

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



## 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)

RECEIVED  
10/16/2012

1. OGCC Operator Number: 96850		4. Contact Name Karolina Blaney		Complete the Attachment Checklist  OP OGCC
2. Name of Operator: WPX Energy Rocky Mountain LLC		Phone: 970 683 2295		
3. Address: 1058 County Road 215 City: Parachute State: CO Zip: 81635		Fax: 970 285 9573		
5. API Number 05-103-11276		OGCC Facility ID Number 335969		Survey Plat
6. Well/Facility Name:		7. Well/Facility Number RG 23-14-298		Directional Survey
8. Location (Qtr/Sec, Twp, Rng, Meridian): NESW-14-25-98W 06M				Surface Equipmt Diagram
9. County: Rio Blanco		10. Field Name: Ryan Gulch		Technical Info Page
11. Federal, Indian or State Lease Number:				Other

## General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest lease line
Ground Elevation	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
<input type="checkbox"/> CHANGE SPACING UNIT	
Formation	Formation Code
Spacing order number	Unit Acreage
	Unit configuration
<input type="checkbox"/> Remove from surface bond	
Signed surface use agreement attached	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	
Effective Date:	
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	
<input type="checkbox"/> CHANGE WELL NAME	
From:	
To:	
Effective Date:	
<input type="checkbox"/> ABANDONED LOCATION:	
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Ready for inspection:	
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS	
Date well shut in or temporarily abandoned:	
Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MIT required if shut in longer than two years. Date of last MIT	
<input type="checkbox"/> SPUD DATE:	
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)	
<input type="checkbox"/> 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
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately	
<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.	

## Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent		<input type="checkbox"/> Report of Work Done	
Approximate Start Date:		Date Work Completed:	
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)			
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal	
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste	
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans	
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Background	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: 10/16/2012

Email: Karolina.Blaney@WPXEnergy.com

Print Name: Karolina Blaney

Title: Environmental Specialist

COGCC Approved: Chris Campbell

Title: FOR

Date: 01/04/2013

CONDITIONS OF APPROVAL IF ANY:

Chris Campbell  
EPS NW Region

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: \_\_\_\_\_ API Number: \_\_\_\_\_

2. Name of Operator: \_\_\_\_\_ OGCC Facility ID # \_\_\_\_\_

3. Well/Facility Name: \_\_\_\_\_ Well/Facility Number: \_\_\_\_\_

4. Location (QtrQtr, Sec, Twp, Rng, Meridian): \_\_\_\_\_

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





## Legend

- Sample Location
- Existing Road
- Existing Pad Limit of Disturbance

**RG 23-14-298**  
**Arsenic Background Sample Location Map**  
**T2S R98W, Section 14**



**October 5, 2011**





12-Oct-2012

Kris Rowe  
HRL Compliance Solutions  
2385 F 1/2 Road  
Grand Junction, CO 81505

Re: **WPX RGU 23-14-298 Pit Confirmation 10/4/12**

Work Order: **1210192**

Dear Kris,

ALS Environmental received 2 samples on 05-Oct-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 26.

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

Sincerely,

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

Electronically approved by: Ann Preston

Ann Preston  
Project Manager



Certificate No: MN331938

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

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

Environmental 

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

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** HRL Compliance Solutions  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12  
**Work Order:** 1210192

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1210192-01	Pit Bottom	Soil		10/4/2012 12:05	10/5/2012 09:30	<input type="checkbox"/>
1210192-02	Inorganics Background	Soil		10/4/2012 12:35	10/5/2012 09:30	<input type="checkbox"/>

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**Client:** HRL Compliance Solutions  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12  
**Work Order:** 1210192

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**Case Narrative**

Batch 43990 sample 1210192-01 PAH analysis had one high surrogate recovery. The result for Fluorene may be biased slightly high.

Batch 43991 sample 1210192-01 DRO surrogate recovery was above the upper control limits. The sample results may be biased high due to matrix interference.

Batch 44003 sample Pit Bottom MS/MSD recoveries for Barium, Chromium and Zinc were outside control limits, however, the results in the parent sample is greater than 4x the spiked amount. No qualification is required for these elements. The MS recovery for Nickel and <SD recovery for Lead were below control limits. However, the MSD recovery for Nickel and MS recovery for Lead and the RPDs between the MS and MSD were in control. No qualification is required for Nickel and Lead.

**Client:** HRL Compliance Solutions  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12  
**WorkOrder:** 1210192

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte 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

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

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
µmhos/cm @25°	
none	
s.u.	Standard Units

# ALS Group USA, Corp

Date: 12-Oct-12

Client: HRL Compliance Solutions

Project: WPX RGU 23-14-298 Pit Confirmation 10/4/12

Work Order: 1210192

Sample ID: Pit Bottom

Lab ID: 1210192-01

Collection Date: 10/4/2012 12:05 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>						
<b>DRO (C10-C28)</b>	<b>170</b>		<b>SW8015M</b>		Prep Date: <b>10/8/2012</b>	Analyst: <b>CW</b>
			<b>4.5</b>	<b>mg/Kg-dry</b>	1	10/9/2012 03:42 PM
Surr: 4-Terphenyl-d14	226	S	39-115	%REC	1	10/9/2012 03:42 PM
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>						
<b>GRO (C6-C10)</b>	<b>ND</b>		<b>SW8015</b>		Prep Date: <b>10/8/2012</b>	Analyst: <b>CW</b>
			<b>2.8</b>	<b>mg/Kg-dry</b>	50	10/5/2012 07:46 PM
Surr: Toluene-d8	110		50-150	%REC	50	10/5/2012 07:46 PM
<b>MERCURY BY CVAA</b>						
<b>Mercury</b>	<b>0.025</b>		<b>SW7471</b>		Prep Date: <b>10/8/2012</b>	Analyst: <b>LR</b>
			<b>0.020</b>	<b>mg/Kg-dry</b>	1	10/9/2012 12:54 PM
<b>METALS BY ICP-MS</b>						
<b>Arsenic</b>	<b>5.0</b>		<b>SW6020A</b>		Prep Date: <b>10/8/2012</b>	Analyst: <b>CES</b>
			<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>Barium</b>	<b>460</b>		<b>4.3</b>	<b>mg/Kg-dry</b>	10	10/9/2012 04:07 PM
Cadmium	ND		0.34	mg/Kg-dry	2	10/9/2012 12:32 AM
<b>Chromium</b>	<b>34</b>		<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>Copper</b>	<b>14</b>		<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>Lead</b>	<b>18</b>		<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>Nickel</b>	<b>20</b>		<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>Selenium</b>	<b>1.1</b>		<b>0.86</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
Silver	ND		0.86	mg/Kg-dry	2	10/9/2012 12:32 AM
<b>Zinc</b>	<b>58</b>		<b>1.7</b>	<b>mg/Kg-dry</b>	2	10/9/2012 12:32 AM
<b>SOLUBLE CATIONS FOR SAR</b>						
<b>Calcium</b>	<b>79</b>		<b>SW6020A</b>		Prep Date: <b>10/9/2012</b>	Analyst: <b>CES</b>
			<b>5.6</b>	<b>mg/L-dry</b>	10	10/9/2012 07:09 PM
<b>Magnesium</b>	<b>24</b>		<b>2.2</b>	<b>mg/L-dry</b>	10	10/9/2012 07:09 PM
<b>Sodium</b>	<b>200</b>		<b>2.2</b>	<b>mg/L-dry</b>	10	10/9/2012 07:09 PM
<b>SODIUM ADSORPTION RATIO</b>						
<b>Sodium Adsorption Ratio</b>	<b>4.7</b>		<b>USDA H60 METHO</b>		Prep Date: <b>10/9/2012</b>	Analyst: <b>CES</b>
			<b>0.010</b>	<b>none</b>	1	10/10/2012
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>						
<b>Acenaphthene</b>	<b>ND</b>		<b>SW8270</b>		Prep Date: <b>10/8/2012</b>	Analyst: <b>HL</b>
			<b>16</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Anthracene</b>	<b>ND</b>		<b>16</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Benzo(a)anthracene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Benzo(a)pyrene</b>	<b>ND</b>		<b>18</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Benzo(b)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Benzo(g,h,i)perylene</b>	<b>ND</b>		<b>30</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Benzo(k)fluoranthene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Chrysene</b>	<b>ND</b>		<b>16</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Dibenzo(a,h)anthracene</b>	<b>ND</b>		<b>20</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Fluoranthene</b>	<b>ND</b>		<b>16</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM
<b>Fluorene</b>	<b>80</b>		<b>16</b>	<b>µg/Kg-dry</b>	1	10/9/2012 11:32 PM

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



# ALS Group USA, Corp

Date: 12-Oct-12

Client: HRL Compliance Solutions

Project: WPX RGU 23-14-298 Pit Confirmation 10/4/12

Work Order: 1210192

Sample ID: Pit Bottom

Lab ID: 1210192-01

Collection Date: 10/4/2012 12:05 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		22	µg/Kg-dry	1	10/9/2012 11:32 PM
Naphthalene	ND		16	µg/Kg-dry	1	10/9/2012 11:32 PM
Pyrene	ND		16	µg/Kg-dry	1	10/9/2012 11:32 PM
Surr: 2-Fluorobiphenyl	103	S	12-100	%REC	1	10/9/2012 11:32 PM
Surr: 4-Terphenyl-d14	95.5		25-137	%REC	1	10/9/2012 11:32 PM
Surr: Nitrobenzene-d5	76.0		37-107	%REC	1	10/9/2012 11:32 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260</b>		Prep Date: 10/5/2012	Analyst: BG
Benzene	ND		33	µg/Kg-dry	1	10/6/2012 08:10 AM
Ethylbenzene	ND		33	µg/Kg-dry	1	10/6/2012 08:10 AM
m,p-Xylene	ND		67	µg/Kg-dry	1	10/6/2012 08:10 AM
o-Xylene	ND		33	µg/Kg-dry	1	10/6/2012 08:10 AM
Toluene	ND		33	µg/Kg-dry	1	10/6/2012 08:10 AM
Xylenes, Total	ND		100	µg/Kg-dry	1	10/6/2012 08:10 AM
Surr: 1,2-Dichloroethane-d4	97.1		70-130	%REC	1	10/6/2012 08:10 AM
Surr: 4-Bromofluorobenzene	99.8		70-130	%REC	1	10/6/2012 08:10 AM
Surr: Dibromofluoromethane	96.5		70-130	%REC	1	10/6/2012 08:10 AM
Surr: Toluene-d8	98.3		70-130	%REC	1	10/6/2012 08:10 AM
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: 10/9/2012	Analyst: JB
Electrical Conductivity @ Saturation	1.2		0.050	mmhos/cm @25	10	10/9/2012 03:15 PM
<b>CHROMIUM, TRIVALENT</b>			<b>CALCULATION</b>			Analyst: JJG
Chromium, Trivalent	34		0.56	mg/Kg-dry	1	10/11/2012 08:40 AM
<b>CHROMIUM, HEXAVALENT</b>			<b>SW7196A</b>		Prep Date: 10/9/2012	Analyst: MB
Chromium, Hexavalent	ND		0.55	mg/Kg-dry	1	10/10/2012 01:50 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: LR
Moisture	10		0.050	% of sample	1	10/5/2012 01:30 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: KF
pH	8.96			s.u.	1	10/5/2012 09:45 AM

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

**ALS Group USA, Corp**

Date: 12-Oct-12

Client: HRL Compliance Solutions

Project: WPX RGU 23-14-298 Pit Confirmation 10/4/12

Work Order: 1210192

Sample ID: Inorganics Background

Lab ID: 1210192-02

Collection Date: 10/4/2012 12:35 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>SOLUBLE CATIONS FOR SAR</b>			<b>SW6020A</b>		Prep Date: <b>10/9/2012</b>	Analyst: <b>CES</b>
Calcium	<b>900</b>		<b>5.4</b>	mg/L-dry	10	10/9/2012 07:53 PM
Magnesium	<b>160</b>		<b>2.2</b>	mg/L-dry	10	10/9/2012 07:53 PM
Sodium	<b>180</b>		<b>2.2</b>	mg/L-dry	10	10/9/2012 07:53 PM
<b>SODIUM ADSORPTION RATIO</b>			<b>USDA H60 METHO</b>		Prep Date: <b>10/9/2012</b>	Analyst: <b>CES</b>
Sodium Adsorption Ratio	<b>1.4</b>		<b>0.010</b>	none	1	10/10/2012
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			<b>USDA H60 METHO</b>		Prep Date: <b>10/9/2012</b>	Analyst: <b>JB</b>
Electrical Conductivity @ Saturation	<b>4.4</b>		<b>0.010</b>	mmhos/cm @25	2	10/9/2012 03:15 PM
<b>MOISTURE</b>			<b>A2540 G</b>			Analyst: <b>LR</b>
Moisture	<b>7.7</b>		<b>0.050</b>	% of sample	1	10/8/2012 04:30 PM
<b>PH</b>			<b>SW9045D</b>			Analyst: <b>KF</b>
pH	<b>8.17</b>			s.u.	1	10/5/2012 09:45 AM

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

Client: HRL Compliance Solutions

# QC BATCH REPORT

Work Order: 1210192

Project: WPX RGU 23-14-298 Pit Confirmation 10/4/12

Batch ID: 43991

Instrument ID GC8

Method: SW8015M

<b>MBLK</b>		Sample ID: <b>DBLKS1-43991-43991</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/9/2012 09:00 AM</b>		
Client ID:		Run ID: <b>GC8_121009A</b>				SeqNo: <b>2107578</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	0.8487	0	1.667	0	50.9	39-115	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-43991-43991</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/9/2012 09:26 AM</b>		
Client ID:		Run ID: <b>GC8_121009A</b>				SeqNo: <b>2107579</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	114.9	4.2	166.7	0	69	49-124	0			
Surr: 4-Terphenyl-d14	1.035	0	1.667	0	62.1	39-115	0			

<b>MS</b>		Sample ID: <b>1210188-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/9/2012 09:53 AM</b>		
Client ID:		Run ID: <b>GC8_121009A</b>				SeqNo: <b>2107580</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	276.7	8.0	318.6	40.92	74	49-130	0			
Surr: 4-Terphenyl-d14	2.114	0	3.186	0	66.4	39-115	0			

<b>MSD</b>		Sample ID: <b>1210188-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/9/2012 10:20 AM</b>		
Client ID:		Run ID: <b>GC8_121009A</b>				SeqNo: <b>2107581</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	245.7	8.0	319.4	40.92	64.1	49-130	276.7	11.9	30	
Surr: 4-Terphenyl-d14	2.164	0	3.194	0	67.8	39-115	2.114	2.34	30	

The following samples were analyzed in this batch: 1210192-01B

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **R110831**      Instrument ID **GC10**      Method: **SW8015**

<b>MBLK</b>		Sample ID: <b>GBLK2-121005-R110831</b>				Units: <b>µg/L</b>		Analysis Date: <b>10/5/2012 11:43 AM</b>		
Client ID:		Run ID: <b>GC10_121005A</b>				SeqNo: <b>2104486</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	<i>109.9</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>110</i>	<i>70-130</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>GLCS2-121005-R110831</b>				Units: <b>µg/L</b>		Analysis Date: <b>10/5/2012 11:19 AM</b>		
Client ID:		Run ID: <b>GC10_121005A</b>				SeqNo: <b>2104485</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9613	200	10000	0	96.1	70-130	0			
<i>Surr: Toluene-d8</i>	<i>102.2</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>1210120-01A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/5/2012 08:35 PM</b>		
Client ID:		Run ID: <b>GC10_121005A</b>				SeqNo: <b>2104513</b>		Prep Date:		DF: <b>50</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	507700	2,500	500000	0	102	70-130	0			
<i>Surr: Toluene-d8</i>	<i>5117</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>102</i>	<i>50-150</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>1210120-01A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/5/2012 08:59 PM</b>		
Client ID:		Run ID: <b>GC10_121005A</b>				SeqNo: <b>2104514</b>		Prep Date:		DF: <b>50</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	491000	2,500	500000	0	98.2	70-130	507700	3.34	30	
<i>Surr: Toluene-d8</i>	<i>5254</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>105</i>	<i>50-150</i>	<i>5117</i>	<i>2.64</i>	<i>30</i>	

The following samples were analyzed in this batch:

1210192-01A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **44004**      Instrument ID **HG1**      Method: **SW7471**

MBLK		Sample ID: MBLK-44004-44004				Units: mg/Kg		Analysis Date: 10/9/2012 12:23 PM		
Client ID:		Run ID: HG1_121009A				SeqNo: 2106832		Prep Date: 10/8/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.001333	0.020								J

LCS		Sample ID: LCS-44004-44004				Units: mg/Kg		Analysis Date: 10/9/2012 12:25 PM		
Client ID:		Run ID: HG1_121009A				SeqNo: 2106833		Prep Date: 10/8/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1499	0.020	0.1665	0	90	80-120	0			

MS		Sample ID: 1210189-01BMS				Units: mg/Kg		Analysis Date: 10/9/2012 12:36 PM		
Client ID:		Run ID: HG1_121009A			SeqNo: 2106847		Prep Date: 10/8/2012		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1583	0.017	0.1411	0.03381	88.3	75-125	0			

MSD		Sample ID: 1210189-01BMSD				Units: mg/Kg		Analysis Date: 10/9/2012 12:38 PM		
Client ID:		Run ID: HG1_121009A				SeqNo: 2106849		Prep Date: 10/8/2012		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1591	0.017	0.1425	0.03381	87.9	75-125	0.1583	0.502	35	

The following samples were analyzed in this batch:

1210192-01B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43980**      Instrument ID **ICPMS1**      Method: **SW6020A**      **(Dissolve)**

<b>DUP</b>		Sample ID: <b>1210191-02A DUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>10/9/2012 07:04 PM</b>		
Client ID:		Run ID: <b>ICPMS1_121009A</b>				SeqNo: <b>2107528</b>		Prep Date: <b>10/9/2012</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Magnesium	1298	2.0	0	0	0	0-0	1199	7.93		
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<b>DUP</b>		Sample ID: <b>1210191-02A DUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>10/10/2012 01:32 PM</b>		
Client ID:		Run ID: <b>ICPMS1_121010A</b>				SeqNo: <b>2108104</b>		Prep Date: <b>10/9/2012</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Calcium	2791	50	0	0	0	0-0	2627	6.05		
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Sodium	6010	20	0	0	0	0-0	5478	9.26		
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<b>DUP</b>		Sample ID: <b>1210191-02A DUP</b>				Units: <b>none</b>		Analysis Date: <b>10/10/2012</b>		
Client ID:		Run ID: <b>SAR_121010A</b>				SeqNo: <b>2108111</b>		Prep Date: <b>10/9/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Sodium Adsorption Ratio	23.57	0.010	0	0	0		22.23	5.83	50	
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The following samples were analyzed in this batch:

1210192-01C	1210192-02A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **44003**      Instrument ID **ICPMS1**      Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-44003-44003</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/8/2012 07:39 PM</b>		
Client ID:		Run ID: <b>ICPMS1_121008A</b>				SeqNo: <b>2106619</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	0.01056	0.25								J
Cadmium	0.01841	0.10								J
Chromium	0.01653	0.25								J
Copper	0.0109	0.25								J
Lead	ND	0.25								
Nickel	0.01062	0.25								J
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

<b>LCS</b>		Sample ID: <b>LCS-44003-44003</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/8/2012 07:45 PM</b>		
Client ID:		Run ID: <b>ICPMS1_121008A</b>				SeqNo: <b>2106620</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.564	0.25	5	0	91.3	80-120	0			
Barium	5.18	0.25	5	0	104	80-120	0			
Cadmium	5.24	0.10	5	0	105	80-120	0			
Chromium	4.965	0.25	5	0	99.3	80-120	0			
Copper	5.065	0.25	5	0	101	80-120	0			
Lead	5.15	0.25	5	0	103	80-120	0			
Nickel	5.075	0.25	5	0	102	80-120	0			
Selenium	4.34	0.25	5	0	86.8	80-120	0			
Silver	5.225	0.25	5	0	104	80-120	0			
Zinc	4.659	0.50	5	0	93.2	80-120	0			

<b>MS</b>		Sample ID: <b>1210192-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/9/2012 12:38 AM</b>		
Client ID: <b>Pit Bottom</b>		Run ID: <b>ICPMS1_121008A</b>				SeqNo: <b>2106665</b>		Prep Date: <b>10/8/2012</b>		DF: <b>2</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.87	0.73	7.289	4.471	87.8	75-125	0			
Cadmium	7.334	0.29	7.289	0.2385	97.3	75-125	0			
Copper	21.33	0.73	7.289	12.8	117	75-125	0			
Lead	25.48	0.73	7.289	16.58	122	75-125	0			
Selenium	7.172	0.73	7.289	0.9825	84.9	75-125	0			
Silver	6.236	0.73	7.289	0.06757	84.6	75-125	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **44003**      Instrument ID **ICPMS1**      Method: **SW6020A**

MS				Sample ID: 1210192-01BMS			Units: mg/Kg		Analysis Date: 10/9/2012 04:13 PM	
Client ID: Pit Bottom				Run ID: ICPMS1_121009A			SeqNo: 2107346		Prep Date: 10/8/2012	
							DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	510.7	3.6	7.289	414.6	1320	75-125	0			SO
Chromium	32.87	3.6	7.289	31.24	22.4	75-125	0			SO
Nickel	22.51	3.6	7.289	19.61	39.8	75-125	0			S
Zinc	59.31	7.3	7.289	60.26	-13.1	75-125	0			SO

MSD				Sample ID: 1210192-01BMSD			Units: mg/Kg		Analysis Date: 10/9/2012 12:43 AM	
Client ID: Pit Bottom				Run ID: ICPMS1_121008A			SeqNo: 2106666		Prep Date: 10/8/2012	
							DF: 2			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	10.37	0.76	7.61	4.471	77.6	75-125	10.87	4.69	25	
Cadmium	7.732	0.30	7.61	0.2385	98.5	75-125	7.334	5.29	25	
Copper	18.72	0.76	7.61	12.8	77.8	75-125	21.33	13	25	
Selenium	7.356	0.76	7.61	0.9825	83.8	75-125	7.172	2.54	25	
Silver	6.788	0.76	7.61	0.06757	88.3	75-125	6.236	8.48	25	

MSD				Sample ID: 1210192-01BMSD			Units: mg/Kg		Analysis Date: 10/9/2012 04:18 PM	
Client ID: Pit Bottom				Run ID: ICPMS1_121009A			SeqNo: 2107347		Prep Date: 10/8/2012	
							DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	487.6	3.8	7.61	414.6	959	75-125	510.7	4.63	25	SO
Chromium	37.56	3.8	7.61	31.24	83	75-125	32.87	13.3	25	O
Lead	21.86	3.8	7.61	16.31	73	75-125	23.55	7.42	25	S
Nickel	27.77	3.8	7.61	19.61	107	75-125	22.51	20.9	25	
Zinc	65.65	7.6	7.61	60.26	70.9	75-125	59.31	10.2	25	SO

The following samples were analyzed in this batch:

1210192-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43990**      Instrument ID **SVMS5**      Method: **SW8270**

MBLK		Sample ID: <b>SBLKS1-43990-43990</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/9/2012 11:09 PM</b>		
Client ID:		Run ID: <b>SVMS5_121009A</b>				SeqNo: <b>2107932</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	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								
<i>Surr: 2-Fluorobiphenyl</i>	1288	0	1667	0	77.3	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1808	0	1667	0	108	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1452	0	1667	0	87.1	37-107	0			

LCS		Sample ID: <b>SLCSS1-43990-43990</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/9/2012 10:09 PM</b>		
Client ID:		Run ID: <b>SVMS5_121009A</b>				SeqNo: <b>2108443</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	608.7	30	666.7	0	91.3	45-110	0			
Anthracene	652	30	666.7	0	97.8	55-105	0			
Benzo(a)anthracene	706.7	30	666.7	0	106	50-110	0			
Benzo(a)pyrene	703.3	30	666.7	0	105	50-110	0			
Benzo(b)fluoranthene	698.3	30	666.7	0	105	45-115	0			
Benzo(g,h,i)perylene	769	30	666.7	0	115	40-125	0			
Benzo(k)fluoranthene	702	30	666.7	0	105	45-115	0			
Chrysene	649.7	30	666.7	0	97.4	55-110	0			
Dibenzo(a,h)anthracene	657.7	30	666.7	0	98.6	40-125	0			
Fluoranthene	701.3	30	666.7	0	105	55-115	0			
Fluorene	673.3	30	666.7	0	101	50-110	0			
Indeno(1,2,3-cd)pyrene	782.7	30	666.7	0	117	40-120	0			
Naphthalene	607	30	666.7	0	91	40-105	0			
Pyrene	698.3	30	666.7	0	105	45-125	0			
<i>Surr: 2-Fluorobiphenyl</i>	1313	0	1667	0	78.8	12-100	0			
<i>Surr: 4-Terphenyl-d14</i>	1878	0	1667	0	113	25-137	0			
<i>Surr: Nitrobenzene-d5</i>	1475	0	1667	0	88.5	37-107	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43990**      Instrument ID **SVMS5**      Method: **SW8270**

MS				Units: µg/Kg			Analysis Date: 10/10/2012 01:51 AM			
Sample ID: <b>1210188-01B MS</b>		Run ID: <b>SVMS5_121009A</b>		SeqNo: <b>2108444</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1134	59	1305	0	86.9	45-110	0			
Anthracene	1231	59	1305	0	94.3	55-105	0			
Benzo(a)anthracene	1315	59	1305	0	101	50-110	0			
Benzo(a)pyrene	1264	59	1305	0	96.8	50-110	0			
Benzo(b)fluoranthene	1220	59	1305	0	93.5	45-115	0			
Benzo(g,h,i)perylene	1334	59	1305	0	102	40-125	0			
Benzo(k)fluoranthene	1363	59	1305	0	104	45-115	0			
Chrysene	1362	59	1305	0	104	55-110	0			
Dibenzo(a,h)anthracene	1137	59	1305	0	87.1	40-125	0			
Fluoranthene	1276	59	1305	0	97.7	55-115	0			
Fluorene	1277	59	1305	0	97.8	50-110	0			
Indeno(1,2,3-cd)pyrene	1331	59	1305	0	102	40-120	0			
Naphthalene	1158	59	1305	0	88.7	40-105	0			
Pyrene	1384	59	1305	0	106	45-125	0			
Surr: 2-Fluorobiphenyl	2412	0	3263	0	73.9	12-100	0			
Surr: 4-Terphenyl-d14	3677	0	3263	0	113	25-137	0			
Surr: Nitrobenzene-d5	2645	0	3263	0	81.1	37-107	0			

MSD				Units: µg/Kg			Analysis Date: 10/10/2012 02:21 AM			
Sample ID: <b>1210188-01B MSD</b>		Run ID: <b>SVMS5_121009A</b>		SeqNo: <b>2108445</b>		Prep Date: <b>10/8/2012</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1108	59	1319	0	84	45-110	1134	2.3	30	
Anthracene	1198	59	1319	0	90.8	55-105	1231	2.7	30	
Benzo(a)anthracene	1305	59	1319	0	99	50-110	1315	0.722	30	
Benzo(a)pyrene	1234	59	1319	0	93.5	50-110	1264	2.44	30	
Benzo(b)fluoranthene	1242	59	1319	0	94.2	45-115	1220	1.78	30	
Benzo(g,h,i)perylene	1337	59	1319	0	101	40-125	1334	0.195	30	
Benzo(k)fluoranthene	1357	59	1319	0	103	45-115	1363	0.465	30	
Chrysene	1352	59	1319	0	102	55-110	1362	0.759	30	
Dibenzo(a,h)anthracene	1144	59	1319	0	86.7	40-125	1137	0.57	30	
Fluoranthene	1244	59	1319	0	94.3	55-115	1276	2.51	30	
Fluorene	1255	59	1319	0	95.2	50-110	1277	1.72	30	
Indeno(1,2,3-cd)pyrene	1338	59	1319	0	101	40-120	1331	0.489	30	
Naphthalene	1111	59	1319	0	84.2	40-105	1158	4.17	30	
Pyrene	1385	59	1319	0	105	45-125	1384	0.0823	30	
Surr: 2-Fluorobiphenyl	2393	0	3296	0	72.6	12-100	2412	0.799	40	
Surr: 4-Terphenyl-d14	3714	0	3296	0	113	25-137	3677	0.994	40	
Surr: Nitrobenzene-d5	2584	0	3296	0	78.4	37-107	2645	2.33	40	

The following samples were analyzed in this batch: 1210192-01B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43977**      Instrument ID **VMS9**      Method: **SW8260**

<b>MBLK</b>		Sample ID: <b>MBLK-43977-43977</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/5/2012 05:15 PM</b>		
Client ID:		Run ID: <b>VMS9_121005A</b>				SeqNo: <b>2105088</b>		Prep Date: <b>10/5/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	988	0	1000	0	98.8	70-130	0			
Surr: 4-Bromofluorobenzene	868	0	1000	0	86.8	70-130	0			
Surr: Dibromofluoromethane	915.5	0	1000	0	91.6	70-130	0			
Surr: Toluene-d8	942.5	0	1000	0	94.2	70-130	0			

<b>MBLK</b>		Sample ID: <b>MBLK-43977-43977</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/6/2012 01:15 AM</b>		
Client ID:		Run ID: <b>VMS5_121005A</b>				SeqNo: <b>2105812</b>		Prep Date: <b>10/5/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	1036	0	1000	0	104	70-130	0			
Surr: 4-Bromofluorobenzene	1026	0	1000	0	103	70-130	0			
Surr: Dibromofluoromethane	1016	0	1000	0	102	70-130	0			
Surr: Toluene-d8	1020	0	1000	0	102	70-130	0			

<b>LCS</b>		Sample ID: <b>LCS-43977-43977</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>10/5/2012 03:59 PM</b>		
Client ID:		Run ID: <b>VMS9_121005A</b>				SeqNo: <b>2105087</b>		Prep Date: <b>10/5/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	919.5	30	1000	0	92	75-125	0			
Ethylbenzene	1036	30	1000	0	104	75-125	0			
m,p-Xylene	1932	60	2000	0	96.6	80-125	0			
o-Xylene	1064	30	1000	0	106	75-125	0			
Toluene	967.5	30	1000	0	96.8	70-125	0			
Xylenes, Total	2996	90	3000	0	99.9	75-125	0			
Surr: 1,2-Dichloroethane-d4	928	0	1000	0	92.8	70-130	0			
Surr: 4-Bromofluorobenzene	1044	0	1000	0	104	70-130	0			
Surr: Dibromofluoromethane	1020	0	1000	0	102	70-130	0			
Surr: Toluene-d8	999	0	1000	0	99.9	70-130	0			

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43977**      Instrument ID **VMS9**      Method: **SW8260**

LCS				Sample ID: LCS-43977-43977				Units: µg/Kg			Analysis Date: 10/6/2012 12:01 PM			
Client ID:				Run ID: VMS5_121005A				SeqNo: 2105825			Prep Date: 10/5/2012		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	1098	30	1000	0	110	75-125	0							
m,p-Xylene	2168	60	2000	0	108	80-125	0							
o-Xylene	1078	30	1000	0	108	75-125	0							
Toluene	1058	30	1000	0	106	70-125	0							
Xylenes, Total	3246	90	3000	0	108	75-125	0							
Surr: 1,2-Dichloroethane-d4	1005	0	1000	0	100	70-130	0							
Surr: 4-Bromofluorobenzene	1010	0	1000	0	101	70-130	0							
Surr: Dibromofluoromethane	1018	0	1000	0	102	70-130	0							
Surr: Toluene-d8	993	0	1000	0	99.3	70-130	0							

MS				Sample ID: 1210155-01A MS			Units: µg/Kg		Analysis Date: 10/6/2012 08:58 AM		
Client ID:			Run ID: VMS5_121005A			SeqNo: 2105823		Prep Date: 10/5/2012		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	994.5	30	1000	0	99.4	75-125	0				
Ethylbenzene	1022	30	1000	0	102	75-125	0				
m,p-Xylene	2070	60	2000	47.5	101	80-125	0				
o-Xylene	1023	30	1000	0	102	75-125	0				
Toluene	994	30	1000	0	99.4	70-125	0				
Xylenes, Total	3092	90	3000	47.5	102	75-125	0				
Surr: 1,2-Dichloroethane-d4	991.5	0	1000	0	99.2	70-130	0				
Surr: 4-Bromofluorobenzene	1054	0	1000	0	105	70-130	0				
Surr: Dibromofluoromethane	985.5	0	1000	0	98.6	70-130	0				
Surr: Toluene-d8	999.5	0	1000	0	100	70-130	0				

MSD				Sample ID: 1210155-01A MSD			Units: µg/Kg		Analysis Date: 10/6/2012 09:22 AM		
Client ID:			Run ID: VMS5_121005A			SeqNo: 2105824		Prep Date: 10/5/2012		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	974	30	1000	0	97.4	75-125	994.5	2.08	30		
Ethylbenzene	1028	30	1000	0	103	75-125	1022	0.586	30		
m,p-Xylene	2076	60	2000	47.5	101	80-125	2070	0.314	30		
o-Xylene	1016	30	1000	0	102	75-125	1023	0.637	30		
Toluene	975	30	1000	0	97.5	70-125	994	1.93	30		
Xylenes, Total	3092	90	3000	47.5	102	75-125	3092	0	30		
Surr: 1,2-Dichloroethane-d4	982.5	0	1000	0	98.2	70-130	991.5	0.912	30		
Surr: 4-Bromofluorobenzene	1026	0	1000	0	103	70-130	1054	2.74	30		
Surr: Dibromofluoromethane	993	0	1000	0	99.3	70-130	985.5	0.758	30		
Surr: Toluene-d8	994	0	1000	0	99.4	70-130	999.5	0.552	30		

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

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Batch ID: **43977**      Instrument ID **VMS9**      Method: **SW8260**

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

1210192-01A
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**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **43980** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>1210191-02A DUP</b>				Units: <b>mmhos/cm @25°F</b>		Analysis Date: <b>10/9/2012 03:15 PM</b>		
Client ID:		Run ID: <b>WETCHEM_121009M</b>				SeqNo: <b>2107256</b>		Prep Date: <b>10/9/2012</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	56.6	0.050	0	0	0		53	6.57	50	

The following samples were analyzed in this batch:

1210192-01C	1210192-02A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **44037**      Instrument ID **WETCHEM**      Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-44037-44037</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/10/2012 01:50 PM</b>		
Client ID:		Run ID: <b>WETCHEM_121010G</b>				SeqNo: <b>2108215</b>		Prep Date: <b>10/9/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      ND      0.50

<b>LCS</b>		Sample ID: <b>LCS-44037-44037</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/10/2012 01:50 PM</b>		
Client ID:		Run ID: <b>WETCHEM_121010G</b>				SeqNo: <b>2108214</b>		Prep Date: <b>10/9/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.905      0.50      1.992      0      95.7      75-110      0

<b>MS</b>		Sample ID: <b>1210192-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/10/2012 01:50 PM</b>		
Client ID: <b>Pit Bottom</b>		Run ID: <b>WETCHEM_121010G</b>				SeqNo: <b>2108211</b>		Prep Date: <b>10/9/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.841      0.49      1.976      0.1584      85.1      60-130      0

<b>MSD</b>		Sample ID: <b>1210192-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>10/10/2012 01:50 PM</b>		
Client ID: <b>Pit Bottom</b>		Run ID: <b>WETCHEM_121010G</b>				SeqNo: <b>2108212</b>		Prep Date: <b>10/9/2012</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent      1.826      0.49      1.961      0.1584      85.1      60-130      1.841      0.787      30

The following samples were analyzed in this batch:

1210192-01B

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



**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **R110799** Instrument ID **WETCHEM** Method: **SW9045D**

LCS					Sample ID: LCS-R110799-R110799					Units: s.u.			Analysis Date: 10/5/2012 09:45 AM				
Client ID:					Run ID: WETCHEM_121005H					SeqNo: 2103756			Prep Date:			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH					4.21		0	4.4	0	95.7		90-110	0				

DUP				Sample ID: 1210188-01B DUP				Units: s.u.			Analysis Date: 10/5/2012 09:45 AM			
Client ID:				Run ID: WETCHEM_121005H				SeqNo: 2103758			Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
pH		8.93	0	0	0	0	0-0	8.93	0	20				

The following samples were analyzed in this batch:

1210192-01B 1210192-02A

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **R110857**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS1-R110857</b>				Units: % of sample			Analysis Date: <b>10/5/2012 01:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121005D</b>				SeqNo: <b>2105061</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R110857</b>				Units: % of sample			Analysis Date: <b>10/5/2012 01:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121005D</b>				SeqNo: <b>2105056</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      100      0.050      100      0      100      99.5-100.5      0

<b>DUP</b>		Sample ID: <b>1210105-04A DUP</b>				Units: % of sample			Analysis Date: <b>10/5/2012 01:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121005D</b>				SeqNo: <b>2105041</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      5.95      0.050      0      0      0      0-0      5.7      4.29      20

<b>DUP</b>		Sample ID: <b>1210189-02B DUP</b>				Units: % of sample			Analysis Date: <b>10/5/2012 01:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121005D</b>				SeqNo: <b>2105045</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      1.74      0.050      0      0      0      0-0      1.72      1.16      20

The following samples were analyzed in this batch:

1210192-01B

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

**Client:** HRL Compliance Solutions  
**Work Order:** 1210192  
**Project:** WPX RGU 23-14-298 Pit Confirmation 10/4/12

## QC BATCH REPORT

Batch ID: **R110916**      Instrument ID **MOIST**      Method: **A2540 G**

<b>MBLK</b>		Sample ID: <b>WBLKS1-R110916</b>				Units: % of sample			Analysis Date: <b>10/8/2012 04:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121008D</b>				SeqNo: <b>2106322</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      ND      0.050

<b>LCS</b>		Sample ID: <b>LCS-R110916</b>				Units: % of sample			Analysis Date: <b>10/8/2012 04:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121008D</b>				SeqNo: <b>2106318</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      100      0.050      100      0      100      99.5-100.5      0

<b>DUP</b>		Sample ID: <b>1210237-02A DUP</b>				Units: % of sample			Analysis Date: <b>10/8/2012 04:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121008D</b>				SeqNo: <b>2106301</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      8.07      0.050      0      0      0      0-0      8.11      0.494      20

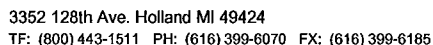
<b>DUP</b>		Sample ID: <b>1210243-04B DUP</b>				Units: % of sample			Analysis Date: <b>10/8/2012 04:30 PM</b>		
Client ID:		Run ID: <b>MOIST_121008D</b>				SeqNo: <b>2106314</b>			Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture      21.14      0.050      0      0      0      0-0      20.64      2.39      20

The following samples were analyzed in this batch:

1210192-02A

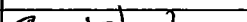

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



1210192

Form 202r8

1 of 1

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Casey Richardson	10/4/2012	1700
RECEIVED BY		Diane F. Shanley	10/5/12	0930
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: HRL

Date/Time Received: 05-Oct-12 09:30

Work Order: 1210192

Received by: DS

Checklist completed by Diane Shaw 05-Oct-12  
eSignature Date

Reviewed by: Ann Preston 06-Oct-12  
eSignature Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>5.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>10/5/2012 11:28:36 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			
Login Notes:			

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ORIGIN ID: GJTA 8012687700X314  
ALS ENVIRONMENTAL  
960 W LEVOR DR  
SALT LAKE CITY, UT 84119

SHIP DATE  
1 FROM  
Date

Sender's Name

Company

Address

City

2 Your Internal Billing Reference

3 To Recipient's Name

Company

Address

Address

City

EAL

NEW Package  
US Airbill

FedEx Tracking Number

8001 2126 9170

Phone 972 243-3271

Dept./Floor/Suite/Room

State CO ZIP 81505

Phone 616 399-6070

Dept./Floor/Suite/Room

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.

QEC

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

0200 Form ID No.

4 Express Package Service

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.

017 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.

5 Packaging \*Declared value limit \$500.

06 FedEx Envelope\*

02 FedEx Pak\*

03 FedEx Box

04 FedEx Tube

017 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.

04 No Yes  
As per attached Shipper's Declaration.

Yes Shipper's Declaration not required.

06 Dry Ice  
Dry Ice, 3, UN 1845

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.

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

2 Recipient

3 Third Party

4 Credit Card

5 Cash/Check

15

Total Packages

Total Weight

2 lbs.

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

FedEx Retrieval Copy

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

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.

fedex.com 1800.GoFedEx 1800.463.3339

fedex.com 1800.GoFedEx 1800.463.3339



8001 2126 9170

612



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

## Report Summary

Friday September 23, 2011

Report Number: L536500

Samples Received: 09/16/11

Client Project:

Description: RG 23-14-298 Pit Sampling

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,  
TX - T104704245, OK-9915, PA - 68-02979

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REPORT OF ANALYSIS

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

September 23, 2011

Date Received : September 16, 2011  
Description : RG 23-14-298 Pit Sampling  
Sample ID : RG 23-14-298-B-1 0.5FT  
Collected By : SG  
Collection Date : 09/14/11 18:17

ESC Sample # : L536500-01

Site ID : RGU 23-14298

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.5	1.0	mg/kg	6010B	09/22/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

September 23, 2011

Date Received : September 16, 2011  
Description : RG 23-14-298 Pit Sampling  
Sample ID : RG 23-14-298-B-2 0.5FT  
Collected By : SG  
Collection Date : 09/14/11 18:22

ESC Sample # : L536500-02

Site ID : RGU 23-14298

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	4.6	1.0	mg/kg	6010B	09/22/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

September 23, 2011

Date Received : September 16, 2011  
Description : RG 23-14-298 Pit Sampling  
Sample ID : RG 23-14-298-B-3 0.5FT  
Collected By : SG  
Collection Date : 09/14/11 18:25

ESC Sample # : L536500-03

Site ID : RGU 23-14298

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.5	1.0	mg/kg	6010B	09/22/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

September 23, 2011

Date Received : September 16, 2011  
Description : RG 23-14-298 Pit Sampling  
Sample ID : RG 23-14-298-B-4 0.5FT  
Collected By : SG  
Collection Date : 09/14/11 18:31

ESC Sample # : L536500-04

Site ID : RGU 23-14298

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	3.4	1.0	mg/kg	6010B	09/22/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

Karolina Blaney  
Williams  
1058 County Road 215  
Parachute, CO 81635

September 23, 2011

Date Received : September 16, 2011  
Description : RG 23-14-298 Pit Sampling  
Sample ID : RG 23-14-298-B-5 0.5FT  
Collected By : SG  
Collection Date : 09/14/11 18:36

ESC Sample # : L536500-05

Site ID : RGU 23-14298

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	7.3	1.0	mg/kg	6010B	09/22/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 09/23/11 11:15 Printed: 09/23/11 13:04

Summary of Remarks For Samples Printed  
09/23/11 at 13:04:34

TSR Signing Reports: 364  
R5 - Desired TAT

use WILPCO-910-1 for 910 list use WILPCO-910-1 for 910 list, \$100 min invoice removed per  
Rodney Mann 9/19/11 TAH

Sample: L536500-01 Account: WILPCO Received: 09/16/11 09:00 Due Date: 09/23/11 00:00 RPT Date: 09/23/11 11:15

Sample: L536500-02 Account: WILPCO Received: 09/16/11 09:00 Due Date: 09/23/11 00:00 RPT Date: 09/23/11 11:15

Sample: L536500-03 Account: WILPCO Received: 09/16/11 09:00 Due Date: 09/23/11 00:00 RPT Date: 09/23/11 11:15

Sample: L536500-04 Account: WILPCO Received: 09/16/11 09:00 Due Date: 09/23/11 00:00 RPT Date: 09/23/11 11:15

Sample: L536500-05 Account: WILPCO Received: 09/16/11 09:00 Due Date: 09/23/11 00:00 RPT Date: 09/23/11 11:15





YOUR LAB OF CHOICE

Williams  
Karolina Blaney  
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report  
Level II

L536500

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September 23, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed			
		Units	% Rec						
Arsenic	< 1	mg/kg			WG556089	09/23/11 09:29			
Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch		
		Result	Duplicate						
Arsenic	mg/kg	3.80	4.40	16.0	20	L536515-05	WG556089		
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch			
		Known Val	Result						
Arsenic	mg/kg	92.6	92.8	100.	82.9-117	WG556089			
Analyte	Units	Matrix Spike		% Rec	Limit	Ref Samp	Batch		
		MS Res	Ref Res						
Arsenic	mg/kg	50.6	4.40	50	92.4	75-125	L536515-05	WG556089	
Analyte	Units	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch	
		MSD	Ref						
Arsenic	mg/kg	50.2	50.6	91.6	75-125	0.794	20	L536515-05	WG556089

Batch number /Run number / Sample number cross reference

WG556089: R1869175 R1869176: L536500-01 03 04 05 02

\* \* Calculations are performed prior to rounding of reported values.  
 \* Performance of this Analyte is outside of established criteria.  
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



Williams  
Karolina Blaney  
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Quality Assurance Report  
Level II

L536500

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September 23, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.