dibromofluoromethane	93.4		70-130	%REC	1	4/13/2014 10:15 PM
Surr: Toluene-d8	122		70-130	%REC	1	4/13/2014 10:15 PM
Surr: Toluene-d8	104		70-130	%REC	4	4/16/2014 08:28 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 4/13/14		Analyst: JB
Electrical Conductivity @ Saturation	3.0		0.050	mmhos/cm @25	10	4/14/2014 11:00 AM
CHROMIUM, TRIVALENT			CALCULATION			Analyst: JJG
Chromium, Trivalent	13		0.55	mg/Kg-dry	1	4/17/2014 03:47 PM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 4/15/14		Analyst: AG
Chromium, Hexavalent	ND		0.55	mg/Kg-dry	1	4/16/2014 11:00 AM
MOISTURE			A2540 G			Analyst: AT
Moisture	9.7		0.050	% of sample	1	4/10/2014 11:00 AM
PH			SW9045D	Prep: EXTRACT / 4/11/14		Analyst: MELB
pH	8.8			s.u.	1	4/11/2014 12:00 PM

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

**QC BATCH REPORT**

Batch ID: **57444** Instrument ID **GC8** Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>DBLKS1-57444-57444</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/11/2014 11:55 PM</b>		
Client ID:		Run ID: <b>GC8_140411A</b>				SeqNo: <b>2710165</b>		Prep Date: <b>4/11/2014</b>		DF: <b>1</b>
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	1.263	0	1.667	0	75.8	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-57444-57444</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/12/2014 12:25 PM</b>		
Client ID:		Run ID: <b>GC8_140411A</b>				SeqNo: <b>2710168</b>		Prep Date: <b>4/11/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	157	4.2	166.7	0	94.2	49-124	0			
Surr: 4-Terphenyl-d14	1.453	0	1.667	0	87.2	39-115	0			

<b>MS</b>		Sample ID: <b>1404532-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/12/2014 12:54 PM</b>		
Client ID:		Run ID: <b>GC8_140411A</b>				SeqNo: <b>2710169</b>		Prep Date: <b>4/11/2014</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1120	120	476.6	893	47.6	49-130	0			S
Surr: 4-Terphenyl-d14	3.489	0	4.766	0	73.2	39-115	0			

<b>MSD</b>		Sample ID: <b>1404532-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/12/2014 01:24 AM</b>		
Client ID:		Run ID: <b>GC8_140411A</b>				SeqNo: <b>2710170</b>		Prep Date: <b>4/11/2014</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1388	120	463.1	893	107	49-130	1120	21.4	30	
Surr: 4-Terphenyl-d14	3.603	0	4.631	0	77.8	39-115	3.489	3.21	30	

The following samples were analyzed in this batch: | 1404507-01B |

Client: HRL Compliance Solutions, Inc  
 Work Order: 1404507  
 Project: WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57427** Instrument ID **GC9** Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>MBLK-57427-57427</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/10/2014 03:10 PM</b>		
Client ID:		Run ID: <b>GC9_140410A</b>				SeqNo: <b>2707157</b>		Prep Date: <b>4/10/2014</b>		DF: <b>1</b>
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	5768	0	5000	0	115	50-150	0			

<b>LCS</b>		Sample ID: <b>LCS-57427-57427</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/10/2014 01:53 PM</b>		
Client ID:		Run ID: <b>GC9_140410A</b>				SeqNo: <b>2707156</b>		Prep Date: <b>4/10/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	613900	2,500	500000	0	123	70-130	0			
Surr: Toluene-d8	4677	0	5000	0	93.5	50-150	0			

<b>MS</b>		Sample ID: <b>1404492-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/10/2014 07:34 PM</b>		
Client ID:		Run ID: <b>GC9_140410A</b>				SeqNo: <b>2707167</b>		Prep Date: <b>4/10/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	462300	2,500	500000	0	92.5	70-130	0			
Surr: Toluene-d8	4262	0	5000	0	85.2	50-150	0			

<b>MSD</b>		Sample ID: <b>1404492-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/10/2014 08:00 PM</b>		
Client ID:		Run ID: <b>GC9_140410A</b>				SeqNo: <b>2707168</b>		Prep Date: <b>4/10/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	480600	2,500	500000	0	96.1	70-130	462300	3.89	30	
Surr: Toluene-d8	4306	0	5000	0	86.1	50-150	4262	1.03	30	

The following samples were analyzed in this batch:

1404507-01A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## 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:

1404507-01B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57402** Instrument ID **ICPMS2** Method: **SW6020A**

<b>DUP</b>		Sample ID: <b>1404513-03BDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>4/13/2014 04:08 PM</b>		
Client ID:		Run ID: <b>ICPMS2_140413A</b>				SeqNo: <b>2710354</b>		Prep Date: <b>4/13/2014</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	74.18	10	0	0	0	0-0	78.36	5.48		
Magnesium	2.034	4.0	0	0	0	0-0	2.164	0		J
Sodium	2.144	4.0	0	0	0	0-0	4.016	0		J

The following samples were analyzed in this batch:

1404507-01B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57491** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: <b>MBLK-57491-57491</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/13/2014 11:54 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140412A</b>				SeqNo: <b>2710651</b>		Prep Date: <b>4/12/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.04768	0.50								J

LCS		Sample ID: <b>LCS-57491-57491</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/14/2014</b>		
Client ID:		Run ID: <b>ICPMS1_140412A</b>				SeqNo: <b>2710652</b>		Prep Date: <b>4/12/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.544	0.25	5	0	90.9	80-120	0			
Barium	4.638	0.25	5	0	92.8	80-120	0			
Cadmium	4.631	0.10	5	0	92.6	80-120	0			
Chromium	4.699	0.25	5	0	94	80-120	0			
Copper	4.676	0.25	5	0	93.5	80-120	0			
Lead	4.75	0.25	5	0	95	80-120	0			
Nickel	4.666	0.25	5	0	93.3	80-120	0			
Selenium	4.304	0.25	5	0	86.1	80-120	0			
Silver	4.424	0.25	5	0	88.5	80-120	0			
Zinc	4.556	0.50	5	0	91.1	80-120	0			

MS		Sample ID: <b>1404528-05BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/14/2014 04:40 AM</b>		
Client ID:		Run ID: <b>ICPMS1_140412A</b>				SeqNo: <b>2710719</b>		Prep Date: <b>4/12/2014</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.044	1.4	6.831	1.605	94.3	75-125	0			
Barium	40.05	1.4	6.831	25.53	213	75-125	0			S
Cadmium	6.123	0.55	6.831	0.03516	89.1	75-125	0			
Chromium	19.27	1.4	6.831	8.682	155	75-125	0			S
Copper	11.83	1.4	6.831	4.663	105	75-125	0			
Lead	12.48	1.4	6.831	5.163	107	75-125	0			
Nickel	15.36	1.4	6.831	5.893	139	75-125	0			S
Selenium	6.317	1.4	6.831	0.4053	86.5	75-125	0			
Silver	5.902	1.4	6.831	0.009382	86.3	75-125	0			
Zinc	33.88	2.7	6.831	20.97	189	75-125	0			S

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57491** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: <b>1404528-05BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/14/2014 04:46 AM</b>		
Client ID:		Run ID: <b>ICPMS1_140412A</b>				SeqNo: <b>2710720</b>		Prep Date: <b>4/12/2014</b>		DF: <b>4</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.138	1.4	6.775	1.605	96.4	75-125	8.044	1.17	25	
Barium	32.87	1.4	6.775	25.53	108	75-125	40.05	19.7	25	
Cadmium	6.168	0.54	6.775	0.03516	90.5	75-125	6.123	0.733	25	
Chromium	16.88	1.4	6.775	8.682	121	75-125	19.27	13.3	25	
Copper	11.31	1.4	6.775	4.663	98.1	75-125	11.83	4.51	25	
Lead	12.54	1.4	6.775	5.163	109	75-125	12.48	0.489	25	
Nickel	14.21	1.4	6.775	5.893	123	75-125	15.36	7.72	25	
Selenium	6.266	1.4	6.775	0.4053	86.5	75-125	6.317	0.816	25	
Silver	5.943	1.4	6.775	0.009382	87.6	75-125	5.902	0.7	25	
Zinc	31.92	2.7	6.775	20.97	162	75-125	33.88	5.94	25	S

The following samples were analyzed in this batch: 1404507-01B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57500**      Instrument ID **SVMS8**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-57500-57500</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/14/2014 03:52 PM</b>		
Client ID:		Run ID: <b>SVMS8_140414A</b>				SeqNo: <b>2713691</b>		Prep Date: <b>4/13/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1207	0	1667	0	72.4	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1836	0	1667	0	110	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1246	0	1667	0	74.8	37-107	0			

LCS		Sample ID: <b>SLCSS1-57500-57500</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/14/2014 04:13 PM</b>		
Client ID:		Run ID: <b>SVMS8_140414A</b>				SeqNo: <b>2713692</b>		Prep Date: <b>4/13/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	510	6.7	666.7	0	76.5	45-110	0			
Acenaphthylene	528.7	6.7	666.7	0	79.3	45-105	0			
Anthracene	639.3	6.7	666.7	0	95.9	55-105	0			
Benzo(a)anthracene	639.7	6.7	666.7	0	95.9	50-110	0			
Benzo(a)pyrene	697	6.7	666.7	0	105	50-110	0			
Benzo(b)fluoranthene	658.7	6.7	666.7	0	98.8	45-115	0			
Benzo(g,h,i)perylene	692	6.7	666.7	0	104	40-125	0			
Benzo(k)fluoranthene	675.7	6.7	666.7	0	101	45-115	0			
Chrysene	628.3	6.7	666.7	0	94.2	55-110	0			
Dibenzo(a,h)anthracene	745.3	6.7	666.7	0	112	40-125	0			
Fluoranthene	722	6.7	666.7	0	108	55-115	0			
Fluorene	542	6.7	666.7	0	81.3	50-110	0			
Indeno(1,2,3-cd)pyrene	745.3	6.7	666.7	0	112	40-120	0			
Naphthalene	450.7	6.7	666.7	0	67.6	40-105	0			
Pyrene	675.3	6.7	666.7	0	101	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1152	0	1667	0	69.1	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1752	0	1667	0	105	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1198	0	1667	0	71.9	37-107	0			

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



**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57500**      Instrument ID **SVMS8**      Method: **SW8270**

MS				Sample ID: 1404445-05B MS			Units: µg/Kg		Analysis Date: 4/14/2014 05:14 PM	
Client ID:		Run ID: SVMS8_140414A			SeqNo: 2713693		Prep Date: 4/13/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1027	13	1314	0	78.1	45-110	0			
Acenaphthylene	1128	13	1314	0	85.8	45-105	0			
Anthracene	1261	13	1314	0	95.9	55-105	0			
Benzo(a)anthracene	1256	13	1314	29.46	93.3	50-110	0			
Benzo(a)pyrene	1315	13	1314	0	100	50-110	0			
Benzo(b)fluoranthene	1233	13	1314	36.07	91.1	45-115	0			
Benzo(g,h,i)perylene	1324	13	1314	0	101	40-125	0			
Benzo(k)fluoranthene	1248	13	1314	0	94.9	45-115	0			
Chrysene	1242	13	1314	34.42	91.9	55-110	0			
Dibenzo(a,h)anthracene	1387	13	1314	0	106	40-125	0			
Fluoranthene	1434	13	1314	60.9	104	55-115	0			
Fluorene	1147	13	1314	0	87.3	50-110	0			
Indeno(1,2,3-cd)pyrene	1410	13	1314	0	107	40-120	0			
Naphthalene	954.3	13	1314	0	72.6	40-105	0			
Pyrene	1383	13	1314	50.97	101	45-125	0			
Surr: 2-Fluorobiphenyl	2353	0	3286	0	71.6	12-100	0			
Surr: 4-Terphenyl-d14	3471	0	3286	0	106	25-137	0			
Surr: Nitrobenzene-d5	2485	0	3286	0	75.6	37-107	0			

MSD				Sample ID: 1404445-05B MSD			Units: µg/Kg		Analysis Date: 4/14/2014 05:35 PM	
Client ID:		Run ID: SVMS8_140414A			SeqNo: 2713694		Prep Date: 4/13/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	975.9	13	1264	0	77.2	45-110	1027	5.13	30	
Acenaphthylene	1086	13	1264	0	85.9	45-105	1128	3.85	30	
Anthracene	1216	13	1264	0	96.2	55-105	1261	3.64	30	
Benzo(a)anthracene	1213	13	1264	29.46	93.6	50-110	1256	3.49	30	
Benzo(a)pyrene	1277	13	1264	0	101	50-110	1315	2.91	30	
Benzo(b)fluoranthene	1216	13	1264	36.07	93.3	45-115	1233	1.38	30	
Benzo(g,h,i)perylene	1231	13	1264	0	97.3	40-125	1324	7.29	30	
Benzo(k)fluoranthene	1156	13	1264	0	91.4	45-115	1248	7.66	30	
Chrysene	1176	13	1264	34.42	90.3	55-110	1242	5.5	30	
Dibenzo(a,h)anthracene	1331	13	1264	0	105	40-125	1387	4.14	30	
Fluoranthene	1361	13	1264	60.9	103	55-115	1434	5.2	30	
Fluorene	1087	13	1264	0	86	50-110	1147	5.4	30	
Indeno(1,2,3-cd)pyrene	1387	13	1264	0	110	40-120	1410	1.65	30	
Naphthalene	903.2	13	1264	0	71.4	40-105	954.3	5.5	30	
Pyrene	1314	13	1264	50.97	99.9	45-125	1383	5.15	30	
Surr: 2-Fluorobiphenyl	2287	0	3160	0	72.4	12-100	2353	2.85	40	
Surr: 4-Terphenyl-d14	3305	0	3160	0	105	25-137	3471	4.89	40	
Surr: Nitrobenzene-d5	2392	0	3160	0	75.7	37-107	2485	3.8	40	

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

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Batch ID: **57500** Instrument ID **SVMS8** Method: **SW8270**

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**The following samples were analyzed in this batch:**

1404507-01B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57410**      Instrument ID **VMS5**      Method: **SW8260B**

MBLK				Sample ID: MBLK-57410-57410				Units: µg/Kg			Analysis Date: 4/10/2014 01:29 PM		
Client ID:			Run ID: VMS5_140410A				SeqNo: 2707557			Prep Date: 4/10/2014		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	980.5	0	1000	0	98	70-130		0					
Surr: 4-Bromofluorobenzene	962.5	0	1000	0	96.2	70-130		0					
Surr: Dibromofluoromethane	975.5	0	1000	0	97.6	70-130		0					
Surr: Toluene-d8	1016	0	1000	0	102	70-130		0					

LCS				Sample ID: LCS-57410-57410			Units: µg/Kg		Analysis Date: 4/10/2014 12:12 PM		
Client ID:		Run ID: VMS5_140410A			SeqNo: 2707555		Prep Date: 4/10/2014		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1091	30	1000	0	109	75-125	0				
Ethylbenzene	1103	30	1000	0	110	75-125	0				
m,p-Xylene	2198	60	2000	0	110	80-125	0				
o-Xylene	1087	30	1000	0	109	75-125	0				
Toluene	1076	30	1000	0	108	70-125	0				
Xylenes, Total	3285	90	3000	0	110	75-125	0				
Surr: 1,2-Dichloroethane-d4	978.5	0	1000	0	97.8	70-130	0				
Surr: 4-Bromofluorobenzene	975.5	0	1000	0	97.6	70-130	0				
Surr: Dibromofluoromethane	1004	0	1000	0	100	70-130	0				
Surr: Toluene-d8	1017	0	1000	0	102	70-130	0				

MS					Sample ID: 1404444-01A MS			Units: µg/Kg		Analysis Date: 4/13/2014 01:17 AM	
Client ID:			Run ID: VMS9_140412A			SeqNo: 2710295		Prep Date: 4/10/2014		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1118	30	1000	0	112	75-125	0				
Ethylbenzene	1012	30	1000	0	101	75-125	0				
m,p-Xylene	2002	60	2000	0	100	80-125	0				
o-Xylene	978.5	30	1000	0	97.8	75-125	0				
Toluene	1098	30	1000	0	110	70-125	0				
Xylenes, Total	2980	90	3000	0	99.3	75-125	0				
Surr: 1,2-Dichloroethane-d4	982.5	0	1000	0	98.2	70-130	0				
Surr: 4-Bromofluorobenzene	948.5	0	1000	0	94.8	70-130	0				
Surr: Dibromofluoromethane	979.5	0	1000	0	98	70-130	0				
Surr: Toluene-d8	1004	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:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57410**      Instrument ID **VMS5**      Method: **SW8260B**

MSD				Sample ID: <b>1404444-01A MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>4/13/2014 01:41 AM</b>	
Client ID:				Run ID: <b>VMS9_140412A</b>			SeqNo: <b>2710296</b>		Prep Date: <b>4/10/2014</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1106	30	1000	0	111	75-125	1118	1.12	30	
Ethylbenzene	1023	30	1000	0	102	75-125	1012	1.13	30	
m,p-Xylene	2034	60	2000	0	102	80-125	2002	1.59	30	
o-Xylene	993.5	30	1000	0	99.4	75-125	978.5	1.52	30	
Toluene	1119	30	1000	0	112	70-125	1098	1.89	30	
Xylenes, Total	3027	90	3000	0	101	75-125	2980	1.56	30	
Surr: 1,2-Dichloroethane-d4	958.5	0	1000	0	95.8	70-130	982.5	2.47	30	
Surr: 4-Bromofluorobenzene	977	0	1000	0	97.7	70-130	948.5	2.96	30	
Surr: Dibromofluoromethane	984.5	0	1000	0	98.4	70-130	979.5	0.509	30	
Surr: Toluene-d8	1010	0	1000	0	101	70-130	1004	0.596	30	

The following samples were analyzed in this batch: | 1404507-01A |

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57402** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>1404513-03B DUP</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>4/14/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140414B</b>				SeqNo: <b>2710883</b>		Prep Date: <b>4/13/2014</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.418	0.050	0	0	0		0.452	7.82	50	

The following samples were analyzed in this batch:

1404507-01B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57520** Instrument ID **WETCHEM** Method: **SW9045D**

DUP					Sample ID: 1404507-01B DUP				Units: s.u.		Analysis Date: 4/11/2014 12:00 PM			
Client ID: BH02 9-11'					Run ID: WETCHEM_140411M				SeqNo: 2710144		Prep Date: 4/11/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		8.9	0	0	0	0	0-0	8.83	0.79	20				

DUP					Sample ID: 1404589-01A DUP					Units: s.u.		Analysis Date: 4/11/2014 12:00 PM		
Client ID:				Run ID: WETCHEM_140411M				SeqNo: 2710152			Prep Date: 4/11/2014		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		9.43	0	0	0	0	0-0	9.47	0.423	20				

The following samples were analyzed in this batch:

1404507-01B

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404507  
**Project:** WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **57600**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-57600-57600</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716116</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-57600-57600</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716117</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.7      0.50      2      0      85      80-120      0

<b>MS</b>		Sample ID: <b>1404555-20C MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716121</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1      0.50      1.984      0.1647      42.1      75-125      0      S

<b>MS</b>		Sample ID: <b>1404555-20C MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716123</b>		Prep Date: <b>4/15/2014</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      342.8      50      682.2      0.1647      50.2      75-125      0      S

<b>MSD</b>		Sample ID: <b>1404555-20C MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716122</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      0.7036      0.49      1.976      0.1647      27.3      75-125      1      34.8      20      SR

The following samples were analyzed in this batch:

1404507-01B

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

Client: HRL Compliance Solutions, Inc  
 Work Order: 1404507  
 Project: WPX PA 31-36 4.9.14

## QC BATCH REPORT

Batch ID: **R138764** Instrument ID **MOIST** Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R138764</b>				Units: % of sample			Analysis Date: <b>4/10/2014 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_140410D</b>				SeqNo: <b>2708390</b>			Prep Date:		
									DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture ND 0.050

<b>LCS</b>		Sample ID: <b>LCS-R138764</b>				Units: % of sample			Analysis Date: <b>4/10/2014 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_140410D</b>				SeqNo: <b>2708389</b>			Prep Date:		
									DF: <b>1</b>		
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

<b>DUP</b>		Sample ID: <b>1404485-01B DUP</b>				Units: % of sample			Analysis Date: <b>4/10/2014 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_140410D</b>				SeqNo: <b>2708365</b>			Prep Date:		
									DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 4.17 0.050 0 0 0 0-0 3.95 5.42 20

<b>DUP</b>		Sample ID: <b>1404509-01B DUP</b>				Units: % of sample			Analysis Date: <b>4/10/2014 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_140410D</b>				SeqNo: <b>2708377</b>			Prep Date:		
									DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 11.49 0.050 0 0 0 0-0 11.2 2.56 20

The following samples were analyzed in this batch:

1404507-01B

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





WORKORDER  
# 140450

PROJECTNAME		SAMPLER		DATE		PAGE	
PROJECT No.		SITEID		TURNAROUN		DISPOSAL	
COMPANYNAME		BILL TO COMPANY		CITY/STATE/ZIP		1 of 1	
SEND REPORT TO		INVOICE ATTN TO		CITY/STATE/ZIP		By Lab or Return to Client	
ADDRESS		ADDRESS		CITY/STATE/ZIP			
PHONE		PHONE		CITY/STATE/ZIP			
FAX		FAX		CITY/STATE/ZIP			
E-MAIL		E-MAIL		CITY/STATE/ZIP			
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC
BH01		S					
BH02	9-11'	S	4/9/14	1030	2	8	
BH03		S		1230			
BH04		S					
BH05		S					
BH06		S					

\*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)	
<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
<input type="checkbox"/>	LEVEL III (Std QC + forms)
<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)
<input type="checkbox"/>	

er 8-4 degrees C 9-5035

**Iservative Key:** 1-HCl 2-HNO<sub>3</sub> 3-H<sub>2</sub>SO<sub>4</sub> 4-NaOH 5-NaHSO<sub>4</sub> 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>captain Lobato</i>	Mike Lobato	4/9/14	1440
RECEIVED BY	<i>N.M.</i>	<i>N.M.</i>	4-9-14	1440
RELINQUISHED BY	<i>N. Marchner</i>	N. Marchner	4-9-14	1500
RECEIVED BY	<i>Diane F. Shew</i>	Diane F Shew	4/10/14	0930
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 10-Apr-14 09:30

Work Order: 1404507

Received by: DS

Checklist completed by Diane Shaw 10-Apr-14  
eSignature Date

Reviewed by: Ann Preston 10-Apr-14  
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/10/2014 11:25:49 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

-----

Client Contacted:

Date Contacted:

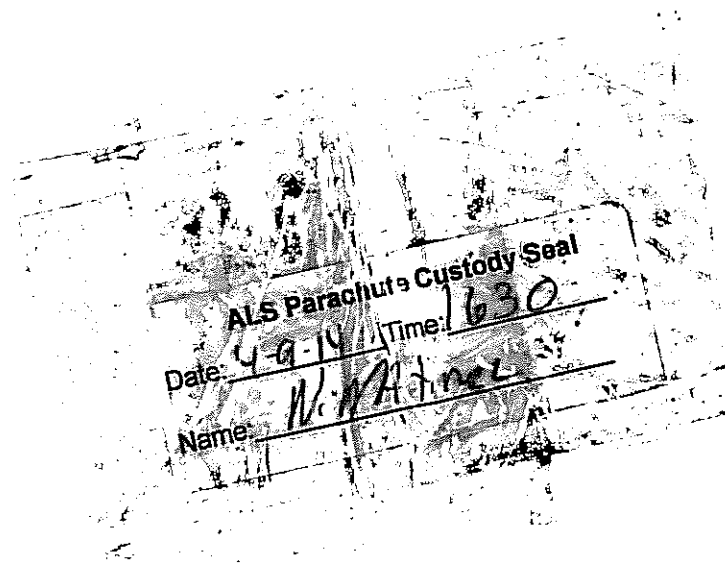
Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:





21-Apr-2014

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

Re: **WPX PA 31-36 Soil 4.9.14**

Work Order: **1404617**

Dear Mark,

ALS Environmental received 3 samples 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 27.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN 532786

### Report of Laboratory Analysis

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

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

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions, Inc  
**Project:** WPX PA 31-36 Soil 4.9.14  
**Work Order:** 1404617

---

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1404617-01	BH03 14-16'	Soil		4/9/2014 11:05	4/11/2014 10:00	<input type="checkbox"/>
1404617-02	BH04 14-16'	Soil		4/9/2014 11:42	4/11/2014 10:00	<input type="checkbox"/>
1404617-03	BH05 14-16'	Soil		4/9/2014 12:32	4/11/2014 10:00	<input type="checkbox"/>

---

## ALS Group USA, Corp

*Date: 21-Apr-14*

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**Client:** HRL Compliance Solutions, Inc

**Project:** WPX PA 31-36 Soil 4.9.14

**Work Order:** 1404617

### **Case Narrative**

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Batch 57600 MS/MSD data for Hexavalent Chromium is not related to this project's samples.  
No data requires qualification.

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	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

<b><u>Acronym</u></b>	<b><u>Description</u></b>
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

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% 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 PA 31-36 Soil 4.9.14

Sample ID: BH03 14-16'

Collection Date: 4/9/2014 11:05 AM

Work Order: 1404617

Lab ID: 1404617-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015M</b>		Prep: SW3541 / 4/16/14	Analyst: <b>IT</b>
<b>DRO (C10-C28)</b>	<b>12</b>		<b>4.4</b>	<b>mg/Kg-dry</b>	<b>1</b>	4/17/2014 05:55 AM
Surr: 4-Terphenyl-d14	88.9		39-115	%REC	1	4/17/2014 05:55 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
			<b>SW8015</b>		Prep: SW5035 / 4/15/14	Analyst: <b>IT</b>
<b>GRO (C6-C10)</b>	<b>49</b>		<b>2.7</b>	<b>mg/Kg-dry</b>	<b>1</b>	4/15/2014 08:11 PM
Surr: Toluene-d8	102		50-150	%REC	1	4/15/2014 08:11 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 4/16/14	Analyst: <b>HL</b>
Acenaphthene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Acenaphthylene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Anthracene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Benzo(a)anthracene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Benzo(a)pyrene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Benzo(b)fluoranthene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Benzo(g,h,i)perylene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Benzo(k)fluoranthene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Chrysene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Dibenzo(a,h)anthracene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Fluoranthene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Fluorene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Indeno(1,2,3-cd)pyrene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Naphthalene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Pyrene	ND		7.0	µg/Kg-dry	1	4/17/2014 12:34 PM
Surr: 2-Fluorobiphenyl	79.7		12-100	%REC	1	4/17/2014 12:34 PM
Surr: 4-Terphenyl-d14	110		25-137	%REC	1	4/17/2014 12:34 PM
Surr: Nitrobenzene-d5	62.9		37-107	%REC	1	4/17/2014 12:34 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8260B</b>		Prep: SW5035 / 4/15/14	Analyst: <b>RS</b>
Benzene	ND		32	µg/Kg-dry	1	4/17/2014 11:33 AM
Ethylbenzene	ND		32	µg/Kg-dry	1	4/17/2014 11:33 AM
m,p-Xylene	ND		64	µg/Kg-dry	1	4/17/2014 11:33 AM
o-Xylene	ND		32	µg/Kg-dry	1	4/17/2014 11:33 AM
Toluene	ND		32	µg/Kg-dry	1	4/17/2014 11:33 AM
Xylenes, Total	ND		96	µg/Kg-dry	1	4/17/2014 11:33 AM
Surr: 1,2-Dichloroethane-d4	94.4		70-130	%REC	1	4/17/2014 11:33 AM
Surr: 4-Bromofluorobenzene	96.4		70-130	%REC	1	4/17/2014 11:33 AM
Surr: Dibromofluoromethane	96.0		70-130	%REC	1	4/17/2014 11:33 AM
Surr: Toluene-d8	97.9		70-130	%REC	1	4/17/2014 11:33 AM
<b>MOISTURE</b>						
			<b>A2540 G</b>			Analyst: <b>AT</b>
<b>Moisture</b>	<b>6.0</b>		<b>0.050</b>	<b>% of sample</b>	<b>1</b>	4/11/2014 06:07 PM

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 PA 31-36 Soil 4.9.14

Sample ID: BH04 14-16'

Collection Date: 4/9/2014 11:42 AM

Work Order: 1404617

Lab ID: 1404617-02

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>16</b>		<b>SW8015M</b>		Prep: SW3541 / 4/16/14	Analyst: <b>IT</b>
<i>Surr: 4-Terphenyl-d14</i>	93.0		4.9	mg/Kg-dry	1	4/17/2014 01:56 AM
			39-115	%REC	1	4/17/2014 01:56 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep: SW5035 / 4/15/14	Analyst: <b>IT</b>
<i>Surr: Toluene-d8</i>	112		3.0	mg/Kg-dry	1	4/15/2014 08:36 PM
			50-150	%REC	1	4/15/2014 08:36 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.44</b>		<b>SW7471</b>		Prep: SW7471 / 4/16/14	Analyst: <b>LR</b>
			0.058	mg/Kg-dry	5	4/16/2014 10:16 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>3.2</b>		<b>SW6020A</b>		Prep: SW3050B / 4/14/14	Analyst: <b>ML</b>
<b>Barium</b>	<b>230</b>		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
Cadmium	ND		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
			0.74	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>Chromium</b>	<b>18</b>		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>Copper</b>	<b>19</b>		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>Lead</b>	<b>5.3</b>		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>Nickel</b>	<b>50</b>		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
Selenium	ND		2.2	mg/Kg-dry	5	4/20/2014 09:51 PM
Silver	ND		1.8	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>Zinc</b>	<b>40</b>		3.7	mg/Kg-dry	5	4/16/2014 05:06 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
			<b>SW6020A</b>		Prep: USDA Method 20B / 4/15/14	Analyst: <b>RH</b>
<b>Calcium</b>	<b>14</b>		10	mg/L	20	4/17/2014 12:27 AM
<b>Magnesium</b>	<b>4.7</b>		4.0	mg/L	20	4/17/2014 12:27 AM
<b>Sodium</b>	<b>89</b>		4.0	mg/L	20	4/17/2014 12:27 AM
<b>SODIUM ADSORPTION RATIO</b>						
			<b>USDA H60 METHO</b>		Prep: USDA Method 20B / 4/15/14	Analyst: <b>RH</b>
<b>Sodium Adsorption Ratio</b>	<b>5.2</b>		0.010	none	1	4/17/2014
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
			<b>SW8270</b>		Prep: SW3541 / 4/16/14	Analyst: <b>HL</b>
Acenaphthene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Acenaphthylene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Anthracene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Benzo(a)anthracene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Benzo(a)pyrene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Benzo(b)fluoranthene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Benzo(g,h,i)perylene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Benzo(k)fluoranthene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Chrysene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 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 PA 31-36 Soil 4.9.14

**Sample ID:** BH04 14-16'

**Collection Date:** 4/9/2014 11:42 AM

**Work Order:** 1404617

**Lab ID:** 1404617-02

**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Fluoranthene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Fluorene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Indeno(1,2,3-cd)pyrene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Naphthalene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Pyrene	ND		7.9	µg/Kg-dry	1	4/17/2014 05:26 AM
Surr: 2-Fluorobiphenyl	84.1		12-100	%REC	1	4/17/2014 05:26 AM
Surr: 4-Terphenyl-d14	115		25-137	%REC	1	4/17/2014 05:26 AM
Surr: Nitrobenzene-d5	63.5		37-107	%REC	1	4/17/2014 05:26 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>	Prep: SW5035 / 4/15/14		Analyst: <b>RS</b>
Benzene	ND		36	µg/Kg-dry	1	4/17/2014 11:59 AM
Ethylbenzene	ND		36	µg/Kg-dry	1	4/17/2014 11:59 AM
m,p-Xylene	ND		71	µg/Kg-dry	1	4/17/2014 11:59 AM
o-Xylene	ND		36	µg/Kg-dry	1	4/17/2014 11:59 AM
Toluene	ND		36	µg/Kg-dry	1	4/17/2014 11:59 AM
Xylenes, Total	ND		110	µg/Kg-dry	1	4/17/2014 11:59 AM
Surr: 1,2-Dichloroethane-d4	92.8		70-130	%REC	1	4/17/2014 11:59 AM
Surr: 4-Bromofluorobenzene	95.1		70-130	%REC	1	4/17/2014 11:59 AM
Surr: Dibromofluoromethane	97.3		70-130	%REC	1	4/17/2014 11:59 AM
Surr: Toluene-d8	97.4		70-130	%REC	1	4/17/2014 11:59 AM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>	Prep: USDA Method 20B / 4/15/14		Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	0.54		0.050	mmhos/cm @25	10	4/15/2014 02:30 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: <b>JJG</b>
Chromium, Trivalent	18		0.59	mg/Kg-dry	1	4/17/2014 03:47 PM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>	Prep: SW3060A / 4/15/14		Analyst: <b>AG</b>
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	4/16/2014 11:00 AM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	16		0.050	% of sample	1	4/11/2014 06:07 PM
<b>PH</b>			<b>SW9045D</b>	Prep: EXTRACT / 4/14/14		Analyst: <b>AT</b>
pH	8.9			s.u.	1	4/14/2014 05:00 PM

**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 PA 31-36 Soil 4.9.14

Sample ID: BH05 14-16'

Collection Date: 4/9/2014 12:32 PM

Work Order: 1404617

Lab ID: 1404617-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>			<b>SW8015M</b>		Prep: SW3541 / 4/16/14	Analyst: <b>IT</b>
DRO (C10-C28)	ND		5.0	mg/Kg-dry	1	4/17/2014 02:26 AM
Surr: 4-Terphenyl-d14	45.6		39-115	%REC	1	4/17/2014 02:26 AM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>			<b>SW8015</b>		Prep: SW5035 / 4/15/14	Analyst: <b>IT</b>
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	4/15/2014 09:02 PM
Surr: Toluene-d8	102		50-150	%REC	1	4/15/2014 09:02 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270</b>		Prep: SW3541 / 4/16/14	Analyst: <b>HL</b>
Acenaphthene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Acenaphthylene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Anthracene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Benzo(a)anthracene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Benzo(a)pyrene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Benzo(b)fluoranthene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Benzo(g,h,i)perylene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Benzo(k)fluoranthene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Chrysene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Dibenzo(a,h)anthracene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Fluoranthene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Fluorene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Indeno(1,2,3-cd)pyrene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Naphthalene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Pyrene	ND		8.0	µg/Kg-dry	1	4/17/2014 05:48 AM
Surr: 2-Fluorobiphenyl	38.5		12-100	%REC	1	4/17/2014 05:48 AM
Surr: 4-Terphenyl-d14	56.2		25-137	%REC	1	4/17/2014 05:48 AM
Surr: Nitrobenzene-d5	29.5	S	37-107	%REC	1	4/17/2014 05:48 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>		Prep: SW5035 / 4/15/14	Analyst: <b>RS</b>
Benzene	ND		36	µg/Kg-dry	1	4/17/2014 12:24 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	4/17/2014 12:24 PM
m,p-Xylene	ND		73	µg/Kg-dry	1	4/17/2014 12:24 PM
o-Xylene	ND		36	µg/Kg-dry	1	4/17/2014 12:24 PM
Toluene	ND		36	µg/Kg-dry	1	4/17/2014 12:24 PM
Xylenes, Total	ND		110	µg/Kg-dry	1	4/17/2014 12:24 PM
Surr: 1,2-Dichloroethane-d4	93.8		70-130	%REC	1	4/17/2014 12:24 PM
Surr: 4-Bromofluorobenzene	94.5		70-130	%REC	1	4/17/2014 12:24 PM
Surr: Dibromofluoromethane	96.2		70-130	%REC	1	4/17/2014 12:24 PM
Surr: Toluene-d8	97.2		70-130	%REC	1	4/17/2014 12:24 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>AT</b>
Moisture	17		0.050	% of sample	1	4/11/2014 06:07 PM

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  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: **57604** Instrument ID **GC8** Method: **SW8015M**

<b>MBLK</b>		Sample ID: <b>DBLKS1-57604-57604</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/17/2014 03:55 AM</b>		
Client ID:		Run ID: <b>GC8_140416A</b>				SeqNo: <b>2717160</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
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	1.6	0	1.667	0	96	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-57604-57604</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/17/2014 04:25 AM</b>		
Client ID:		Run ID: <b>GC8_140416A</b>				SeqNo: <b>2717161</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	168	4.2	166.7	0	101	49-124	0			
Surr: 4-Terphenyl-d14	1.536	0	1.667	0	92.2	39-115	0			

<b>MS</b>		Sample ID: <b>1404617-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/17/2014 04:55 AM</b>		
Client ID: <b>BH03 14-16'</b>		Run ID: <b>GC8_140416A</b>				SeqNo: <b>2717162</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	338.5	8.1	324.1	11.55	101	49-130	0			
Surr: 4-Terphenyl-d14	3.244	0	3.241	0	100	39-115	0			

<b>MSD</b>		Sample ID: <b>1404617-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/17/2014 05:25 AM</b>		
Client ID: <b>BH03 14-16'</b>		Run ID: <b>GC8_140416A</b>				SeqNo: <b>2717163</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	318.8	8.3	330.4	11.55	93	49-130	338.5	5.98	30	
Surr: 4-Terphenyl-d14	3.071	0	3.304	0	92.9	39-115	3.244	5.48	30	

The following samples were analyzed in this batch: | 1404617-01A | 1404617-02A | 1404617-03A |

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

Client: HRL Compliance Solutions, Inc  
 Work Order: 1404617  
 Project: WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: 57571 Instrument ID GC9 Method: SW8015

<b>MBLK</b>		Sample ID: <b>MBLK-57571-57571</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/15/2014 02:00 PM</b>		
Client ID:		Run ID: <b>GC9_140415A</b>				SeqNo: <b>2714623</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
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			

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

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

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

1404617-01A	1404617-02A	1404617-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## 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:

1404617-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

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

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

<b>DUP</b>		Sample ID: <b>1404615-05ADUP</b>				Units: <b>none</b>		Analysis Date: <b>4/17/2014</b>		
Client ID:		Run ID: <b>SAR_140417A</b>				SeqNo: <b>2719985</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
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: | 1404617-02B |

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

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

Sample ID: <b>MBLK-57544-57544</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>4/16/2014 01:17 AM</b>			
Client ID:		Run ID: <b>ICPMS1_140415A</b>			SeqNo: <b>2715066</b>		Prep Date: <b>4/14/2014</b>		DF: <b>1</b>	
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:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

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

MSD		Sample ID: <b>1404595-01AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 01:58 AM</b>		
Client ID:		Run ID: <b>ICPMS1_140415A</b>				SeqNo: <b>2715073</b>		Prep Date: <b>4/14/2014</b>		DF: <b>1</b>
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: 1404617-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

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

<b>MBLK</b>		Sample ID: <b>MBLK-57775-57775</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/20/2014 08:24 PM</b>		
Client ID:		Run ID: <b>ICPMS1_140420A</b>				SeqNo: <b>2722091</b>		Prep Date: <b>4/18/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Selenium ND 0.25

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

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

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

1404617-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: **57603**      Instrument ID **SVMS7**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-57603-57603</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/16/2014 08:02 PM</b>		
Client ID:		Run ID: <b>SVMS7_140416A</b>				SeqNo: <b>2718253</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
<i>Surr: 2-Fluorobiphenyl</i>	1268	0	1667	0	76.1	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1802	0	1667	0	108	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1053	0	1667	0	63.2	37-107	0			

LCS		Sample ID: <b>SLCSS1-57603-57603</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>4/16/2014 08:25 PM</b>		
Client ID:		Run ID: <b>SVMS7_140416A</b>				SeqNo: <b>2718254</b>		Prep Date: <b>4/16/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	540.7	6.7	666.7	0	81.1	45-110	0			
Acenaphthylene	538.3	6.7	666.7	0	80.7	45-105	0			
Anthracene	627.3	6.7	666.7	0	94.1	55-105	0			
Benzo(a)anthracene	635.7	6.7	666.7	0	95.3	50-110	0			
Benzo(a)pyrene	699	6.7	666.7	0	105	50-110	0			
Benzo(b)fluoranthene	709.3	6.7	666.7	0	106	45-115	0			
Benzo(g,h,i)perylene	555	6.7	666.7	0	83.2	40-125	0			
Benzo(k)fluoranthene	696	6.7	666.7	0	104	45-115	0			
Chrysene	643	6.7	666.7	0	96.4	55-110	0			
Dibenzo(a,h)anthracene	564.7	6.7	666.7	0	84.7	40-125	0			
Fluoranthene	604.7	6.7	666.7	0	90.7	55-115	0			
Fluorene	564.3	6.7	666.7	0	84.6	50-110	0			
Indeno(1,2,3-cd)pyrene	598.7	6.7	666.7	0	89.8	40-120	0			
Naphthalene	524.3	6.7	666.7	0	78.6	40-105	0			
Pyrene	640.7	6.7	666.7	0	96.1	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1353	0	1667	0	81.2	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1951	0	1667	0	117	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1221	0	1667	0	73.3	37-107	0			

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: **57603**      Instrument ID **SVMS7**      Method: **SW8270**

MS				Sample ID: 1404617-01A MS			Units: µg/Kg		Analysis Date: 4/16/2014 11:49 PM	
Client ID: BH03 14-16'				Run ID: SVMS7_140416A			SeqNo: 2718255		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
Acenaphthene	967.6	13	1272	0	76	45-110	0			
Acenaphthylene	1034	13	1272	0	81.2	45-105	0			
Anthracene	1157	13	1272	0	90.9	55-105	0			
Benzo(a)anthracene	1204	13	1272	0	94.6	50-110	0			
Benzo(a)pyrene	1232	13	1272	0	96.8	50-110	0			
Benzo(b)fluoranthene	1276	13	1272	0	100	45-115	0			
Benzo(g,h,i)perylene	1084	13	1272	0	85.2	40-125	0			
Benzo(k)fluoranthene	1288	13	1272	0	101	45-115	0			
Chrysene	1216	13	1272	0	95.5	55-110	0			
Dibenzo(a,h)anthracene	1039	13	1272	0	81.6	40-125	0			
Fluoranthene	1022	13	1272	0	80.3	55-115	0			
Fluorene	1076	13	1272	0	84.5	50-110	0			
Indeno(1,2,3-cd)pyrene	1101	13	1272	0	86.5	40-120	0			
Naphthalene	993.7	13	1272	0	78.1	40-105	0			
Pyrene	1332	13	1272	0	105	45-125	0			
Surr: 2-Fluorobiphenyl	2623	0	3181	0	82.5	12-100	0			
Surr: 4-Terphenyl-d14	3828	0	3181	0	120	25-137	0			
Surr: Nitrobenzene-d5	2258	0	3181	0	71	37-107	0			

MSD				Sample ID: 1404617-01A MSD			Units: µg/Kg		Analysis Date: 4/17/2014 12:11 PM	
Client ID: BH03 14-16'				Run ID: SVMS7_140416A			SeqNo: 2718260		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
Acenaphthene	1015	13	1319	0	76.9	45-110	967.6	4.74	30	
Acenaphthylene	1055	13	1319	0	80	45-105	1034	2.08	30	
Anthracene	1190	13	1319	0	90.2	55-105	1157	2.85	30	
Benzo(a)anthracene	1237	13	1319	0	93.7	50-110	1204	2.72	30	
Benzo(a)pyrene	1338	13	1319	0	101	50-110	1232	8.31	30	
Benzo(b)fluoranthene	1331	13	1319	0	101	45-115	1276	4.17	30	
Benzo(g,h,i)perylene	1159	13	1319	0	87.8	40-125	1084	6.69	30	
Benzo(k)fluoranthene	1354	13	1319	0	103	45-115	1288	4.95	30	
Chrysene	1211	13	1319	0	91.7	55-110	1216	0.431	30	
Dibenzo(a,h)anthracene	1110	13	1319	0	84.1	40-125	1039	6.64	30	
Fluoranthene	1092	13	1319	0	82.8	55-115	1022	6.63	30	
Fluorene	1108	13	1319	0	84	50-110	1076	2.97	30	
Indeno(1,2,3-cd)pyrene	1148	13	1319	0	87	40-120	1101	4.2	30	
Naphthalene	967.7	13	1319	0	73.3	40-105	993.7	2.65	30	
Pyrene	1322	13	1319	0	100	45-125	1332	0.766	30	
Surr: 2-Fluorobiphenyl	2721	0	3298	0	82.5	12-100	2623	3.68	40	
Surr: 4-Terphenyl-d14	3909	0	3298	0	119	25-137	3828	2.1	40	
Surr: Nitrobenzene-d5	2383	0	3298	0	72.3	37-107	2258	5.41	40	

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

**QC BATCH REPORT**

Batch ID: **57603**      Instrument ID **SVMS7**      Method: **SW8270**

**The following samples were analyzed in this batch:**

1404617-01A	1404617-02A	1404617-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## 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:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## 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:      1404617-01A      1404617-02A      1404617-03A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

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

<b>DUP</b>		Sample ID: <b>1404615-05A DUP</b>				Units: <b>mmhos/cm @25°C</b>		Analysis Date: <b>4/15/2014 02:30 PM</b>		
Client ID:		Run ID: <b>WETCHEM_140415J</b>				SeqNo: <b>2713881</b>		Prep Date: <b>4/15/2014</b>		DF: <b>10</b>
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:

1404617-02B

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



**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## 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			
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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	
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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	
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The following samples were analyzed in this batch:

1404617-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: **57600**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-57600-57600</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716116</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-57600-57600</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716117</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.7      0.50      2      0      85      80-120      0

<b>MS</b>		Sample ID: <b>1404555-20C MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716121</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1      0.50      1.984      0.1647      42.1      75-125      0      S

<b>MS</b>		Sample ID: <b>1404555-20C MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716123</b>		Prep Date: <b>4/15/2014</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      342.8      50      682.2      0.1647      50.2      75-125      0      S

<b>MSD</b>		Sample ID: <b>1404555-20C MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>4/16/2014 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_140416K</b>				SeqNo: <b>2716122</b>		Prep Date: <b>4/15/2014</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      0.7036      0.49      1.976      0.1647      27.3      75-125      1      34.8      20      SR

The following samples were analyzed in this batch:

1404617-02A

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

**Client:** HRL Compliance Solutions, Inc  
**Work Order:** 1404617  
**Project:** WPX PA 31-36 Soil 4.9.14

## QC BATCH REPORT

Batch ID: **R138845**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS-R138845</b>				Units: % of sample		Analysis Date: <b>4/11/2014 06:07 PM</b>		
Client ID:		Run ID: <b>MOIST_140411E</b>				SeqNo: <b>2711090</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R138845</b>				Units: % of sample		Analysis Date: <b>4/11/2014 06:07 PM</b>		
Client ID:		Run ID: <b>MOIST_140411E</b>				SeqNo: <b>2711089</b>		Prep Date:		DF: <b>1</b>
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

<b>DUP</b>		Sample ID: <b>1404577-01B DUP</b>				Units: % of sample		Analysis Date: <b>4/11/2014 06:07 PM</b>		
Client ID:		Run ID: <b>MOIST_140411E</b>				SeqNo: <b>2711071</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      10.43      0.050      0      0      0      0-0      10.79      3.39      20

<b>DUP</b>		Sample ID: <b>1404603-30A DUP</b>				Units: % of sample		Analysis Date: <b>4/11/2014 06:07 PM</b>		
Client ID:		Run ID: <b>MOIST_140411E</b>				SeqNo: <b>2711080</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture      19.9      0.050      0      0      0      0-0      20.03      0.651      20

The following samples were analyzed in this batch:

1404617-01A	1404617-02A	1404617-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 11-Apr-14 10:00

Work Order: 1404617

Received by: DS

Checklist completed by Diane Shaw 11-Apr-14  
eSignature Date

Reviewed by: Ann Preston 14-Apr-14  
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>4.6 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/11/2014 3:17:38 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes:

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Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

Date: 4/10/14  
Signature: Michael Skote