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

#8420

FOR OGCC USE ONLY

RECEIVED
5/14/2014

OGCC Employee:

☒ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No: 2148356

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 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: 05-045-06691 County: Garfield
Facility Name: Clough 14-22MV Facility Number: 335218
Well Name: Clough Well Number: 14-22MV
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SESW Sec. 22 T6S R94W 6th PM Latitude: 39.506589N Longitude: -107.87860

TECHNICAL CONDITIONS

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

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.): Non-Irrigated Cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Torrifluvents

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Man-made ponds and the Colorado river are located approximately 0.7 mile to the south of the location

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

Impacted Media (check):	Extent of Impact:	How Determined:
☑ Soils	Approximately 2, 400 sq. feet x 11 ft. bgs	Excavation of the impacted area
☐ Vegetation		
☑ Groundwater	TBD	Monitor well installation & sampling
☐ Surface Water		

REMEDIATION WORKPLAN

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

See previously submitted Form 19 Spill Tracking # 2148356

Describe how source is to be removed:

See previously submitted Form 19 Spill Tracking # 2148356

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.:

See previously submitted Form 19 Spill Tracking # 2148356

Submit Page 2 with Page 1

FORM
27
Rev 6/99

Click here to reset form

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: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

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

Four (4) monitoring wells will be installed downgradient and one (1) upgradient of the excavated area. It is anticipated that the total depth of each monitoring well will average 25 feet below ground surface, depending on the water table which, during the excavation activities, has been determined to be approximately eleven (11) feet. During drilling activities, cuttings will be field screened using a photo ionization detector. If practical, soil samples will be collected at 2 foot intervals for lithology. Indication of hydrocarbon impacts will be noted and will determine the need and location of any additional monitoring wells. The monitoring wells will be developed after installation activities are complete. A map depicting the proposed location of the monitoring wells is included in Attachment A. A groundwater monitoring and sampling and analysis plan is included as Attachment B.

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.

The excavation has been backfilled, the tanks re-set, and the pad recontoured to it's orginal grade. As the location is a working well pad, no additional reclamation activities are planned at the current time.

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:

The samples location map and the laboratory analytical reports for the confirmation samples collected from the four walls of the excavated area are included in the Attachment C.
The Clough 14-22MV well pad is located within the Rifle, CO Uranium Mill Tailings Remedial Action (UMTRA) Site Institutional Control Boundary therefore the excavated soil was screened for gamma-emmiters. The radiation survey is included in the Attachment D.

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

The impacted soil is treated on-site with a bio-remediation product in order to reduce hydrocarbon contaminant levels below COGCC Table 910-1 standards.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 3/21/2014	Date Site Investigation Completed: TBD	Date Remediation Plan Submitted: 5/13/14
Remediation Start Date: May, 2014	Anticipated Completion Date: TBD	Actual Completion Date: TBD

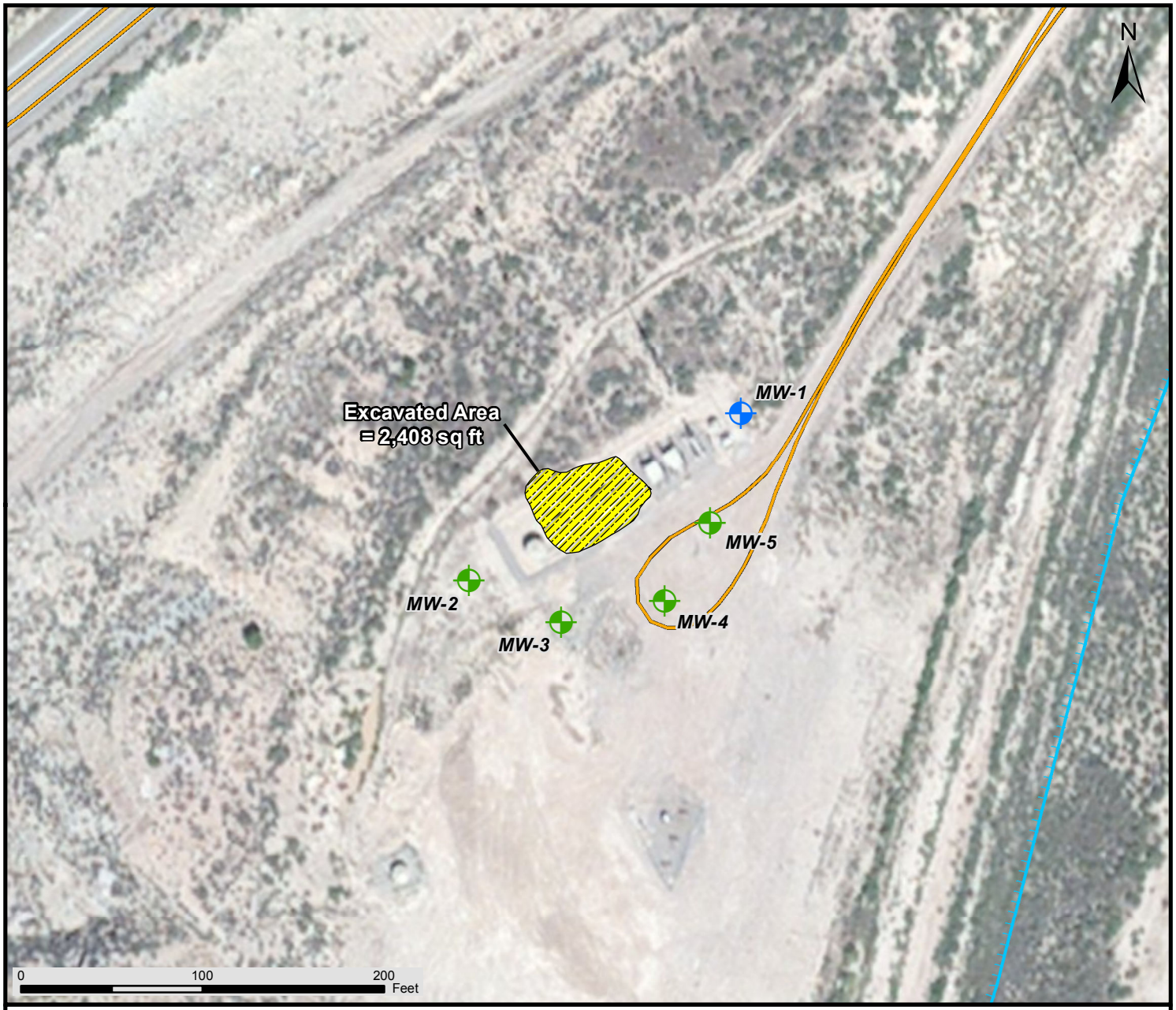
I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

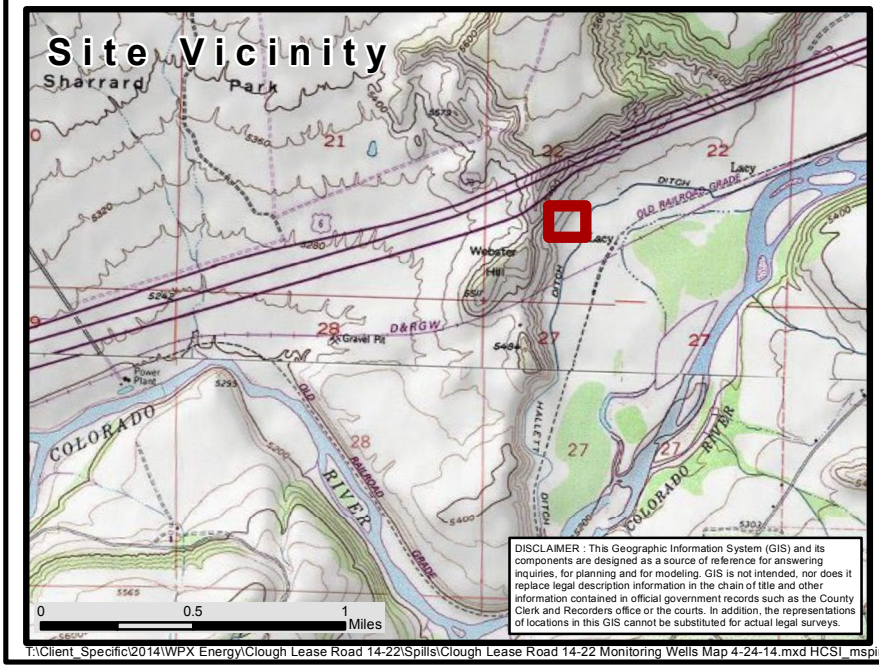
Print Name: Karolina Blaney Signed: Karolina Blaney

Title: Environmental Specialist Date: 5/13/14

OGCC Approved: Stanley C. Spencer Title: EPS Northwest Date: 5/14/2014

Attachment A





Proposed Monitoring Well Locations

Location: Clough 14-22

39.507060 -107.878716

WPX Energy

Proposed Upgradient Well

Proposed Downgradient Well

Excavated Area

PLSS

Township

Section

Transportation Features

Public Roads

Access Roads

Hydrographic Features

Perennial Stream

Intermittent Stream

WPXENERGY

HCSI ENVIRONMENTAL CONSULTANTS

HRL COMPLIANCE SOLUTIONS, INC.

T:\Client_Specific\2014\WPX Energy\Clough Lease Road 14-22\Spills\Clough Lease Road 14-22 Monitoring Wells Map 4-24-14.mxd HCSI_mspinelli

Revision Date: 4/24/2014 10:06:56 AM

Attachment B

Groundwater Monitoring, Sampling and Analysis Plan

Clough 14-22MV Well Pad
WPX Energy Rocky Mountain, LLC

Prepared for:

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

Prepared by:
HRL Compliance Solutions, Inc.
2385 F ½ Road
Grand Junction, CO 81505
Phone: 970-243-3271

Prepared: May 2014

Table of Contents

1.0 INTRODUCTION

WPX Energy Rocky Mountain, LLC (WPX) retained HRL Compliance Solutions, Inc. (HCSI) to conduct groundwater quality sampling at selected locations downgradient of the excavated area on the WPX Clough 14-22MV well pad. The Groundwater Monitoring and Sampling and Analysis Plan is being provided as a supplement to the Form 27 requested by the COGCC on April 3, 2014.

This Groundwater Monitoring and Sampling and Analysis Plan is a guidance document that outlines the goals for groundwater monitoring, sampling frequency, and sampling procedures to delineate the extent of localized groundwater contamination that was discovered during the remediation of a condensate release discovered on March 21, 2014 at the WPX Clough 14-22MV location and reported to COGCC on March 22, 2014.

2.0 BACKGROUND

The following sections report information regarding the site location and release summary for the Clough 14-22MV well pad.

2.1 Site Location

The WPX Clough 14-22MV well pad is located in the South Rulison Field located in Garfield County, Colorado. Specifically, the well pad is located in the SESW of Section 22, Township 6 South Range 94 West of the 6th Primary Meridian. The well pad is situated on Quaternary age alluvial deposits consisting of loam, sand, and river cobbles at approximately 11 feet (See Attachment A for the Site Location Map).

2.2 Release Summary

The release was caused by corrosion of a buried condensate dump line. The leak was discovered during a quarterly pressure integrity test of the dump line. The leaking line, buried approximately five (5) feet below the pad surface, allowed the condensate to be released into subsurface soils. The impacted area was excavated the week of March 24, 2014 to a depth of approximately eleven (11) feet where river cobble and groundwater was encountered making further excavation impractical. Confirmation samples collected from all four (4) walls of the excavation were in compliance with the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards. Background samples were also collected and analyzed for arsenic. As the release was condensate, SAR and EC were not included or analyzed in the background samples. The analytical results for hydrocarbons are presented in Table 1. The raw analytical data and the confirmation sample locations are attached with the Form 27 (Attachment C).

On April 3, 2014, permission was granted by the COGCC allowing the excavation to be backfilled with clean native material. A Form 27 was requested to address potential groundwater contamination downgradient of the excavated area.

Table 1. Sidewall Confirmation analytical

Sample ID	Sample Date	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	GRO mg/kg	DRO mg/kg
COGCC 910-1 standards		0.17	85	100	175	500	
North Wall	3/25/14	0.17	<0.008	<0.008	<0.008	100	15
South Wall	3/28/14	0.130	ND	ND	.290	ND	320
East Wall	3/25/14	0.057	.400	0.68	1.7	44	15
West Wall	3/25/14	<0.034	<0.034	0.055	.640	41	18

3.0 GROUNDWATER MONITORING PLAN (PROPOSED)

The groundwater impacts at the Clough 14-22MV appears to be limited to the excavated area beneath the former location of the production tanks. This area below the former tanks was excavated to a depth of approximately 11 feet bgs where hydrocarbon impacted groundwater was encountered. A surface water sample collected from the bottom of the excavation has benzene concentrations which exceed the COGCC Table 910-1 standards for benzene. However, benzene is at a concentration that will likely attenuate within a reasonable time period. Therefore, the overall goal of the groundwater monitoring will be to conduct Monitored Natural Attenuation (MNA) over four quarters to ensure benzene concentration at the Cough 14-22 MV are below the COGCC Table 910-1 standards.

Four (4) two inch monitoring wells will be installed downgradient and one (1) two inch monitoring well will be installed upgradient of the excavated area. It is anticipated that the total depth of each monitoring well will average 25 feet below ground surface, depending on the water table which, during the excavation activities, has been determined to be approximately eleven (11) feet. During drilling activities, cuttings will be field screened using a photo ionization detector. If practical, soil samples will be collected at 2 foot intervals for lithology. Indication of hydrocarbon impacts will be noted and will determine the need and location of any additional monitoring wells. The monitoring wells will be developed after installation activities are complete. A map depicting the proposed location of the monitoring wells is included in Attachment A to the Form 27.

3.1 Quarterly Sampling

To monitor the progress of the MNA and verify that the source removal was complete, HCSI recommends that the proposed monitoring wells be sampled for a period of one year on a quarterly basis.

4.0 SAMPLING AND ANALYSIS PLAN

Upon approval of the submitted Form 27, water samples will be collected from the proposed monitoring wells. All of the proposed monitoring wells will be surveyed utilizing a Trimble GeoXT GPS unit, for compliance with COGCC rule 215, and placed on the sample location map. Casing and ground elevations will be surveyed for permitting purposes and to prepare a potentiometric map of the area depicting groundwater flow directions. The following table identifies and explains the proposed monitoring well sample locations for the Clough 14-22MV well pad.

Clough 14-22MV Well Pad		
Proposed Sample ID	**Matrix**	**Description**
MW-1	Groundwater	Upgradient water sample to establish background concentration
MW-2	Groundwater	Downgradient water sample
MW-3	Groundwater	Downgradient water sample
MW-4	Groundwater	Downgradient water sample
MW-5	Groundwater	Downgradient water sample

5.0 SAMPLING PROCEDURES

Water samples will be collected and placed in laboratory supplied containers, placed on ice in a sample cooler and shipped overnight delivery to ALS Environmental, in Holland, Michigan. All samples will be shipped following laboratory chain-of-custody protocol. The samples will be analyzed for the following parameters using the indicated test method:

Water

- Benzene-Toluene-Ethylbenzene-Xylenes (BTEX).....EPA Method SW8260
- Total Dissolved Solids .....EPA E.160.1
- Chloride.....EPA Method SW9056
- Sulfate .....EPA Method SW9056
- Temperature .....Field Measurement YSI
- Electrical Conductivity .....Field Measurement YSI
- Resistivity .....Field Measurement YSI
- Salinity .....Field Measurement YSI
- Dissolved Oxygen .....Field Measurement YSI
- pH.....Field Measurement YSI
- Oxygen Reduction Potential .....Field Measurement YSI

Due to the shallow depth to groundwater, samples will be collected utilizing a peristaltic pump. The wells will be purged and sampled in accordance with EPA Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures (EPA/540/S-95/504 April 1996, Revised 2010). Pump head tubing, as well as sample collection tubing, will be replaced between samples to ensure no

potential for cross contamination. Water quality parameters, listed above, will be collected utilizing a YSI 556 MPS water quality meter.

6.0 DECONTAMINATION PROCEDURES

All equipment that comes into contact with potentially contaminated water will be decontaminated prior to re-use. Decontamination will consist of washing with a mixture of deionized (DI) water, Alconox soap and rinsing with DI water.

7.0 FIELD QUALITY CONTROL

- A single field duplicate sample will be collected once per quarter. The duplicate will be collected simultaneously with a standard sample from the same source under identical conditions into separate sample containers. The duplicate sample is used to assess laboratory performance through comparison of lab results.
- One trip blank will be prepared and shipped with each sample event when water is collected. The trip blank is used to assess any potential cross contamination during shipment.
- Field equipment will be calibrated prior to each sample event.

8.0 LABORATORY QUALITY CONTROL

The analytical laboratory will perform Quality Control (QC). The QC will consist of method blank results, laboratory control spikes and matrix spike results.

1. Method Blank Results – A method blank is a laboratory generated sample that assesses the degree to which laboratory operations and procedures cause false-positive analytical results. The method blank results associated with the samples will be included in the final lab report.
2. Laboratory Control Spike – A laboratory control spike is a sample that is spiked with known analyte concentrations and then analyzed at approximately 10 percent of the sample load in order to establish method specific control limits.
3. Matrix Spike Results – A matrix spike is a sample that is spiked with known analyte concentrations and analyzed at approximately 10 percent of the sample load in order to establish method specific control limits.
4. Trip Blank – A clean sample of a matrix that is taken from the laboratory to the sampling site and transported back to the laboratory without having been exposed to sampling procedures. A trip blank is typically analyzed for volatile compounds only. The trip blank assesses contamination introduced during shipping and field handling procedures.

9.0 FIELD NOTES

A field log book will be used to document the vital project and sample information. At a minimum the following sample information will be recorded.

- Sample ID
- Location (GPS)
- Date and Time
- Ambient temperature
- Field investigator will document all personnel on location, including both contractor and regulating agency personnel
- Any other field comments by field personnel

10.0 PHOTOGRAPHS

Photographs will be taken at the sample location and at surrounding areas. The photographs will verify information entered into the field log book. Each photograph taken will be documented in the field log book with the approximate time, location, and date.

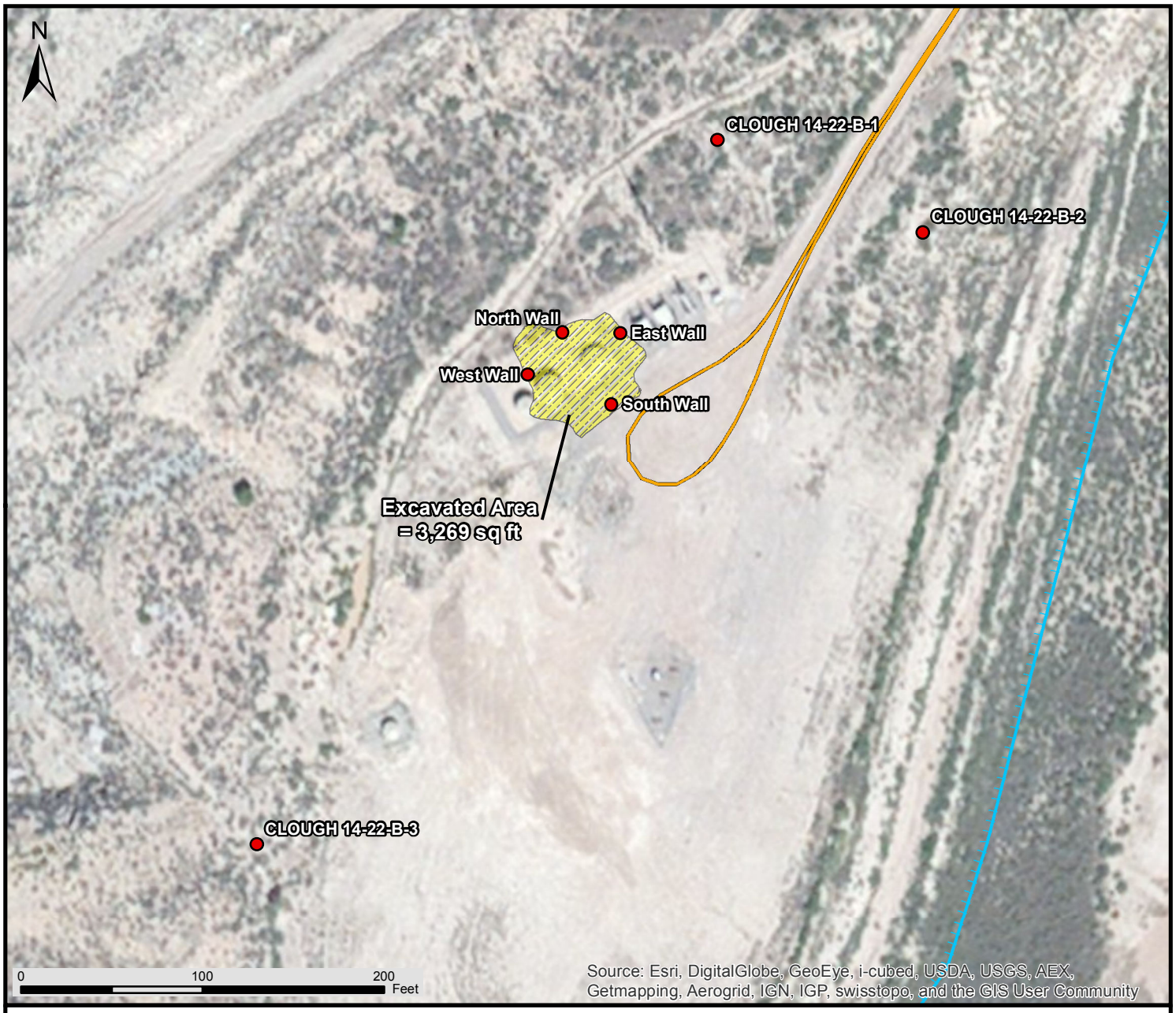
11.0 REPORTING

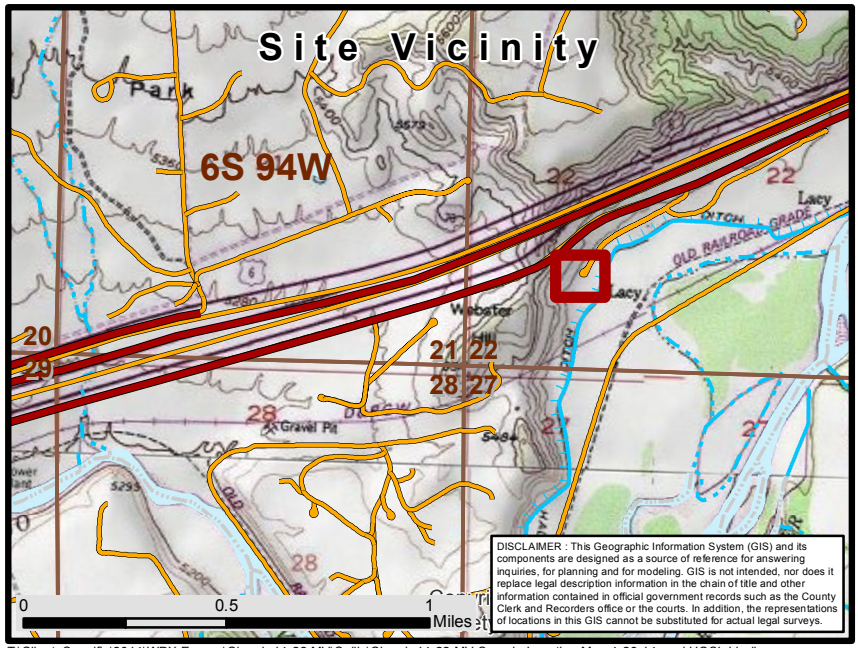
Following receipt of the final analytical report, HCSI staff will review, evaluate and summarize project data/information utilizing appropriate figures and tables. All sampling summary reports will be provided to COGCC as soon as practical

12.0 CONCLUSION

WPX Energy Rocky Mountain, LLC (WPX) retained HRL Compliance Solutions, Inc. (HCSI) to conduct water quality sampling at proposed locations downgradient of the WPX Clough 14-22MV well pad. This proposed Groundwater Monitoring and Sampling and Analysis Plan has presented this guidance document to outline the water quality sampling protocol for potential groundwater contamination resulting from a condensate release which was discovered on March 21, 2014 at the WPX Clough 14-22MV well pad. WPX reserves the right to amend or update this proposed plan if merited by new findings at or near the site location. Any changes will be documented and sent to the COGCC via a Form 4.

Attachment C





Sample Location Map

Location: Clough 14-22 MV

39.507060 -107.878716

WPX Energy

Sample Location

Excavated Area

PLSS

Township

Section

Transportation Features

Public Roads

Access Roads

Hydrographic Features

Perennial Stream

Ditch/Canal

WPXENERGY

HCSI ENVIRONMENTAL CONSULTANTS

HRL COMPLIANCE SOLUTIONS, INC.

T:\Client_Specific\2014\WPX Energy\Clough 14-22 MV\Spills\Clough 14-22 MV Sample Location Map 4-28-14.mxd HCSI_bhall

Revision Date: 4/28/2014 9:25:20 AM

Analytical Results
Clough 14-22 MV

Contaminant of Concern ↓	COGCC standards	Location →	South Wall	South Wall	East Wall	West Wall	North Wall
		Date Sampled →	3/25/2014	3/28/2014	3/25/2014	3/25/2014	3/25/2014
Organic Compounds in Soil							
TPH	500	mg/kg	1,570	320	59	59	115
DRO		mg/kg	470	320	15	18	15
GRO		mg/kg	1,100	<3	44	41	100
Benzene	0.17	mg/kg	1.1	0.13	0.057	<0.034	0.17
Toluene	85	mg/kg	41	<0.036	0.4	0.11	2.1
Ethylbenzene	100	mg/kg	14	<0.036	0.068	0.055	0.33
Xylenes (Total)	175	mg/kg	220	0.29	1.7	0.64	6.2
Acenaphthene	1,000	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Anthracene	1,000	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Benzo(A)anthracene	0.22	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Benzo(B)fluoranthene	0.22	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Benzo(K)fluoranthene	2.2	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Benzo(A)pyrene	0.022	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Chrysene	22	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Dibenzo(A,H)anthracene	0.022	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Fluoranthene	1,000	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Fluorene	1,000	mg/kg	0.029		<0.0077	<0.0074	<0.008
Indeno(1,2,3-cd)pyrene	0.22	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Naphthalene	23	mg/kg	0.45		<0.0077	<0.0074	<0.008
Pyrene	1,000	mg/kg	<0.0076		<0.0077	<0.0074	<0.008
Inorganics in Soil							
EC	<4 or 2 x background	mmhos/cm	12		34	14	62
SAR	<12		43		35	18	51
pH	6-9		9.1		8.1	8.2	8.3
Metals in Soil							
Arsenic	0.39	mg/kg	7.9		5.3	6.8	5
Barium total	15,000	mg/kg	120		120	160	110
Cadmium	70	mg/kg	<0.88		<0.89	<0.91	<0.9
Chromium (III)	120,000	mg/kg	10		9	9.7	10
Chromium (VI)	23	mg/kg	<0.58		<0.57	<0.57	<0.61
Copper	3,100	mg/kg	13		10	12	11
Lead	400	mg/kg	13		10	12	10
Mercury	23	mg/kg	<0.016		<0.016	0.019	<0.016
Nickel	1,600	mg/kg	16		14	15	16
Selenium	390	mg/kg	<2.2		<2.2	<2.3	<2.3
Silver	390	mg/kg	<2.2		<2.2	<2.3	<2.3
Zinc	23,000	mg/kg	57		53	59	58

Analytical Results
Clough 14-22 MV

Contaminant of Concern ↓	COGCC standards	Location →	Clough 14-22-B-1	Clough 14-22-B-2	Clough 14-22-B-3
		Date Sampled →	4/9/2014	4/9/2014	4/9/2014
Organic Compounds in Soil					
TPH	500	mg/kg			
DRO		mg/kg			
GRO		mg/kg			
Benzene	0.17	mg/kg			
Toluene	85	mg/kg			
Ethylbenzene	100	mg/kg			
Xylenes (Total)	175	mg/kg			
Acenaphthene	1,000	mg/kg			
Anthracene	1,000	mg/kg			
Benzo(A)anthracene	0.22	mg/kg			
Benzo(B)fluoranthene	0.22	mg/kg			
Benzo(K)fluoranthene	2.2	mg/kg			
Benzo(A)pyrene	0.022	mg/kg			
Chrysene	22	mg/kg			
Dibenzo(A,H)anthracene	0.022	mg/kg			
Fluoranthene	1,000	mg/kg			
Fluorene	1,000	mg/kg			
Indeno(1,2,3-cd)pyrene	0.22	mg/kg			
Naphthalene	23	mg/kg			
Pyrene	1,000	mg/kg			
Inorganics in Soil					
EC	<4 or 2 x background	mmhos/cm			
SAR	<12				
pH	6-9				
Metals in Soil					
Arsenic	0.39	mg/kg	4.9	5.4	8.7
Barium total	15,000	mg/kg			
Cadmium	70	mg/kg			
Chromium (III)	120,000	mg/kg			
Chromium (VI)	23	mg/kg			
Copper	3,100	mg/kg			
Lead	400	mg/kg			
Mercury	23	mg/kg			
Nickel	1,600	mg/kg			
Selenium	390	mg/kg			
Silver	390	mg/kg			
Zinc	23,000	mg/kg			

31-Mar-2014

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

Re: **WPX Clough 14-22 Condensate Spill 3.25.14** Work Order: **14031137**

Dear Mark,

ALS Environmental received 4 samples on 26-Mar-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 30.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 31-Mar-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14
Work Order: **14031137**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14031137-01	South Wall	Soil		3/25/2014 15:50	3/26/2014 09:30	☐
14031137-02	East Wall	Soil		3/25/2014 15:40	3/26/2014 09:30	☐
14031137-03	West Wall	Soil		3/25/2014 16:00	3/26/2014 09:30	☐
14031137-04	North Wall	Soil		3/25/2014 16:10	3/26/2014 09:30	☐

ALS Group USA, Corp

Date: 31-Mar-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14
Work Order: 14031137

Case Narrative

Batch 56918 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 57006 MS/MSD data for Hexavalent Chromium is not related to this project's samples. No data requires qualification.

Batch 56917 sample 14031137-01 was run at a dilution for BTEX due to high concentrations of target and non target analytes. One surrogate recovery was above control limits, but all results associated with this surrogate were reported from the dilution. No data requires qualification.

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

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

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

ALS Group USA, Corp

Date: *31-Mar-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: South Wall **Lab ID:** 14031137-01
Collection Date: 3/25/2014 03:50 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/26/14	Analyst: **IT**
DRO (C10-C28)	**470**		**4.8**	**mg/Kg-dry**	1	3/27/2014 12:27 PM
Surr: 4-Terphenyl-d14	*45.1*		*39-115*	*%REC*	1	3/27/2014 12:27 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 3/26/14	Analyst: **IT**
GRO (C6-C10)	**1,100**		**2.9**	**mg/Kg-dry**	1	3/27/2014 06:01 AM
Surr: Toluene-d8	*118*		*50-150*	*%REC*	1	3/27/2014 06:01 AM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 3/27/14	Analyst: **LR**
Mercury	ND		0.016	mg/Kg-dry	1	3/27/2014 01:37 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 3/26/14	Analyst: **ML**
Arsenic	**7.9**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Barium	**120**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Cadmium	ND		0.88	mg/Kg-dry	5	3/27/2014 04:18 AM
Chromium	**10**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Copper	**13**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Lead	**13**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Nickel	**16**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
Selenium	ND		2.2	mg/Kg-dry	5	3/27/2014 04:18 AM
Silver	ND		2.2	mg/Kg-dry	5	3/27/2014 04:18 AM
Zinc	**57**		**4.4**	**mg/Kg-dry**	5	3/27/2014 04:18 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Calcium	**41**		**10**	**mg/L**	20	3/30/2014 08:02 AM
Magnesium	**60**		**4.0**	**mg/L**	20	3/30/2014 08:02 AM
Sodium	**1,800**		**4.0**	**mg/L**	20	3/30/2014 08:02 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Sodium Adsorption Ratio	**43**		**0.010**	**none**	1	3/29/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 3/26/14	Analyst: **RM**
Acenaphthene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Acenaphthylene	**29**		**7.6**	**µg/Kg-dry**	1	3/26/2014 07:57 PM
Anthracene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Benzo(a)anthracene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Benzo(a)pyrene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Benzo(b)fluoranthene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Benzo(g,h,i)perylene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Benzo(k)fluoranthene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Chrysene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM

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

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: South Wall **Lab ID:** 14031137-01
Collection Date: 3/25/2014 03:50 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Fluoranthene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Fluorene	**29**		**7.6**	**µg/Kg-dry**	1	3/26/2014 07:57 PM
Indeno(1,2,3-cd)pyrene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Naphthalene	**450**		**7.6**	**µg/Kg-dry**	1	3/26/2014 07:57 PM
Pyrene	ND		7.6	µg/Kg-dry	1	3/26/2014 07:57 PM
Surr: 2-Fluorobiphenyl	*64.3*		*12-100*	*%REC*	1	3/26/2014 07:57 PM
Surr: 4-Terphenyl-d14	*85.5*		*25-137*	*%REC*	1	3/26/2014 07:57 PM
Surr: Nitrobenzene-d5	*80.6*		*37-107*	*%REC*	1	3/26/2014 07:57 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/26/14	Analyst: **AK**
Benzene	**1,100**		**35**	**µg/Kg-dry**	1	3/26/2014 06:49 PM
Ethylbenzene	**14,000**		**690**	**µg/Kg-dry**	20	3/27/2014 11:13 AM
m,p-Xylene	**200,000**		**1,400**	**µg/Kg-dry**	20	3/27/2014 11:13 AM
o-Xylene	**26,000**		**690**	**µg/Kg-dry**	20	3/27/2014 11:13 AM
Toluene	**41,000**		**690**	**µg/Kg-dry**	20	3/27/2014 11:13 AM
Xylenes, Total	**220,000**		**2,100**	**µg/Kg-dry**	20	3/27/2014 11:13 AM
Surr: 1,2-Dichloroethane-d4	*95.6*		*70-130*	*%REC*	1	3/26/2014 06:49 PM
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-130*	*%REC*	20	3/27/2014 11:13 AM
Surr: 4-Bromofluorobenzene	*97.9*		*70-130*	*%REC*	1	3/26/2014 06:49 PM
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	20	3/27/2014 11:13 AM
Surr: Dibromofluoromethane	*96.0*		*70-130*	*%REC*	20	3/27/2014 11:13 AM
Surr: Dibromofluoromethane	*98.1*		*70-130*	*%REC*	1	3/26/2014 06:49 PM
Surr: Toluene-d8	*114*		*70-130*	*%REC*	20	3/27/2014 11:13 AM
Surr: Toluene-d8	*150*	S	*70-130*	*%REC*	1	3/26/2014 06:49 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **JJG**
Electrical Conductivity @ Saturation	**12**		**0.12**	**mmhos/cm @25**	25	3/29/2014 09:20 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**10**		**0.58**	**mg/Kg-dry**	1	3/28/2014 04:10 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/27/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.58	mg/Kg-dry	1	3/28/2014 09:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**13**		**0.050**	**% of sample**	1	3/26/2014 12:16 PM
PH			**SW9045D**		Prep: EXTRACT / 3/26/14	Analyst: **AT**
pH	**9.1**			**s.u.**	1	3/26/2014 04:30 PM

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

ALS Group USA, Corp

Date: *31-Mar-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: East Wall **Lab ID:** 14031137-02
Collection Date: 3/25/2014 03:40 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/26/14	Analyst: **IT**
DRO (C10-C28)	**15**		**4.8**	**mg/Kg-dry**	1	3/27/2014 12:57 PM
Surr: 4-Terphenyl-d14	*63.1*		*39-115*	*%REC*	1	3/27/2014 12:57 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 3/26/14	Analyst: **IT**
GRO (C6-C10)	**44**		**2.9**	**mg/Kg-dry**	1	3/27/2014 06:26 AM
Surr: Toluene-d8	*114*		*50-150*	*%REC*	1	3/27/2014 06:26 AM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 3/27/14	Analyst: **LR**
Mercury	ND		0.016	mg/Kg-dry	1	3/27/2014 01:39 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 3/26/14	Analyst: **ML**
Arsenic	**5.3**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Barium	**120**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Cadmium	ND		0.89	mg/Kg-dry	5	3/27/2014 04:24 AM
Chromium	**9.0**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Copper	**10**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Lead	**10**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Nickel	**14**		**2.2**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
Selenium	ND		2.2	mg/Kg-dry	5	3/27/2014 04:24 AM
Silver	ND		2.2	mg/Kg-dry	5	3/27/2014 04:24 AM
Zinc	**53**		**4.4**	**mg/Kg-dry**	5	3/27/2014 04:24 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Calcium	**530**		**10**	**mg/L**	20	3/30/2014 08:08 AM
Magnesium	**560**		**4.0**	**mg/L**	20	3/30/2014 08:08 AM
Sodium	**4,900**		**40**	**mg/L**	200	3/30/2014 05:47 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Sodium Adsorption Ratio	**35**		**0.010**	**none**	1	3/29/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 3/26/14	Analyst: **RM**
Acenaphthene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Acenaphthylene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Anthracene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Benzo(a)anthracene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Benzo(a)pyrene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Benzo(b)fluoranthene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Benzo(g,h,i)perylene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Benzo(k)fluoranthene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Chrysene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM

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

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: East Wall **Lab ID:** 14031137-02
Collection Date: 3/25/2014 03:40 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Fluoranthene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Fluorene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Indeno(1,2,3-cd)pyrene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Naphthalene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Pyrene	ND		7.7	µg/Kg-dry	1	3/26/2014 08:17 PM
Surr: 2-Fluorobiphenyl	*63.9*		*12-100*	*%REC*	1	3/26/2014 08:17 PM
Surr: 4-Terphenyl-d14	*88.6*		*25-137*	*%REC*	1	3/26/2014 08:17 PM
Surr: Nitrobenzene-d5	*67.4*		*37-107*	*%REC*	1	3/26/2014 08:17 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/26/14	Analyst: **AK**
Benzene	**57**		**35**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
Ethylbenzene	**68**		**35**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
m,p-Xylene	**1,400**		**69**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
o-Xylene	**230**		**35**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
Toluene	**400**		**35**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
Xylenes, Total	**1,700**		**100**	**µg/Kg-dry**	1	3/26/2014 04:47 PM
Surr: 1,2-Dichloroethane-d4	*97.4*		*70-130*	*%REC*	1	3/26/2014 04:47 PM
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	1	3/26/2014 04:47 PM
Surr: Dibromofluoromethane	*96.1*		*70-130*	*%REC*	1	3/26/2014 04:47 PM
Surr: Toluene-d8	*103*		*70-130*	*%REC*	1	3/26/2014 04:47 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **JJG**
Electrical Conductivity @ Saturation	**34**		**0.12**	**mmhos/cm @25**	25	3/29/2014 09:20 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**9.0**		**0.58**	**mg/Kg-dry**	1	3/28/2014 04:10 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/27/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	3/28/2014 09:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**13**		**0.050**	**% of sample**	1	3/26/2014 12:16 PM
PH			**SW9045D**		Prep: EXTRACT / 3/26/14	Analyst: **AT**
pH	**8.1**			**s.u.**	1	3/26/2014 04:30 PM

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

ALS Group USA, Corp

Date: *31-Mar-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: West Wall **Lab ID:** 14031137-03
Collection Date: 3/25/2014 04:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/26/14	Analyst: **IT**
DRO (C10-C28)	**18**		**4.6**	**mg/Kg-dry**	1	3/27/2014 01:27 PM
Surr: 4-Terphenyl-d14	*64.9*		*39-115*	*%REC*	1	3/27/2014 01:27 PM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 3/26/14	Analyst: **IT**
GRO (C6-C10)	**41**		**2.9**	**mg/Kg-dry**	1	3/27/2014 06:52 AM
Surr: Toluene-d8	*119*		*50-150*	*%REC*	1	3/27/2014 06:52 AM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 3/27/14	Analyst: **LR**
Mercury	**0.019**		**0.016**	**mg/Kg-dry**	1	3/27/2014 01:41 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 3/26/14	Analyst: **ML**
Arsenic	**6.8**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Barium	**160**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Cadmium	ND		0.91	mg/Kg-dry	5	3/27/2014 04:30 AM
Chromium	**9.9**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Copper	**12**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Lead	**12**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Nickel	**15**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
Selenium	ND		2.3	mg/Kg-dry	5	3/27/2014 04:30 AM
Silver	ND		2.3	mg/Kg-dry	5	3/27/2014 04:30 AM
Zinc	**59**		**4.5**	**mg/Kg-dry**	5	3/27/2014 04:30 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Calcium	**440**		**10**	**mg/L**	20	3/30/2014 08:20 AM
Magnesium	**190**		**4.0**	**mg/L**	20	3/30/2014 08:20 AM
Sodium	**1,800**		**4.0**	**mg/L**	20	3/30/2014 08:20 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Sodium Adsorption Ratio	**18**		**0.010**	**none**	1	3/29/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 3/26/14	Analyst: **RM**
Acenaphthene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Acenaphthylene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Anthracene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Benzo(a)anthracene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Benzo(a)pyrene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Benzo(b)fluoranthene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Benzo(g,h,i)perylene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Benzo(k)fluoranthene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Chrysene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM

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

ALS Group USA, Corp

Date: *31-Mar-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: West Wall **Lab ID:** 14031137-03
Collection Date: 3/25/2014 04:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Fluoranthene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Fluorene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Indeno(1,2,3-cd)pyrene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Naphthalene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Pyrene	ND		7.4	µg/Kg-dry	1	3/26/2014 08:37 PM
Surr: 2-Fluorobiphenyl	*63.4*		*12-100*	*%REC*	1	3/26/2014 08:37 PM
Surr: 4-Terphenyl-d14	*89.9*		*25-137*	*%REC*	1	3/26/2014 08:37 PM
Surr: Nitrobenzene-d5	*58.5*		*37-107*	*%REC*	1	3/26/2014 08:37 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/26/14	Analyst: **AK**
Benzene	ND		34	µg/Kg-dry	1	3/26/2014 05:11 PM
Ethylbenzene	**55**		**34**	**µg/Kg-dry**	1	3/26/2014 05:11 PM
m,p-Xylene	**570**		**69**	**µg/Kg-dry**	1	3/26/2014 05:11 PM
o-Xylene	**71**		**34**	**µg/Kg-dry**	1	3/26/2014 05:11 PM
Toluene	**110**		**34**	**µg/Kg-dry**	1	3/26/2014 05:11 PM
Xylenes, Total	**640**		**100**	**µg/Kg-dry**	1	3/26/2014 05:11 PM
Surr: 1,2-Dichloroethane-d4	*98.1*		*70-130*	*%REC*	1	3/26/2014 05:11 PM
Surr: 4-Bromofluorobenzene	*98.6*		*70-130*	*%REC*	1	3/26/2014 05:11 PM
Surr: Dibromofluoromethane	*96.1*		*70-130*	*%REC*	1	3/26/2014 05:11 PM
Surr: Toluene-d8	*101*		*70-130*	*%REC*	1	3/26/2014 05:11 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **JJG**
Electrical Conductivity @ Saturation	**14**		**0.12**	**mmhos/cm @25**	25	3/29/2014 09:20 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**9.7**		**0.57**	**mg/Kg-dry**	1	3/28/2014 04:10 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/27/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.57	mg/Kg-dry	1	3/28/2014 09:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**13**		**0.050**	**% of sample**	1	3/26/2014 12:16 PM
PH			**SW9045D**		Prep: EXTRACT / 3/26/14	Analyst: **AT**
pH	**8.2**			**s.u.**	1	3/26/2014 04:30 PM

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

ALS Group USA, Corp

Date: *31-Mar-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: North Wall **Lab ID:** 14031137-04
Collection Date: 3/25/2014 04:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/26/14	Analyst: **IT**
DRO (C10-C28)	**15**		**5.0**	**mg/Kg-dry**	1	3/27/2014 10:58 AM
Surr: 4-Terphenyl-d14	*71.6*		*39-115*	*%REC*	1	3/27/2014 10:58 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 3/26/14	Analyst: **IT**
GRO (C6-C10)	**100**		**3.0**	**mg/Kg-dry**	1	3/27/2014 07:17 AM
Surr: Toluene-d8	*116*		*50-150*	*%REC*	1	3/27/2014 07:17 AM
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 3/27/14	Analyst: **LR**
Mercury	ND		0.016	mg/Kg-dry	1	3/27/2014 01:43 PM
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 3/26/14	Analyst: **ML**
Arsenic	**5.0**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Barium	**110**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Cadmium	ND		0.90	mg/Kg-dry	5	3/27/2014 04:55 AM
Chromium	**10**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Copper	**11**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Lead	**10**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Nickel	**16**		**2.3**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
Selenium	ND		2.3	mg/Kg-dry	5	3/27/2014 04:55 AM
Silver	ND		2.3	mg/Kg-dry	5	3/27/2014 04:55 AM
Zinc	**58**		**4.5**	**mg/Kg-dry**	5	3/27/2014 04:55 AM
SOLUBLE CATIONS FOR SAR			**SW6020A**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Calcium	**630**		**10**	**mg/L**	20	3/30/2014 08:26 AM
Magnesium	**1,300**		**4.0**	**mg/L**	20	3/30/2014 08:26 AM
Sodium	**9,800**		**40**	**mg/L**	200	3/30/2014 05:58 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **RH**
Sodium Adsorption Ratio	**51**		**0.010**	**none**	1	3/29/2014
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW8270**		Prep: SW3541 / 3/26/14	Analyst: **RM**
Acenaphthene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Acenaphthylene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Anthracene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Benzo(a)anthracene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Benzo(a)pyrene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Benzo(b)fluoranthene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Benzo(g,h,i)perylene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Benzo(k)fluoranthene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Chrysene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM

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

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.25.14 **Work Order:** 14031137
Sample ID: North Wall **Lab ID:** 14031137-04
Collection Date: 3/25/2014 04:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Fluoranthene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Fluorene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Indeno(1,2,3-cd)pyrene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Naphthalene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Pyrene	ND		8.0	µg/Kg-dry	1	3/26/2014 06:56 PM
Surr: 2-Fluorobiphenyl	*72.4*		*12-100*	*%REC*	1	3/26/2014 06:56 PM
Surr: 4-Terphenyl-d14	*101*		*25-137*	*%REC*	1	3/26/2014 06:56 PM
Surr: Nitrobenzene-d5	*78.1*		*37-107*	*%REC*	1	3/26/2014 06:56 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/26/14	Analyst: **AK**
Benzene	**170**		**36**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
Ethylbenzene	**330**		**36**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
m,p-Xylene	**5,400**		**72**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
o-Xylene	**810**		**36**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
Toluene	**2,100**		**36**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
Xylenes, Total	**6,200**		**110**	**µg/Kg-dry**	1	3/26/2014 05:36 PM
Surr: 1,2-Dichloroethane-d4	*97.0*		*70-130*	*%REC*	1	3/26/2014 05:36 PM
Surr: 4-Bromofluorobenzene	*95.4*		*70-130*	*%REC*	1	3/26/2014 05:36 PM
Surr: Dibromofluoromethane	*95.1*		*70-130*	*%REC*	1	3/26/2014 05:36 PM
Surr: Toluene-d8	*105*		*70-130*	*%REC*	1	3/26/2014 05:36 PM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 3/28/14	Analyst: **JJG**
Electrical Conductivity @ Saturation	**62**		**0.12**	**mmhos/cm @25**	25	3/29/2014 09:20 AM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JJG**
Chromium, Trivalent	**10**		**0.60**	**mg/Kg-dry**	1	3/28/2014 04:10 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 3/27/14	Analyst: **MB**
Chromium, Hexavalent	ND		0.61	mg/Kg-dry	1	3/28/2014 09:00 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**17**		**0.050**	**% of sample**	1	3/26/2014 12:16 PM
PH			**SW9045D**		Prep: EXTRACT / 3/26/14	Analyst: **AT**
pH	**8.3**			**s.u.**	1	3/26/2014 04:30 PM

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

QC BATCH REPORT

Batch ID: **56914** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-56914-56914** Units: **mg/Kg** Analysis Date: **3/27/2014 08:58 AM**

Client ID: Run ID: **GC8_140327A** SeqNo: **2688092** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	*1.225*	0	*1.667*	0	*73.5*	*39-115*	0			

LCS Sample ID: **DLCSS1-56914-56914** Units: **mg/Kg** Analysis Date: **3/27/2014 09:28 AM**

Client ID: Run ID: **GC8_140327A** SeqNo: **2688095** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	140.4	4.2	166.7	0	84.2	49-124	0			
Surr: 4-Terphenyl-d14	*1.165*	0	*1.667*	0	*69.9*	*39-115*	0			

MS Sample ID: **14031137-04B MS** Units: **mg/Kg** Analysis Date: **3/27/2014 09:58 AM**

Client ID: **North Wall** Run ID: **GC8_140327A** SeqNo: **2688097** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	261.5	7.8	313.4	12.27	79.5	49-130	0			
Surr: 4-Terphenyl-d14	*2.219*	0	*3.134*	0	*70.8*	*39-115*	0			

MSD Sample ID: **14031137-04B MSD** Units: **mg/Kg** Analysis Date: **3/27/2014 10:28 AM**

Client ID: **North Wall** Run ID: **GC8_140327A** SeqNo: **2688099** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	262.7	7.9	317.8	12.27	78.8	49-130	261.5	0.459	30	
Surr: 4-Terphenyl-d14	*2.134*	0	*3.178*	0	*67.2*	*39-115*	2.219	*3.87*	*30*	

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56908** Instrument ID **GC9** Method: **SW8015**

MBLK Sample ID: **MBLK-56908-56908** Units: **µg/Kg** Analysis Date: **3/26/2014 11:39 PM**
Client ID: Run ID: **GC9_140326B** SeqNo: **2686961** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*5810*	0	*5000*	0	*116*	*50-150*	0			

LCS Sample ID: **LCS-56908-56908** Units: **µg/Kg** Analysis Date: **3/26/2014 11:13 PM**
Client ID: Run ID: **GC9_140326B** SeqNo: **2686959** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	537200	2,500	500000	0	107	70-130	0			
Surr: Toluene-d8	*4772*	0	*5000*	0	*95.4*	*50-150*	0			

MS Sample ID: **14031137-04A MS** Units: **µg/Kg** Analysis Date: **3/27/2014 08:59 AM**
Client ID: **North Wall** Run ID: **GC9_140326B** SeqNo: **2686985** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	670900	2,500	500000	84720	117	70-130	0			
Surr: Toluene-d8	*5271*	0	*5000*	0	*105*	*50-150*	0			

MSD Sample ID: **14031137-04A MSD** Units: **µg/Kg** Analysis Date: **3/27/2014 09:25 AM**
Client ID: **North Wall** Run ID: **GC9_140326B** SeqNo: **2686987** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	645900	2,500	500000	84720	112	70-130	670900	3.79	30	
Surr: Toluene-d8	*4904*	0	*5000*	0	*98.1*	*50-150*	5271	*7.22*	*30*	

The following samples were analyzed in this batch:

14031137-01A	14031137-02A	14031137-03A
14031137-04A		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56945** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-56945-56945** Units: **mg/Kg** Analysis Date: **3/27/2014 01:30 PM**
Client ID: Run ID: **HG1_140327A** SeqNo: **2687823** Prep Date: **3/27/2014** DF: **1**

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

LCS Sample ID: **LCS-56945-56945** Units: **mg/Kg** Analysis Date: **3/27/2014 01:32 PM**
Client ID: Run ID: **HG1_140327A** SeqNo: **2687824** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1878	0.020	0.1665	0	113	80-120	0			

MS Sample ID: **1403953-01AMS** Units: **mg/Kg** Analysis Date: **3/27/2014 02:04 PM**
Client ID: Run ID: **HG1_140327A** SeqNo: **2687838** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1758	0.016	0.1309	0.02819	113	75-125	0			

MSD Sample ID: **1403953-01AMSD** Units: **mg/Kg** Analysis Date: **3/27/2014 02:07 PM**
Client ID: Run ID: **HG1_140327A** SeqNo: **2687839** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1677	0.015	0.1281	0.02819	109	75-125	0.1758	4.73	35	

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56918** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-56918-56918** Units: **mg/Kg** Analysis Date: **3/26/2014 11:52 PM**
Client ID: Run ID: **ICPMS1_140326A** SeqNo: **2686681** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	0.00145	0.10								J
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.25								
Silver	0.001064	0.25								J
Zinc	ND	0.50								

MBLK Sample ID: **MBLK-56918-56918** Units: **mg/Kg** Analysis Date: **3/27/2014 01:33 PM**
Client ID: Run ID: **ICPMS1_140327A** SeqNo: **2688014** Prep Date: **3/26/2014** DF: **1**

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

LCS Sample ID: **LCS-56918-56918** Units: **mg/Kg** Analysis Date: **3/26/2014 11:58 PM**
Client ID: Run ID: **ICPMS1_140326A** SeqNo: **2686682** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.741	0.25	5	0	94.8	80-120	0			
Cadmium	4.72	0.10	5	0	94.4	80-120	0			
Chromium	4.726	0.25	5	0	94.5	80-120	0			
Copper	4.798	0.25	5	0	96	80-120	0			
Lead	4.777	0.25	5	0	95.5	80-120	0			
Nickel	4.682	0.25	5	0	93.6	80-120	0			
Selenium	4.32	0.25	5	0	86.4	80-120	0			
Silver	4.652	0.25	5	0	93	80-120	0			
Zinc	4.664	0.50	5	0	93.3	80-120	0			

LCS Sample ID: **LCS-56918-56918** Units: **mg/Kg** Analysis Date: **3/27/2014 01:39 PM**
Client ID: Run ID: **ICPMS1_140327A** SeqNo: **2688016** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.743	0.25	5	0	94.9	80-120	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56918** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **14031119-03AMS** Units: **mg/Kg** Analysis Date: **3/27/2014 03:42 AM**
Client ID: Run ID: **ICPMS1_140326A** SeqNo: **2686717** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.549	0.37	7.474	0.5149	94.1	75-125	0			
Barium	12.54	0.37	7.474	4.242	111	75-125	0			
Cadmium	7.134	0.15	7.474	0.02365	95.1	75-125	0			
Chromium	9.993	0.37	7.474	2.166	105	75-125	0			
Copper	8.505	0.37	7.474	1.181	98	75-125	0			
Lead	8.52	0.37	7.474	1.108	99.2	75-125	0			
Nickel	9.17	0.37	7.474	1.678	100	75-125	0			
Selenium	7.072	0.37	7.474	0.2965	90.7	75-125	0			
Silver	6.88	0.37	7.474	0.001369	92	75-125	0			
Zinc	16.11	0.75	7.474	6.454	129	75-125	0			S

MSD Sample ID: **14031119-03AMSD** Units: **mg/Kg** Analysis Date: **3/27/2014 03:48 AM**
Client ID: Run ID: **ICPMS1_140326A** SeqNo: **2686718** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.318	0.38	7.599	0.5149	89.5	75-125	7.549	3.1	25	
Barium	12.05	0.38	7.599	4.242	103	75-125	12.54	3.98	25	
Cadmium	7.125	0.15	7.599	0.02365	93.5	75-125	7.134	0.118	25	
Chromium	9.286	0.38	7.599	2.166	93.7	75-125	9.993	7.33	25	
Copper	8.343	0.38	7.599	1.181	94.3	75-125	8.505	1.92	25	
Lead	8.214	0.38	7.599	1.108	93.5	75-125	8.52	3.66	25	
Nickel	8.906	0.38	7.599	1.678	95.1	75-125	9.17	2.93	25	
Selenium	7.008	0.38	7.599	0.2965	88.3	75-125	7.072	0.911	25	
Silver	6.869	0.38	7.599	0.001369	90.4	75-125	6.88	0.151	25	
Zinc	13.56	0.76	7.599	6.454	93.5	75-125	16.11	17.2	25	

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **57015** Instrument ID **ICPMS2** Method: **SW6020A**

DUP Sample ID: **14031137-02CDUP** Units: **mg/L** Analysis Date: **3/30/2014 08:14 AM**
Client ID: **East Wall** Run ID: **ICPMS2_140329A** SeqNo: **2691010** Prep Date: **3/28/2014** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	538.6	10	0	0	0	0-0	533.6	0.933		
Magnesium	557.8	4.0	0	0	0	0-0	564	1.11		

DUP Sample ID: **14031137-02CDUP** Units: **mg/L** Analysis Date: **3/30/2014 05:52 PM**
Client ID: **East Wall** Run ID: **ICPMS2_140330A** SeqNo: **2691071** Prep Date: **3/28/2014** DF: **200**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	4842	40	0	0	0	0-0	4896	1.11		

DUP Sample ID: **14031137-02CDUP** Units: **none** Analysis Date: **3/29/2014**
Client ID: **East Wall** Run ID: **SAR_140329A** SeqNo: **2691847** Prep Date: **3/28/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	34.91	0.010	0	0	0		35.24	0.93	50	

The following samples were analyzed in this batch:

14031137-01C	14031137-02C	14031137-03C
14031137-04C		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56915** Instrument ID **SVMS8** Method: **SW8270**

MBLK Sample ID: **SBLKS1-56915-56915** Units: **µg/Kg** Analysis Date: **3/26/2014 05:34 PM**
Client ID: Run ID: **SVMS8_140326A** SeqNo: **2687752** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1190*	0	*1667*	0	*71.4*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1726*	0	*1667*	0	*104*	*25-137*	0			
Surr: Nitrobenzene-d5	*1246*	0	*1667*	0	*74.8*	*37-107*	0			

LCS Sample ID: **SLCSS1-56915-56915** Units: **µg/Kg** Analysis Date: **3/26/2014 05:55 PM**
Client ID: Run ID: **SVMS8_140326A** SeqNo: **2687712** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	497.3	6.7	666.7	0	74.6	45-110	0			
Acenaphthylene	512.3	6.7	666.7	0	76.8	45-105	0			
Anthracene	600	6.7	666.7	0	90	55-105	0			
Benzo(a)anthracene	602.3	6.7	666.7	0	90.3	50-110	0			
Benzo(a)pyrene	620.7	6.7	666.7	0	93.1	50-110	0			
Benzo(b)fluoranthene	601	6.7	666.7	0	90.1	45-115	0			
Benzo(g,h,i)perylene	623	6.7	666.7	0	93.4	40-125	0			
Benzo(k)fluoranthene	587	6.7	666.7	0	88	45-115	0			
Chrysene	582.3	6.7	666.7	0	87.3	55-110	0			
Dibenzo(a,h)anthracene	644.3	6.7	666.7	0	96.6	40-125	0			
Fluoranthene	566	6.7	666.7	0	84.9	55-115	0			
Fluorene	519.3	6.7	666.7	0	77.9	50-110	0			
Indeno(1,2,3-cd)pyrene	641.7	6.7	666.7	0	96.2	40-120	0			
Naphthalene	451.7	6.7	666.7	0	67.7	40-105	0			
Pyrene	637	6.7	666.7	0	95.5	45-125	0			
Surr: 2-Fluorobiphenyl	*1147*	0	*1667*	0	*68.8*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1740*	0	*1667*	0	*104*	*25-137*	0			
Surr: Nitrobenzene-d5	*1248*	0	*1667*	0	*74.9*	*37-107*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56915** Instrument ID **SVMS8** Method: **SW8270**

MS Sample ID: **14031137-04B MS** Units: **µg/Kg** Analysis Date: **3/26/2014 06:15 PM**
Client ID: **North Wall** Run ID: **SVMS8_140326A** SeqNo: **2687715** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	994.5	13	1285	0	77.4	45-110	0			
Acenaphthylene	1048	13	1285	0	81.6	45-105	0			
Anthracene	1144	13	1285	0	89	55-105	0			
Benzo(a)anthracene	1144	13	1285	0	89	50-110	0			
Benzo(a)pyrene	1153	13	1285	0	89.7	50-110	0			
Benzo(b)fluoranthene	1126	13	1285	0	87.6	45-115	0			
Benzo(g,h,i)perylene	1191	13	1285	0	92.7	40-125	0			
Benzo(k)fluoranthene	1081	13	1285	0	84.1	45-115	0			
Chrysene	1053	13	1285	0	81.9	55-110	0			
Dibenzo(a,h)anthracene	1216	13	1285	0	94.6	40-125	0			
Fluoranthene	1055	13	1285	0	82.1	55-115	0			
Fluorene	1020	13	1285	0	79.4	50-110	0			
Indeno(1,2,3-cd)pyrene	1206	13	1285	0	93.9	40-120	0			
Naphthalene	909.7	13	1285	0	70.8	40-105	0			
Pyrene	1199	13	1285	0	93.3	45-125	0			
Surr: 2-Fluorobiphenyl	*2381*	0	*3212*	0	*74.1*	*12-100*	0			
Surr: 4-Terphenyl-d14	*3264*	0	*3212*	0	*102*	*25-137*	0			
Surr: Nitrobenzene-d5	*2576*	0	*3212*	0	*80.2*	*37-107*	0			

MSD Sample ID: **14031137-04B MSD** Units: **µg/Kg** Analysis Date: **3/26/2014 06:35 PM**
Client ID: **North Wall** Run ID: **SVMS8_140326A** SeqNo: **2687717** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1024	13	1298	0	78.9	45-110	994.5	2.93	30	
Acenaphthylene	1049	13	1298	0	80.8	45-105	1048	0.0904	30	
Anthracene	1156	13	1298	0	89.1	55-105	1144	1.13	30	
Benzo(a)anthracene	1151	13	1298	0	88.6	50-110	1144	0.62	30	
Benzo(a)pyrene	1169	13	1298	0	90	50-110	1153	1.4	30	
Benzo(b)fluoranthene	1143	13	1298	0	88.1	45-115	1126	1.53	30	
Benzo(g,h,i)perylene	1236	13	1298	0	95.2	40-125	1191	3.67	30	
Benzo(k)fluoranthene	1083	13	1298	0	83.4	45-115	1081	0.238	30	
Chrysene	1070	13	1298	0	82.4	55-110	1053	1.56	30	
Dibenzo(a,h)anthracene	1231	13	1298	0	94.8	40-125	1216	1.22	30	
Fluoranthene	1094	13	1298	0	84.3	55-115	1055	3.66	30	
Fluorene	1045	13	1298	0	80.5	50-110	1020	2.39	30	
Indeno(1,2,3-cd)pyrene	1275	13	1298	0	98.2	40-120	1206	5.54	30	
Naphthalene	937.8	13	1298	0	72.2	40-105	909.7	3.04	30	
Pyrene	1190	13	1298	0	91.7	45-125	1199	0.77	30	
Surr: 2-Fluorobiphenyl	*2398*	0	*3245*	0	*73.9*	*12-100*	2381	*0.716*	*40*	
Surr: 4-Terphenyl-d14	*3240*	0	*3245*	0	*99.8*	*25-137*	3264	*0.753*	*40*	
Surr: Nitrobenzene-d5	*2590*	0	*3245*	0	*79.8*	*37-107*	2576	*0.539*	*40*	

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56915** Instrument ID **SVMS8** Method: **SW8270**

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56917** Instrument ID **VMS9** Method: **SW8260B**

MBLK Sample ID: **MBLK-56917-56917** Units: **µg/Kg** Analysis Date: **3/27/2014 11:27 AM**
Client ID: Run ID: **VMS9_140326B** SeqNo: **2687641** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*1031*	0	*1000*	0	*103*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*961*	0	*1000*	0	*96.1*	*70-130*	0			
Surr: Dibromofluoromethane	*1022*	0	*1000*	0	*102*	*70-130*	0			
Surr: Toluene-d8	*1006*	0	*1000*	0	*101*	*70-130*	0			

LCS Sample ID: **LCS-56917-56917** Units: **µg/Kg** Analysis Date: **3/26/2014 03:53 PM**
Client ID: Run ID: **VMS9_140326A** SeqNo: **2687640** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1034	30	1000	0	103	75-125	0			
Ethylbenzene	1063	30	1000	0	106	75-125	0			
m,p-Xylene	2164	60	2000	0	108	80-125	0			
o-Xylene	1090	30	1000	0	109	75-125	0			
Toluene	1006	30	1000	0	101	70-125	0			
Xylenes, Total	3254	90	3000	0	108	75-125	0			
Surr: 1,2-Dichloroethane-d4	*947.5*	0	*1000*	0	*94.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1012*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*961*	0	*1000*	0	*96.1*	*70-130*	0			
Surr: Toluene-d8	*997*	0	*1000*	0	*99.7*	*70-130*	0			

MS Sample ID: **14031138-01A MS** Units: **µg/Kg** Analysis Date: **3/26/2014 08:03 PM**
Client ID: Run ID: **VMS8_140326A** SeqNo: **2686859** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	952.5	30	1000	0	95.2	75-125	0			
Ethylbenzene	1039	30	1000	0	104	75-125	0			
m,p-Xylene	2158	60	2000	64	105	80-125	0			
o-Xylene	1057	30	1000	0	106	75-125	0			
Toluene	1032	30	1000	30.5	100	70-125	0			
Xylenes, Total	3215	90	3000	64	105	75-125	0			
Surr: 1,2-Dichloroethane-d4	*966.5*	0	*1000*	0	*96.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1026*	0	*1000*	0	*103*	*70-130*	0			
Surr: Dibromofluoromethane	*976.5*	0	*1000*	0	*97.6*	*70-130*	0			
Surr: Toluene-d8	*998*	0	*1000*	0	*99.8*	*70-130*	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56917** Instrument ID **VMS9** Method: **SW8260B**

MSD Sample ID: **14031138-01A MSD** Units: **µg/Kg** Analysis Date: **3/26/2014 08:27 PM**
Client ID: Run ID: **VMS8_140326A** SeqNo: **2686864** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	923.5	30	1000	0	92.4	75-125	952.5	3.09	30	
Ethylbenzene	996.5	30	1000	0	99.6	75-125	1039	4.18	30	
m,p-Xylene	2060	60	2000	64	99.8	80-125	2158	4.67	30	
o-Xylene	994.5	30	1000	0	99.4	75-125	1057	6.09	30	
Toluene	978.5	30	1000	30.5	94.8	70-125	1032	5.37	30	
Xylenes, Total	3054	90	3000	64	99.7	75-125	3215	5.14	30	
Surr: 1,2-Dichloroethane-d4	*960*	0	*1000*	0	*96*	*70-130*	966.5	*0.675*	*30*	
Surr: 4-Bromofluorobenzene	*1012*	0	*1000*	0	*101*	*70-130*	1026	*1.47*	*30*	
Surr: Dibromofluoromethane	*968.5*	0	*1000*	0	*96.8*	*70-130*	976.5	*0.823*	*30*	
Surr: Toluene-d8	*999.5*	0	*1000*	0	*100*	*70-130*	998	*0.15*	*30*	

The following samples were analyzed in this batch:

14031137-01A	14031137-02A	14031137-03A
14031137-04A		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **56924** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-56924-56924** Units: **s.u.** Analysis Date: **3/26/2014 04:30 PM**
Client ID: Run ID: **WETCHEM_140326X** SeqNo: **2687666** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.94	0	4	0	98.5	90-110	0			

DUP Sample ID: **14031136-01B DUP** Units: **s.u.** Analysis Date: **3/26/2014 04:30 PM**
Client ID: Run ID: **WETCHEM_140326X** SeqNo: **2687668** Prep Date: **3/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.85	0	0	0	0	0-0	7.76	1.15	20	

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **57006** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-57006-57006** Units: **mg/Kg** Analysis Date: **3/28/2014 09:00 AM**
Client ID: Run ID: **WETCHEM_140328E** SeqNo: **2688917** Prep Date: **3/27/2014** DF: **1**

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

LCS Sample ID: **LCS-57006-57006** Units: **mg/Kg** Analysis Date: **3/28/2014 09:00 AM**
Client ID: Run ID: **WETCHEM_140328E** SeqNo: **2688918** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.88	0.50	2	0	94	80-120	0			

MS Sample ID: **14031136-01B MS** Units: **mg/Kg** Analysis Date: **3/28/2014 09:00 AM**
Client ID: Run ID: **WETCHEM_140328E** SeqNo: **2688927** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.49	1.961	0.119	-6.07	75-125	0			S

MS Sample ID: **14031136-01B MSI** Units: **mg/Kg** Analysis Date: **3/28/2014 09:00 AM**
Client ID: Run ID: **WETCHEM_140328E** SeqNo: **2688929** Prep Date: **3/27/2014** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	904.8	50	772.6	0.119	117	75-125	0			

MSD Sample ID: **14031136-01B MSD** Units: **mg/Kg** Analysis Date: **3/28/2014 09:00 AM**
Client ID: Run ID: **WETCHEM_140328E** SeqNo: **2688928** Prep Date: **3/27/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.50	2	0.119	-5.95	75-125	0.1176	0	20	S

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **57015** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP Sample ID: **14031137-02C DUP** Units: **mmhos/cm @25°C** Analysis Date: **3/29/2014 09:20 AM**
Client ID: **East Wall** Run ID: **WETCHEM_140329A** SeqNo: **2690198** Prep Date: **3/28/2014** DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	33.32	0.12	0	0	0		34.48	3.39	50	

The following samples were analyzed in this batch:

14031137-01C
14031137-02C
14031137-03C
14031137-04C

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031137
Project: WPX Clough 14-22 Condensate Spill 3.25.14

QC BATCH REPORT

Batch ID: **R137838** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R137838** Units: **% of sample** Analysis Date: **3/26/2014 12:16 PM**
Client ID: Run ID: **MOIST_140326C** SeqNo: **2687310** 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-R137838** Units: **% of sample** Analysis Date: **3/26/2014 12:16 PM**
Client ID: Run ID: **MOIST_140326C** SeqNo: **2687309** 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: **14031091-04A DUP** Units: **% of sample** Analysis Date: **3/26/2014 12:16 PM**
Client ID: Run ID: **MOIST_140326C** SeqNo: **2687284** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	96.73	0.050	0	0	0	0-0	96.58	0.155	20	

DUP Sample ID: **14031104-09A DUP** Units: **% of sample** Analysis Date: **3/26/2014 12:16 PM**
Client ID: Run ID: **MOIST_140326C** SeqNo: **2687298** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	85.37	0.050	0	0	0	0-0	86.02	0.759	20	

The following samples were analyzed in this batch:

14031137-01B	14031137-02B	14031137-03B
14031137-04B		

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 # 14031137

		SAMPLER	Reed Wold	DATE	3/25/14	PAGE	1 of 1
PROJECT NAME	WPX Clough 14-22	SITE ID	Clough 14-22	TURNAROUND	24 HR	DISPOSAL	By Lab or Return to Client
PROJECT No.	Condensate spill	EDD FORMAT					
		PURCHASE ORDER					
COMPANY NAME	HCSI	BILL TO COMPANY	WPX				
SEND REPORT TO	Mark Mumby	INVOICE ATTN TO	Karolina Blarcy				
ADDRESS	2385 F1/2 Rd	ADDRESS					
CITY / STATE / ZIP	Grand Junction CO 81506	CITY / STATE / ZIP					
PHONE	970-243-3271	PHONE					
FAX	970-243-3280	FAX					
E-MAIL	Mmumby@hrlcomp.com rwold@hrlcomp.com	E-MAIL					

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	BTEX+MTBE	DRO/PAH/Metals	SAR/ECp/pH
1	South Wall	SO	3/25/14	3:50	3	8		X	X	X
2	East Wall		↓	3:40				X	X	X
3	West Wall			4:00				X	X	X
4	North Wall		↓	4:10				X	X	X

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

For metals or anions, please detail analytes below.

Comments:

~~See attached Table for Analytical Method~~

4.4°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	3/25/14	4:20
RECEIVED BY			3-25	4:20
RELINQUISHED BY			3-25	4:45
RECEIVED BY		Diane F. Shaw	3/26/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **26-Mar-14 09:30**

Work Order: **14031137** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 26-Mar-14 (Date) Reviewed by: Ann Preston (eSignature) 26-Mar-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/26/2014 10:46:23 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

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

127 E First Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J1410140207032G

SHIP TO: (616) 399-6070 BILL RECIPIENT

Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

Ship Date: 25MAR14
ActWgt: 60.0 LB
CAD: 103923490/INET3490

Dims: 25 X 14 X 15 IN

Delivery Address Bar Code

Ref # 1001-032514-6
Invoice #
PO #
Dept #

WED - 26 MAR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7983 3597 6044

XX GRRA

49424
MI-US
GRR

522G1/CC4F/F220

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

02-Apr-2014

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

Re: **WPX Clough 14-22 Condensate Spill 3.28.14** Work Order: **14031368**

Dear Mark,

ALS Environmental received 1 sample on 29-Mar-2014 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.

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

The total number of pages in this report is 11.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 02-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.28.14
Work Order: **14031368**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14031368-01	South Wall	Soil		3/28/2014 14:00	3/29/2014 10:30	☐

ALS Group USA, Corp

Date: 02-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.28.14
WorkOrder: **14031368**

QUALIFIERS, ACRONYMS, UNITS

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

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

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

ALS Group USA, Corp

Date: *02-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Condensate Spill 3.28.14 **Work Order:** 14031368
Sample ID: South Wall **Lab ID:** 14031368-01
Collection Date: 3/28/2014 02:00 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 3/31/14	Analyst: **IT**
DRO (C10-C28)	**320**		**4.9**	**mg/Kg-dry**	1	4/1/2014 03:58 AM
Surr: 4-Terphenyl-d14	*66.9*		*39-115*	*%REC*	1	4/1/2014 03:58 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015**		Prep: SW5035 / 3/31/14	Analyst: **IT**
GRO (C6-C10)	ND		3.0	mg/Kg-dry	1	4/1/2014 04:08 PM
Surr: Toluene-d8	*97.2*		*50-150*	*%REC*	1	4/1/2014 04:08 PM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 3/31/14	Analyst: **AK**
Benzene	**130**		**36**	**µg/Kg-dry**	1	3/31/2014 02:36 PM
Ethylbenzene	ND		36	µg/Kg-dry	1	3/31/2014 02:36 PM
m,p-Xylene	**250**		**71**	**µg/Kg-dry**	1	3/31/2014 02:36 PM
o-Xylene	**37**		**36**	**µg/Kg-dry**	1	3/31/2014 02:36 PM
Toluene	ND		36	µg/Kg-dry	1	3/31/2014 02:36 PM
Xylenes, Total	**290**		**110**	**µg/Kg-dry**	1	3/31/2014 02:36 PM
Surr: 1,2-Dichloroethane-d4	*97.2*		*70-130*	*%REC*	1	3/31/2014 02:36 PM
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	1	3/31/2014 02:36 PM
Surr: Dibromofluoromethane	*98.2*		*70-130*	*%REC*	1	3/31/2014 02:36 PM
Surr: Toluene-d8	*96.2*		*70-130*	*%REC*	1	3/31/2014 02:36 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**16**		**0.050**	**% of sample**	1	3/31/2014 09:13 AM

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

QC BATCH REPORT

Batch ID: **57041** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-57041-57041** Units: **mg/Kg** Analysis Date: **3/31/2014 11:59 PM**

Client ID: Run ID: **GC8_140331B** SeqNo: **2694265** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	4.2								
Surr: 4-Terphenyl-d14	*0.9027*	0	*1.667*	0	*54.2*	*39-115*	0			

LCS Sample ID: **DLCSS1-57041-57041** Units: **mg/Kg** Analysis Date: **4/1/2014 12:29 PM**

Client ID: Run ID: **GC8_140331B** SeqNo: **2694280** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	139.5	4.2	166.7	0	83.7	49-124	0			
Surr: 4-Terphenyl-d14	*1.028*	0	*1.667*	0	*61.7*	*39-115*	0			

MS Sample ID: **14031325-05B MS** Units: **mg/Kg** Analysis Date: **4/1/2014 12:59 PM**

Client ID: Run ID: **GC8_140331B** SeqNo: **2694281** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	345.6	8.1	322.8	9.837	104	49-130	0			
Surr: 4-Terphenyl-d14	*2.489*	0	*3.228*	0	*77.1*	*39-115*	0			

MSD Sample ID: **14031325-05B MSD** Units: **mg/Kg** Analysis Date: **4/1/2014 01:28 AM**

Client ID: Run ID: **GC8_140331B** SeqNo: **2694267** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	287	8.2	328.2	9.837	84.4	49-130	345.6	18.5	30	
Surr: 4-Terphenyl-d14	*2.23*	0	*3.282*	0	*67.9*	*39-115*	2.489	*11*	*30*	

The following samples were analyzed in this batch: 14031368-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031368
Project: WPX Clough 14-22 Condensate Spill 3.28.14

QC BATCH REPORT

Batch ID: **57048** Instrument ID **GC9** Method: **PUBL-SW-140**

MBLK Sample ID: **MBLK-57048-57048** Units: **µg/Kg** Analysis Date: **4/1/2014 12:32 PM**
Client ID: Run ID: **GC9_140331B** SeqNo: **2693355** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	1,000								

MBLK Sample ID: **MBLK-57048-57048** Units: **µg/Kg** Analysis Date: **4/1/2014 03:43 PM**
Client ID: Run ID: **GC9_140401B** SeqNo: **2694710** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*4870*	0	*5000*	0	*97.4*	*50-150*	0			

LCS Sample ID: **LCS-57048-57048** Units: **µg/Kg** Analysis Date: **3/31/2014 10:45 PM**
Client ID: Run ID: **GC9_140331B** SeqNo: **2693336** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	10380	1,000	10000	0	104	80-120	0			

LCS Sample ID: **LCS-57048-57048** Units: **µg/Kg** Analysis Date: **4/1/2014 02:19 PM**
Client ID: Run ID: **GC9_140401B** SeqNo: **2694709** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	487500	2,500	500000	0	97.5	70-130	0			
Surr: Toluene-d8	*4176*	0	*5000*	0	*83.5*	*50-150*	0			

LCSD Sample ID: **LCSD-57048-57048** Units: **µg/Kg** Analysis Date: **4/1/2014 01:51 AM**
Client ID: Run ID: **GC9_140331B** SeqNo: **2693337** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	11300	1,000	10000	0	113	80-120	10380	8.57	20	

The following samples were analyzed in this batch: 14031368-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031368
Project: WPX Clough 14-22 Condensate Spill 3.28.14

QC BATCH REPORT

Batch ID: **57047** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-57047-57047** Units: **µg/Kg** Analysis Date: **3/31/2014 12:28 PM**
Client ID: Run ID: **VMS5_140331A** SeqNo: **2692048** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*968*	0	*1000*	0	*96.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*986*	0	*1000*	0	*98.6*	*70-130*	0			
Surr: Dibromofluoromethane	*960*	0	*1000*	0	*96*	*70-130*	0			
Surr: Toluene-d8	*959.5*	0	*1000*	0	*96*	*70-130*	0			

LCS Sample ID: **LCS-57047-57047** Units: **µg/Kg** Analysis Date: **3/31/2014 11:10 AM**
Client ID: Run ID: **VMS5_140331A** SeqNo: **2692047** Prep Date: **3/31/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1052	30	1000	0	105	75-125	0			
Ethylbenzene	1011	30	1000	0	101	75-125	0			
m,p-Xylene	1998	60	2000	0	99.9	80-125	0			
o-Xylene	1001	30	1000	0	100	75-125	0			
Toluene	979.5	30	1000	0	98	70-125	0			
Xylenes, Total	2999	90	3000	0	100	75-125	0			
Surr: 1,2-Dichloroethane-d4	*965.5*	0	*1000*	0	*96.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*987*	0	*1000*	0	*98.7*	*70-130*	0			
Surr: Dibromofluoromethane	*1001*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*958.5*	0	*1000*	0	*95.8*	*70-130*	0			

The following samples were analyzed in this batch: 14031368-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 14031368
Project: WPX Clough 14-22 Condensate Spill 3.28.14

QC BATCH REPORT

Batch ID: **R138129** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R138129** Units: **% of sample** Analysis Date: **3/31/2014 09:13 AM**
Client ID: Run ID: **MOIST_140331A** SeqNo: **2693375** 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-R138129** Units: **% of sample** Analysis Date: **3/31/2014 09:13 AM**
Client ID: Run ID: **MOIST_140331A** SeqNo: **2693374** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.95	0.050	100	0	100	99.5-100.5	0			

DUP Sample ID: **14031368-01A DUP** Units: **% of sample** Analysis Date: **3/31/2014 09:13 AM**
Client ID: **South Wall** Run ID: **MOIST_140331A** SeqNo: **2693358** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.68	0.050	0	0	0	0-0	15.7	6.71	20	

DUP Sample ID: **14031398-07B DUP** Units: **% of sample** Analysis Date: **3/31/2014 09:13 AM**
Client ID: Run ID: **MOIST_140331A** SeqNo: **2693365** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.24	0.050	0	0	0	0-0	17.24	5.64	20	

The following samples were analyzed in this batch: 14031368-01A

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 # 1403136 8

PAGE 1 of 1

DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX Clough 14-22 condensate Spill	SAMPLER	Reed Wold
PROJECT No.		SITE ID	Clough 14-22
		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 3/28/14

TURNAROUND 24HR

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	GRO 8TEX	DRO
1	South Wall	SO	3/28/14	2:00	1	8		X	X

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

For metals or anions, please detail analytes below.

Comments: 3.4°C

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	3/28/14	3:00
RECEIVED BY		Colby Koerner	3/28/14	15 15
RELINQUISHED BY		Colby Koerner	3/28/14	1530
RECEIVED BY	FedEx			
RELINQUISHED BY				
RECEIVED BY		Diane F. Sha	3/29/14	1030

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **29-Mar-14 10:30**

Work Order: **14031368** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 29-Mar-14 (Date) Reviewed by: Ann Preston (eSignature) 31-Mar-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.4 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/29/2014 12:54:02 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

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

Origin ID: RILA

FedEx Express

J14101402070326

Ship Date: 28MAR14
ActWgt: 32.0 LB
CAD: 103923490/INET3490

Dims: 17X11X15 IN

Delivery Address Bar Code

Ref# 1001 032614.1
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070
BILL RECIPIENT

Sample recieving
ALS Holland
3352 128TH AVE

HOLLAND, MI 49424

TRK# 0201 7983 7445 0703

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 GRRA

49424
MI-US
GRR

S22G1/C04F/F220

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

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

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FedEx

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
Tel. +1 616 399 6070
Fax. +1 616 399 6185

CUSTODY SEAL

Date: 3/28/14 Time: 1600
Name:
Company: ALS Lab Hub

Seal Broken By:

Date:

24-Apr-2014

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

Re: **WPX Clough 14-22 Backgrounds 4.15.14** Work Order: **1404925**

Dear Mark,

ALS Environmental received 3 samples on 17-Apr-2014 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 14.

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

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 24-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Backgrounds 4.15.14
Work Order: **1404925**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1404925-01	Clough 14-22-B-1	Soil		4/15/2014 01:00	4/17/2014 09:30	☐
1404925-02	Clough 14-22-B-2	Soil		4/15/2014 13:05	4/17/2014 09:30	☐
1404925-03	Clough 14-22-B-3	Soil		4/15/2014 13:10	4/17/2014 09:30	☐

ALS Group USA, Corp

Date: 24-Apr-14

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Backgrounds 4.15.14
WorkOrder: **1404925**

QUALIFIERS, ACRONYMS, UNITS

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

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

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

ALS Group USA, Corp

Date: *24-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Backgrounds 4.15.14 **Work Order:** 1404925
Sample ID: Clough 14-22-B-1 **Lab ID:** 1404925-01
Collection Date: 4/15/2014 01:00 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/18/14	Analyst: **ML**
Arsenic	**4.9**		**2.3**	**mg/Kg-dry**	5	4/23/2014 03:33 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**8.7**		**0.050**	**% of sample**	1	4/21/2014 10:28 AM

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

ALS Group USA, Corp

Date: *24-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Backgrounds 4.15.14 **Work Order:** 1404925
Sample ID: Clough 14-22-B-2 **Lab ID:** 1404925-02
Collection Date: 4/15/2014 01:05 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/18/14	Analyst: **ML**
Arsenic	**5.4**		**2.1**	**mg/Kg-dry**	5	4/21/2014 06:30 PM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**8.5**		**0.050**	**% of sample**	1	4/18/2014 09:48 AM

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

ALS Group USA, Corp

Date: *24-Apr-14*

Client: HRL Compliance Solutions, Inc
Project: WPX Clough 14-22 Backgrounds 4.15.14 **Work Order:** 1404925
Sample ID: Clough 14-22-B-3 **Lab ID:** 1404925-03
Collection Date: 4/15/2014 01:10 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 4/18/14	Analyst: **ML**
Arsenic	**8.3**		**2.1**	**mg/Kg-dry**	5	4/24/2014 07:43 AM
MOISTURE			**A2540 G**			Analyst: **AT**
Moisture	**7.4**		**0.050**	**% of sample**	1	4/18/2014 09:48 AM

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

ALS Group USA, Corp

Date: 24-Apr-14

Client: HRL Compliance Solutions, Inc

QC BATCH REPORT

Work Order: 1404925

Project: WPX Clough 14-22 Backgrounds 4.15.14

Batch ID: **57712** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-57712-57712** Units: **mg/Kg** Analysis Date: **4/22/2014 10:36 PM**

Client ID: Run ID: **ICPMS1_140422A** SeqNo: **2726336** Prep Date: **4/18/2014** DF: **1**

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

LCS Sample ID: **LCS-57712-57712** Units: **mg/Kg** Analysis Date: **4/22/2014 10:42 PM**

Client ID: Run ID: **ICPMS1_140422A** SeqNo: **2726337** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.324	0.25	5	0	86.5	80-120	0			

MS Sample ID: **1404924-01BMS** Units: **mg/Kg** Analysis Date: **4/23/2014 02:59 AM**

Client ID: Run ID: **ICPMS1_140422A** SeqNo: **2726399** Prep Date: **4/18/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.25	1.9	7.587	5.443	89.7	75-125	0			

MSD Sample ID: **1404924-01BMSD** Units: **mg/Kg** Analysis Date: **4/23/2014 03:04 AM**

Client ID: Run ID: **ICPMS1_140422A** SeqNo: **2726400** Prep Date: **4/18/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.72	1.8	7.31	5.443	99.6	75-125	12.25	3.79	25	

The following samples were analyzed in this batch: 1404925-01A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404925
Project: WPX Clough 14-22 Backgrounds 4.15.14

QC BATCH REPORT

Batch ID: **57742** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-57742-57742** Units: **mg/Kg** Analysis Date: **4/19/2014 10:29 AM**
Client ID: Run ID: **ICPMS1_140417A** SeqNo: **2721981** Prep Date: **4/18/2014** DF: **1**

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

LCS Sample ID: **LCS-57742-57742** Units: **mg/Kg** Analysis Date: **4/21/2014 07:23 AM**
Client ID: Run ID: **ICPMS1_140420A** SeqNo: **2722194** Prep Date: **4/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.683	0.25	5	0	93.7	80-120	0			

MS Sample ID: **1404925-02AMS** Units: **mg/Kg** Analysis Date: **4/21/2014 09:37 PM**
Client ID: **Clough 14-22-B-2** Run ID: **ICPMS1_140421A** SeqNo: **2724916** Prep Date: **4/18/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	14.16	1.9	7.776	4.935	119	75-125	0			

MSD Sample ID: **1404925-02AMSD** Units: **mg/Kg** Analysis Date: **4/21/2014 09:43 PM**
Client ID: **Clough 14-22-B-2** Run ID: **ICPMS1_140421A** SeqNo: **2724917** Prep Date: **4/18/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.59	2.0	7.825	4.935	111	75-125	14.16	4.13	25	

The following samples were analyzed in this batch: 1404925-02A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404925
Project: WPX Clough 14-22 Backgrounds 4.15.14

QC BATCH REPORT

Batch ID: **57751** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK	Sample ID: **MBLK-57751-57751**				Units: **mg/Kg**			Analysis Date: **4/24/2014 07:25 AM**			
Client ID:		Run ID: **ICPMS1_140423B**			SeqNo: **2728200**			Prep Date: **4/18/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.25									

LCS	Sample ID: **LCS-57751-57751**				Units: **mg/Kg**			Analysis Date: **4/24/2014 07:31 AM**			
Client ID:		Run ID: **ICPMS1_140423B**			SeqNo: **2728201**			Prep Date: **4/18/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	4.329	0.25	5	0	86.6	80-120	0				

The following samples were analyzed in this batch: 1404925-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404925
Project: WPX Clough 14-22 Backgrounds 4.15.14

QC BATCH REPORT

Batch ID: **R139243** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R139243** Units: **% of sample** Analysis Date: **4/18/2014 09:48 AM**
Client ID: Run ID: **MOIST_140418A** SeqNo: **2721735** 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-R139243** Units: **% of sample** Analysis Date: **4/18/2014 09:48 AM**
Client ID: Run ID: **MOIST_140418A** SeqNo: **2721734** 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: **1404928-01A DUP** Units: **% of sample** Analysis Date: **4/18/2014 09:48 AM**
Client ID: Run ID: **MOIST_140418A** SeqNo: **2721728** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.34	0.050	0	0	0	0-0	19.02	3.64	20	

DUP Sample ID: **1404928-02A DUP** Units: **% of sample** Analysis Date: **4/18/2014 09:48 AM**
Client ID: Run ID: **MOIST_140418A** SeqNo: **2721730** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	14.8	0.050	0	0	0	0-0	13.96	5.84	20	

The following samples were analyzed in this batch: 1404925-02A 1404925-03A

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

Client: HRL Compliance Solutions, Inc
Work Order: 1404925
Project: WPX Clough 14-22 Backgrounds 4.15.14

QC BATCH REPORT

Batch ID: **R139366** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R139366** Units: **% of sample** Analysis Date: **4/21/2014 10:28 AM**
Client ID: Run ID: **MOIST_140421A** SeqNo: **2724787** 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-R139366** Units: **% of sample** Analysis Date: **4/21/2014 10:28 AM**
Client ID: Run ID: **MOIST_140421A** SeqNo: **2724785** 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: **1404825-02A DUP** Units: **% of sample** Analysis Date: **4/21/2014 10:28 AM**
Client ID: Run ID: **MOIST_140421A** SeqNo: **2724758** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	60.01	0.050	0	0	0	0-0	61.46	2.39	20	

DUP Sample ID: **1404925-01A DUP** Units: **% of sample** Analysis Date: **4/21/2014 10:28 AM**
Client ID: **Clough 14-22-B-1** Run ID: **MOIST_140421A** SeqNo: **2724766** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	8.91	0.050	0	0	0	0-0	8.67	2.73	20	

The following samples were analyzed in this batch: 1404925-01A

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 292r8

WORKORDER #	1404925
PAGE	1 of 1
DISPOSAL	(By Lab) or Return to Client

PROJECT NAME	WPX Clough 14-22	SAMPLER	Reed Wold
PROJECT No.	Backgrounds	SITE ID	Clough 14-22
		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	4/15/14
TURNAROUND	Standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Arsenic
1	clough 14-22-B-1	SO	4/15/14	1:00	1	8		X
2	clough 14-22-B-2			1:05	1	8		X
3	clough 14-22-B-3			1:10	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:

3.2c

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

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

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Reed Wold	Reed Wold	4/15/14	2:00
RECEIVED BY	M.M	M.M	4-15-14	2:00
RELINQUISHED BY	M.M	M.M	4-15	8:30
RECEIVED BY	Keith Heffington	Keith Heffington	4/17/14	0930
RELINQUISHED BY				
RECEIVED BY				

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL** Date/Time Received: **17-Apr-14 09:30**

Work Order: **1404925** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 17-Apr-14 (Date) Reviewed by: Ann Preston (eSignature) 18-Apr-14 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.2 C		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	4/17/2014 3:12:57 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:

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

Holland, MI 49424

Origin ID: GRRA

J14101402070326

Ship Date: 15APR14
ActWgt: 71.0 LB
CAD: 2284840/INET3490

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 041514-2
Invoice #
PO #
Dept #

SHIP TO: (616) 399-6070 BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

WED - 16 APR AA
STANDARD OVERNIGHT

TRK# 0201 7985 5782 6286

68 GRRA

49424
MI-US
GRR

522G1/76D8/F220

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

501

Attachment D

HCSI
ENVIRONMENTAL CONSULTANTS
HRL COMPLIANCE SOLUTIONS, INC.

2385 F ½ Road
Grand Junction, CO 81505
Phone: 970-243-3271
Fax: 970-243-3280

May 5, 2014

Ms. Karolina Blaney
Environmental Specialist
WPX Energy rocky Mountain, LLC
1058 County Road 215
Parachute, CO 81635

RE: Radiation Survey Summary
Clough 14-22MV Well Pad
Garfield County, CO

Dear Ms. Blaney

In an email dated March 25, 2014; Colorado Oil and Gas Conservation Commission (COGCC) Environmental Protection Specialist Stan Spencer stated that the Clough 14-22MV well pad was located within the Rifle, CO Uranium Mill Tailings Remedial Action (UMTRA) Site Institutional Control Boundary. The Colorado Department of Public Health and Environment (CDPHE) and the Department of Energy (DOE) have stipulations regarding the management of soils excavated within the Rifle, Colorado UMTRA Site Institutional Control Boundary. The stipulations state; "All materials removed for the setting of the conductor pipe or any other excavation on this site must be screened for gamma-emitters. If any gamma-emitter detection above background is encountered, the operator must isolate the materials and contact the COGCC, CDPHE, and DOE for further instructions". In consultation with CDPHE Hazardous Materials and Waste Management Division personnel; they stated that any readings of the excavated material 30 percent over background readings would be considered contaminated by mill tailings material.

On March 26, 2014 HRL Compliance Solutions, Inc. (HCSI) personnel conducted a radiation (RAD) survey of the excavated soil on the Clough 14-22MV well pad. The survey was conducted utilizing a calibrated Ludlum Model 19 scintillometer. Readings were collected from six (6) background locations and six (6) locations on the excavated soil stockpile. Readings indicated that there was no exceedance of background levels which would classify the soil as being contaminated with uranium mill tailings. The survey results are noted below. A map depicting the background and excavated soil locations is included as Figure 1.

Table 1 RAD Survey Results
Clough 14-22MV Well Pad

Sample Location (Background)	Results mR/hr
RAD B-1	12-16
RAD B-1	14-17
RAD B-1	15-19
RAD B-1	13-17
RAD B-1	12-16
RAD B-1	13-16
Sample Location Soil Stockpile	**Results mR/hr**
SP-1	12-15
SP-1	12-15
SP-1	13-16
SP-1	12-15
SP-1	12-15
SP-1	12-15

mR/hr = micro Roentgen/hour

If you have any questions or concerns, please do not hesitate to give me a call.

Sincerely,

HRL Compliance Solutions, Inc.

Mark Mumby, RPG
Environmental Program Manager