District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OIL CONS. DIV DIST. 3
FEB 08 2018

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company WPX Energy Production, LLC	Contact Deborah Watson
Address 721 S Main Ave, Aztec, NM	Telephone No. 505-333-1880
Facility Name W Lybrook Unit 726H	Facility Type Pipeline/ROW

Surface Owner Indian	Lease Information NO-G1312-1863, NMNM 135216A	API No. 30-045-35769

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	23	23N	09W	90	South	1235	West	San Juan

Latitude: N36.205396 **Longitude**: W107.762917 NAD83

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release Estimated 20 bbl	Volume Recovered Estimated 4 bbl
Source of Release Failed Valve at Well Tie-In Riser	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12/8/17
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Vanessa Fields/Cory Smith (NMOCD) Whitney Thomas (BLM-FFO), Maureen Joe (BIA-FIMO)	
By Whom? Deborah Watson/Andrea Felix	Date and Hour 12/8/17, 14:42-14:46 followed by email 12/9 at 12:07	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Isolation valve froze and cracked at well tie-in riser, the impacted area included the ROW heading to the well pad and a small area in the sagebrush field located W of the riser. Source was stopped, line emptied, release contained, and cleanup initiated.

Describe Area Affected and Cleanup Action Taken.*

- Hydrovac/spec trucks called to location for fluid recovery.
- Stabilization of location and cleanup started on 12/8/2017. Crews repaired valve during week of 12/10/17.
- Crews removed impacted materials between 12/8-12/15. Impacted soil was taken to the landfarm for disposal.
- Following cleanup, 11 five-point confirmation samples were collected from within the impacted area and analyzed for BTEX and TPH (MRO/GRO/DRO). A representative from BLM-FFO was in attendance during confirmation sampling on 12/15/17.
- Laboratory analytical results were reported below applicable NMOCD RRAL, see attached laboratory report.
- Backfilling of the excavation occurred during the week of 12/18/17.
- Seeding of the location occurred during the week on 12/18/2017.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Deborah Watson	OIL CONSERVATION DIVISION Approved by Environmental Specialist:	
Printed Name: Deborah Watson		
Title: Environmental Specialist	Approval Date: 2/27/18	Expiration Date:
E-mail Address: Deborah.watson@wpxenergy.com	Conditions of Approval: —	Attached ☐
Date: January 31, 2018 Phone:505-333-1880		

* Attach Additional Sheets If Necessary #nvf1735236555

26

WPXENERGY

W Lybrook Unit #726 Well Tie-In Release Report
Section 23, Township 23N, Range 9W
San Juan County, NM

January 31, 2018

1.0 Introduction

On December 8, 2017, crude oil was discovered leaking from a valve at the well tie-in riser for the W Lybrook Unit #726H, located in Section 23, Township 23N, Range 9W, San Juan County, New Mexico. The same day of discovery, the release source was stopped and cleanup initiated.

A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Well Location: W Lybrook Unit #726H
*API #:*30-045-35769
Site Location Description: Unit Letter M, Section 23, Township 23N, Range 9W
Release Latitude/Longitude: N36.205396, W107.762917
Land Jurisdiction: Indian Allotted Lands (Lease # NO-G-1312-1863)
Agency Notification: New Mexico Oil Conservation Division (NMOCD), BLM Farmington Field Office (BLM-FFO), and Bureau of Indian Affairs Federal Indian Minerals Office (FIMO)
Agency Notification Date(s): December 8, 2017
Source of Release: Failed valve at well tie-in riser
Release Contents: Crude oil
Volume Released: Estimated 20 barrels crude oil
Volume Recovered: Estimated 4 barrels crude oil
NMOCD Ranking: 10

3.0 Land Jurisdiction and Site Ranking

The referenced well is located on Indian allotted land in San Juan County, New Mexico.

In accordance with *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), this site was assigned a ranking score of 10. Based on a ranking score of 10, recommended remedial action levels (RRAL) for remediated soils at the site are as follows: 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

Depth to groundwater at the site is estimated to be greater than 100 feet below ground surface (bgs) based on the June 2017 ground bed drilling log for the W Lybrook Unit #726H which recorded depth to water at 290 feet bgs.

A review was completed of the New Mexico Office of the State Engineer Online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 feet radius of the location.

A stock pond is located approximately 645 feet southwest of the impacted area.

4.0 Field Activities

Excavation and removal of impacted soil was initiated on December 8, 2017, same day as discovery. Approximately 1,200 cubic yards of hydrocarbon impacted soils were removed from within the impacted area. The excavation extent was approximately 450 ft. (length) x 1-20 ft. (width) x 0.25 – 8 ft. (depth).

5.0 Soil Sampling

On December 15, 2017, 11 confirmation soil samples (SC-1 through SC-11) were collected from the excavation. Mr. A. Aedeloye, BLM-FFO,was present during confirmation sample collection on December 15, 2017. Soil samples composited for laboratory analysis were placed into laboratory supplied glassware, labeled, and shipped on ice to Hall Environmental Analysis Laboratory. Each sample was analyzed for the following:

- BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B, and
- TPH (GRO/DRO/MRO-Motor Oil Range) per USEPA Method 8015M/D.

6.0 Analytical Results

Final laboratory analytical results for soil confirmation samples (SC-1 through SC-11) reported benzene and BTEX concentrations below the NMOCD RRAL of 10 mg/kg and 50 mg/kg, respectively. All final soil confirmation samples reported TPH concentrations below the NMOCD RRAL of 1,000 mg/kg,

Laboratory analytical results are summarized in Table 1 and the analytical laboratory report is attached.

7.0 Conclusions

A crude oil release of approximately 20 barrels was discovered on December 8, 2017, along the well tie-in riser to the W Lybrook Unit #726H, located in Section 23, Township 23N, Range 9W, San Juan County, New Mexico. Cleanup consisted of removal and disposal of approximately 1,200 cubic yards of impacted soil from the location. Eleven confirmation samples were collected from within the impacted area. Laboratory analytical results for final soil confirmation samples reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable NMOCD RRAL. The site was backfilled and reseeded during the week of December 18, 2017. Based on laboratory analytical results of the confirmation soil samples, no further work is recommended.

For additional information or questions regarding site conditions, please contact me at 505-333-1880.

Sincerely,

Deborah Watson

Deborah Watson
Environmental Specialist

Attachments
Figure 1. Topographic Map
Figure 2. Aerial Site Map with Sample Locations
Table 1. Final Soil Sampling Results
Hall Analytical Laboratory Reports (Report #1712986)

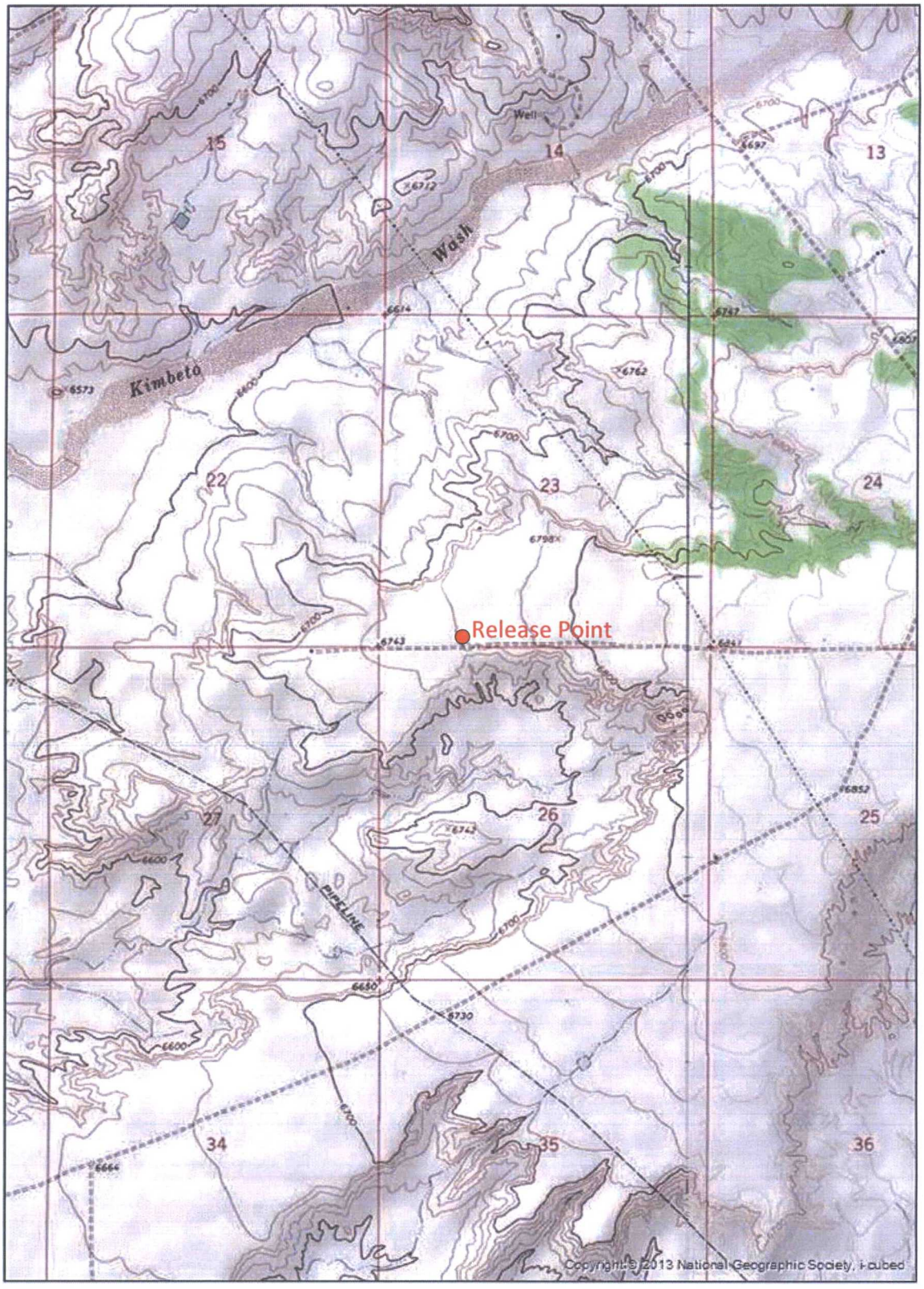

Figure 1. Topographic Map
W Lybrook Unit #726H Well Tie-In Riser
Section 23, Township 23N, Range 09W
N36.205396, W107.762917
San Juan County, NM
Scale 1:24,000

Figure 2. Aerial Map with Sample Locations
W Lybrook Unit #726H Well Tie-In Riser
Section 23, Township 23N, Range 09W
N36.205396, W107.762917
San Juan County, NM

Table 1: Final Soil Sampling Results
W Lybrook Unit #726H Well Tie-In Riser

Sample ID	Date Sampled	Depth (ft.)	TPH (mg/kg) 1,000 mg/kg* (GRO+DRO)	TPH (mg/kg) (MRO)	Benzene (mg/kg) 10 mg/kg*	BTEX (mg/kg) 50 mg/kg*
SC-1	12/15/2017	0.5-1.5	<14.9	<48	<0.026	<0.23
SC-2	12/15/2017	0.5-2.0	<14.2	<49	<0.021	<0.193
SC-3	12/15/2017	1.0-8.0	110	55	<0.098	<0.888
SC-4	12/15/2017	1.0-8.0	160	80	<0.10	<0.90
SC-5	12/15/2017	8.0	61	51	<0.021	<0.189
SC-6	12/15/2017	1.0-6.0	22	<47	<0.020	<0.181
SC-7	12/15/2017	1.0-6.0	44	<48	<0.11	<0.960
SC-8	12/15/2017	6.0	72	53	<0.12	<1.05
SC-9	12/15/2017	0.5-1.0	<14.2	<48	<0.023	<0.208
SC-10	12/15/2017	0.25-1.0	<13.0	<47	<0.018	<0.162
SC-11	12/15/2017	0.5-1.5	<13.2	<48	<0.018	<0.162

*NMOCD Action Levels based on site ranking of 10

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 19, 2017

Debbie Watson

WPX Energy
721 S Main Ave
Aztec, NM 87410
TEL: (505) 333-1880
FAX

RE: W Lybrook Unit 726H Well Tie In Riser OrderNo.: 1712986

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1712986**
Date Reported: **12/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-1
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:58:00 AM
Lab ID: 1712986-001 **Matrix:** SOIL **Received Date:** 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/18/2017 10:17:24 AM	35560
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2017 10:17:24 AM	35560
Surr: DNOP	92.0	70-130		%Rec	1	12/18/2017 10:17:24 AM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	12/18/2017 9:53:15 AM	G47853
Surr: BFB	127	15-316		%Rec	1	12/18/2017 9:53:15 AM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.026		mg/Kg	1	12/18/2017 9:53:15 AM	B47853
Toluene	ND	0.052		mg/Kg	1	12/18/2017 9:53:15 AM	B47853
Ethylbenzene	ND	0.052		mg/Kg	1	12/18/2017 9:53:15 AM	B47853
Xylenes, Total	ND	0.10		mg/Kg	1	12/18/2017 9:53:15 AM	B47853
Surr: 4-Bromofluorobenzene	119	80-120		%Rec	1	12/18/2017 9:53:15 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-2
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:55:00 AM
Lab ID: 1712986-002
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/18/2017 10:39:25 AM	35560
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/18/2017 10:39:25 AM	35560
Surr: DNOP	88.4	70-130		%Rec	1	12/18/2017 10:39:25 AM	35560
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	12/18/2017 10:17:03 AM	G47853
Surr: BFB	128	15-316		%Rec	1	12/18/2017 10:17:03 AM	G47853
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.021		mg/Kg	1	12/18/2017 10:17:03 AM	B47853
Toluene	ND	0.043		mg/Kg	1	12/18/2017 10:17:03 AM	B47853
Ethylbenzene	ND	0.043		mg/Kg	1	12/18/2017 10:17:03 AM	B47853
Xylenes, Total	ND	0.086		mg/Kg	1	12/18/2017 10:17:03 AM	B47853
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	1	12/18/2017 10:17:03 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-3
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:53:00 AM
Lab ID: 1712986-003 **Matrix:** SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	12/18/2017 11:01:14 AM	35560
Motor Oil Range Organics (MRO)	55	49		mg/Kg	1	12/18/2017 11:01:14 AM	35560
Surr: DNOP	88.0	70-130		%Rec	1	12/18/2017 11:01:14 AM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	12/18/2017 10:40:50 AM	G47853
Surr: BFB	128	15-316		%Rec	5	12/18/2017 10:40:50 AM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.098		mg/Kg	5	12/18/2017 10:40:50 AM	B47853
Toluene	ND	0.20		mg/Kg	5	12/18/2017 10:40:50 AM	B47853
Ethylbenzene	ND	0.20		mg/Kg	5	12/18/2017 10:40:50 AM	B47853
Xylenes, Total	ND	0.39		mg/Kg	5	12/18/2017 10:40:50 AM	B47853
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	5	12/18/2017 10:40:50 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-4
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:50:00 AM
Lab ID: 1712986-004
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	160	9.9		mg/Kg	1	12/18/2017 11:23:33 AM	35560
Motor Oil Range Organics (MRO)	80	49		mg/Kg	1	12/18/2017 11:23:33 AM	35560
Surr: DNOP	88.8	70-130		%Rec	1	12/18/2017 11:23:33 AM	35560
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	12/18/2017 11:04:45 AM	G47853
Surr: BFB	130	15-316		%Rec	5	12/18/2017 11:04:45 AM	G47853
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.10		mg/Kg	5	12/18/2017 11:04:45 AM	B47853
Toluene	ND	0.20		mg/Kg	5	12/18/2017 11:04:45 AM	B47853
Ethylbenzene	ND	0.20		mg/Kg	5	12/18/2017 11:04:45 AM	B47853
Xylenes, Total	ND	0.40		mg/Kg	5	12/18/2017 11:04:45 AM	B47853
Surr: 4-Bromofluorobenzene	119	80-120		%Rec	5	12/18/2017 11:04:45 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-5
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:45:00 AM
Lab ID: 1712986-005 **Matrix:** SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	61	9.4		mg/Kg	1	12/18/2017 11:45:18 AM	35560
Motor Oil Range Organics (MRO)	51	47		mg/Kg	1	12/18/2017 11:45:18 AM	35560
Surr: DNOP	93.1	70-130		%Rec	1	12/18/2017 11:45:18 AM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	12/18/2017 11:28:39 AM	G47853
Surr: BFB	133	15-316		%Rec	1	12/18/2017 11:28:39 AM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	12/18/2017 11:28:39 AM	B47853
Toluene	ND	0.042		mg/Kg	1	12/18/2017 11:28:39 AM	B47853
Ethylbenzene	ND	0.042		mg/Kg	1	12/18/2017 11:28:39 AM	B47853
Xylenes, Total	ND	0.084		mg/Kg	1	12/18/2017 11:28:39 AM	B47853
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	1	12/18/2017 11:28:39 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-6
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:40:00 AM
Lab ID: 1712986-006
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	22	9.5		mg/Kg	1	12/18/2017 12:07:29 PM	35560
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2017 12:07:29 PM	35560
Surr: DNOP	88.7	70-130		%Rec	1	12/18/2017 12:07:29 PM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/18/2017 11:53:14 AM	G47853
Surr: BFB	109	15-316		%Rec	1	12/18/2017 11:53:14 AM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	12/18/2017 11:53:14 AM	B47853
Toluene	ND	0.040		mg/Kg	1	12/18/2017 11:53:14 AM	B47853
Ethylbenzene	ND	0.040		mg/Kg	1	12/18/2017 11:53:14 AM	B47853
Xylenes, Total	ND	0.081		mg/Kg	1	12/18/2017 11:53:14 AM	B47853
Surr: 4-Bromofluorobenzene	98.4	80-120		%Rec	1	12/18/2017 11:53:14 AM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-7
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:37:00 AM
Lab ID: 1712986-007
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **TOM**
Diesel Range Organics (DRO)	44	9.6		mg/Kg	1	12/18/2017 12:29:29 PM	35560
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2017 12:29:29 PM	35560
Surr: DNOP	87.5	70-130		%Rec	1	12/18/2017 12:29:29 PM	35560
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	12/18/2017 12:17:08 PM	G47853
Surr: BFB	109	15-316		%Rec	5	12/18/2017 12:17:08 PM	G47853
EPA METHOD 8021B: VOLATILES							Analyst: **NSB**
Benzene	ND	0.11		mg/Kg	5	12/18/2017 12:17:08 PM	B47853
Toluene	ND	0.21		mg/Kg	5	12/18/2017 12:17:08 PM	B47853
Ethylbenzene	ND	0.21		mg/Kg	5	12/18/2017 12:17:08 PM	B47853
Xylenes, Total	ND	0.43		mg/Kg	5	12/18/2017 12:17:08 PM	B47853
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	5	12/18/2017 12:17:08 PM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1712986**
Date Reported: **12/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-8
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:33:00 AM
Lab ID: 1712986-008 **Matrix:** SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	72	9.6		mg/Kg	1	12/18/2017 12:51:27 PM	35560
Motor Oil Range Organics (MRO)	53	48		mg/Kg	1	12/18/2017 12:51:27 PM	35560
Surr: DNOP	93.5	70-130		%Rec	1	12/18/2017 12:51:27 PM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	23		mg/Kg	5	12/18/2017 12:40:49 PM	G47853
Surr: BFB	109	15-316		%Rec	5	12/18/2017 12:40:49 PM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	12/18/2017 12:40:49 PM	B47853
Toluene	ND	0.23		mg/Kg	5	12/18/2017 12:40:49 PM	B47853
Ethylbenzene	ND	0.23		mg/Kg	5	12/18/2017 12:40:49 PM	B47853
Xylenes, Total	ND	0.47		mg/Kg	5	12/18/2017 12:40:49 PM	B47853
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	5	12/18/2017 12:40:49 PM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-9
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:28:00 AM
Lab ID: 1712986-009
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/18/2017 1:13:28 PM	35560
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2017 1:13:28 PM	35560
Surr: DNOP	91.9	70-130		%Rec	1	12/18/2017 1:13:28 PM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/18/2017 1:04:41 PM	G47853
Surr: BFB	108	15-316		%Rec	1	12/18/2017 1:04:41 PM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/18/2017 1:04:41 PM	B47853
Toluene	ND	0.046		mg/Kg	1	12/18/2017 1:04:41 PM	B47853
Ethylbenzene	ND	0.046		mg/Kg	1	12/18/2017 1:04:41 PM	B47853
Xylenes, Total	ND	0.093		mg/Kg	1	12/18/2017 1:04:41 PM	B47853
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	12/18/2017 1:04:41 PM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1712986**
Date Reported: **12/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-10
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 10:23:00 AM
Lab ID: 1712986-010
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/18/2017 1:20:28 PM	35560
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2017 1:20:28 PM	35560
Surr: DNOP	88.5	70-130		%Rec	1	12/18/2017 1:20:28 PM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/18/2017 1:28:31 PM	G47853
Surr: BFB	109	15-316		%Rec	1	12/18/2017 1:28:31 PM	G47853
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/18/2017 1:28:31 PM	B47853
Toluene	ND	0.036		mg/Kg	1	12/18/2017 1:28:31 PM	B47853
Ethylbenzene	ND	0.036		mg/Kg	1	12/18/2017 1:28:31 PM	B47853
Xylenes, Total	ND	0.072		mg/Kg	1	12/18/2017 1:28:31 PM	B47853
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	12/18/2017 1:28:31 PM	B47853

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SC-11
Project: W Lybrook Unit 726H Well Tie In Riser
Collection Date: 12/15/2017 11:02:00 AM
Lab ID: 1712986-011
Matrix: SOIL
Received Date: 12/17/2017 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/18/2017 1:48:18 PM	35560
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/18/2017 1:48:18 PM	35560
Surr: DNOP	82.0	70-130		%Rec	1	12/18/2017 1:48:18 PM	35560
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/18/2017 9:58:03 AM	G47852
Surr: BFB	85.7	15-316		%Rec	1	12/18/2017 9:58:03 AM	G47852
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/18/2017 9:58:03 AM	B47852
Toluene	ND	0.036		mg/Kg	1	12/18/2017 9:58:03 AM	B47852
Ethylbenzene	ND	0.036		mg/Kg	1	12/18/2017 9:58:03 AM	B47852
Xylenes, Total	ND	0.072		mg/Kg	1	12/18/2017 9:58:03 AM	B47852
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/18/2017 9:58:03 AM	B47852

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712986**

19-Dec-17

Client: WPX Energy

Project: W Lybrook Unit 726H Well Tie In Riser

Sample ID **LCS-35560**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **35560**	RunNo: **47845**
Prep Date: **12/18/2017**	Analysis Date: **12/18/2017**	SeqNo: **1530855** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.3	73.2	114			
Surr: DNOP	4.5		5.000		89.9	70	130			

Sample ID **MB-35560**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **35560**	RunNo: **47845**
Prep Date: **12/18/2017**	Analysis Date: **12/18/2017**	SeqNo: **1530856** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.4	70	130			

Sample ID **1712986-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **35560**	RunNo: **47845**
Prep Date: **12/18/2017**	Analysis Date: **12/18/2017**	SeqNo: **1531822** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.8	48.83	0	93.8	55.8	125			
Surr: DNOP	4.3		4.883		88.6	70	130			

Sample ID **1712986-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **35560**	RunNo: **47845**
Prep Date: **12/18/2017**	Analysis Date: **12/18/2017**	SeqNo: **1531823** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	49.12	0	91.3	55.8	125	2.17	20	
Surr: DNOP	4.3		4.912		86.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712986

19-Dec-17

Client: WPX Energy

Project: W Lybrook Unit 726H Well Tie In Riser

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G47853	RunNo:	47853					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531544	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1300		1000		129	15	316			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G47853	RunNo:	47853					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531545	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	75.9	131			
Surr: BFB	1400		1000		138	15	316			

Sample ID	1712986-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-1	Batch ID:	G47853	RunNo:	47853					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531546	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.2	25.85	0	108	77.8	128			
Surr: BFB	1300		1034		121	15	316			

Sample ID	1712986-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-1	Batch ID:	G47853	RunNo:	47853					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531547	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.2	25.85	0	107	77.8	128	0.822	20	
Surr: BFB	1200		1034		120	15	316	0	0	

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G47852	RunNo:	47852					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531574	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.1	15	316			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G47852	RunNo:	47852					
Prep Date:		Analysis Date:	12/18/2017	SeqNo:	1531575	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712986**

19-Dec-17

Client: WPX Energy

Project: W Lybrook Unit 726H Well Tie In Riser

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G47852**	RunNo: **47852**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531575** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	75.9	131			
Surr: BFB	1000		1000		101	15	316			

Sample ID **1712986-011AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SC-11**	Batch ID: **G47852**	RunNo: **47852**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531576** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.6	18.00	0	95.4	77.8	128			
Surr: BFB	680		719.9		94.1	15	316			

Sample ID **1712986-011AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SC-11**	Batch ID: **G47852**	RunNo: **47852**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531577** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.6	18.00	0	96.6	77.8	128	1.29	20	
Surr: BFB	670		719.9		93.6	15	316	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712986**

19-Dec-17

Client: WPX Energy

Project: W Lybrook Unit 726H Well Tie In Riser

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B47853**	RunNo: **47853**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531557** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B47853**	RunNo: **47853**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531559** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.9	77.3	128			
Toluene	0.94	0.050	1.000	0	93.6	79.2	125			
Ethylbenzene	0.92	0.050	1.000	0	91.5	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	92.1	81.6	129			
Surr: 4-Bromofluorobenzene	1.2		1.000		123	80	120			S

Sample ID **1712986-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-2**	Batch ID: **B47853**	RunNo: **47853**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531560** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.021	0.8576	0	97.4	80.9	132			
Toluene	0.85	0.043	0.8576	0	98.7	79.8	136			
Ethylbenzene	0.82	0.043	0.8576	0	95.3	79.4	140			
Xylenes, Total	2.4	0.086	2.573	0	94.2	78.5	142			
Surr: 4-Bromofluorobenzene	0.87		0.8576		102	80	120			

Sample ID **1712986-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-2**	Batch ID: **B47853**	RunNo: **47853**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531561** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.021	0.8576	0	96.0	80.9	132	1.48	20	
Toluene	0.83	0.043	0.8576	0	96.9	79.8	136	1.78	20	
Ethylbenzene	0.81	0.043	0.8576	0	94.4	79.4	140	0.927	20	
Xylenes, Total	2.4	0.086	2.573	0	94.1	78.5	142	0.165	20	
Surr: 4-Bromofluorobenzene	0.87		0.8576		102	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712986**

19-Dec-17

Client: WPX Energy

Project: W Lybrook Unit 726H Well Tie In Riser

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B47852**	RunNo: **47852**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531606** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B47852**	RunNo: **47852**
Prep Date:	Analysis Date: **12/18/2017**	SeqNo: **1531607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	77.3	128			
Toluene	0.95	0.050	1.000	0	95.1	79.2	125			
Ethylbenzene	0.96	0.050	1.000	0	95.9	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	97.0	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WPX ENERGY | Work Order Number: 1712986 | RcptNo: 1

Received By: Andy Freeman 12/17/2017 12:00:00 PM

Completed By: Anne Thorne 12/18/2017 7:30:36 AM

Reviewed By: DDS 12/18/17

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? _____
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record

Client: WPX Energy Production

Mailing Address: 721 S Main
Aztec NM

Phone #: 505 3331880

email or Fax#: deborah.watson@wpxenergy.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush Same day

Project Name:

Project #: W Lybrook Unit 726H

Well Tie-in Riser

Project Manager: D Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.7 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and # (12/19/17 MeoH kit)	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12.15.17	1058	Soil	SC-1	1-4oz	Cold	001	X		X													
12.15.17	1055	Soil	SC-2			002	X		X													
12.15.17	1053	Soil	SC-3			003	X		X													
12.15.17	1050	Soil	SC-4			004	X		X													
12.15.17	1045	Soil	SC-5			005	X		X													
12.15.17	1040	Soil	SC-6			006	X		X													
12.15.17	1037	Soil	SC-7			007	X		X													
12.15.17	1033	Soil	SC-8			008	X		X													
12.15.17	1028	Soil	SC-9			009	X		X													
12.15.17	1023	Soil	SC-10			010	X		X													
12.15.17	1102	Soil	SC-11			011	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/16/17	1340	Deborah Watson		12/16/17	1340
12/16/17	1410			12/17/17	1100

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.