FORM 27 Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

#7062

FOR OGCC USE ONLY

RECEIVED 11/5/2012

OGCC Employee:

☐ Spill ☐ Complaint ☐ Inspection ☐ NOAV

Tracking No:

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☑ Site/Facility Closure ☐ Other (describe):

OGCC Operator Number: 96850
Name of Operator: WPX Energy Rocky Mountain, LLC
Address: 1058 County Road 215
City: Parachute State: CO Zip: 81635

Contact Name and Telephone:
Karolina Blaney
No: 970 683 2295
Fax: 970-285-9573

API Number: N/A
County: Rio Blanco
Facility Name: RGU 31-2-298
Facility Number: 426887
Well Name: RGU 31-2-298
Well Number:
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 2, T2S, R98W, 6th PM Latitude: 39.9101 Longitude: -108.3583

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☑ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland, non-irrigated

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Rentsac Channery Loam, 5 to 50 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): an un-named tributary to Ryan Gulch lies ~1240 ft to the West

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
☑ Soils	Please see attached Notice of Completion Report	Visual observations, field screening, analytical testing
☐ Vegetation	for Remediation # 7062	
☐ Groundwater		
☐ Surface Water		

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Please refer to attached Notice of Completion Report for Remediation # 7062

Describe how source is to be removed:

Please refer to attached Notice of Completion Report for Remediation # 7062

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Please refer to attached Notice of Completion Report for Remediation # 7062

Submit Page 2 with Page 1

FORM 27 Rev 6/99

Page 2

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax:(303)894-2109

Tracking Number: _____
Name of Operator: WPX
OGCC Operator No: _____
Received Date: Location ID #335718
Well Name & No: 103 10597 PIT
Facility Name & No: RGV 31-2-298 / Loc # 426887

REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Please refer to attached Notice of Completion Report for Remediation # 7062

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Please refer to attached Notice of Completion Report for Remediation # 7062

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☐ N If yes, describe:

Please refer to attached Notice of Completion Report for Remediation # 7062

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Please refer to attached Notice of Completion Report for Remediation # 7062

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: May 18, 2012	Date Site Investigation Completed: May 18, 2012	Date Remediation Plan Submitted: 11/5/2012
Remediation Start Date: May 18, 2012	Anticipated Completion Date: May 23, 2012	Actual Completion Date: May 23, 2012

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Karolina Blaney Signed: Karolina Blaney

Title: Environmental Specialist Date: 11/5/2012

OGCC Approved: _____ Title: FOR Chris Canfield Date: 01/07/2013

EPS NW Region

WPX ENERGY ROCKY MOUNTAIN LLC

RYAN GULCH FIELD

NOTICE OF COMPLETION REPORT FOR

RGU 31-2-298 MULTI WELL PIT REMEDIATION # 7062

Prepared For:

1058 County Road 215
P.O. Box 370
Parachute, Colorado 81635

Prepared By:

2385 F ½ RD
Grand Junction, CO81505
Phone: 970-243-3271
Fax: 970-243-3280

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INTRODUCTION

The purpose of this Notice of Completion report – for the closure of the RGU 31-2-298 Multi Well Pit (COGCC Facility ID number 426887; hereinafter referred to as RGU 31-2-298) – is to provide detailed information and result analysis for the previously submitted and approved remediation number 7062, Colorado Oil and Gas Conservation Commission (COGCC) Site Investigation and Remediation Workplan, Form 27. This report will provide the documentation necessary to demonstrate a comprehensive and diligent investigation of the pit and adjacent environment which was obtained as described and in accordance with all appropriate county, state and federal rules and regulations.

The subject Form 27 was delivered via Certified Express Mail and electronic email on May 31, 2012. Preliminary approval to proceed with closure of the subject pit was issued by the COGCC and obtained by WPX Energy Rocky Mountain, LLC (WPX) on May 31, 2012; at which time the aforementioned remediation number was issued. Closure activities began on May 18, 2012 and were concluded on May 23, 2012. Information included in this report includes but is not limited to; field screening results, laboratory analytical, subliner soil remediation, soil treatment, and liner recycling.

EVACUATION OF PIT CONTENTS

Produced water and free liquidswereremoved from the pit utilizing avacuum truck.Once the liquids were removed from the pit the residual pit contents remaining on the liner were removed using a pressure washer.All pit fluids were transported to an approved disposal/evaporation facility located in the Piceance Creek area for further processing.

BACKGROUND SAMPLING

Three grab samples were collected from the uphill undisturbed hillsides surrounding the pad. All three samples were analyzed for arsenic, as well as an additional analysis at one location which included inorganic parameters listed in COGCC Table 910-1. Refer to Table 3 and Appendix 2 for background sampling results.

PIT LINER INVESTIGATION AND INTEGRITY ASSESSMENT

The pit liner system, containing two layers of 24 mm poly synthetic material, was present within the pit. The liner system revealed no large tears or rips. However, numerous small holes approximately 1 cm in diameter were observed over the surface of the liner. The liner holes were documented and mapped accordingly in order to assess soil impacts upon liner removal. It was concluded from the initial pit liner investigation that the integrity of the liner had been compromised to a small degree and soil impacts were probable.

PIT LINER REMOVAL

Once the pit liners were cleaned, the liners itself were removed from the pit. A track hoe was utilized to pull the liners off the ground surface and out of the pit. Any remaining residue was removed from the liners by allowing the contents on-top the pad surface. The liner material was moved to an earthen bermed containment cell where it was compacted, bailed and processed for transport to a recycling center.

EVALUATION OF PIT SUB-SOILS

After the liners were removed, the pit sub-soils were evaluated for evidence of contamination. In doing so, the pit was divided into a conceptual grid pattern in order to represent a composite characterization of the pit as a whole by investigating individual grid nodes. For each node, soils were visually inspected for impacts and field screened using a MiniRae Lite Photoionozing Detection Unit (PID) and a PetroFlag Hydrocarbon Detection Unit (PetroFlag) in order to determine any areas of impact. In addition, special consideration was paid to areas where holes were observed through a more detailed investigation process utilizing both PID and PetroFlag field screening instruments. Figure 1 outlines the initial sub soil evaluation and field screening results.

FIGURE 1: INITIAL PID FIELD SCREENING RESULTS

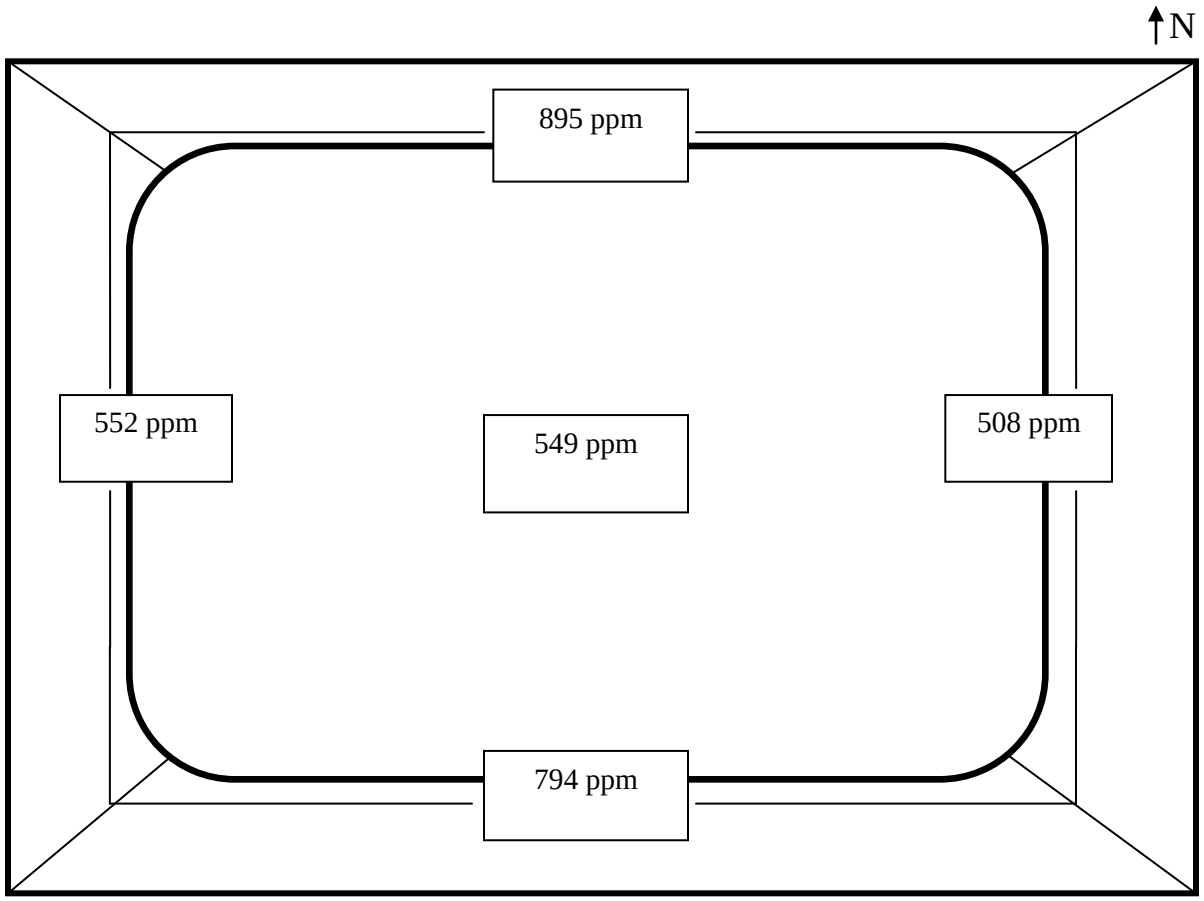

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TABLE 1:PETROFLAG©FIELD SCREENING RESULTS

Sample ID	Result (0-6'')
North Wall	2012
South Wall	1840
East Wall	1141
West Wall	1733
Pit Bottom	2518

Note: All results are in mg/kg
Highlighted numbers indicate areas that warranted additional inspection and analysis

Based on the results from the field screening provided in Table 1 and Figure 1, as well as visual observations, it was determined that the soil on the pit bottom and adjacent four side walls, contained hydrocarbon concentrations that exceededconstituents set forth in COGCC Table 910-1 standards and remediation activities were necessary.

REMEDIATION ACTIVITIES

Pit excavation activities began on May 18, 2012. Initially the pit bottom footprint and the impacted side walls were excavated to a depth of approximately 1foot. A track hoe was utilized to excavate the contaminated soil from within the pit.The excavated material was transferred to a bermed containment cell pending treatment and amending.

After approximately 1 foot of excavation, a solid layer of sandstone was encountered on the pit bottom which halted excavation activities with the track hoe. PID results indicating that hydrocarbon levels still exceeded COGCC Table 910-1as well as dark staining pit bottom and hydrocarbon odors were observed. It was determined further excavation was necessary. A dozer was scheduled in order to break through the rock layer and remove the remaining impacted soils present within the pit.

The second round of excavation was conducted on May 23, 2012. An additional 3 feet of impacted material was removed from the pit bottom and 2 feet removed from the pit walls. At this depth no visual

staining was present and no odor of hydrocarbons remained. The soils were a rocky, slightly moist, and brown to light brown in color. Based on field screening results, all impacted soils have been sufficiently removed at this depth, and no additional excavation was required. Field screens were conducted utilizing both PID and Petroflag instruments with results indicating hydrocarbon concentrations below the 500 mg/kg threshold. In total, approximately 4 feet of impacted soils were removed from the pit bottom and 3 feet from the four pit walls. The excavated soils were transferred to a bermed containment for further processing. Confirmation samples were collected and analyzed for COGCC Table 910-1.

- Confirmation samples were collected in accordance with Rule 905.b.(4), from all four walls at a position that was centered vertically and horizontally. These samples were collected for confirmation of compliance of COGCC Rule 910 for hydrocarbon concentrations; as well as verification of field screening analysis. One (1) additional grab sample was collected from the base of the pit, which included the low point of the base to be analyzed for full COGCC Table 910-1, to demonstrate compliance in accordance with Rule 905.b.(1).
- A Trimble Geo XT 2011 was used to satisfy requirements as outlined in COGCC Rule 215 for collecting GPS locations of each confirmation sample location from the pit walls and pit bottom.
- Visual inspection of the pit bottoms, field screening techniques, and sampling procedures were followed in accordance with WPX Pit Closure Plan (COGCC document #01175818).

SAMPLE ANALYSIS

Sampling was performed in accordance with WPX Pit Closure Plan, Phase IV, Task 2. See attached Table 2for summary of initial excavation analytical results. Additional detailed provided in Appendix 1.

BACKFILL MATERIAL

Material utilized to backfill the pit will be the original excavated soil from construction of the pit. The soil is currently stockpiled directly south of the pit.

EXCEPTIONS TO COGCC TABLE 910-1

The only exceedances with COGCC Table 910-1 are within the inorganic and arsenic samples. Refer to the Sundry Notice for consideration of background inorganic and arsenic concentrations in the immediate area of the subject facility. Refer to Appendix 3 for submitted Sundry Notice.

STOCKPILED SOILS MANAGEMENT

Impacted soils removed from the pit bottom and side walls were amended on-site with native soils from the surrounding pad. Analytical presented in Table 4 indicated that soils are below hydrocarbon concentrations outlined in COGCC Table 910-1 and amending was stopped. Soils will be used to backfill the pit once approval from the COGCC has been obtained.

ANALYTICAL DATA MANAGEMENT

Refer to Appendix 1 for the raw analytical analysis for samples collected along the pit bottom and side walls. Table 1 includes all analytical results of samples collected within the pit, highlighting areas exceeding COGCC Table 910-1 concentrations. Pit bottom samples were collected at 4 feet and pit walls at 3 feet. Appendix 2 includes the background samples raw analytical results and Table 3 has all background analytical results.

FIGURES

FIGURE 2: GIS MAP OF THE SAMPLE LOCATIONS

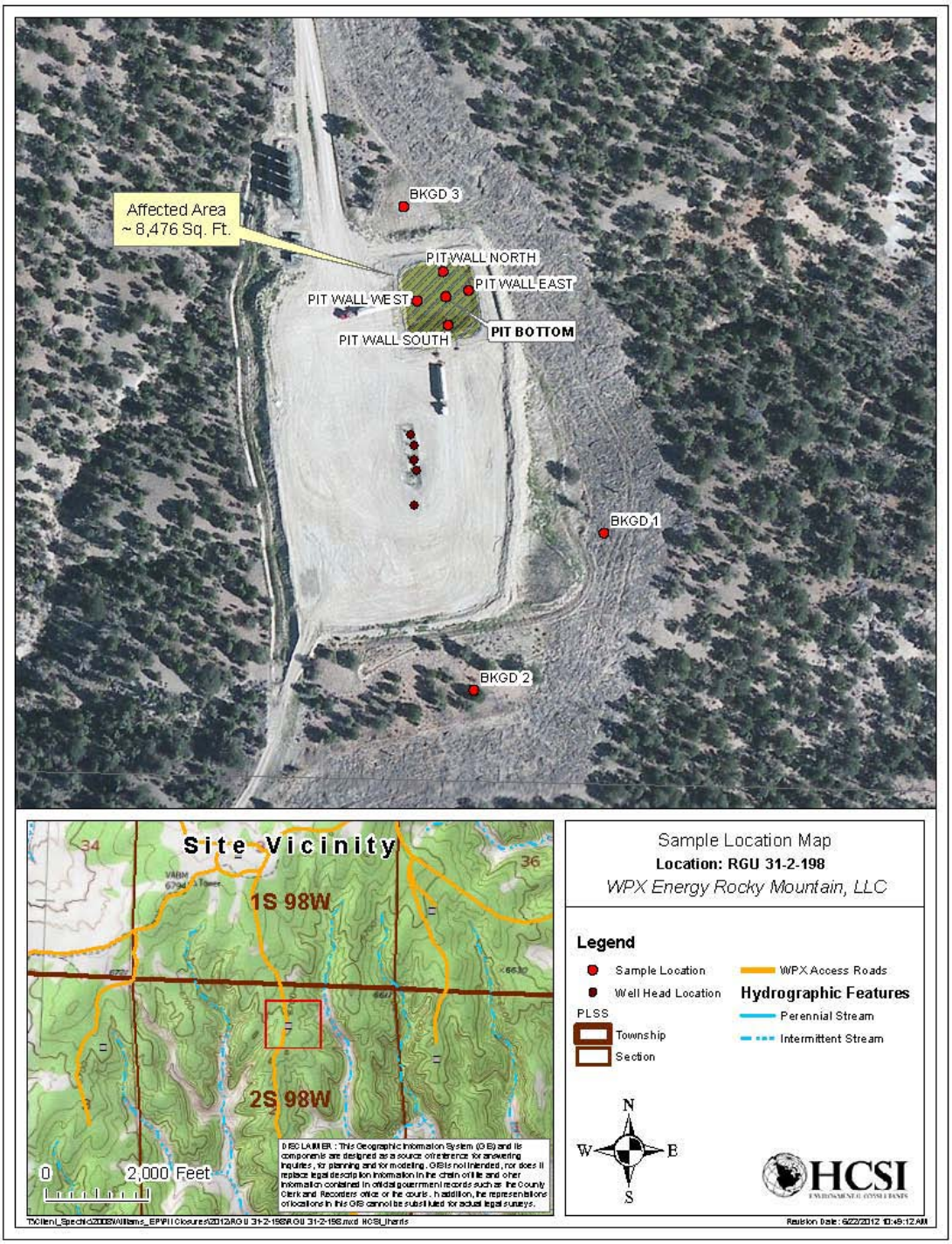


FIGURE 3:

Visual representation of the impacted soils on pit bottom and pit walls prior to excavation

FIGURE 4:

Visual representation of the soils on pit bottom and pit walls post excavation

TABLES

TABLE 2: POST EXCAVATION PIT BOTTOM AND WALLS ANALYTICAL RESULTS

Pit Bottom and Walls	Sample Locations				
	North Wall	South Wall	East Wall	West Wall	Pit Bottom
TEPH (DRO)	47	100	11	19	19
TVPH (GRO)	ND	ND	ND	ND	ND
BENZENE	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND	ND
XYLENE TOTAL	ND	ND	ND	ND	ND
ACENAPHTHENE	ND	ND	ND	ND	ND
ANTHRACENE	ND	ND	ND	ND	ND
BENZO(A)ANTRHACENE	ND	ND	ND	ND	ND
BENZO(A)PYRENE	ND	ND	ND	ND	ND
BENZO(B)FLUORANTHENE	ND	ND	ND	ND	ND
BENZO(G,H,I)PERYLEN	ND	ND	ND	ND	ND
BENZO(K)FLUORANTHENE	ND	ND	ND	ND	ND
CHRYSENE (mg/kg)	ND	ND	ND	ND	ND
DIBENZO(A,H)ANTHRANCENE	ND	ND	ND	ND	ND
FLUORANTHENE	ND	ND	ND	ND	ND
FLUORENE	ND	ND	ND	ND	ND
INDENO(1,2,3-CD)PYRENE	ND	ND	ND	ND	ND
NAPHTHALENE	ND	ND	ND	ND	ND
PYRENE	ND	ND	ND	ND	ND
ARSENIC	-	-	-	-	1.7
BARIUM	-	-	-	-	400
CADMIUM	-	-	-	-	ND
CHROMIUM	-	-	-	-	36
CHROMIUM (III)	-	-	-	-	35
CHROMIUM (IV)	-	-	-	-	ND
COPPER	-	-	-	-	12
LEAD	-	-	-	-	18
MERCURY	-	-	-	-	ND
NICKEL	-	-	-	-	16
SELENIUM	-	-	-	-	1.6
SILVER	-	-	-	-	ND
ZINC	-	-	-	-	45
ELECTRICAL CONDUCTIVITY (EC) (mmho/cm)	-	-	-	-	2.97
pH	-	-	-	-	9.12
SODIUM ADSORPTION RATIO (SAR)	-	-	-	-	66.4

Readings above state limits are highlighted in yellow

Note: all results are in, mg/kg = milligram per kilogram, unless noted otherwise

TABLE 3: BACKGROUND ANALYTICAL RESULTS

	Arsenic (mg/kg)	Conductivity(mmho/cm)	pH (s.u.)	Sodium Adsorbtion Ratio
BKGD 1	2.8	0.34	8.32	3.7
BKGD 2	2.9	N/A	N/A	N/A
BKGD 3	1.9	N/A	N/A	N/A

Results above state limits are highlighted in yellow

Table 4: Landfarm Analytical Results

	DRO	GRO
Landfarm	340	ND

APPENDIXES

APPENDIX 1: PIT BOTTOM AND WALL SAMPLING RAW ANALYTICAL RESULTS

31-May-2012

Kris Rowe
HRL Compliance Solutions
744 Horizon Ct. Suite 140
Grand Junction, CO 81506

Re: **WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12** Work Order: **1205745**

Dear Kris,

ALS Environmental received 8 samples on 24-May-2012 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.

QC sample results for this data met 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 39.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN331938

ALS Group USA, Corp

Date: 31-May-12

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12
Work Order: **1205745**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1205745-01	North Wall	Soil		5/23/2012 12:20	5/24/2012 09:30	☐
1205745-02	South Wall	Soil		5/23/2012 12:10	5/24/2012 09:30	☐
1205745-03	East Wall	Soil		5/23/2012 12:15	5/24/2012 09:30	☐
1205745-04	West Wall	Soil		5/23/2012 12:05	5/24/2012 09:30	☐
1205745-05	Pit Bottom	Soil		5/23/2012 12:00	5/24/2012 09:30	☐
1205745-06	BKGD 1	Soil		5/21/2012 10:00	5/24/2012 09:30	☐
1205745-07	BKGD 2	Soil		5/21/2012 10:05	5/24/2012 09:30	☐
1205745-08	BKGD 3	Soil		5/21/2012 10:10	5/24/2012 09:30	☐

ALS Group USA, Corp

Date: 31-May-12

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12
Work Order: 1205745

Case Narrative

Batch 41310 MS/MSD data for Metals is not related to this project's samples.

Batch R105198 MS/MSD data for GRO is not related to this project's samples.

ALS Group USA, Corp

Date: 31-May-12

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12
WorkOrder: **1205745**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: North Wall **Lab ID:** 1205745-01

Collection Date: 5/23/2012 12:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **5/25/2012**	Analyst: **RM**
DRO (C10-C28)	**47**		**4.9**	**mg/Kg-dry**	1	5/25/2012 07:44 PM
Surr: 4-Terphenyl-d14	*39.9*		*39-115*	*%REC*	1	5/25/2012 07:44 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **RM**
GRO (C6-C10)	ND		2.9	mg/Kg-dry	50	5/25/2012 12:57 PM
Surr: Toluene-d8	*92.6*		*50-150*	*%REC*	50	5/25/2012 12:57 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **5/25/2012**	Analyst: **HL**
Acenaphthene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Anthracene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Benzo(a)anthracene	ND		23	µg/Kg-dry	1	5/29/2012 07:44 PM
Benzo(a)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 07:44 PM
Benzo(b)fluoranthene	ND		23	µg/Kg-dry	1	5/29/2012 07:44 PM
Benzo(g,h,i)perylene	ND		35	µg/Kg-dry	1	5/29/2012 07:44 PM
Benzo(k)fluoranthene	ND		35	µg/Kg-dry	1	5/29/2012 07:44 PM
Chrysene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Dibenzo(a,h)anthracene	ND		21	µg/Kg-dry	1	5/29/2012 07:44 PM
Fluoranthene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Fluorene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 07:44 PM
Naphthalene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Pyrene	ND		18	µg/Kg-dry	1	5/29/2012 07:44 PM
Surr: 2,4,6-Tribromophenol	*82.2*		*34-140*	*%REC*	1	5/29/2012 07:44 PM
Surr: 2-Fluorobiphenyl	*65.6*		*12-100*	*%REC*	1	5/29/2012 07:44 PM
Surr: 2-Fluorophenol	*71.5*		*33-117*	*%REC*	1	5/29/2012 07:44 PM
Surr: 4-Terphenyl-d14	*73.0*		*25-137*	*%REC*	1	5/29/2012 07:44 PM
Surr: Nitrobenzene-d5	*64.2*		*37-107*	*%REC*	1	5/29/2012 07:44 PM
Surr: Phenol-d6	*69.8*		*40-106*	*%REC*	1	5/29/2012 07:44 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **AK**
Benzene	ND		59	µg/Kg-dry	50	5/26/2012 06:41 PM
Ethylbenzene	ND		120	µg/Kg-dry	50	5/26/2012 06:41 PM
m,p-Xylene	ND		120	µg/Kg-dry	50	5/26/2012 06:41 PM
o-Xylene	ND		59	µg/Kg-dry	50	5/26/2012 06:41 PM
Toluene	ND		88	µg/Kg-dry	50	5/26/2012 06:41 PM
Xylenes, Total	ND		180	µg/Kg-dry	50	5/26/2012 06:41 PM
Surr: 1,2-Dichloroethane-d4	*98.2*		*70-120*	*%REC*	50	5/26/2012 06:41 PM
Surr: 4-Bromofluorobenzene	*97.9*		*75-120*	*%REC*	50	5/26/2012 06:41 PM
Surr: Dibromofluoromethane	*98.8*		*85-115*	*%REC*	50	5/26/2012 06:41 PM
Surr: Toluene-d8	*98.7*		*85-115*	*%REC*	50	5/26/2012 06:41 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: North Wall **Lab ID:** 1205745-01

Collection Date: 5/23/2012 12:20 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**15**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745
Sample ID: South Wall **Lab ID:** 1205745-02
Collection Date: 5/23/2012 12:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **5/25/2012**	Analyst: **RM**
DRO (C10-C28)	**100**		**4.7**	**mg/Kg-dry**	1	5/25/2012 08:16 PM
Surr: 4-Terphenyl-d14	*60.8*		*39-115*	*%REC*	1	5/25/2012 08:16 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **RM**
GRO (C6-C10)	ND		2.8	mg/Kg-dry	50	5/25/2012 01:22 AM
Surr: Toluene-d8	*94.2*		*50-150*	*%REC*	50	5/25/2012 01:22 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **5/25/2012**	Analyst: **HL**
Acenaphthene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Anthracene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Benzo(a)anthracene	ND		22	µg/Kg-dry	1	5/29/2012 08:18 PM
Benzo(a)pyrene	ND		22	µg/Kg-dry	1	5/29/2012 08:18 PM
Benzo(b)fluoranthene	ND		22	µg/Kg-dry	1	5/29/2012 08:18 PM
Benzo(g,h,i)perylene	ND		33	µg/Kg-dry	1	5/29/2012 08:18 PM
Benzo(k)fluoranthene	ND		33	µg/Kg-dry	1	5/29/2012 08:18 PM
Chrysene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Dibenzo(a,h)anthracene	ND		20	µg/Kg-dry	1	5/29/2012 08:18 PM
Fluoranthene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Fluorene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Indeno(1,2,3-cd)pyrene	ND		22	µg/Kg-dry	1	5/29/2012 08:18 PM
Naphthalene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Pyrene	ND		17	µg/Kg-dry	1	5/29/2012 08:18 PM
Surr: 2,4,6-Tribromophenol	*96.4*		*34-140*	*%REC*	1	5/29/2012 08:18 PM
Surr: 2-Fluorobiphenyl	*65.3*		*12-100*	*%REC*	1	5/29/2012 08:18 PM
Surr: 2-Fluorophenol	*68.8*		*33-117*	*%REC*	1	5/29/2012 08:18 PM
Surr: 4-Terphenyl-d14	*78.0*		*25-137*	*%REC*	1	5/29/2012 08:18 PM
Surr: Nitrobenzene-d5	*60.1*		*37-107*	*%REC*	1	5/29/2012 08:18 PM
Surr: Phenol-d6	*67.0*		*40-106*	*%REC*	1	5/29/2012 08:18 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **AK**
Benzene	ND		56	µg/Kg-dry	50	5/26/2012 07:08 PM
Ethylbenzene	ND		110	µg/Kg-dry	50	5/26/2012 07:08 PM
m,p-Xylene	ND		110	µg/Kg-dry	50	5/26/2012 07:08 PM
o-Xylene	ND		56	µg/Kg-dry	50	5/26/2012 07:08 PM
Toluene	ND		85	µg/Kg-dry	50	5/26/2012 07:08 PM
Xylenes, Total	ND		170	µg/Kg-dry	50	5/26/2012 07:08 PM
Surr: 1,2-Dichloroethane-d4	*98.4*		*70-120*	*%REC*	50	5/26/2012 07:08 PM
Surr: 4-Bromofluorobenzene	*94.1*		*75-120*	*%REC*	50	5/26/2012 07:08 PM
Surr: Dibromofluoromethane	*96.3*		*85-115*	*%REC*	50	5/26/2012 07:08 PM
Surr: Toluene-d8	*101*		*85-115*	*%REC*	50	5/26/2012 07:08 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: South Wall **Lab ID:** 1205745-02

Collection Date: 5/23/2012 12:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**11**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: East Wall **Lab ID:** 1205745-03

Collection Date: 5/23/2012 12:15 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **5/25/2012**	Analyst: **RM**
DRO (C10-C28)	**11**		**4.9**	**mg/Kg-dry**	1	5/25/2012 08:46 PM
Surr: 4-Terphenyl-d14	*67.7*		*39-115*	*%REC*	1	5/25/2012 08:46 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **RM**
GRO (C6-C10)	ND		3.0	mg/Kg-dry	50	5/25/2012 01:47 AM
Surr: Toluene-d8	*93.8*		*50-150*	*%REC*	50	5/25/2012 01:47 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **5/25/2012**	Analyst: **HL**
Acenaphthene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Anthracene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Benzo(a)anthracene	ND		23	µg/Kg-dry	1	5/29/2012 08:54 PM
Benzo(a)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 08:54 PM
Benzo(b)fluoranthene	ND		23	µg/Kg-dry	1	5/29/2012 08:54 PM
Benzo(g,h,i)perylene	ND		35	µg/Kg-dry	1	5/29/2012 08:54 PM
Benzo(k)fluoranthene	ND		35	µg/Kg-dry	1	5/29/2012 08:54 PM
Chrysene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Dibenzo(a,h)anthracene	ND		21	µg/Kg-dry	1	5/29/2012 08:54 PM
Fluoranthene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Fluorene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 08:54 PM
Naphthalene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Pyrene	ND		18	µg/Kg-dry	1	5/29/2012 08:54 PM
Surr: 2,4,6-Tribromophenol	*92.1*		*34-140*	*%REC*	1	5/29/2012 08:54 PM
Surr: 2-Fluorobiphenyl	*69.9*		*12-100*	*%REC*	1	5/29/2012 08:54 PM
Surr: 2-Fluorophenol	*78.5*		*33-117*	*%REC*	1	5/29/2012 08:54 PM
Surr: 4-Terphenyl-d14	*77.8*		*25-137*	*%REC*	1	5/29/2012 08:54 PM
Surr: Nitrobenzene-d5	*68.6*		*37-107*	*%REC*	1	5/29/2012 08:54 PM
Surr: Phenol-d6	*75.9*		*40-106*	*%REC*	1	5/29/2012 08:54 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **AK**
Benzene	ND		59	µg/Kg-dry	50	5/26/2012 07:34 PM
Ethylbenzene	ND		120	µg/Kg-dry	50	5/26/2012 07:34 PM
m,p-Xylene	ND		120	µg/Kg-dry	50	5/26/2012 07:34 PM
o-Xylene	ND		59	µg/Kg-dry	50	5/26/2012 07:34 PM
Toluene	ND		89	µg/Kg-dry	50	5/26/2012 07:34 PM
Xylenes, Total	ND		180	µg/Kg-dry	50	5/26/2012 07:34 PM
Surr: 1,2-Dichloroethane-d4	*99.7*		*70-120*	*%REC*	50	5/26/2012 07:34 PM
Surr: 4-Bromofluorobenzene	*94.7*		*75-120*	*%REC*	50	5/26/2012 07:34 PM
Surr: Dibromofluoromethane	*97.4*		*85-115*	*%REC*	50	5/26/2012 07:34 PM
Surr: Toluene-d8	*102*		*85-115*	*%REC*	50	5/26/2012 07:34 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client:	HRL Compliance Solutions		
Project:	WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12	**Work Order:**	1205745
Sample ID:	East Wall	**Lab ID:**	1205745-03
Collection Date:	5/23/2012 12:15 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**15**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: West Wall **Lab ID:** 1205745-04

Collection Date: 5/23/2012 12:05 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **5/25/2012**	Analyst: **RM**
DRO (C10-C28)	**19**		**4.7**	**mg/Kg-dry**	1	5/25/2012 09:17 PM
Surr: 4-Terphenyl-d14	*73.7*		*39-115*	*%REC*	1	5/25/2012 09:17 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **RM**
GRO (C6-C10)	ND		2.9	mg/Kg-dry	50	5/25/2012 02:12 AM
Surr: Toluene-d8	*92.3*		*50-150*	*%REC*	50	5/25/2012 02:12 AM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **5/25/2012**	Analyst: **HL**
Acenaphthene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Anthracene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Benzo(a)anthracene	ND		23	µg/Kg-dry	1	5/29/2012 09:29 PM
Benzo(a)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 09:29 PM
Benzo(b)fluoranthene	ND		23	µg/Kg-dry	1	5/29/2012 09:29 PM
Benzo(g,h,i)perylene	ND		34	µg/Kg-dry	1	5/29/2012 09:29 PM
Benzo(k)fluoranthene	ND		34	µg/Kg-dry	1	5/29/2012 09:29 PM
Chrysene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Dibenzo(a,h)anthracene	ND		20	µg/Kg-dry	1	5/29/2012 09:29 PM
Fluoranthene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Fluorene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Indeno(1,2,3-cd)pyrene	ND		23	µg/Kg-dry	1	5/29/2012 09:29 PM
Naphthalene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Pyrene	ND		17	µg/Kg-dry	1	5/29/2012 09:29 PM
Surr: 2,4,6-Tribromophenol	*94.1*		*34-140*	*%REC*	1	5/29/2012 09:29 PM
Surr: 2-Fluorobiphenyl	*57.4*		*12-100*	*%REC*	1	5/29/2012 09:29 PM
Surr: 2-Fluorophenol	*64.0*		*33-117*	*%REC*	1	5/29/2012 09:29 PM
Surr: 4-Terphenyl-d14	*78.6*		*25-137*	*%REC*	1	5/29/2012 09:29 PM
Surr: Nitrobenzene-d5	*56.0*		*37-107*	*%REC*	1	5/29/2012 09:29 PM
Surr: Phenol-d6	*62.0*		*40-106*	*%REC*	1	5/29/2012 09:29 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **AK**
Benzene	ND		58	µg/Kg-dry	50	5/26/2012 08:00 PM
Ethylbenzene	ND		120	µg/Kg-dry	50	5/26/2012 08:00 PM
m,p-Xylene	ND		120	µg/Kg-dry	50	5/26/2012 08:00 PM
o-Xylene	ND		58	µg/Kg-dry	50	5/26/2012 08:00 PM
Toluene	ND		86	µg/Kg-dry	50	5/26/2012 08:00 PM
Xylenes, Total	ND		170	µg/Kg-dry	50	5/26/2012 08:00 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-120*	*%REC*	50	5/26/2012 08:00 PM
Surr: 4-Bromofluorobenzene	*94.8*		*75-120*	*%REC*	50	5/26/2012 08:00 PM
Surr: Dibromofluoromethane	*96.6*		*85-115*	*%REC*	50	5/26/2012 08:00 PM
Surr: Toluene-d8	*101*		*85-115*	*%REC*	50	5/26/2012 08:00 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client:	HRL Compliance Solutions		
Project:	WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12	**Work Order:**	1205745
Sample ID:	West Wall	**Lab ID:**	1205745-04
Collection Date:	5/23/2012 12:05 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**13**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745
Sample ID: Pit Bottom **Lab ID:** 1205745-05
Collection Date: 5/23/2012 12:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **5/25/2012**	Analyst: **RM**
DRO (C10-C28)	**19**		**4.7**	**mg/Kg-dry**	1	5/25/2012 09:48 PM
Surr: 4-Terphenyl-d14	*40.0*		*39-115*	*%REC*	1	5/25/2012 09:48 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **RM**
GRO (C6-C10)	ND		2.8	mg/Kg-dry	50	5/25/2012 02:37 AM
Surr: Toluene-d8	*96.9*		*50-150*	*%REC*	50	5/25/2012 02:37 AM
MERCURY BY CVAA			**SW7471**		Prep Date: **5/29/2012**	Analyst: **LR**
Mercury	ND		0.018	mg/Kg-dry	1	5/29/2012 02:47 PM
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**1.7**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Barium	**400**		**3.8**	**mg/Kg-dry**	10	5/30/2012 03:11 PM
Cadmium	ND		0.30	mg/Kg-dry	2	5/29/2012 07:56 PM
Chromium	**36**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Copper	**12**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Lead	**18**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Nickel	**16**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Selenium	**1.6**		**0.76**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
Silver	ND		0.76	mg/Kg-dry	2	5/29/2012 07:56 PM
Zinc	**45**		**1.5**	**mg/Kg-dry**	2	5/29/2012 07:56 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **A&LGL**
Subcontracted Analyses	**Rcvd 5/31/12**			**as noted**	1	5/31/2012
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **5/30/2012**	Analyst: **HL**
Acenaphthene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Anthracene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Benzo(a)anthracene	ND		22	µg/Kg-dry	1	5/30/2012 10:19 PM
Benzo(a)pyrene	ND		22	µg/Kg-dry	1	5/30/2012 10:19 PM
Benzo(b)fluoranthene	ND		22	µg/Kg-dry	1	5/30/2012 10:19 PM
Benzo(g,h,i)perylene	ND		34	µg/Kg-dry	1	5/30/2012 10:19 PM
Benzo(k)fluoranthene	ND		34	µg/Kg-dry	1	5/30/2012 10:19 PM
Chrysene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Dibenzo(a,h)anthracene	ND		20	µg/Kg-dry	1	5/30/2012 10:19 PM
Fluoranthene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Fluorene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Indeno(1,2,3-cd)pyrene	ND		22	µg/Kg-dry	1	5/30/2012 10:19 PM
Naphthalene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Pyrene	ND		17	µg/Kg-dry	1	5/30/2012 10:19 PM
Surr: 2,4,6-Tribromophenol	*107*		*34-140*	*%REC*	1	5/30/2012 10:19 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745
Sample ID: Pit Bottom **Lab ID:** 1205745-05
Collection Date: 5/23/2012 12:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	*74.0*		*12-100*	*%REC*	1	5/30/2012 10:19 PM
Surr: 2-Fluorophenol	*78.1*		*33-117*	*%REC*	1	5/30/2012 10:19 PM
Surr: 4-Terphenyl-d14	*105*		*25-137*	*%REC*	1	5/30/2012 10:19 PM
Surr: Nitrobenzene-d5	*72.3*		*37-107*	*%REC*	1	5/30/2012 10:19 PM
Surr: Phenol-d6	*69.8*		*40-106*	*%REC*	1	5/30/2012 10:19 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**			Analyst: **AK**
Benzene	ND		56	µg/Kg-dry	50	5/26/2012 08:27 PM
Ethylbenzene	ND		110	µg/Kg-dry	50	5/26/2012 08:27 PM
m,p-Xylene	ND		110	µg/Kg-dry	50	5/26/2012 08:27 PM
o-Xylene	ND		56	µg/Kg-dry	50	5/26/2012 08:27 PM
Toluene	ND		85	µg/Kg-dry	50	5/26/2012 08:27 PM
Xylenes, Total	ND		170	µg/Kg-dry	50	5/26/2012 08:27 PM
Surr: 1,2-Dichloroethane-d4	*100*		*70-120*	*%REC*	50	5/26/2012 08:27 PM
Surr: 4-Bromofluorobenzene	*96.3*		*75-120*	*%REC*	50	5/26/2012 08:27 PM
Surr: Dibromofluoromethane	*96.1*		*85-115*	*%REC*	50	5/26/2012 08:27 PM
Surr: Toluene-d8	*101*		*85-115*	*%REC*	50	5/26/2012 08:27 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**35**		**0.56**	**mg/Kg-dry**	1	5/31/2012 01:42 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **5/30/2012**	Analyst: **MB**
Chromium, Hexavalent	ND		0.56	mg/Kg-dry	1	5/31/2012 12:10 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**11**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM
PH			**SW9045D**			Analyst: **CG**
pH	**9.12**			**s.u.**	1	5/24/2012 01:30 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 1 **Lab ID:** 1205745-06

Collection Date: 5/21/2012 10:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.8**		**0.76**	**mg/Kg-dry**	2	5/29/2012 08:03 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **A&LGL**
Subcontracted Analyses	**Rcvd 5/31/12**			**as noted**	1	5/31/2012
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**6.6**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM
PH			**SW9045D**			Analyst: **CG**
pH	**8.32**			**s.u.**	1	5/24/2012 01:30 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 2 **Lab ID:** 1205745-07

Collection Date: 5/21/2012 10:05 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.9**		**0.70**	**mg/Kg-dry**	2	5/29/2012 08:09 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**2.9**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 3 **Lab ID:** 1205745-08

Collection Date: 5/21/2012 10:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**1.9**		**0.77**	**mg/Kg-dry**	2	5/29/2012 08:15 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**8.4**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

Report Number: F12150-0255
Acount Number: 91000

A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274
www.algreatlakes.com • lab@algreatlakes.com

QUALITY ANALYSES FOR INFORMED DECISIONS

TO: ALS LABORATORY GROUP
3352 128TH AVE
HOLLAND, MI 49424-9263

RE: 1205745-05C & 06B

DATE RECEIVED: 05/29/2012
DATE REPORTED: 05/31/2012
PAGE: 1
P.O. NUMBER: 20-1205745

ATTN: ANN PRESTON

REPORT OF ANALYSIS

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
7569	PIT BOTTOM	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	2.97	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	47	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	39	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	2556	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	66.4	-	USDA Handbook 60
7570	BKGD 1	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	0.34	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	56	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	5	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	108	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	3.7	-	USDA Handbook 60

ALS Group USA, Corp

Date: 31-May-12

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1205745

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

Batch ID: **41276** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-41276-41276** Units: **mg/Kg** Analysis Date: **5/25/2012 06:42 PM**

Client ID: Run ID: **GC8_120525A** SeqNo: **1985380** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	*1.03*	0	*1.667*	0	*61.8*	*39-115*	0			

LCS Sample ID: **DLCSS1-41276-41276** Units: **mg/Kg** Analysis Date: **5/25/2012 04:39 PM**

Client ID: Run ID: **GC8_120525A** SeqNo: **1985377** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	159.6	4.2	166.7	0	95.8	60-130	0			
Surr: 4-Terphenyl-d14	*0.8797*	0	*1.667*	0	*52.8*	*39-115*	0			

LCSD Sample ID: **DLCSDS1-41276-41276** Units: **mg/Kg** Analysis Date: **5/25/2012 03:47 PM**

Client ID: Run ID: **GC8_120525A** SeqNo: **1985376** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	160.9	4.2	166.7	0	96.5	60-130	159.6	0.777	30	
Surr: 4-Terphenyl-d14	*0.9197*	0	*1.667*	0	*55.2*	*39-115*	0.8797	*4.45*	*30*	

MS Sample ID: **1205753-01C MS** Units: **mg/Kg** Analysis Date: **5/25/2012 05:10 PM**

Client ID: Run ID: **GC8_120525A** SeqNo: **1985378** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	349.4	8.1	324.7	65.68	87.4	60-130	0			
Surr: 4-Terphenyl-d14	*1.944*	0	*3.247*	0	*59.9*	*39-115*	0			

MSD Sample ID: **1205753-01C MSD** Units: **mg/Kg** Analysis Date: **5/25/2012 05:40 PM**

Client ID: Run ID: **GC8_120525A** SeqNo: **1985379** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	394.7	8.7	348.2	65.68	94.5	60-130	349.4	12.2	30	
Surr: 4-Terphenyl-d14	*2.065*	0	*3.482*	0	*59.3*	*39-115*	1.944	*6.04*	*30*	

The following samples were analyzed in this batch:

1205745-01B	1205745-02B	1205745-03B
1205745-04B	1205745-05A	

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105198** Instrument ID **GC10** Method: **SW8015**

MBLK Sample ID: **MBLK-R105198-R105198** Units: **µg/L** Analysis Date: **5/24/2012 08:19 PM**
Client ID: Run ID: **GC10_120524A** SeqNo: **1983880** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	*97.47*	0	*100*	0	*97.5*	*70-130*	0			

LCS Sample ID: **LCS-R105198-R105198** Units: **µg/L** Analysis Date: **5/24/2012 07:04 PM**
Client ID: Run ID: **GC10_120524A** SeqNo: **1983878** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	29840	200	25000	0	119	70-130	0			
Surr: Toluene-d8	*91.67*	0	*100*	0	*91.7*	*70-130*	0			

LCSD Sample ID: **LCSD-R105198-R105198** Units: **µg/L** Analysis Date: **5/24/2012 07:29 PM**
Client ID: Run ID: **GC10_120524A** SeqNo: **1983879** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	29190	200	25000	0	117	70-130	29840	2.21	30	
Surr: Toluene-d8	*93.09*	0	*100*	0	*93.1*	*70-130*	91.67	*1.54*	*30*	

MS Sample ID: **1205661-01A MS** Units: **µg/L** Analysis Date: **5/25/2012 05:07 AM**
Client ID: Run ID: **GC10_120524A** SeqNo: **1983891** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	24960	200	25000	0	99.9	70-130	0			H
Surr: Toluene-d8	*93.82*	0	*100*	0	*93.8*	*70-130*	0			

MSD Sample ID: **1205661-01A MSD** Units: **µg/L** Analysis Date: **5/25/2012 05:32 AM**
Client ID: Run ID: **GC10_120524A** SeqNo: **1983892** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	26080	200	25000	0	104	70-130	24960	4.38	30	H
Surr: Toluene-d8	*88.82*	0	*100*	0	*88.8*	*70-130*	93.82	*5.48*	*30*	

The following samples were analyzed in this batch: 1205745-01A 1205745-02A 1205745-03A 1205745-04A 1205745-05A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41325** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-41325-41325** Units: **mg/Kg** Analysis Date: **5/29/2012 02:29 PM**
Client ID: Run ID: **HG1_120529A** SeqNo: **1986724** Prep Date: **5/29/2012** 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-41325-41325** Units: **mg/Kg** Analysis Date: **5/29/2012 02:31 PM**
Client ID: Run ID: **HG1_120529A** SeqNo: **1986725** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.178	0.020	0.1665	0	107	80-120	0			

LCSD Sample ID: **LCSD-41325-41325** Units: **mg/Kg** Analysis Date: **5/29/2012 02:33 PM**
Client ID: Run ID: **HG1_120529A** SeqNo: **1986726** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1755	0.020	0.1665	0	105	80-120	0.178	1.41	20	

MS Sample ID: **1205765-05AMS** Units: **mg/Kg** Analysis Date: **5/29/2012 02:40 PM**
Client ID: Run ID: **HG1_120529A** SeqNo: **1986729** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1488	0.016	0.1361	0.009283	103	75-125	0			

MSD Sample ID: **1205765-05AMSD** Units: **mg/Kg** Analysis Date: **5/29/2012 02:42 PM**
Client ID: Run ID: **HG1_120529A** SeqNo: **1986730** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1505	0.016	0.1372	0.009283	103	75-125	0.1488	1.1	35	

The following samples were analyzed in this batch: 1205745-05A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41310** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-41310-41310** Units: **mg/Kg** Analysis Date: **5/29/2012 06:24 PM**
Client ID: Run ID: **ICPMS1_120529A** SeqNo: **1987106** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	0.00984	0.25								J
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	0.002264	0.25								J
Nickel	0.01152	0.25								J
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	0.05265	0.50								J

LCS Sample ID: **LCS-41310-41310** Units: **mg/Kg** Analysis Date: **5/29/2012 06:43 PM**
Client ID: Run ID: **ICPMS1_120529A** SeqNo: **1987109** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.49	0.25	5	0	89.8	80-120	0			
Barium	5.04	0.25	5	0	101	80-120	0			
Cadmium	4.943	0.10	5	0	98.9	80-120	0			
Chromium	5.125	0.25	5	0	102	80-120	0			
Copper	4.986	0.25	5	0	99.7	80-120	0			
Lead	5.215	0.25	5	0	104	80-120	0			
Nickel	4.983	0.25	5	0	99.7	80-120	0			
Silver	4.911	0.25	5	0	98.2	80-120	0			
Zinc	4.355	0.50	5	0	87.1	80-120	0			

LCS Sample ID: **LCS-41310-41310** Units: **mg/Kg** Analysis Date: **5/31/2012 02:59 PM**
Client ID: Run ID: **ICPMS2_120531A** SeqNo: **1988864** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	4.36	0.25	5	0	87.2	80-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41310** Instrument ID **ICPMS1** Method: **SW6020A**

LCSD Sample ID: **LCSD-41310-41310** Units: **mg/Kg** Analysis Date: **5/29/2012 06:49 PM**
Client ID: Run ID: **ICPMS1_120529A** SeqNo: **1987110** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.265	0.25	5	0	85.3	80-120	4.49	5.13	20	
Barium	4.794	0.25	5	0	95.9	80-120	5.04	5	20	
Cadmium	4.708	0.10	5	0	94.2	80-120	4.943	4.88	20	
Chromium	4.898	0.25	5	0	98	80-120	5.125	4.52	20	
Copper	4.756	0.25	5	0	95.1	80-120	4.986	4.72	20	
Lead	4.968	0.25	5	0	99.4	80-120	5.215	4.84	20	
Nickel	4.76	0.25	5	0	95.2	80-120	4.983	4.57	20	
Silver	4.7	0.25	5	0	94	80-120	4.911	4.4	20	
Zinc	4.218	0.50	5	0	84.4	80-120	4.355	3.2	20	

LCSD Sample ID: **LCSD-41310-41310** Units: **mg/Kg** Analysis Date: **5/31/2012 03:03 PM**
Client ID: Run ID: **ICPMS2_120531A** SeqNo: **1988865** Prep Date: **5/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	4.102	0.25	5	0	82	80-120	4.36	6.09	20	

MS Sample ID: **1205748-01BMS** Units: **mg/Kg** Analysis Date: **5/29/2012 09:29 PM**
Client ID: Run ID: **ICPMS1_120529A** SeqNo: **1987138** Prep Date: **5/29/2012** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.62	0.63	6.321	9.914	154	80-120	0			S
Cadmium	6.314	0.25	6.321	0.3848	93.8	80-120	0			
Chromium	27.89	0.63	6.321	20.77	113	80-120	0			
Copper	20.88	0.63	6.321	13.91	110	80-120	0			
Lead	20	0.63	6.321	15.06	78.1	80-120	0			S
Nickel	21	0.63	6.321	13.83	113	80-120	0			
Selenium	6.391	0.63	6.321	1.129	83.2	80-120	0			
Silver	5.196	0.63	6.321	0.04839	81.4	80-120	0			
Zinc	41.63	1.3	6.321	35.05	104	80-120	0			O

MS Sample ID: **1205748-01BMS** Units: **mg/Kg** Analysis Date: **5/30/2012 03:48 PM**
Client ID: Run ID: **ICPMS1_120530A** SeqNo: **1988349** Prep Date: **5/29/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	248.1	3.2	6.321	323.7	-1200	80-120	0			SO

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41310** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **1205748-01BMSD** Units: **mg/Kg** Analysis Date: **5/29/2012 09:36 PM**
Client ID: Run ID: **ICPMS1_120529A** SeqNo: **1987140** Prep Date: **5/29/2012** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	40.56	0.66	6.64	9.914	461	80-120	19.62	69.6	25	SR
Cadmium	6.857	0.27	6.64	0.3848	97.5	80-120	6.314	8.25	25	
Chromium	30.29	0.66	6.64	20.77	143	80-120	27.89	8.26	25	S
Copper	24.49	0.66	6.64	13.91	159	80-120	20.88	15.9	25	S
Lead	21.45	0.66	6.64	15.06	96.1	80-120	20	6.98	25	
Nickel	21.43	0.66	6.64	13.83	115	80-120	21	2.05	25	
Selenium	6.444	0.66	6.64	1.129	80	80-120	6.391	0.825	25	
Silver	5.448	0.66	6.64	0.04839	81.3	80-120	5.196	4.73	25	
Zinc	42.36	1.3	6.64	35.05	110	80-120	41.63	1.75	25	O

MSD Sample ID: **1205748-01BMSD** Units: **mg/Kg** Analysis Date: **5/30/2012 03:54 PM**
Client ID: Run ID: **ICPMS1_120530A** SeqNo: **1988350** Prep Date: **5/29/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	251	3.3	6.64	323.7	-1090	80-120	248.1	1.16	25	SO

The following samples were analyzed in this batch:

1205745-05A	1205745-06A	1205745-07A
1205745-08A		

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41275** Instrument ID **SVMS5** Method: **SW8270**

MBLK Sample ID: **SBLKS1-41275-41275** Units: **µg/Kg** Analysis Date: **5/25/2012 11:31 AM**
Client ID: Run ID: **SVMS5_120525A** SeqNo: **1986071** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2,4,6-Tribromophenol	*1306*	0	*1667*	0	*78.3*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*1297*	0	*1667*	0	*77.8*	*12-100*	0			
Surr: 2-Fluorophenol	*1463*	0	*1667*	0	*87.8*	*33-117*	0			
Surr: 4-Terphenyl-d14	*1417*	0	*1667*	0	*85*	*25-137*	0			
Surr: Nitrobenzene-d5	*1243*	0	*1667*	0	*74.6*	*37-107*	0			
Surr: Phenol-d6	*1367*	0	*1667*	0	*82*	*40-106*	0			

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41275** Instrument ID **SVMS5** Method: **SW8270**

LCS Sample ID: **SLCSS1-41275-41275** Units: **µg/Kg** Analysis Date: **5/25/2012 12:06 PM**
Client ID: Run ID: **SVMS5_120525A** SeqNo: **1986073** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	592.7	30	666.7	0	88.9	45-110	0			
Anthracene	557.3	30	666.7	0	83.6	55-105	0			
Benzo(a)anthracene	591.3	30	666.7	0	88.7	50-110	0			
Benzo(a)pyrene	565.3	30	666.7	0	84.8	50-110	0			
Benzo(b)fluoranthene	655	30	666.7	0	98.2	45-115	0			
Benzo(g,h,i)perylene	635.7	30	666.7	0	95.3	40-125	0			
Benzo(k)fluoranthene	529.7	30	666.7	0	79.4	45-115	0			
Chrysene	608.3	30	666.7	0	91.2	55-110	0			
Dibenzo(a,h)anthracene	571.3	30	666.7	0	85.7	40-125	0			
Fluoranthene	558.3	30	666.7	0	83.7	55-115	0			
Fluorene	575.3	30	666.7	0	86.3	50-110	0			
Indeno(1,2,3-cd)pyrene	576	30	666.7	0	86.4	40-120	0			
Naphthalene	565	30	666.7	0	84.7	40-105	0			
Pyrene	603.3	30	666.7	0	90.5	45-125	0			
Surr: 2,4,6-Tribromophenol	*1445*	0	*1667*	0	*86.7*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*1433*	0	*1667*	0	*86*	*12-100*	0			
Surr: 2-Fluorophenol	*1410*	0	*1667*	0	*84.6*	*33-117*	0			
Surr: 4-Terphenyl-d14	*1413*	0	*1667*	0	*84.8*	*25-137*	0			
Surr: Nitrobenzene-d5	*1299*	0	*1667*	0	*77.9*	*37-107*	0			
Surr: Phenol-d6	*1432*	0	*1667*	0	*85.9*	*40-106*	0			

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41275** Instrument ID **SVMS5** Method: **SW8270**

LCSD Sample ID: **SLCSDS1-41275-41275** Units: **µg/Kg** Analysis Date: **5/25/2012 12:41 PM**
Client ID: Run ID: **SVMS5_120525A** SeqNo: **1986074** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	560.7	30	666.7	0	84.1	45-110	592.7	5.55	25	
Anthracene	538	30	666.7	0	80.7	55-105	557.3	3.53	25	
Benzo(a)anthracene	561	30	666.7	0	84.1	50-110	591.3	5.26	25	
Benzo(a)pyrene	541.7	30	666.7	0	81.2	50-110	565.3	4.28	25	
Benzo(b)fluoranthene	676	30	666.7	0	101	45-115	655	3.16	25	
Benzo(g,h,i)perylene	610.3	30	666.7	0	91.5	40-125	635.7	4.07	25	
Benzo(k)fluoranthene	518	30	666.7	0	77.7	45-115	529.7	2.23	25	
Chrysene	581.7	30	666.7	0	87.2	55-110	608.3	4.48	25	
Dibenzo(a,h)anthracene	546	30	666.7	0	81.9	40-125	571.3	4.53	25	
Fluoranthene	536.7	30	666.7	0	80.5	55-115	558.3	3.96	25	
Fluorene	559	30	666.7	0	83.8	50-110	575.3	2.88	25	
Indeno(1,2,3-cd)pyrene	550.7	30	666.7	0	82.6	40-120	576	4.5	25	
Naphthalene	561.3	30	666.7	0	84.2	40-105	565	0.651	25	
Pyrene	573.3	30	666.7	0	86	45-125	603.3	5.1	25	
Surr: 2,4,6-Tribromophenol	*1481*	0	*1667*	0	*88.9*	*34-140*	1445	*2.44*	*40*	
Surr: 2-Fluorobiphenyl	*1402*	0	*1667*	0	*84.1*	*12-100*	1433	*2.19*	*40*	
Surr: 2-Fluorophenol	*1420*	0	*1667*	0	*85.2*	*33-117*	1410	*0.707*	*40*	
Surr: 4-Terphenyl-d14	*1364*	0	*1667*	0	*81.8*	*25-137*	1413	*3.53*	*40*	
Surr: Nitrobenzene-d5	*1311*	0	*1667*	0	*78.7*	*37-107*	1299	*0.945*	*40*	
Surr: Phenol-d6	*1409*	0	*1667*	0	*84.5*	*40-106*	1432	*1.6*	*40*	

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41275** Instrument ID **SVMS5** Method: **SW8270**

MS Sample ID: **1205753-01C MS** Units: **µg/Kg** Analysis Date: **5/25/2012 01:17 PM**
Client ID: Run ID: **SVMS5_120525A** SeqNo: **1986075** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1167	62	1370	0	85.1	45-110	0			
Anthracene	1134	62	1370	0	82.7	55-105	0			
Benzo(a)anthracene	1189	62	1370	0	86.8	50-110	0			
Benzo(a)pyrene	1041	62	1370	44.53	72.7	50-110	0			
Benzo(b)fluoranthene	1122	62	1370	0	81.9	45-115	0			
Benzo(g,h,i)perylene	1143	62	1370	22.59	81.8	40-125	0			
Benzo(k)fluoranthene	976.9	62	1370	0	71.3	45-115	0			
Chrysene	1147	62	1370	0	83.7	55-110	0			
Dibenzo(a,h)anthracene	1050	62	1370	0	76.6	40-125	0			
Fluoranthene	1089	62	1370	58.28	75.2	55-115	0			
Fluorene	1165	62	1370	0	85	50-110	0			
Indeno(1,2,3-cd)pyrene	1056	62	1370	50.09	73.4	40-120	0			
Naphthalene	1295	62	1370	0	94.5	40-105	0			
Pyrene	1174	62	1370	0	85.7	45-125	0			
Surr: 2,4,6-Tribromophenol	*2973*	0	*3425*	0	*86.8*	*34-140*	0			
Surr: 2-Fluorobiphenyl	*2896*	0	*3425*	0	*84.6*	*12-100*	0			
Surr: 2-Fluorophenol	*2931*	0	*3425*	0	*85.6*	*33-117*	0			
Surr: 4-Terphenyl-d14	*2759*	0	*3425*	0	*80.5*	*25-137*	0			
Surr: Nitrobenzene-d5	*2637*	0	*3425*	0	*77*	*37-107*	0			
Surr: Phenol-d6	*2999*	0	*3425*	0	*87.5*	*40-106*	0			

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41275** Instrument ID **SVMS5** Method: **SW8270**

MSD Sample ID: **1205753-01C MSD** Units: **µg/Kg** Analysis Date: **5/25/2012 01:53 PM**
Client ID: Run ID: **SVMS5_120525A** SeqNo: **1986077** Prep Date: **5/25/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1222	59	1318	0	92.7	45-110	1167	4.6	30	
Anthracene	1138	59	1318	0	86.3	55-105	1134	0.369	30	
Benzo(a)anthracene	1195	59	1318	0	90.6	50-110	1189	0.45	30	
Benzo(a)pyrene	1040	59	1318	44.53	75.5	50-110	1041	0.145	30	
Benzo(b)fluoranthene	1201	59	1318	0	91.1	45-115	1122	6.81	30	
Benzo(g,h,i)perylene	1044	59	1318	22.59	77.5	40-125	1143	9.05	30	
Benzo(k)fluoranthene	869.1	59	1318	0	65.9	45-115	976.9	11.7	30	
Chrysene	1177	59	1318	0	89.3	55-110	1147	2.53	30	
Dibenzo(a,h)anthracene	1017	59	1318	0	77.1	40-125	1050	3.17	30	
Fluoranthene	1079	59	1318	58.28	77.4	55-115	1089	0.977	30	
Fluorene	1199	59	1318	0	91	50-110	1165	2.93	30	
Indeno(1,2,3-cd)pyrene	1002	59	1318	50.09	72.2	40-120	1056	5.26	30	
Naphthalene	1246	59	1318	0	94.5	40-105	1295	3.84	30	
Pyrene	1202	59	1318	0	91.2	45-125	1174	2.33	30	
Surr: 2,4,6-Tribromophenol	*2915*	0	*3295*	0	*88.5*	*34-140*	2973	*1.97*	*40*	
Surr: 2-Fluorobiphenyl	*2931*	0	*3295*	0	*89*	*12-100*	2896	*1.18*	*40*	
Surr: 2-Fluorophenol	*2981*	0	*3295*	0	*90.5*	*33-117*	2931	*1.7*	*40*	
Surr: 4-Terphenyl-d14	*2768*	0	*3295*	0	*84*	*25-137*	2759	*0.34*	*40*	
Surr: Nitrobenzene-d5	*2796*	0	*3295*	0	*84.9*	*37-107*	2637	*5.85*	*40*	
Surr: Phenol-d6	*3073*	0	*3295*	0	*93.3*	*40-106*	2999	*2.46*	*40*	

The following samples were analyzed in this batch: 1205745-01B 1205745-02B 1205745-03B 1205745-04B 1205745-05A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105275A** Instrument ID **VMS8** Method: **SW8260**

MBLK Sample ID: **VBLKW1-120526-R105275A** Units: **µg/L** Analysis Date: **5/26/2012 06:04 PM**
Client ID: Run ID: **VMS8_120526A** SeqNo: **1985573** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*100.5*	0	*100*	0	*100*	*70-120*	0			
Surr: 4-Bromofluorobenzene	*97.16*	0	*100*	0	*97.2*	*75-120*	0			
Surr: Dibromofluoromethane	*102.8*	0	*100*	0	*103*	*85-115*	0			
Surr: Toluene-d8	*99.9*	0	*100*	0	*99.9*	*85-120*	0			

LCS Sample ID: **VLCSW1-120526-R105275A** Units: **µg/L** Analysis Date: **5/26/2012 04:43 PM**
Client ID: Run ID: **VMS8_120526A** SeqNo: **1985478** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.66	1.0	20	0	108	80-120	0			
Ethylbenzene	22.01	1.0	20	0	110	75-125	0			
m,p-Xylene	43.71	2.0	40	0	109	75-130	0			
o-Xylene	21.32	1.0	20	0	107	80-120	0			
Toluene	19.9	1.0	20	0	99.5	75-120	0			
Xylenes, Total	65.03	3.0	60	0	108	75-130	0			
Surr: 1,2-Dichloroethane-d4	*100.2*	0	*100*	0	*100*	*70-120*	0			
Surr: 4-Bromofluorobenzene	*98.84*	0	*100*	0	*98.8*	*75-120*	0			
Surr: Dibromofluoromethane	*103.6*	0	*100*	0	*104*	*85-115*	0			
Surr: Toluene-d8	*99.83*	0	*100*	0	*99.8*	*85-120*	0			

LCSD Sample ID: **VLCSDW1-120526-R105275A** Units: **µg/L** Analysis Date: **5/26/2012 05:10 PM**
Client ID: Run ID: **VMS8_120526A** SeqNo: **1985514** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.99	1.0	20	0	105	80-120	21.66	3.14	30	
Ethylbenzene	21.41	1.0	20	0	107	75-125	22.01	2.76	30	
m,p-Xylene	42.22	2.0	40	0	106	75-130	43.71	3.47	30	
o-Xylene	20.99	1.0	20	0	105	80-120	21.32	1.56	30	
Toluene	19.3	1.0	20	0	96.5	75-120	19.9	3.06	30	
Xylenes, Total	63.21	3.0	60	0	105	75-130	65.03	2.84	30	
Surr: 1,2-Dichloroethane-d4	*101*	0	*100*	0	*101*	*70-120*	100.2	*0.895*	*30*	
Surr: 4-Bromofluorobenzene	*100.2*	0	*100*	0	*100*	*75-120*	98.84	*1.42*	*30*	
Surr: Dibromofluoromethane	*104.1*	0	*100*	0	*104*	*85-115*	103.6	*0.453*	*30*	
Surr: Toluene-d8	*99.55*	0	*100*	0	*99.6*	*85-120*	99.83	*0.281*	*30*	

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105275A** Instrument ID **VMS8** Method: **SW8260**

MS Sample ID: **1205720-01A MS** Units: **µg/L** Analysis Date: **5/27/2012 02:09 AM**
Client ID: Run ID: **VMS8_120526A** SeqNo: **1985582** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.13	1.0	20	0	101	80-120	0			
Ethylbenzene	20.35	1.0	20	0	102	75-125	0			
m,p-Xylene	39.82	2.0	40	0.53	98.2	75-130	0			
o-Xylene	19.58	1.0	20	0	97.9	80-120	0			
Toluene	18.29	1.0	20	0	91.4	75-120	0			
Xylenes, Total	59.4	3.0	60	0.53	98.1	75-130	0			
Surr: 1,2-Dichloroethane-d4	*100.6*	0	*100*	0	*101*	*70-120*	0			
Surr: 4-Bromofluorobenzene	*98.16*	0	*100*	0	*98.2*	*75-120*	0			
Surr: Dibromofluoromethane	*102.8*	0	*100*	0	*103*	*85-115*	0			
Surr: Toluene-d8	*100.8*	0	*100*	0	*101*	*85-120*	0			

MS Sample ID: **1205745-05A MS** Units: **µg/Kg** Analysis Date: **5/27/2012 03:02 AM**
Client ID: **Pit Bottom** Run ID: **VMS8_120526A** SeqNo: **1985591** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1005	50	1000	0	100	75-125	0			
Ethylbenzene	1020	100	1000	0	102	75-125	0			
m,p-Xylene	2012	100	2000	0	101	80-125	0			
o-Xylene	990.5	50	1000	0	99	75-125	0			
Toluene	929.5	75	1000	0	93	70-125	0			
Xylenes, Total	3003	150	3000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*5104*	0	*5000*	0	*102*	*70-120*	0			
Surr: 4-Bromofluorobenzene	*4724*	0	*5000*	0	*94.5*	*75-120*	0			
Surr: Dibromofluoromethane	*5090*	0	*5000*	0	*102*	*85-115*	0			
Surr: Toluene-d8	*5088*	0	*5000*	0	*102*	*85-115*	0			

MSD Sample ID: **1205720-01A MSD** Units: **µg/L** Analysis Date: **5/27/2012 02:36 AM**
Client ID: Run ID: **VMS8_120526A** SeqNo: **1985583** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.9	1.0	20	0	99.5	80-120	20.13	1.15	30	
Ethylbenzene	20.28	1.0	20	0	101	75-125	20.35	0.345	30	
m,p-Xylene	39.67	2.0	40	0.53	97.8	75-130	39.82	0.377	30	
o-Xylene	19.55	1.0	20	0	97.8	80-120	19.58	0.153	30	
Toluene	18.27	1.0	20	0	91.4	75-120	18.29	0.109	30	
Xylenes, Total	59.22	3.0	60	0.53	97.8	75-130	59.4	0.303	30	
Surr: 1,2-Dichloroethane-d4	*100.7*	0	*100*	0	*101*	*70-120*	100.6	*0.0994*	*30*	
Surr: 4-Bromofluorobenzene	*98.11*	0	*100*	0	*98.1*	*75-120*	98.16	*0.051*	*30*	
Surr: Dibromofluoromethane	*101.7*	0	*100*	0	*102*	*85-115*	102.8	*1.09*	*30*	
Surr: Toluene-d8	*100.8*	0	*100*	0	*101*	*85-120*	100.8	*0.0298*	*30*	

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105275A** Instrument ID **VMS8** Method: **SW8260**

MSD Sample ID: **1205745-05A MSD** Units: **µg/Kg** Analysis Date: **5/27/2012 03:28 AM**
Client ID: **Pit Bottom** Run ID: **VMS8_120526A** SeqNo: **1985592** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	966.5	50	1000	0	96.6	75-125	1005	3.91	30	
Ethylbenzene	986	100	1000	0	98.6	75-125	1020	3.39	30	
m,p-Xylene	1973	100	2000	0	98.6	80-125	2012	1.98	30	
o-Xylene	972.5	50	1000	0	97.2	75-125	990.5	1.83	30	
Toluene	892	75	1000	0	89.2	70-125	929.5	4.12	30	
Xylenes, Total	2946	150	3000	0	98.2	75-125	3003	1.93	30	
Surr: 1,2-Dichloroethane-d4	*4983*	0	*5000*	0	*99.7*	*70-120*	5104	*2.41*	*30*	
Surr: 4-Bromofluorobenzene	*4765*	0	*5000*	0	*95.3*	*75-120*	4724	*0.875*	*30*	
Surr: Dibromofluoromethane	*5078*	0	*5000*	0	*102*	*85-115*	5090	*0.246*	*30*	
Surr: Toluene-d8	*5026*	0	*5000*	0	*101*	*85-115*	5088	*1.22*	*30*	

The following samples were analyzed in this batch: 1205745-01A 1205745-02A 1205745-03A 1205745-04A 1205745-05A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **41378** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-41378-41378** Units: **mg/Kg** Analysis Date: **5/31/2012 12:10 PM**
Client ID: Run ID: **WETCHEM_120531D** SeqNo: **1988689** Prep Date: **5/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50								

LCS Sample ID: **LCS-41378-41378** Units: **mg/Kg** Analysis Date: **5/31/2012 12:10 PM**
Client ID: Run ID: **WETCHEM_120531D** SeqNo: **1988687** Prep Date: **5/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.047	0.49	1.961	0	104	75-110	0			

LCSD Sample ID: **LCSD-41378-41378** Units: **mg/Kg** Analysis Date: **5/31/2012 12:10 PM**
Client ID: Run ID: **WETCHEM_120531D** SeqNo: **1988688** Prep Date: **5/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.909	0.50	1.984	0	96.2	75-110	2.047	6.99	20	

MS Sample ID: **1205844-01B MS** Units: **mg/Kg** Analysis Date: **5/31/2012 12:10 PM**
Client ID: Run ID: **WETCHEM_120531D** SeqNo: **1988684** Prep Date: **5/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.798	0.50	1.984	0.09412	85.9	60-130	0			

MSD Sample ID: **1205844-01B MSD** Units: **mg/Kg** Analysis Date: **5/31/2012 12:10 PM**
Client ID: Run ID: **WETCHEM_120531D** SeqNo: **1988685** Prep Date: **5/30/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.846	0.49	1.976	0.09412	88.6	60-130	1.798	2.65	30	

The following samples were analyzed in this batch: 1205745-05A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105163** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **WLCSS1-120524-R105163** Units: **s.u.** Analysis Date: **5/24/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120524H** SeqNo: **1983410** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.26	0	4.4	0	96.8	90-110	0			

DUP Sample ID: **1205734-01ADUP** Units: **s.u.** Analysis Date: **5/24/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120524H** SeqNo: **1983412** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.18	0	0	0	0	0-0	8.18	0	20	

The following samples were analyzed in this batch: 1205745-05A 1205745-06A

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

Client: HRL Compliance Solutions
Work Order: 1205745
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/

QC BATCH REPORT

Batch ID: **R105209** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS1-R105209** Units: **% of sample** Analysis Date: **5/24/2012 01:02 PM**
Client ID: Run ID: **MOIST_120524A** SeqNo: **1984390** Prep Date: DF: **1**

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

LCS Sample ID: **LCS-R105209** Units: **% of sample** Analysis Date: **5/24/2012 01:02 PM**
Client ID: Run ID: **MOIST_120524A** SeqNo: **1984389** Prep Date: DF: **1**

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

DUP Sample ID: **1205745-01BDUP** Units: **% of sample** Analysis Date: **5/24/2012 01:02 PM**
Client ID: **North Wall** Run ID: **MOIST_120524A** SeqNo: **1984370** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.05	0.050	0	0	0	0-0	14.8	1.68	20	

DUP Sample ID: **1205746-02BDUP** Units: **% of sample** Analysis Date: **5/24/2012 01:02 PM**
Client ID: Run ID: **MOIST_120524A** SeqNo: **1984382** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.79	0.050	0	0	0	0-0	8.93	9.19	20	

The following samples were analyzed in this batch:

1205745-01B	1205745-02B	1205745-03B
1205745-04B	1205745-05A	1205745-06A
1205745-07A	1205745-08A	

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1205745

PAGE 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	WPX Energy RGU 31-2-298 Pit Closure	SAMPLER	LUKE MILEY
PROJECT No.		SITE ID	
		EDD FORMAT	
COMPANY NAME	HRL COMPLIANCE SOLUTIONS Inc.	PURCHASE ORDER	
SEND REPORT TO	Kris Rowe	BILL TO COMPANY	WPX Energy
ADDRESS	744 HORIZON CT SUITE 140	INVOICE ATTN TO	Karolina Blaney
CITY / STATE / ZIP	GRAND JUNCTION CO 81506	ADDRESS	1058 CR 215
PHONE	970-243-3271	CITY / STATE / ZIP	Parachute, CO 81635
FAX	970-243-3280	PHONE	970-683-2295
E-MAIL	Krowe@hrlcomp.com	FAX	970-285-9573
		E-MAIL	karolina.blaney@williams.com

DATE: 5/23/2012

TURNAROUND: STD

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO	GRO	BTEX	TABLE 910-1 (SEE COMMENTS)	SEMI VOLS - PAH	ARSENIC	SAR/EC/pH
1	North Wall	S	5/23/2012	1220	2			X	X	X		X		
2	South Wall	S	5/23/2012	1210	2			X	X	X		X		
3	East Wall	S	5/23/2012	1215	2			X	X	X		X		
4	West Wall	S	5/23/2012	1205	2			X	X	X		X		
5	Pit Bottom	S	5/23/2012	1200	3			X	X	X	X	X		X
6	BKGD 1	S	5/21/2012	1000	2								X	X
7	BKGD 2	S	5/21/2012	1005	1								X	
8	BKGD 3	S	5/21/2012	1010	1								X	

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

For metals or anions, please detail analytes below.

Comments:

Report Barium as total Barium and do not run Boron

4.2 - 5.2°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Luke Miley	5/23/2012	17:00
RECEIVED BY		Diane F Shea	5/24/12	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental

Subcontractor:
A & L Great Lakes Agricultural La
3505 Conestoga Dr
Ft. Wayne, IN 46808
TEL: (260) 483-4759
FAX: (260) 483-5274
Acct #: 91000

Salesperson **Debbie Fazio**

CHAIN-OF-CUSTODY RECORD

Date: **24-May-12**
COC ID: **3669**
Due D **31-May-12**

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	1205745	A Subcontracted Analyses (SUBCONTRACT)
Work Order		Project Number		B
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C
Send Report To	Ann Preston	Inv Attn	Accounts Payable	D
Address	3352 128th Avenue	Address	3352 128th Avenue	E
				F
City/State/Zip	Holland, Michigan 49424-9263	City/State/Zip	Holland, Michigan 49424-9263	G
Phone	(616) 399-6070	Phone	(616) 399-6070	H
Fax	(616) 399-6185	Fax	(616) 399-6185	I
eMail Address	ann.preston@alsglobal.com	eMail CC		J

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1205745-05C	Pit Bottom	Soil	23/May/2012 12:00	(1) MISC	X									
1205745-06B	BKGD 1	Soil	21/May/2012 10:00	(1) MISC	X									

Comments:

Please analyze for SAR-EC. Email results to Ann Preston.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	5/25/12				**Std**
Relinquished by:	Date/Time	Received by:	Date/Time		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **24-May-12 09:30**

Work Order: **1205745** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 24-May-12 (Date) Reviewed by: Ann Preston (eSignature) 24-May-12 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.2-5.2 c		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

FedEx Express® **NEW** Package **US Airbill**

FedEx Tracking Number 8008 9259 9037

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date 5/23/12

Sender's Name Luke Miley Phone 970 261-2015

Company HRL Compliance Solutions INC

Address 744 Horizon Ct 140

Dept./Floor/Suite/Room

City Grand Junction State CO ZIP 81506

2 Your Internal Billing Reference

3 To

Recipient's Name Sample Recieving Phone 616 399-6070

Company ALS Group

Address 3352 128th Ave

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

Dept./Floor/Suite/Room

Address

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

City Holland State MI ZIP 49424

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

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

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

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

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

05 ☒ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

49 ☐ **NEW** FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

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

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

5 Packaging * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

6 Special Handling and Delivery Signature Options

03 ☐ **SATURDAY DELIVERY**

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

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

34 ☐ 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 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 06 ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

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

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☐ Sender Acct. No. in Section 1 will be billed. 2 ☒ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

[redacted]

Total Packages 1 Total Weight 60 lbs. Credit Card Auth.

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

612

fedex.com 1.800.GoFedEx 1.800.463.3339

fedex.com 1.800.GoFedEx 1.800.463.3339

L

Quality Environmental Containers
800-255-3950 • 304-255-3900

OEC

JSTODY SEAL

IGNATURE

ATE 5/23/12

APPENDIX 2: BACKGROUND RAW ANALYTICAL RESULTS

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 1 **Lab ID:** 1205745-06

Collection Date: 5/21/2012 10:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.8**		**0.76**	**mg/Kg-dry**	2	5/29/2012 08:03 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **A&LGL**
Subcontracted Analyses	**Rcvd 5/31/12**			**as noted**	1	5/31/2012
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**6.6**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM
PH			**SW9045D**			Analyst: **CG**
pH	**8.32**			**s.u.**	1	5/24/2012 01:30 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 2 **Lab ID:** 1205745-07

Collection Date: 5/21/2012 10:05 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.9**		**0.70**	**mg/Kg-dry**	2	5/29/2012 08:09 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**2.9**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 3 **Lab ID:** 1205745-08

Collection Date: 5/21/2012 10:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**1.9**		**0.77**	**mg/Kg-dry**	2	5/29/2012 08:15 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**8.4**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

Report Number: F12150-0255
Acount Number: 91000

A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274
www.algreatlakes.com • lab@algreatlakes.com

QUALITY ANALYSES FOR INFORMED DECISIONS

TO: ALS LABORATORY GROUP
3352 128TH AVE
HOLLAND, MI 49424-9263

RE: 1205745-05C & 06B

DATE RECEIVED: 05/29/2012
DATE REPORTED: 05/31/2012
PAGE: 1
P.O. NUMBER: 20-1205745

ATTN: ANN PRESTON

REPORT OF ANALYSIS

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
7569	PIT BOTTOM	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	2.97	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	47	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	39	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	2556	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	66.4	-	USDA Handbook 60
7570	BKGD 1	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	0.34	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	56	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	5	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	108	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	3.7	-	USDA Handbook 60

APPENDIX 3: LANDFARM RAW ANALYTICAL RESULTS

18-Jun-2012

Kris Rowe
HRL Compliance Solutions
744 Horizon Ct. Suite 140
Grand Junction, CO 81506

Re: **WPX RGU 31-2-298 Pit Closure 6/7/12** Work Order: **1206316**

Dear Kris,

ALS Environmental received 1 sample on 09-Jun-2012 10:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Ann Preston

Electronically approved by: Alex Csaszar

Ann Preston
Project Manager

Certificate No: MN331938

ALS Group USA, Corp

Date: 18-Jun-12

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Pit Closure 6/7/12
Work Order: **1206316**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1206316-01	Land Farm	Soil		6/7/2012 13:00	6/9/2012 10:30	☐

ALS Group USA, Corp

Date: 18-Jun-12

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Pit Closure 6/7/12
Work Order: 1206316

Case Narrative

QC and Sample Comments:

Batch 41603, Method SVO_8270_S, Sample Land Farm: The internal standard recovery was below the lower control limits, but >20%. The results associated with the IS are being reported and should be considered as estimated for the analytes highlighted with an asterisk.

Batch 41603, MS/MSD data for Semi-Volatiles is not related to this project's samples.

Batch 41610, MS/MSD data for Volatiles is not related to this project's samples.

Batch 41636, MS/MSD data for Metals is not related to this project's samples.

Batch 41700, MS/MSD data for CR6 is not related to this project's samples.

ALS Group USA, Corp

Date: 18-Jun-12

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Pit Closure 6/7/12
WorkOrder: **1206316**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

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

ALS Group USA, Corp

Date: *18-Jun-12*

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Pit Closure 6/7/12 **Work Order:** 1206316
Sample ID: Land Farm **Lab ID:** 1206316-01
Collection Date: 6/7/2012 01:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **6/13/2012**	Analyst: **CW**
DRO (C10-C28)	**2,000**		**9.1**	**mg/Kg-dry**	2	6/15/2012 10:51 AM
Surr: 4-Terphenyl-d14	*72.4*		*39-115*	*%REC*	2	6/15/2012 10:51 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **JD**
GRO (C6-C10)	ND		2.8	mg/Kg-dry	50	6/15/2012 12:06 PM
Surr: Toluene-d8	*97.3*		*50-150*	*%REC*	50	6/15/2012 12:06 PM
MERCURY BY CVAA			**SW7471**		Prep Date: **6/14/2012**	Analyst: **LR**
Mercury	**0.18**		**0.019**	**mg/Kg-dry**	1	6/15/2012 11:45 AM
METALS BY ICP-MS			**SW6020A**		Prep Date: **6/14/2012**	Analyst: **ML**
Arsenic	**2.1**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Barium	**1,700**		**7.9**	**mg/Kg-dry**	20	6/15/2012 03:03 PM
Cadmium	ND		0.32	mg/Kg-dry	2	6/15/2012 01:37 PM
Chromium	**25**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Copper	**13**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Lead	**15**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Nickel	**14**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Selenium	**1.0**		**0.79**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
Silver	ND		0.79	mg/Kg-dry	2	6/15/2012 01:37 PM
Zinc	**43**		**1.6**	**mg/Kg-dry**	2	6/15/2012 01:37 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **A&LGL**
Subcontracted Analyses	**Rcvd 6/14/12**			**as noted**	1	6/14/2012
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep Date: **6/13/2012**	Analyst: **HL**
Acenaphthene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Anthracene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Benzo(a)anthracene	ND		440	µg/Kg-dry	20	6/15/2012 02:45 PM
Benzo(a)pyrene	ND	*	440	µg/Kg-dry	20	6/15/2012 02:45 PM
Benzo(b)fluoranthene	ND	*	440	µg/Kg-dry	20	6/15/2012 02:45 PM
Benzo(g,h,i)perylene	ND	*	660	µg/Kg-dry	20	6/15/2012 02:45 PM
Benzo(k)fluoranthene	ND	*	660	µg/Kg-dry	20	6/15/2012 02:45 PM
Chrysene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Dibenzo(a,h)anthracene	ND	*	390	µg/Kg-dry	20	6/15/2012 02:45 PM
Fluoranthene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Fluorene	**370**		**330**	**µg/Kg-dry**	20	6/15/2012 02:45 PM
Indeno(1,2,3-cd)pyrene	ND	*	440	µg/Kg-dry	20	6/15/2012 02:45 PM
Naphthalene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Pyrene	ND		330	µg/Kg-dry	20	6/15/2012 02:45 PM
Surr: 2-Fluorobiphenyl	*67.6*		*12-100*	*%REC*	20	6/15/2012 02:45 PM

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

ALS Group USA, Corp

Date: *18-Jun-12*

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Pit Closure 6/7/12 **Work Order:** 1206316
Sample ID: Land Farm **Lab ID:** 1206316-01
Collection Date: 6/7/2012 01:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	*99.6*		*25-137*	*%REC*	20	6/15/2012 02:45 PM
Surr: Nitrobenzene-d5	*60.8*		*37-107*	*%REC*	20	6/15/2012 02:45 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260**		Prep Date: **6/13/2012**	Analyst: **RS**
Benzene	ND		33	µg/Kg-dry	1	6/14/2012 09:40 AM
Ethylbenzene	ND		33	µg/Kg-dry	1	6/14/2012 09:40 AM
m,p-Xylene	**74**		**67**	**µg/Kg-dry**	1	6/14/2012 09:40 AM
o-Xylene	ND		33	µg/Kg-dry	1	6/14/2012 09:40 AM
Toluene	ND		33	µg/Kg-dry	1	6/14/2012 09:40 AM
Xylenes, Total	ND		100	µg/Kg-dry	1	6/14/2012 09:40 AM
Surr: 1,2-Dichloroethane-d4	*120*		*70-130*	*%REC*	1	6/14/2012 09:40 AM
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	1	6/14/2012 09:40 AM
Surr: Dibromofluoromethane	*110*		*70-130*	*%REC*	1	6/14/2012 09:40 AM
Surr: Toluene-d8	*92.4*		*70-130*	*%REC*	1	6/14/2012 09:40 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **MB**
Chromium, Trivalent	**25**		**0.56**	**mg/Kg-dry**	1	6/18/2012 01:00 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep Date: **6/12/2012**	Analyst: **MB**
Chromium, Hexavalent	ND		0.55	mg/Kg-dry	1	6/17/2012 01:00 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**10**		**0.050**	**% of sample**	1	6/12/2012 12:48 PM
PH			**SW9045D**			Analyst: **EE**
pH	**8.95**			**s.u.**	1	6/11/2012 09:30 AM

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

Report Number: F12164-0197
Acount Number: 91000

A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274
www.algreatlakes.com • lab@algreatlakes.com

QUALITY ANALYSES FOR INFORMED DECISIONS

TO: ALS LABORATORY GROUP
3352 128TH AVE
HOLLAND, MI 49424-9263

RE: 1206316

DATE RECEIVED: 06/12/2012
DATE REPORTED: 06/14/2012
PAGE: 1
P.O. NUMBER: 20-1206316

ATTN: ANN PRESTON

REPORT OF ANALYSIS

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
27210	LAND FARM	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	6.80	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	103	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	57	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	4080	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	79.7	-	USDA Handbook 60

QC BATCH REPORT

Batch ID: **41604A** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-41604-41604A** Units: **mg/Kg** Analysis Date: **6/15/2012 08:48 AM**

Client ID: Run ID: **GC8_120614A** SeqNo: **2000318** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	*1.303*	0	*1.667*	0	*78.2*	*39-115*	0			

LCS Sample ID: **DLCSS1-41604-41604A** Units: **mg/Kg** Analysis Date: **6/14/2012 07:55 PM**

Client ID: Run ID: **GC8_120614A** SeqNo: **2000313** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	106.6	4.2	166.7	0	64	60-130	0			
Surr: 4-Terphenyl-d14	*0.8059*	0	*1.667*	0	*48.4*	*39-115*	0			

MS Sample ID: **1206308-01B MS** Units: **mg/Kg** Analysis Date: **6/15/2012 09:13 AM**

Client ID: Run ID: **GC8_120614A** SeqNo: **2000319** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	344.7	8.1	324.7	37.54	94.6	60-130	0			
Surr: 4-Terphenyl-d14	*2.381*	0	*3.247*	0	*73.3*	*39-115*	0			

MSD Sample ID: **1206308-01B MSD** Units: **mg/Kg** Analysis Date: **6/14/2012 08:20 PM**

Client ID: Run ID: **GC8_120614A** SeqNo: **2000314** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	311.1	8.1	325.2	37.54	84.1	60-130	344.7	10.3	30	
Surr: 4-Terphenyl-d14	*2.252*	0	*3.252*	0	*69.3*	*39-115*	2.381	*5.53*	*30*	

The following samples were analyzed in this batch: 1206316-01B

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **R106059** Instrument ID **GC10** Method: **SW8015**

MBLK Sample ID: **MBLK-R106059-R106059** Units: **µg/L** Analysis Date: **6/15/2012 05:01 AM**
Client ID: Run ID: **GC10_120614A** SeqNo: **2000974** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	*107.5*	0	*100*	0	*108*	*70-130*	0			

LCS Sample ID: **LCS-R106059-R106059** Units: **µg/L** Analysis Date: **6/15/2012 04:12 AM**
Client ID: Run ID: **GC10_120614A** SeqNo: **2000973** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	27970	200	25000	0	112	70-130	0			
Surr: Toluene-d8	*89.78*	0	*100*	0	*89.8*	*70-130*	0			

MS Sample ID: **1206263-04A MS** Units: **µg/Kg** Analysis Date: **6/15/2012 01:20 PM**
Client ID: Run ID: **GC10_120614A** SeqNo: **2001004** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1193000	2,500	1250000	0	95.4	70-130	0			
Surr: Toluene-d8	*4660*	0	*5000*	0	*93.2*	*50-150*	0			

MSD Sample ID: **1206263-04A MSD** Units: **µg/Kg** Analysis Date: **6/15/2012 01:45 PM**
Client ID: Run ID: **GC10_120614A** SeqNo: **2001005** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1138000	2,500	1250000	0	91	70-130	1193000	4.75	30	
Surr: Toluene-d8	*4666*	0	*5000*	0	*93.3*	*50-150*	4660	*0.118*	*30*	

The following samples were analyzed in this batch: 1206316-01A

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41635** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-41635-41635** Units: **mg/Kg** Analysis Date: **6/14/2012 04:17 PM**
Client ID: Run ID: **HG1_120614A** SeqNo: **1999605** Prep Date: **6/14/2012** 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-41635-41635** Units: **mg/Kg** Analysis Date: **6/14/2012 04:19 PM**
Client ID: Run ID: **HG1_120614A** SeqNo: **1999606** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1788	0.020	0.1665	0	107	80-120	0			

MS Sample ID: **1206429-07AMS** Units: **mg/Kg** Analysis Date: **6/15/2012 12:31 PM**
Client ID: Run ID: **HG1_120615A** SeqNo: **2000519** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1569	0.016	0.1367	0.006724	110	75-125	0			

MSD Sample ID: **1206429-07AMSD** Units: **mg/Kg** Analysis Date: **6/15/2012 12:33 PM**
Client ID: Run ID: **HG1_120615A** SeqNo: **2000521** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1545	0.017	0.1429	0.006724	103	75-125	0.1569	1.54	35	

The following samples were analyzed in this batch: 1206316-01B

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41636** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-41636-41636** Units: **mg/Kg** Analysis Date: **6/14/2012 03:10 PM**
Client ID: Run ID: **ICPMS1_120614A** SeqNo: **1999803** Prep Date: **6/14/2012** 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	0.01022	0.25								J
Copper	0.01799	0.25								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	0.02312	0.25								J
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-41636-41636** Units: **mg/Kg** Analysis Date: **6/14/2012 03:17 PM**
Client ID: Run ID: **ICPMS1_120614A** SeqNo: **1999804** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.206	0.25	5	0	84.1	80-120	0			
Barium	4.662	0.25	5	0	93.2	80-120	0			
Cadmium	4.818	0.10	5	0	96.4	80-120	0			
Chromium	4.432	0.25	5	0	88.6	80-120	0			
Copper	4.404	0.25	5	0	88.1	80-120	0			
Lead	4.398	0.25	5	0	88	80-120	0			
Nickel	4.308	0.25	5	0	86.2	80-120	0			
Selenium	4.126	0.25	5	0	82.5	80-120	0			
Silver	4.267	0.25	5	0	85.3	80-120	0			
Zinc	4.168	0.50	5	0	83.4	80-120	0			

MS Sample ID: **1206429-07AMS** Units: **mg/Kg** Analysis Date: **6/14/2012 04:01 PM**
Client ID: Run ID: **ICPMS1_120614A** SeqNo: **1999811** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.273	0.33	6.667	2.162	76.7	80-120	0			S
Barium	53.26	0.33	6.667	34.46	282	80-120	0			SO
Cadmium	6.707	0.13	6.667	0.1675	98.1	80-120	0			
Chromium	11.29	0.33	6.667	4.879	96.1	80-120	0			
Copper	15.91	0.33	6.667	9.953	89.4	80-120	0			
Lead	35.08	0.33	6.667	28.98	91.5	80-120	0			O
Nickel	11.54	0.33	6.667	5.485	90.8	80-120	0			
Selenium	5.747	0.33	6.667	0.3037	81.6	80-120	0			
Silver	5.457	0.33	6.667	0.0568	81	80-120	0			
Zinc	25.32	0.67	6.667	18.67	99.7	80-120	0			

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41636** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **1206429-07AMSD** Units: **mg/Kg** Analysis Date: **6/14/2012 04:07 PM**
Client ID: Run ID: **ICPMS1_120614A** SeqNo: **1999812** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.877	0.35	6.916	2.162	82.6	80-120	7.273	7.97	25	
Barium	43.15	0.35	6.916	34.46	126	80-120	53.26	21	25	SO
Cadmium	7.089	0.14	6.916	0.1675	100	80-120	6.707	5.54	25	
Chromium	12.1	0.35	6.916	4.879	104	80-120	11.29	6.97	25	
Copper	18.22	0.35	6.916	9.953	119	80-120	15.91	13.5	25	
Lead	36.58	0.35	6.916	28.98	110	80-120	35.08	4.2	25	O
Nickel	12.75	0.35	6.916	5.485	105	80-120	11.54	9.98	25	
Selenium	5.932	0.35	6.916	0.3037	81.4	80-120	5.747	3.17	25	
Silver	5.788	0.35	6.916	0.0568	82.9	80-120	5.457	5.9	25	
Zinc	27.62	0.69	6.916	18.67	129	80-120	25.32	8.69	25	S

The following samples were analyzed in this batch: 1206316-01B

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41603** Instrument ID **SVMS4** Method: **SW8270**

MBLK Sample ID: **SBLKS1-41603-41603** Units: **µg/Kg** Analysis Date: **6/14/2012 11:35 AM**
Client ID: Run ID: **SVMS4_120614A** SeqNo: **1999371** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2-Fluorobiphenyl	*1102*	0	*1667*	0	*66.1*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1416*	0	*1667*	0	*85*	*25-137*	0			
Surr: Nitrobenzene-d5	*1090*	0	*1667*	0	*65.4*	*37-107*	0			

MBLK Sample ID: **SBLKS1-41603-41603** Units: **µg/Kg** Analysis Date: **6/14/2012 05:30 PM**
Client ID: Run ID: **SVMS7_120614A** SeqNo: **2000636** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	30								
Anthracene	ND	30								
Benzo(a)anthracene	ND	30								
Benzo(a)pyrene	ND	30								
Benzo(b)fluoranthene	ND	30								
Benzo(g,h,i)perylene	ND	30								
Benzo(k)fluoranthene	ND	30								
Chrysene	ND	30								
Dibenzo(a,h)anthracene	ND	30								
Fluoranthene	ND	30								
Fluorene	ND	30								
Indeno(1,2,3-cd)pyrene	ND	30								
Naphthalene	ND	30								
Pyrene	ND	30								
Surr: 2-Fluorobiphenyl	*984*	0	*1667*	0	*59*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1165*	0	*1667*	0	*69.9*	*25-137*	0			
Surr: Nitrobenzene-d5	*1055*	0	*1667*	0	*63.3*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41603** Instrument ID **SVMS4** Method: **SW8270**

LCS Sample ID: **SLCSS1-41603-41603** Units: **µg/Kg** Analysis Date: **6/14/2012 09:19 AM**
Client ID: Run ID: **SVMS4_120614A** SeqNo: **1999367** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	526	30	666.7	0	78.9	45-110	0			
Anthracene	609.7	30	666.7	0	91.4	55-105	0			
Benzo(a)anthracene	601.3	30	666.7	0	90.2	50-110	0			
Benzo(a)pyrene	628.3	30	666.7	0	94.2	50-110	0			
Benzo(b)fluoranthene	659	30	666.7	0	98.8	45-115	0			
Benzo(g,h,i)perylene	664.3	30	666.7	0	99.6	40-125	0			
Benzo(k)fluoranthene	630.3	30	666.7	0	94.5	45-115	0			
Chrysene	641	30	666.7	0	96.1	55-110	0			
Dibenzo(a,h)anthracene	652.7	30	666.7	0	97.9	40-125	0			
Fluoranthene	617.3	30	666.7	0	92.6	55-115	0			
Fluorene	572	30	666.7	0	85.8	50-110	0			
Indeno(1,2,3-cd)pyrene	658.3	30	666.7	0	98.7	40-120	0			
Naphthalene	422.7	30	666.7	0	63.4	40-105	0			
Pyrene	627.7	30	666.7	0	94.1	45-125	0			
Surr: 2-Fluorobiphenyl	*1065*	0	*1667*	0	*63.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1317*	0	*1667*	0	*79*	*25-137*	0			
Surr: Nitrobenzene-d5	*977*	0	*1667*	0	*58.6*	*37-107*	0			

LCS Sample ID: **SLCSS1-41603-41603** Units: **µg/Kg** Analysis Date: **6/14/2012 05:00 PM**
Client ID: Run ID: **SVMS7_120614A** SeqNo: **2000635** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	550	30	666.7	0	82.5	45-110	0			
Anthracene	611.7	30	666.7	0	91.7	55-105	0			
Benzo(a)anthracene	630	30	666.7	0	94.5	50-110	0			
Benzo(a)pyrene	646	30	666.7	0	96.9	50-110	0			
Benzo(b)fluoranthene	595.7	30	666.7	0	89.3	45-115	0			
Benzo(g,h,i)perylene	667.3	30	666.7	0	100	40-125	0			
Benzo(k)fluoranthene	685.3	30	666.7	0	103	45-115	0			
Chrysene	632	30	666.7	0	94.8	55-110	0			
Dibenzo(a,h)anthracene	657.3	30	666.7	0	98.6	40-125	0			
Fluoranthene	639	30	666.7	0	95.8	55-115	0			
Fluorene	602.3	30	666.7	0	90.3	50-110	0			
Indeno(1,2,3-cd)pyrene	663.7	30	666.7	0	99.5	40-120	0			
Naphthalene	461.3	30	666.7	0	69.2	40-105	0			
Pyrene	635.7	30	666.7	0	95.3	45-125	0			
Surr: 2-Fluorobiphenyl	*930*	0	*1667*	0	*55.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1184*	0	*1667*	0	*71*	*25-137*	0			
Surr: Nitrobenzene-d5	*945.7*	0	*1667*	0	*56.7*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41603** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: **1206308-01B MS** Units: **µg/Kg** Analysis Date: **6/14/2012 09:53 AM**
Client ID: Run ID: **SVMS4_120614A** SeqNo: **1999368** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1099	59	1309	0	83.9	45-110	0			
Anthracene	1229	59	1309	0	93.9	55-105	0			
Benzo(a)anthracene	1199	59	1309	0	91.6	50-110	0			
Benzo(a)pyrene	1231	59	1309	0	94	50-110	0			
Benzo(b)fluoranthene	1229	59	1309	0	93.9	45-115	0			
Benzo(g,h,i)perylene	1331	59	1309	0	102	40-125	0			
Benzo(k)fluoranthene	1331	59	1309	0	102	45-115	0			
Chrysene	1272	59	1309	0	97.2	55-110	0			
Dibenzo(a,h)anthracene	1264	59	1309	0	96.6	40-125	0			
Fluoranthene	1274	59	1309	0	97.3	55-115	0			
Fluorene	1155	59	1309	0	88.2	50-110	0			
Indeno(1,2,3-cd)pyrene	1281	59	1309	0	97.9	40-120	0			
Naphthalene	1026	59	1309	0	78.4	40-105	0			
Pyrene	1227	59	1309	0	93.7	45-125	0			
Surr: 2-Fluorobiphenyl	*2453*	0	*3273*	0	*75*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2579*	0	*3273*	0	*78.8*	*25-137*	0			
Surr: Nitrobenzene-d5	*2397*	0	*3273*	0	*73.2*	*37-107*	0			

MS Sample ID: **1206308-01B MS** Units: **µg/Kg** Analysis Date: **6/14/2012 08:32 PM**
Client ID: Run ID: **SVMS7_120614A** SeqNo: **2000637** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1155	59	1309	0	88.2	45-110	0			
Anthracene	1240	59	1309	0	94.7	55-105	0			
Benzo(a)anthracene	1229	59	1309	0	93.9	50-110	0			
Benzo(a)pyrene	1289	59	1309	0	98.5	50-110	0			
Benzo(b)fluoranthene	1266	59	1309	0	96.7	45-115	0			
Benzo(g,h,i)perylene	1294	59	1309	0	98.8	40-125	0			
Benzo(k)fluoranthene	1270	59	1309	0	97	45-115	0			
Chrysene	1280	59	1309	0	97.7	55-110	0			
Dibenzo(a,h)anthracene	1271	59	1309	0	97.1	40-125	0			
Fluoranthene	1281	59	1309	0	97.8	55-115	0			
Fluorene	1222	59	1309	0	93.3	50-110	0			
Indeno(1,2,3-cd)pyrene	1286	59	1309	0	98.2	40-120	0			
Naphthalene	1101	59	1309	0	84.1	40-105	0			
Pyrene	1257	59	1309	0	96	45-125	0			
Surr: 2-Fluorobiphenyl	*2024*	0	*3273*	0	*61.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2350*	0	*3273*	0	*71.8*	*25-137*	0			
Surr: Nitrobenzene-d5	*2258*	0	*3273*	0	*69*	*37-107*	0			

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41603** Instrument ID **SVMS4** Method: **SW8270**

MSD Sample ID: **1206308-01B MSD** Units: **µg/Kg** Analysis Date: **6/14/2012 10:27 AM**
Client ID: Run ID: **SVMS4_120614A** SeqNo: **1999369** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	966.1	58	1286	0	75.1	45-110	1099	12.9	30	
Anthracene	1068	58	1286	0	83.1	55-105	1229	14	30	
Benzo(a)anthracene	1037	58	1286	0	80.7	50-110	1199	14.4	30	
Benzo(a)pyrene	1046	58	1286	0	81.4	50-110	1231	16.2	30	
Benzo(b)fluoranthene	1125	58	1286	0	87.5	45-115	1229	8.86	30	
Benzo(g,h,i)perylene	1119	58	1286	0	87	40-125	1331	17.3	30	
Benzo(k)fluoranthene	1082	58	1286	0	84.2	45-115	1331	20.6	30	
Chrysene	1093	58	1286	0	85	55-110	1272	15.1	30	
Dibenzo(a,h)anthracene	1077	58	1286	0	83.7	40-125	1264	16	30	
Fluoranthene	1079	58	1286	0	83.9	55-115	1274	16.6	30	
Fluorene	991.2	58	1286	0	77.1	50-110	1155	15.3	30	
Indeno(1,2,3-cd)pyrene	1084	58	1286	0	84.3	40-120	1281	16.7	30	
Naphthalene	844.6	58	1286	0	65.7	40-105	1026	19.4	30	
Pyrene	1050	58	1286	0	81.6	45-125	1227	15.6	30	
Surr: 2-Fluorobiphenyl	*2083*	0	*3214*	0	*64.8*	*12-100*	2453	*16.3*	*40*	
Surr: 4-Terphenyl-d14	*2166*	0	*3214*	0	*67.4*	*25-137*	2579	*17.4*	*40*	
Surr: Nitrobenzene-d5	*1917*	0	*3214*	0	*59.6*	*37-107*	2397	*22.3*	*40*	

MSD Sample ID: **1206308-01B MSD** Units: **µg/Kg** Analysis Date: **6/14/2012 09:03 PM**
Client ID: Run ID: **SVMS7_120614A** SeqNo: **2000638** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1021	58	1286	0	79.4	45-110	1155	12.4	30	
Anthracene	1084	58	1286	0	84.3	55-105	1240	13.4	30	
Benzo(a)anthracene	1076	58	1286	0	83.7	50-110	1229	13.3	30	
Benzo(a)pyrene	1106	58	1286	0	86	50-110	1289	15.3	30	
Benzo(b)fluoranthene	1022	58	1286	0	79.5	45-115	1266	21.4	30	
Benzo(g,h,i)perylene	1090	58	1286	0	84.8	40-125	1294	17.1	30	
Benzo(k)fluoranthene	1171	58	1286	0	91	45-115	1270	8.18	30	
Chrysene	1097	58	1286	0	85.3	55-110	1280	15.3	30	
Dibenzo(a,h)anthracene	1091	58	1286	0	84.9	40-125	1271	15.2	30	
Fluoranthene	1117	58	1286	0	86.9	55-115	1281	13.6	30	
Fluorene	1071	58	1286	0	83.3	50-110	1222	13.2	30	
Indeno(1,2,3-cd)pyrene	1099	58	1286	0	85.4	40-120	1286	15.7	30	
Naphthalene	904.4	58	1286	0	70.3	40-105	1101	19.6	30	
Pyrene	1084	58	1286	0	84.3	45-125	1257	14.8	30	
Surr: 2-Fluorobiphenyl	*1833*	0	*3214*	0	*57*	*12-100*	2024	*9.91*	*40*	
Surr: 4-Terphenyl-d14	*2029*	0	*3214*	0	*63.1*	*25-137*	2350	*14.6*	*40*	
Surr: Nitrobenzene-d5	*1828*	0	*3214*	0	*56.9*	*37-107*	2258	*21*	*40*	

The following samples were analyzed in this batch: 1206316-01B

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

QC BATCH REPORT

Batch ID: **41610** Instrument ID **VMS5** Method: **SW8260**

MBLK Sample ID: **MBLK-41610-41610** Units: **µg/Kg** Analysis Date: **6/14/2012 05:17 AM**
Client ID: Run ID: **VMS5_120613B** SeqNo: **1998275** Prep Date: **6/13/2012** 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	*1161*	0	*1000*	0	*116*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*996.5*	0	*1000*	0	*99.6*	*70-130*	0			
Surr: Dibromofluoromethane	*1072*	0	*1000*	0	*107*	*70-130*	0			
Surr: Toluene-d8	*934*	0	*1000*	0	*93.4*	*70-130*	0			

MBLK Sample ID: **MBLK-41610-41610** Units: **µg/Kg** Analysis Date: **6/13/2012 10:43 PM**
Client ID: Run ID: **VMS7_120613B** SeqNo: **1999261** Prep Date: **6/13/2012** 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	*963.5*	0	*1000*	0	*96.4*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*997.5*	0	*1000*	0	*99.8*	*70-130*	0			
Surr: Dibromofluoromethane	*951.5*	0	*1000*	0	*95.2*	*70-130*	0			
Surr: Toluene-d8	*1014*	0	*1000*	0	*101*	*70-130*	0			

LCS Sample ID: **LCS-41610-41610** Units: **µg/Kg** Analysis Date: **6/14/2012 04:26 AM**
Client ID: Run ID: **VMS5_120613B** SeqNo: **1998274** Prep Date: **6/13/2012** 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	932	30	1000	0	93.2	75-125	0			
m,p-Xylene	1875	60	2000	0	93.8	80-125	0			
o-Xylene	935	30	1000	0	93.5	75-125	0			
Toluene	894.5	30	1000	0	89.4	70-125	0			
Xylenes, Total	2810	90	3000	0	93.7	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1124*	0	*1000*	0	*112*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1010*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*1102*	0	*1000*	0	*110*	*70-130*	0			
Surr: Toluene-d8	*954*	0	*1000*	0	*95.4*	*70-130*	0			

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41610** Instrument ID **VMS5** Method: **SW8260**

LCS Sample ID: **LCS-41610-41610** Units: **µg/Kg** Analysis Date: **6/13/2012 09:53 PM**
Client ID: Run ID: **VMS7_120613B** SeqNo: **1999260** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	934.5	30	1000	0	93.4	75-125	0			
Ethylbenzene	958.5	30	1000	0	95.8	75-125	0			
m,p-Xylene	1912	60	2000	0	95.6	80-125	0			
o-Xylene	979	30	1000	0	97.9	75-125	0			
Toluene	962.5	30	1000	0	96.2	70-125	0			
Xylenes, Total	2892	90	3000	0	96.4	75-125	0			
Surr: 1,2-Dichloroethane-d4	*954*	0	*1000*	0	*95.4*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*1016*	0	*1000*	0	*102*	*70-130*	0			
Surr: Toluene-d8	*998.5*	0	*1000*	0	*99.8*	*70-130*	0			

MS Sample ID: **1206308-01A MS** Units: **µg/Kg** Analysis Date: **6/14/2012 10:55 AM**
Client ID: Run ID: **VMS5_120613B** SeqNo: **1999521** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1709	49	1647	0	104	75-125	0			
Ethylbenzene	1315	49	1647	0	79.8	75-125	0			
m,p-Xylene	2622	99	3295	0	79.6	80-125	0			S
o-Xylene	1320	49	1647	0	80.1	75-125	0			
Toluene	1292	49	1647	0	78.4	70-125	0			
Xylenes, Total	3942	150	4942	0	79.8	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1836*	0	*1647*	0	*111*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1637*	0	*1647*	0	*99.4*	*70-130*	0			
Surr: Dibromofluoromethane	*1798*	0	*1647*	0	*109*	*70-130*	0			
Surr: Toluene-d8	*1498*	0	*1647*	0	*91*	*70-130*	0			

MSD Sample ID: **1206308-01A MSD** Units: **µg/Kg** Analysis Date: **6/14/2012 11:21 AM**
Client ID: Run ID: **VMS5_120613B** SeqNo: **1999522** Prep Date: **6/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1616	49	1647	0	98.1	75-125	1709	5.6	30	
Ethylbenzene	1281	49	1647	0	77.8	75-125	1315	2.66	30	
m,p-Xylene	2601	99	3295	0	79	80-125	2622	0.789	30	S
o-Xylene	1321	49	1647	0	80.2	75-125	1320	0.125	30	
Toluene	1271	49	1647	0	77.2	70-125	1292	1.61	30	
Xylenes, Total	3923	150	4942	0	79.4	75-125	3942	0.482	30	
Surr: 1,2-Dichloroethane-d4	*1806*	0	*1647*	0	*110*	*70-130*	1836	*1.63*	*30*	
Surr: 4-Bromofluorobenzene	*1676*	0	*1647*	0	*102*	*70-130*	1637	*2.39*	*30*	
Surr: Dibromofluoromethane	*1812*	0	*1647*	0	*110*	*70-130*	1798	*0.776*	*30*	
Surr: Toluene-d8	*1520*	0	*1647*	0	*92.2*	*70-130*	1498	*1.42*	*30*	

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41610** Instrument ID **VMS5** Method: **SW8260**

The following samples were analyzed in this batch: 1206316-01A

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **41700** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-41700-41700** Units: **mg/Kg** Analysis Date: **6/17/2012 01:00 PM**
Client ID: Run ID: **WETCHEM_120617B** SeqNo: **2001202** Prep Date: **6/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50								

LCS Sample ID: **LCS-41700-41700** Units: **mg/Kg** Analysis Date: **6/17/2012 01:00 PM**
Client ID: Run ID: **WETCHEM_120617B** SeqNo: **2001201** Prep Date: **6/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.75	0.50	1.984	0	88.2	75-110	0			

MS Sample ID: **1206263-01A MS** Units: **mg/Kg** Analysis Date: **6/17/2012 01:00 PM**
Client ID: Run ID: **WETCHEM_120617B** SeqNo: **2001196** Prep Date: **6/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.313	0.48	1.931	0.1395	60.8	60-130	0			

MSD Sample ID: **1206263-01A MSD** Units: **mg/Kg** Analysis Date: **6/17/2012 01:00 PM**
Client ID: Run ID: **WETCHEM_120617B** SeqNo: **2001197** Prep Date: **6/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.147	0.50	1.984	0.1395	50.8	60-130	1.313	13.5	30	S

The following samples were analyzed in this batch: 1206316-01B

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **R105800** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **WLCSS1-061112-R105800** Units: **s.u.** Analysis Date: **6/11/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120611I** SeqNo: **1995597** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.15	0	4.4	0	94.3	90-110	0			

DUP Sample ID: **1206310-01A DUP** Units: **s.u.** Analysis Date: **6/11/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120611I** SeqNo: **1995600** Prep Date: DF: **1**

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

DUP Sample ID: **1206310-02A DUP** Units: **s.u.** Analysis Date: **6/11/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120611I** SeqNo: **1995602** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.56	0	0	0	0	-0 0	8.56	0	20	

The following samples were analyzed in this batch: 1206316-01B

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

Client: HRL Compliance Solutions
Work Order: 1206316
Project: WPX RGU 31-2-298 Pit Closure 6/7/12

QC BATCH REPORT

Batch ID: **R105902** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS1-R105902** Units: **% of sample** Analysis Date: **6/12/2012 12:48 PM**
Client ID: Run ID: **MOIST_120612A** SeqNo: **1997416** Prep Date: DF: **1**

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

LCS Sample ID: **LCS-R105902** Units: **% of sample** Analysis Date: **6/12/2012 12:48 PM**
Client ID: Run ID: **MOIST_120612A** SeqNo: **1997415** Prep Date: DF: **1**

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

DUP Sample ID: **1206315-01ADUP** Units: **% of sample** Analysis Date: **6/12/2012 12:48 PM**
Client ID: Run ID: **MOIST_120612A** SeqNo: **1997395** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	7.12	0.050	0	0	0	-0 0	7.1	0.281	20	

DUP Sample ID: **1206321-01ADUP** Units: **% of sample** Analysis Date: **6/12/2012 12:48 PM**
Client ID: Run ID: **MOIST_120612A** SeqNo: **1997410** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.42	0.050	0	0	0	-0 0	13.23	6.32	20	

The following samples were analyzed in this batch: 1206316-01B

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1206316

		SAMPLER	Luke Miley	DATE	6/7/2012	PAGE	1 of 1
PROJECT NAME	WPX RGU 31-2-298 Pit Closure	SITE ID		TURNAROUND	Standard 5 Day	DISPOSAL	By Lab or Return to Client
PROJECT No.		EDD FORMAT					
		PURCHASE ORDER					
COMPANY NAME	HRL Compliance Solutions, Inc.	BILL TO COMPANY	WPX Energy				
SEND REPORT TO		INVOICE ATTN TO	Karolina Blaney				
ADDRESS	744 Horizon Ct. Suite 140	ADDRESS	1058 County Rd. 215				
CITY / STATE / ZIP	Grand Junction, CO. 81506	CITY / STATE / ZIP	Parachute, CO. 81635				
PHONE	970-243-3271	PHONE	970-683-2295				
FAX	970-243-3280	FAX	970-285-9573				
E-MAIL	Krowe@hrlcomp.com	E-MAIL	Karolina.Blaney@Williams.com				

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	TABLE 910-1 :	DRO/GRO/BTEX	PAH Metals	Cr+6, Cr+3, pH	SAR-EC
1	Land Farm	S	6/7/2012	1300	3	4°c		X				

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

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)	
5.6°c	x	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Luke Miley	6/8/2012	1700
RECEIVED BY		Diane F Shaw	6/9/12	1030
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental

Subcontractor:
A & L Great Lakes Agricultural La
3505 Conestoga Dr
Ft. Wayne, IN 46808
TEL: (260) 483-4759
FAX: (260) 483-5274
Acct #: 91000

Salesperson **Bruce Schlatter**

CHAIN-OF-CUSTODY RECORD

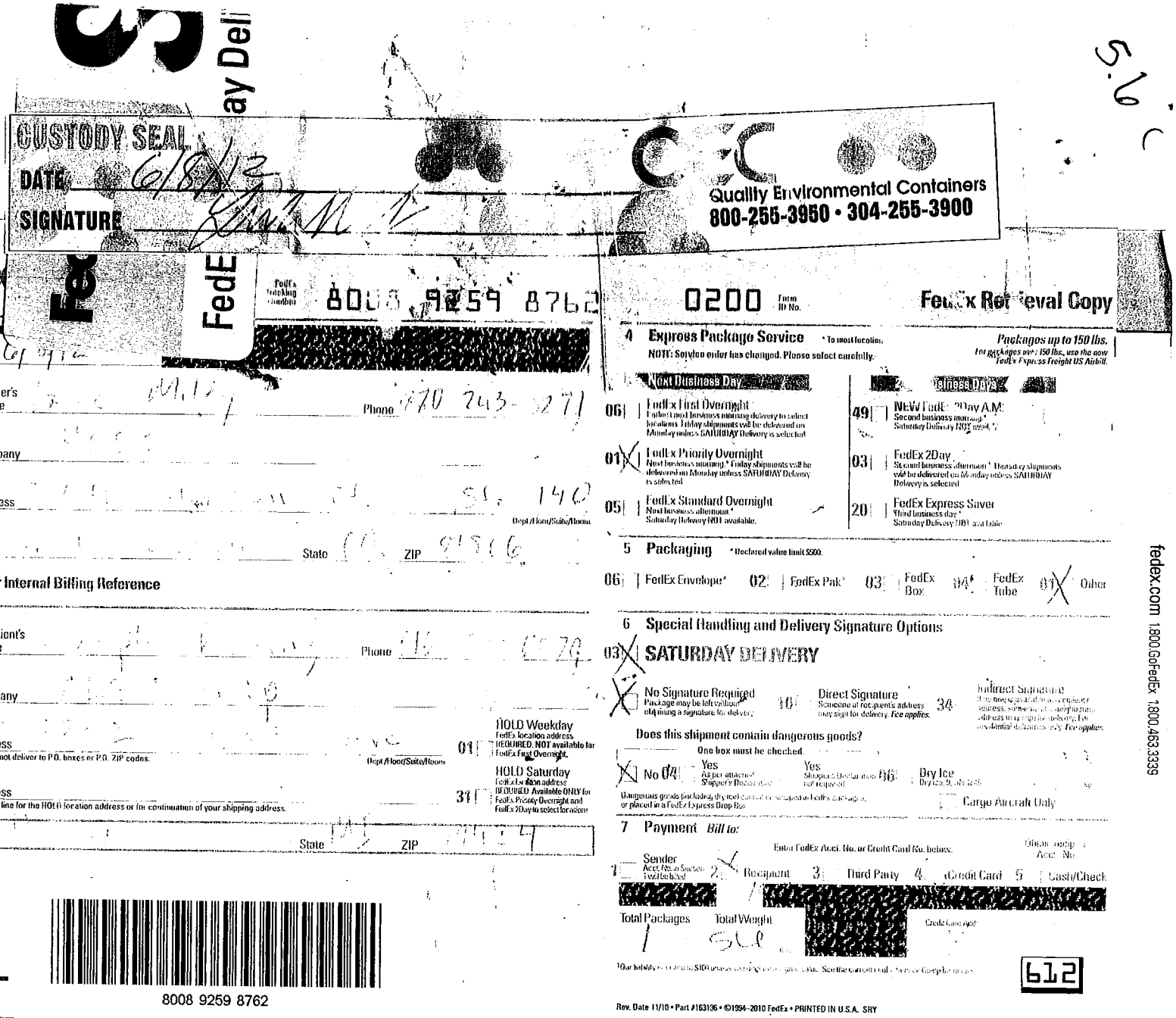
Date: 11-Jun-12
COC ID: 3700
Due D 15-Jun-12

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	1206316	A Subcontracted Analyses (SUBCONTRACT) SAR-EC
Work Order		Project Number		B
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C
Send Report To	Ann Preston	Inv Attn	Accounts Payable	D
Address	3352 128th Avenue	Address	3352 128th Avenue	E
				F
City/State/Zip	Holland, Michigan 49424-9263	City/State/Zip	Holland, Michigan 49424-9263	G
Phone	(616) 399-6070	Phone	(616) 399-6070	H
Fax	(616) 399-6185	Fax	(616) 399-6185	I
eMail Address	ann.preston@alsglobal.com	eMail CC		J

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1206316-01C	Land Farm	Soil	7/Jun/2012 13:00	(1) MISC	X									

Comments:
Please analyze for SAR-EC. Email results to Ann Preston.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	6/11/12	Fed Ex			Std
Relinquished by:	Date/Time	Received by:	Date/Time		



CUSTODY SEAL
DATE 6/8/12
SIGNATURE

Quality Environmental Containers
800-255-3950 • 304-255-3900

5.6 C

FedEx Delivery

FedEx Tracking Number 8008 9259 8762

0200 Form ID No.

FedEx Retrieval Copy

1 From
Date 6/7/12
Sender's Name [illegible] Phone 770 243-[illegible]
Company
Address [illegible] Dept./Floor/Suite/Room
City [illegible] State [illegible] ZIP

2 Your Internal Billing Reference

3 To
Recipient's Name [illegible] Phone
Company
Address — We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room
Address — Use this line for the HOLD location address or for continuation of your shipping address.
City State ZIP

01 HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.
31 HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

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

Next Business Day
06 FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
01 X FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
05 FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

Second Day
49 NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
03 FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
20 FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging — *Declared value limit $500.
06 FedEx Envelope* 02 FedEx Pak* 03 FedEx Box 04 FedEx Tube 01 X Other

6 Special Handling and Delivery Signature Options
03 X SATURDAY DELIVERY
X No Signature Required — Package may be left without obtaining a signature for delivery.
10 Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
30 Indirect Signature — Someone at recipient's address may sign for delivery. Fee applies.

Does this shipment contain dangerous goods?
One box must be checked.
X No 04 Yes — As per attached Shipper's Declaration
Yes — Shipper's Declaration not required 06 Dry Ice
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.
Cargo Aircraft Only

7 Payment Bill to:
Enter FedEx Acct. No. or Credit Card No. below.
1 Sender Acct. No. in Section 1 will be billed 2 X Recipient 3 Third Party 4 Credit Card 5 Cash/Check
Obtain Recipient Acct. No.
Total Packages 1 Total Weight 5.0 Credit Card Exp. Date

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

612

8008 9259 8762

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fedex.com 1.800.GoFedEx 1.800.463.3339

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **09-Jun-12 10:30**

Work Order: **1206316** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Jun-12 (Date) Reviewed by: Ann Preston (eSignature) 11-Jun-12 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.6 c		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

01-Nov-2012

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

Re: **WPX RGU 31-2-298 Landfarm 10/24/12** Work Order: **1210907**

Dear Mark,

ALS Environmental received 1 sample on 26-Oct-2012 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.

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

The total number of pages in this report is 10.

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

Sincerely,

Ann Preston

Electronically approved by: Alex Csaszar

Ann Preston
Project Manager

Certificate No: MN331938

ALS Group USA, Corp

Date: 01-Nov-12

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Landfarm 10/24/12
Work Order: **1210907**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1210907-01	RGU 31-2-298 Landfarm	Soil		10/24/2012 12:00	10/26/2012 09:30	☐

ALS Group USA, Corp

Date: 01-Nov-12

Client: HRL Compliance Solutions
Project: WPX RGU 31-2-298 Landfarm 10/24/12
WorkOrder: **1210907**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

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

ALS Group USA, Corp

Date: *01-Nov-12*

Client: HRL Compliance Solutions

Project: WPX RGU 31-2-298 Landfarm 10/24/12 **Work Order:** 1210907

Sample ID: RGU 31-2-298 Landfarm **Lab ID:** 1210907-01

Collection Date: 10/24/2012 12:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep Date: **10/29/2012**	Analyst: **CW**
DRO (C10-C28)	**340**		**4.7**	**mg/Kg-dry**	1	10/30/2012 04:33 AM
Surr: 4-Terphenyl-d14	*62.5*		*39-115*	*%REC*	1	10/30/2012 04:33 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**			Analyst: **CW**
GRO (C6-C10)	ND		2.8	mg/Kg-dry	50	10/30/2012 03:33 PM
Surr: Toluene-d8	*109*		*50-150*	*%REC*	50	10/30/2012 03:33 PM
MOISTURE			**A2540 G**			Analyst: **LR**
Moisture	**11**		**0.050**	**% of sample**	1	10/29/2012 01:30 PM

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

ALS Group USA, Corp

Date: 01-Nov-12

Client: HRL Compliance Solutions

QC BATCH REPORT

Work Order: 1210907

Project: WPX RGU 31-2-298 Landfarm 10/24/12

Batch ID: **44420** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID **DBLKS1-44420-44420** Units: **mg/Kg** Analysis Date: **10/29/2012 08:57 P**

Client ID: Run ID: **GC8_121029A** SeqNo: **2127099** Prep Date: **10/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	*0.9743*	0	*1.667*	0	*58.5*	*39-115*	0			

LCS Sample ID **DLCSS1-44420-44420** Units: **mg/Kg** Analysis Date: **10/29/2012 09:24 P**

Client ID: Run ID: **GC8_121029A** SeqNo: **2127100** Prep Date: **10/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	112.3	4.2	166.7	0	67.4	49-124	0			
Surr: 4-Terphenyl-d14	*0.951*	0	*1.667*	0	*57.1*	*39-115*	0			

MS Sample ID **1210841-03B MS** Units: **mg/Kg** Analysis Date: **10/29/2012 09:51 P**

Client ID: Run ID: **GC8_121029A** SeqNo: **2127101** Prep Date: **10/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	336.6	12	493.4	60.77	55.9	49-130	0			
Surr: 4-Terphenyl-d14	*2.901*	0	*4.934*	0	*58.8*	*39-115*	0			

MSD Sample ID **1210841-03B MSD** Units: **mg/Kg** Analysis Date: **10/29/2012 10:18 P**

Client ID: Run ID: **GC8_121029A** SeqNo: **2127102** Prep Date: **10/29/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	329.4	12	494.3	60.77	54.4	49-130	336.6	2.14	30	
Surr: 4-Terphenyl-d14	*3.064*	0	*4.943*	0	*62*	*39-115*	2.901	*5.48*	*30*	

The following samples were analyzed in this batch: 1210907-01A

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

Client: HRL Compliance Solutions
Work Order: 1210907
Project: WPX RGU 31-2-298 Landfarm 10/24/12

QC BATCH REPORT

Batch ID: **R111898** Instrument ID **GC10** Method: **SW8015**

MBLK Sample ID **GBLK1-121030-R111898** Units: **µg/L** Analysis Date: **10/30/2012 11:28 A**
Client ID: Run ID: **GC10_121030A** SeqNo: **2126834** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
Surr: Toluene-d8	*111.7*	0	*100*	0	*112*	*70-130*	0			

LCS Sample ID **GLCS1-121030-R111898** Units: **µg/L** Analysis Date: **10/30/2012 11:04 A**
Client ID: Run ID: **GC10_121030A** SeqNo: **2126833** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9405	200	10000	0	94	70-130	0			
Surr: Toluene-d8	*117.6*	0	*100*	0	*118*	*70-130*	0			

MS Sample ID **1210946-01C MS** Units: **µg/L** Analysis Date: **10/30/2012 06:01 P**
Client ID: Run ID: **GC10_121030A** SeqNo: **2127337** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	7687	200	10000	180.8	75.1	70-130	0			
Surr: Toluene-d8	*111.9*	0	*100*	0	*112*	*70-130*	0			

The following samples were analyzed in this batch: 1210907-01A

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

Client: HRL Compliance Solutions
Work Order: 1210907
Project: WPX RGU 31-2-298 Landfarm 10/24/12

QC BATCH REPORT

Batch ID: **R111879** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID **WBLKS1-R111879** Units: **% of sample** Analysis Date: **10/29/2012 01:30 P**
Client ID: Run ID: **MOIST_121029A** SeqNo: **2126511** Prep Date: DF: **1**

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

LCS Sample ID **LCS-R111879** Units: **% of sample** Analysis Date: **10/29/2012 01:30 P**
Client ID: Run ID: **MOIST_121029A** SeqNo: **2126507** Prep Date: DF: **1**

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

DUP Sample ID **1210915-08B DUP** Units: **% of sample** Analysis Date: **10/29/2012 01:30 P**
Client ID: Run ID: **MOIST_121029A** SeqNo: **2126498** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.07	0.050	0	0	0	-0 0	11.02	0.453	20	

DUP Sample ID **1210945-01A DUP** Units: **% of sample** Analysis Date: **10/29/2012 01:30 P**
Client ID: Run ID: **MOIST_121029A** SeqNo: **2126505** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.52	0.050	0	0	0	-0 0	14.61	7.75	20	

The following samples were analyzed in this batch: 1210907-01A

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

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1210907

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX RGU 31-2-298 Landfarm	SAMPLER	Reed Wold
PROJECT No.		SITE ID	RGU 31-2-298
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	HRL Compliance	BILL TO COMPANY	WPX
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blaney
ADDRESS	2385 F 1/2 Rd	ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachure CO 81635
PHONE	970-243-3271	PHONE	970-683-2295
FAX	970-243-3280	FAX	
E-MAIL	mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL	Karolina.blaney@wpxenergy.com

DATE 10/25/2012

TURNAROUND 5 day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	GRO/ DRO
1	RGU 31-2-298 Landfarm	SO	10/24/2012	12:00	1	8		X

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

For metals or anions, please detail analytes below.

Comments:

4.2°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY				5:00
RECEIVED BY		Diane F Shea	10/26/12	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8987 5964 3300

0200 Form ID No.

FedEx Retrieval Copy

Packages up to 150 lbs.
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

1 From [redacted]

Date 10/25/12

Sender's Name ... Phone ...

Company ... compliance

Address 2385 ... Rd — Dept./Floor/Suite/Room

City Grand Junction State CO ZIP 81505

2 Your Internal Billing Reference

3 To

Recipient's Name Sample Receiving — Phone ...

Company ...

Address ... 128th Ave — Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight. (01)

HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations. (31)

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

City Holland State MI ZIP 49424

8987 5964 3300

4 Express Package Service — To most locations.
NOTE: Service order has changed. Please select carefully.

Next Business Day

- 06 FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 01 FedEx Priority Overnight — Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 05 FedEx Standard Overnight — Next business afternoon. Saturday Delivery NOT available.

2 or 3 Business Days

- 49 NEW FedEx 2Day A.M. — Second business morning. Saturday Delivery NOT available.
- 03 FedEx 2Day — Second business afternoon. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- 20 FedEx Express Saver — Third business day. Saturday Delivery NOT available.

5 Packaging — Declared value limit $500.

06 FedEx Envelope — 02 FedEx Pak — 03 FedEx Box — 04 FedEx Tube — 01 Other

6 Special Handling and Delivery Signature Options

03 SATURDAY DELIVERY

- No Signature Required — Package may be left without obtaining a signature for delivery.
- 10 Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- 34 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 04 — Yes As per attached Shipper's Declaration — Yes Shipper's Declaration not required 06 — Dry Ice — Cargo Aircraft Only

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

7 Payment Bill to:
Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No.

1 Sender (Acct. No. in Section 1 will be billed.) 2 Recipient 3 Third Party 4 Credit Card 5 Cash/Check

[redacted] [redacted]

Total Packages — Total Weight — Credit Card Auth.

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ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **26-Oct-12 09:30**

Work Order: **1210907** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 26-Oct-12 (Date) Reviewed by: Ann Preston (eSignature) 27-Oct-12 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.2 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/26/2012 2:16:57 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

APPENDIX 4: SUNDRY NOTICE FORM 4 FOR BACKGROUND ARSENIC CONSIDERATIONS

FORM 4
Rev 12/05

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109

DE	ET	DE	ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry Information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 96850
2. Name of Operator: WPX Energy Rocky Mountain LLC
3. Address:
City: State: Zip:
4. Contact Name: Karolina Blaney
Phone: 970-683-2295
Fax: 970-285-9573

Complete the Attachment Checklist

	OP	OGCC
Survey Plat		
Directional Survey		
Surface Eqpmt Diagram		
Technical Info Page		
Other		

5. API Number 05- 103-10597
OGCC Facility ID Number 426887
6. Well/Facility Name: RGU 31-2-298
7. Well/Facility Number RGU 31-2-298
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 2, T2S, R98W, 6th PM
9. County: Rio Blanco
10. Field Name: Ryan Gulch
11. Federal, Indian or State Lease Number:

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

	FNL/FSL		FEL/FWL	
Change of **Surface** Footage **from** Exterior Section Lines:				
Change of **Surface** Footage **to** Exterior Section Lines:				
Change of **Bottomhole** Footage **from** Exterior Section Lines:				
Change of **Bottomhole** Footage **to** Exterior Section Lines:				attach directional survey

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer
Latitude
Longitude
Ground Elevation
Distance to nearest property line
Distance to nearest lease line
Distance to nearest well same formation
Distance to nearest bldg, public rd, utility or RR
Is location in a High Density Area (rule 603b)? Yes/No
Surface owner consultation date:

GPS DATA:
Date of Measurement PDOP Reading Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):
Effective Date:
Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME NUMBER
From:
To:
Effective Date:

☐ ABANDONED LOCATION:
Was location ever built? ☐ Yes ☐ No
Is site ready for Inspection? ☐ Yes ☐ No
Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS
Date well shut in or temporarily abandoned:
Has Production Equipment been removed from site? ☐ Yes ☐ No
MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately ☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent
Approximate Start Date:

☐ Report of Work Done
Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)
☐ Change Drilling Plans
☐ Gross Interval Changed?
☐ Casing/Cementing Program Change
☐ Request to Vent or Flare
☐ Repair Well
☐ Rule 502 variance requested
☒ Other: Background
☐ E&P Waste Disposal
☐ Beneficial Reuse of E&P Waste
☐ Status Update/Change of Remediation Plans for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Karolina Blaney Date: 11/5/2012 Email: Karolina.Blaney@WPXEnergy.com
Print Name: Karolina Blaney Title: Environmental Specialist

COGCC Approved: Title: Date:

CONDITIONS OF APPROVAL, IF ANY:

FORM 4 Rev 12/05

TECHNICAL INFORMATION PAGE

FOR OGCC USE ONLY

1. OGCC Operator Number: 96850 API Number: 05-103-10597
2. Name of Operator: WPX Energy Rocky Mountain LLC OGCC Facility ID # 426887
3. Well/Facility Name: Well/Facility Number: RGU 31-2-298
4. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE, Sec 2, T2S, R98W, 6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

This COGCC Form 4 is being submitted as a request to consider the background concentration levels for arsenic at the RGU 31-2-298 well pad relative to the clouse of the reserve and completions pit at the subject facillity in accordance with footnote 1 to the COGCC Table 9101-1.

The request is based on the analytical results below (see attached analytical)

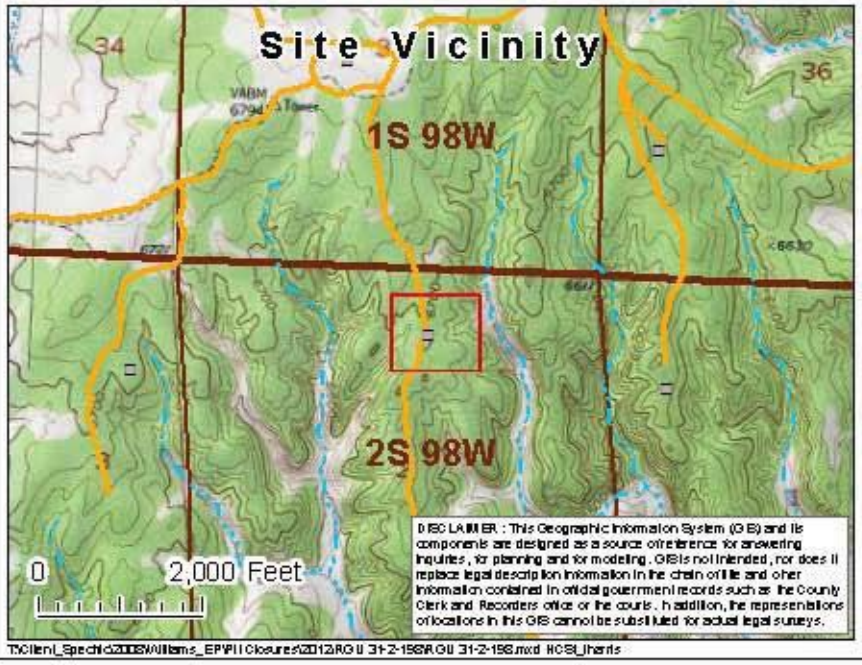
Grab sample was collected from the lowest point of the pit bottom, approximately 20' to 20.6' below pad grade within the production pit.

Pit Bottom - 1.7 mg/kg

Three (3) grab samples were collected from nearby non-impacted, native soil from surface to 6" below to establish the background arsenic concentrations.

BKGD 1 - 2.8 mg/kg
BKGD 2 - 2.9 mg/kg
BKGD 3 - 1.9 mg/kg

WPX Energy is requesting this approval in order to proceed with closure and reclamation of the production pit on the RGU 31-2-298 well pad.



Sample Location Map

Location: RGU 31-2-198

WPX Energy Rocky Mountain, LLC

Legend

- Sample Location
- Well Head Location
- PLSS
  - Township
  - Section
- WPX Access Roads
- **Hydrographic Features**
  - Perennial Stream
  - Intermittent Stream

N
W E
S

HCSI
ENVIRONMENTAL CONSULTANTS

T:\Client_Specific\2008\Williams_EP\Pit Closures\2012\RGU 31-2-198\RGU 31-2-198.mxd HCSI_jherris

Revision Date: 6/22/2012 10:49:12 AM

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions
Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745
Sample ID: BKGD 1 **Lab ID:** 1205745-06
Collection Date: 5/21/2012 10:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.8**		**0.76**	**mg/Kg-dry**	2	5/29/2012 08:03 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **A&LGL**
Subcontracted Analyses	**Rcvd 5/31/12**			**as noted**	1	5/31/2012
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**6.6**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM
PH			**SW9045D**			Analyst: **CG**
pH	**8.32**			**s.u.**	1	5/24/2012 01:30 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 2 **Lab ID:** 1205745-07

Collection Date: 5/21/2012 10:05 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**2.9**		**0.70**	**mg/Kg-dry**	2	5/29/2012 08:09 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**2.9**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

ALS Group USA, Corp

Date: *31-May-12*

Client: HRL Compliance Solutions

Project: WPX Energy RGU 31-2-298 Pit Closure 5/21-5/23/12 **Work Order:** 1205745

Sample ID: BKGD 3 **Lab ID:** 1205745-08

Collection Date: 5/21/2012 10:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep Date: **5/29/2012**	Analyst: **ML**
Arsenic	**1.9**		**0.77**	**mg/Kg-dry**	2	5/29/2012 08:15 PM
MOISTURE			**A2540 G**			Analyst: **CG**
Moisture	**8.4**		**0.050**	**% of sample**	1	5/24/2012 01:02 PM

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

Report Number: F12150-0255
Acount Number: 91000

A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Drive • Fort Wayne, Indiana 46808-4413 • Phone 260-483-4759 • Fax 260-483-5274
www.algreatlakes.com • lab@algreatlakes.com

QUALITY ANALYSES FOR INFORMED DECISIONS

TO: ALS LABORATORY GROUP
3352 128TH AVE
HOLLAND, MI 49424-9263

RE: 1205745-05C & 06B

DATE RECEIVED: 05/29/2012
DATE REPORTED: 05/31/2012
PAGE: 1
P.O. NUMBER: 20-1205745

ATTN: ANN PRESTON

REPORT OF ANALYSIS

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
7569	PIT BOTTOM	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	2.97	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	47	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	39	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	2556	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	66.4	-	USDA Handbook 60
7570	BKGD 1	Sat'd Paste Extraction with DIW			USDA Handbook 60
		Conductivity (ECe)	0.34	mmho/cm	USDA Handbook 60
		Calcium (Sat'd Paste)	56	ppm	USDA Handbook 60
		Magnesium (Sat'd Paste)	5	ppm	USDA Handbook 60
		Sodium (Sat'd Paste)	108	ppm	USDA Handbook 60
		Sodium Adsorption Ratio (SAR)	3.7	-	USDA Handbook 60